



港燈電力投資 HK Electric Investments

Sustainability Report 2022



Building Resilience
for a Sustainable Future





Rising to the Challenge

2022 was marked by new and ongoing challenges, as the global energy crisis exacerbated socio-economic hardships brought about by the COVID-19 pandemic. HKEI believes that by pressing on together with determination we can build resilience and create a vibrant and sustainable future.

Throughout this report, various design elements symbolise resilience in the face of challenge. Four lines in different colours — gold, green, orange and purple — represent the four strategic directions of HKEI's Sustainability Framework coming together to achieve sustainable development. On the front cover, the outline of a heart shape represents our determination to move forward.





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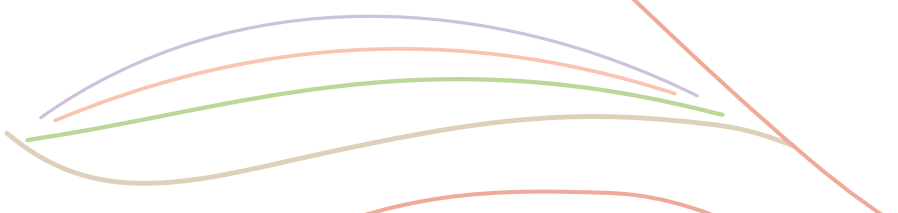
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Report Overview

Scope and Boundary

This is the Sustainability Report 2022 of HK Electric Investments and HK Electric Investments Limited (collectively known as HKEI), covering the period from 1 January to 31 December 2022 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 and 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. 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 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. 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, if any, on individual disclosures. In addition, we are adopting recommendations from the international Financial Stability Board's Task Force on Climate-related Financial Disclosures (TCFD). Please refer to the chapter on [Running a Sustainable Business](#) for details.

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 report 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 emissions and local government guidelines for energy and carbon audits for buildings. We have set targets to help evaluate our impacts and performance over time and report on our achievement status against these targets in this report. Significant performance data for the latest three years are listed in the [Key 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 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.

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 are presented in Hong Kong dollars unless otherwise specified. Due to rounding, some reported 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 promoting transparency concerning our sustainability impacts and performance and to managing those impacts responsibly, we have commissioned an independent third party to verify the content 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.



2022 Performance Highlights



ENVIRONMENT & AWARENESS

New gas-fired unit L11
commissioned in May

~53% of electricity output
generated from natural gas

~32% decrease in absolute carbon
emissions compared with that of 2005

~0.68 kg/kWh carbon intensity
(CO_{2e} per electricity unit sold)

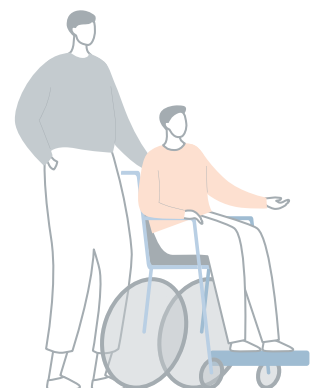
Full compliance with stipulated emissions caps
for sulphur dioxide, nitrogen oxides and respirable suspended particulates

>8 GWh of green electricity generated from renewable
energy installations of HK Electric and its Feed-in-Tariff customers

>120 public events held to
promote Smart Power Services

>120,000 participants
in Happy Green Campaign

~670 employees engaged in a month-long
in-house campaign on World Environment Day





>99.9999%
supply reliability rating

All 18 pledged Customer Service Standards
met or surpassed

4.7 average customer satisfaction
rating on a 5-point scale

>240,000
smart meters deployed since 2020

~\$31 million of subsidies
approved under Smart Power Building Fund

210
free Smart Power Energy Audits

~56,000 households subsidised
under Smart Power Care Fund

>10,000 elders connected
through "CAREnJOY for the Elderly"

>9,200 learning opportunities offered
to local retirees through "University of 3rd Age"



CUSTOMER & COMMUNITY CARE

>4,700
safety risk assessments

>2,100
safety inspections

Zero
Lost Time Injuries
among employees

>1,000 participants in
wellness talks and activities

25 hours of training
per employee on average

7.7% employee
voluntary turnover rate



EMPLOYEE CARE & SAFETY





A Word from our CEO





“ HKEI is focused on delivering safe, reliable, clean and affordable electricity while continuing to build resilience and facilitate a fair and inclusive transition to a low and ultimately zero-carbon future. ”

Pushing on with determination

2022 was an extraordinary year for the power industry as geopolitical tensions resulted in skyrocketing fuel prices and tight supply. At home here in Hong Kong, the global energy crisis compounded socio-economic hardships during our fight against the COVID-19 pandemic. Despite these difficulties, HKEI has continued to fulfil its vision of excelling in the power business. We are delivering electricity supply with world-class reliability and pushing on with determination to help build a stronger and more resilient city.

During the year, our main operating company, HK Electric, achieved a supply reliability rating exceeding 99.9999% for the third consecutive year. We also met or surpassed all 18 of our pledged Customer Service Standards and received several prestigious customer service awards. We achieved these results despite significant obstacles, such as a month-long ban on coal exports from Indonesia that affected market prices and security of fuel supply as well as manpower shortages during the fifth wave of the COVID-19 outbreak in Hong Kong.

Strengthening our approach to sustainability

HKEI is continually reflecting and learning to build business resilience. We are fully integrating sustainability considerations into all aspects of our business as outlined in our Sustainability Framework. We are also adopting recommendations from the international Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD). A scenario analysis to assess potential impacts of climate-related risks and opportunities for our business is due to be completed in 2023.

In 2022, we conducted a comprehensive review of potential environmental, social and governance risks and refined our associated risk control measures. We also launched a new digital platform to facilitate our business units in strategising, planning, recording and reviewing stakeholder engagement activities more effectively using data analytics.

Our corporate innovation culture supports and advances our sustainability efforts. In 2022, HK Electric was ranked among the top 20 Innovative Companies in the Corporate Innovation Index Awards co-organised by the Asia-Pacific Institute of Business of the Chinese University of Hong Kong and the Hong Kong General Chamber of Commerce. We also received the prestigious Gold Award for the manufacturing sector as well as the Sustainable Business Award in the BOCHK Corporate Environmental Leadership series.

Progressing towards carbon neutrality

The 2022 United Nations Climate Change Conference (COP27) concluded in November with an historic breakthrough promoting a just and inclusive transition to net zero. Meanwhile, Hong Kong is making firm progress towards upholding its commitment to achieving carbon neutrality before 2050.

At HK Electric, we are switching from coal-fired to gas-fired generation as a transitional decarbonisation measure and increasing local renewable energy (RE) generation. In 2022, we updated our carbon reduction target and committed to reducing Scope 1 greenhouse gas emissions by 68.4% per kWh of electricity generated by 2035, as compared with that of 2019. This mid-term carbon intensity target has been validated and approved by the Science Based Targets initiative (SBTi).



During the year, we commissioned a new gas-fired unit, L11, at Lamma Power Station (LPS), raising our gas-fired generation ratio to around 53% of total power output. Another new gas-fired unit, L12, is expected to commence operation in early 2024, which will further boost power output from natural gas. To enhance the security and cost competitiveness of gas supply for LPS, we are building an offshore liquefied natural gas terminal in partnership with CLP Power. Full commissioning of the project is expected to be achieved by mid-2023.

HK Electric is also actively developing local RE sources and exploring opportunities to deploy advanced zero-carbon energy solutions such as green hydrogen. On top of our existing 0.8-MW wind turbine, we will commission additional solar power systems to double the installed capacity of photovoltaic (PV) panels. Total installed capacity of our PV panels will reach 2.4 MW by end 2023. We are also planning to build a 150-MW offshore wind farm located southwest of Lamma Island.

Working together to achieve shared goals

A majority of Hong Kong's carbon footprint comes from the built environment. Under the banner of Smart Power Services, we provide a suite of funding and service initiatives to help our customers and the community achieve decarbonisation via supporting RE and electric vehicles, enhancing energy efficiency and conservation, and adopting low-carbon lifestyles.

Smart meters will play an important role in helping improve lifecycle management and energy efficiency of buildings. In 2022, we continued to roll out advanced metering infrastructure for our customers and achieved our interim target of installing 240,000 smart meters cumulatively since 2020.

During the year, we joined the Asian Corporate Coalition for Climate Change Resilience as a steering committee member to support strategic actions on climate resilience, while continuing to participate in other strategic partnerships to achieve carbon neutrality, such as the Carbon Neutrality Partnership led by the HKSAR Government.





Supporting those in need

For decades, HK Electric's community investment strategy has focused on creating long-lasting partnerships to improve elderly care and provide green education. In 2022, we received the "10 years+ Caring Company Logo" from the Hong Kong Council of Social Service in recognition of our corporate social responsibility performance.

Our signature elderly programme, "CAREnJOY for the Elderly", has been serving local elders for over 14 years while the "University of 3rd Age" network continues to provide unparalleled opportunities for local retirees to fulfil their dreams. Meanwhile, the "Happy Green Schools" network has grown to include more than 540 primary and secondary schools which are keen on environmental education.

We acknowledge that an upsurge in global fuel prices over recent years has imposed a tariff burden on our customers. During the year, we provided a series of relief measures and strengthened our energy efficiency promotions to help alleviate the impact on those experiencing economic hardship, including small businesses and underprivileged families. We will continue to offer relief measures in 2023 and have set aside \$95 million for this purpose.

Caring for our people

In 2022, HK Electric was ranked the fourth Most Attractive Employer in Hong Kong in the annual Randstad Hong Kong Employer Brand Awards. Recognising that our business is only as strong and resilient as our workforce, we are committed to empowering our people to achieve their full potential. During the year, we launched a new three-year Accelerated Development Programme to speed

up preparation of exceptionally high-potential young talent for leadership positions. We also introduced a bespoke programme in collaboration with the Employees Retraining Board to support and deepen the talent pool of technicians for the power sector.

As a caring and responsible employer, we must continuously strive to improve our safety performance. At the end of 2022, we achieved a record for 14 consecutive months with zero Lost Time Injuries among our employees. Our outstanding corporate safety culture was also reflected in the performance of HK Electric representatives at the Safety Quiz 2022 co-organised by the Occupational Safety and Health Council and Labour Department. In addition to taking the top three places in the Cup Final of the Enterprise category, our teams also won the Championship and first runner-up in the Plate Final.

Meeting challenges head on

On this positive note, I would like to share my cautious optimism for a gradual return to normalcy in 2023. The trust that HK Electric has earned over 130 years of service is the greatest source of strength for our business. We will continue to help our city pursue sustainability and social inclusion and look forward to enjoying renewed stability and prosperity together in the years ahead.

Thank you for your continued support.

Wan Chi Tin

Chief Executive Officer
March 2023



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 focused exclusively on the energy sector. Share Stapled Units issued by the trust and HK Electric Investments Limited (collectively, HKEI) are listed on the Main Board of the Hong Kong Stock Exchange. The structure of the trust enables dedicated focus on delivering stable distributions for holders of our Share Stapled Units and sustainable long-term growth of the business.



Commencing operations in 1890, our main operating company, HK Electric, is one of the longest established utility companies in the world. HK Electric supplies electricity to about 586,000 customers in Hong Kong. It operates a vertically integrated power utility under a Scheme of Control Agreement (SCA) with the HKSAR Government, including a power station on Lamma Island known as Lamma Power Station (LPS).

Over the years, HK Electric has contributed immeasurably to the economic and social development of Hong Kong by supplying safe, reliable, clean and affordable electricity in line with our Vision, Missions and Core Values. To help combat climate change and support Hong Kong in achieving its decarbonisation agenda, we are transitioning from coal-fired to gas-fired power generation at LPS and increasing the use of renewable energy (RE).

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

VISION

To excel in the power business in Hong Kong

CORE VALUES

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

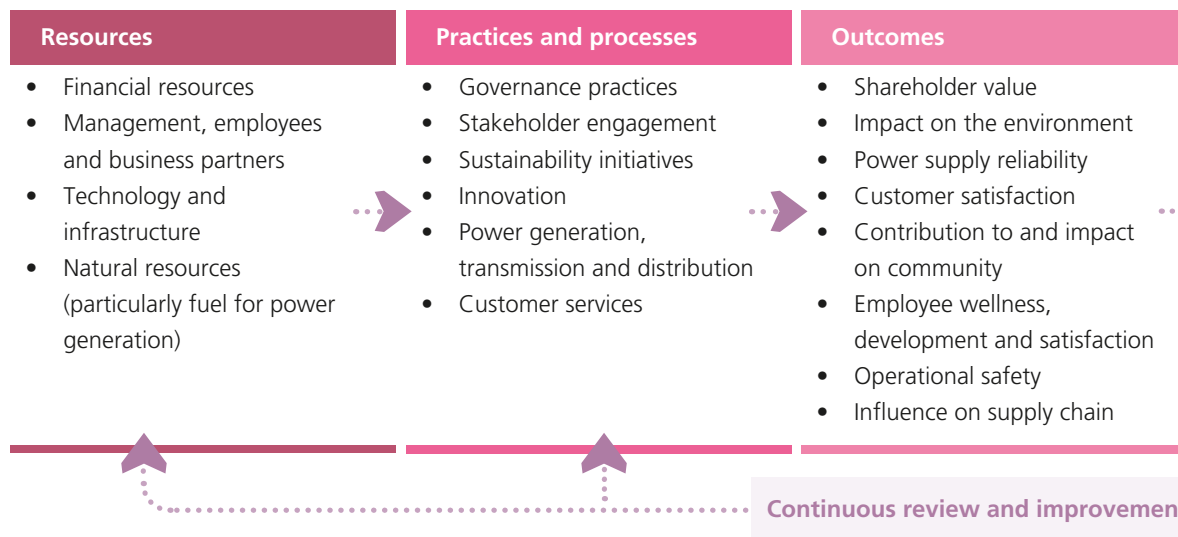
MISSIONS

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



Our Value Chain

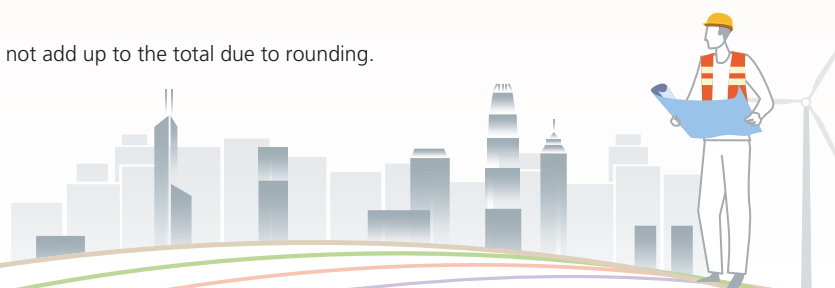
In addition to decarbonising our operations and continually reviewing and improving our environmental performance, we engage with stakeholders to promote low-carbon lifestyles. We are integrating sustainability into our entire value chain as part of our management approach to transitioning our business towards carbon neutrality and achieving long-term sustainable growth.



Business Profile (as at the end of 2022)

Service territories	Hong Kong Island and Lamma Island	
Installed generating capacity	3 gas-fired combined-cycle units: <i>1,095 MW</i> 5 coal-fired units: <i>1,750 MW</i> 1 solar power system: <i>1.1 MW</i> 1 wind turbine unit (known as Lamma Winds): <i>0.8 MW</i> Other small-scale RE installations: <i>0.1 MW</i> 5 oil-fired gas turbine units (for peak-logging): <i>555 MW</i>	TOTAL 3,402 MW
Transmission and distribution network	High-voltage circuit length: <i>445 km</i> Medium-voltage circuit length: <i>4,183 km</i> Low-voltage circuit length: <i>2,226 km</i>	TOTAL 6,853 km
Operations	Number of customers: <i>~586,000</i>	Electricity sold: <i>9,941 million kWh</i>
Workforce	Number of permanent employees: <i>1,690</i>	Number of contract employees: <i>160</i>
Economic contribution	Total capital expenditure: <i>\$5,734 million</i>	Distributable income: <i>\$2,830 million</i>

Notes: Reported figures may not add up to the total due to rounding.





Sustainability Governance

HKEI strives to operate a sustainable and responsible business in line with the principles of openness, integrity and accountability. Our approach to sustainability governance is built on a robust foundation of corporate governance and high ethical standards.

Our Sustainability Framework facilitates consistent implementation of sustainability practices in line with the Sustainability Policy and other key corporate policies and business priorities. The framework contains 14 focus-areas representing the most material topics for HKEI and its stakeholders. These have been organised into four strategic pillars based on our business nature with clear interlinkages to the United Nations’ Sustainable Development Goals. The Framework helps us translate our values and commitments into measurable actions and targets that enable consistent monitoring and evaluation of performance and clear communication with stakeholders.

Sustainability Governance Structure



Our commitment to sustainability cascades from the very top of our organisation throughout all levels and departments:

- Accountability for overall sustainability strategy, management, performance and reporting resides with the Board of Directors (the Board).
- The Board has delegated responsibility to its Sustainability Committee for overseeing development and implementation of sustainability initiatives, including reviewing related policies and practices and evaluating sustainability risks and opportunities. The Sustainability Committee also advises the Board on public communications and disclosures concerning the Group’s sustainability performance and environmental and social impacts, including the annual Sustainability Report. The Sustainability Committee’s Terms of Reference is available on our [corporate website](#).
- At management level, the Sustainability Management Committee supports the Sustainability Committee in fulfilling its responsibilities by driving and coordinating the Group’s sustainability efforts and promoting better understanding of sustainability throughout the organisation and value chain. It is chaired by the CEO and meets four times a year to review progress.

In 2022, the following issues were discussed at the Sustainability Management Committee meetings and reported to the Sustainability Committee:

- ▶ Policies and risk management on ESG;
- ▶ Sustainability goals and targets;
- ▶ Climate-related studies and disclosures;
- ▶ Science-based carbon reduction targets;
- ▶ Stakeholder engagement and community investment; and
- ▶ Materiality assessment and sustainability reporting.



As part of our commitment to continuous improvement, we participate in local and global benchmarking initiatives such as the 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) of the HKEX. We have also consistently appeared in the Euronext Vigeo World 120 Index of highest-ranking listed companies for environmental, social and governance (ESG) performance.



Sustainability Framework

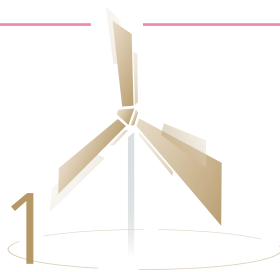
Guided by our **Vision, Missions and Core Values**
 Aligned with our **Sustainability Policy** and other **Key Corporate Policies**

- Commitment** ➤ Operating our business in a responsible and transparent manner while supporting sustainable development and meeting the long-term energy needs of our community

- Objective** ➤ Striving to be a world-class electricity supplier, a good corporate citizen and an employer of choice

- Approach** ➤ Integrating sustainability considerations into our operations and engaging with our stakeholders to create shared value

Strategic Directions



Running a Sustainable Business

Ensuring a strong foundation for supporting sustainable development



Sharing our Planet

Sustaining a beautiful and liveable planet for our future generations



Serving Hong Kong

Making our home a prosperous, smart and caring city



Working with Partners

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

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

Material Areas

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

Material Areas

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

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



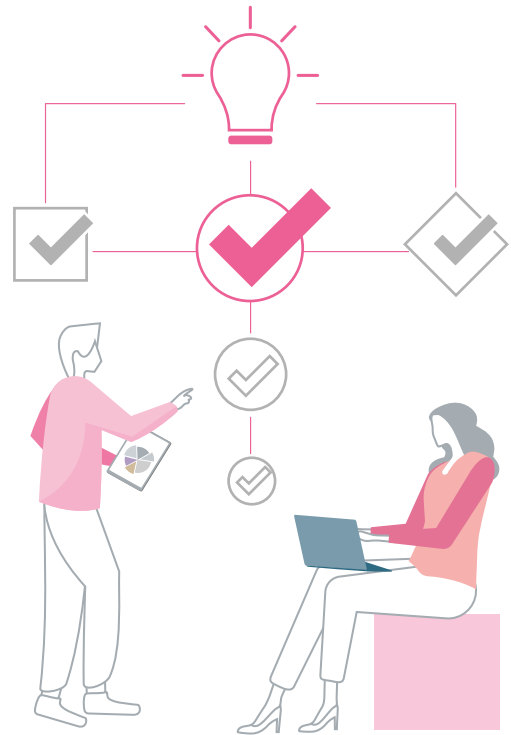
GOAL 13
Climate Action



Materiality

We implement a robust process for updating our materiality assessment on a regular basis. The Sustainability Management Committee and the Sustainability Committee review and endorse the outcomes of this process and receive updates on progress towards relevant goals and targets to evaluate our performance.

In 2022, we conducted an impact materiality analysis to evaluate actual and potential impacts of our operations on the economy, environment and society. A total of 16 material topics were identified, evaluated and prioritised. Some material topics considered previously were consolidated with related topics, while some topics were renamed for better clarity. The outcomes of the materiality assessment serve as good reference for refining our goals and targets, helping us allocate our resources more effectively for creating shared value for the Group and our stakeholders.



2022 Materiality Assessment Process





2022 Materiality Assessment Outcomes

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

Running a Sustainable Business

Positive impact



Main impact generated

- **Business Ethics (1.2)** Promote integrity among employees, suppliers, contractors and other business partners and gain trust from key stakeholders, such as investors and customers.
- **Contingency Preparedness (1.2, 4.2)** Minimise disruption to the local economy/communities from critical events through effective contingency planning.
- **Corporate Governance (1.2, 1.3)** Provide directions on how the organisation achieves its goals, controls risk and benefits its stakeholders, including workers, suppliers, local communities and the natural environment and creates and safeguards long-term shareholder value.
- **Economic Performance (1.1)** Sustain economic growth and social advancement through a reliable power supply and promote sustainable development of Hong Kong through investments such as RE projects.
- **Stakeholder Engagement (1.4)** Promote social and economic development of society, increase public awareness of sustainability and build mutual understanding and trust with stakeholders.
- **Innovation (1.5)** Support transformation of the energy industry and decarbonisation of the economy through ongoing commitment to innovation and collaboration with stakeholders.

Negative impact



Main impact generated

- **Economic Performance (1.1)** Impose economic burden on the society if failing to provide a reliable power supply, such as when there are no adequate provisions for phase-out of coal-fired power.
- **Innovation (1.5)** Impede the advancement of low-carbon transition and the realisation of 2050 carbon neutrality goal, if failing to implement innovation and digital transformation projects.
- **Corporate Governance (1.2, 1.3)** Heighten exposure to legal, regulatory and reputational risks, which in turn impacts shareholder value and by extension the wider community, if effective governance is not in place.
- **Business Ethics (1.2)** Affect the way employees, suppliers, contractors and other business partners do their job and reduce public trust in the fairness and integrity of businesses in the industry, if failing to maintain a high standard of ethics.
- **Stakeholder Engagement (1.4)** Cannot promote ownership from the stakeholders and gain their support towards sustainable development, if failing to communicate effectively.
- **Contingency Preparedness (1.2, 4.2)** May result in catastrophic consequences for workers, local communities and the environment and cause damage to the organisation's assets, if failing to respond promptly to critical incidents.



Sharing our Planet



Main impact generated

- **Climate Change (1.3, 2.1)** Help alleviate climate change, which in turn benefits the whole society, by reducing greenhouse gas emissions through ceasing coal-fired power generation by 2035 and substantially increasing renewable energy applications.
- **Responsible Environmental Management (2.2, 3.2)** Safeguard the well-being of ecosystems and communities by minimising our environmental footprint.
- **Climate Change (1.3, 2.1)** Boost economic activities and provide new employment opportunities and skills development throughout the course of low-carbon transition.
- **Promoting Low-carbon Behaviour (2.3)** Reduce electricity use and costs, and most importantly and ultimately, reduce greenhouse gas emissions.



Main impact generated

- **Climate Change (1.3, 2.1)** Lead to air pollution and anthropogenic climate change, which affects all of society and causes negative impacts on the health, lives, livelihoods and human rights of millions of people, if continuing to rely on coal-fired power generation.
- **Promoting Low-carbon Behaviour (2.3)** Result in potential pushback from the community for the substantial costs involved in decarbonisation initiatives, if no provision for energy saving is provided.
- **Responsible Environmental Management (2.2, 3.2)** Pose harmful environmental and health impacts to residents in proximity to operating sites, if environmental impacts are not managed responsibly.
- **Climate Change (1.3, 2.1)** Pose potential impacts to workers and local communities, e.g. due to closure of coal-fired power plants due to the transition to a low-carbon economy, if there are inadequate provisions for just transition.



Serving Hong Kong

Positive impact



Main impact generated

- **Reliability and Asset Integrity (3.1)** Deliver a reliable and secure power supply to support the economic development of society.
- **Access to Electricity and Affordability (3.1)** Provide affordable, reliable and modern energy services for low-income or vulnerable consumers.
- **Customer Privacy, Health and Service (3.2, 4.2)** Enhance customer satisfaction by delivering high quality services, which in turn helps gain support and cooperation from consumers.
- **Community Relations and Investment (2.3, 3.3)** Encourage and promote effective public, public-private and civil society partnerships, in building an inclusive and sustainable community.

Negative impact



Main impact generated

- **Reliability and Asset Integrity (3.1)** Cause disruptions to the local economy and daily life, due to unplanned power interruption, improper system operations and delay in maintenance.
- **Access to Electricity and Affordability (3.1)** Increase the number of households living under the energy poverty line, if failing to ensure accessible and affordable electricity for those in need.
- **Community Relations and Investment (2.3, 3.3)** Give rise to potential disruptions to project planning, operations and development, due to lack of consultation and collaboration with the community.
- **Customer Privacy, Health and Service (3.2, 4.2)** Lead to leakage/misuse of personal data or unauthorised access to such data, due to insufficient database and network protection, unclear management of personal information or vague database-access rules.

Working with Partners

Positive impact



Main impact generated

- **Occupational Health and Safety (4.2)** Promote greater hazard awareness and change the way people approach risk, prevent illness and promote healthy lifestyles, and hence provide lasting benefits for the workforce, their families and the general public.
- **Human Capital Management (1.2, 4.1)** Promote sustained and inclusive economic growth and facilitate the creation of personal, social and economic well-being through providing stable and decent jobs and expanding the knowledge and skills of colleagues.
- **Sustainable Supply Chain (1.2, 4.3)** Promote social and environmental responsibility throughout the supply networks.

Negative impact



Main impact generated

- **Human Capital Management (1.2, 4.1)** Lead to reduction in job opportunities and negative impacts on operations, if the human capital management is ineffective.
- **Sustainable Supply Chain (1.2, 4.3)** Increase social and environmental impacts, if suppliers fail to adopt adequate management policies and practices.
- **Occupational Health and Safety (4.2)** Increase the risk of work-related illness, injury and death, if failing to implement sufficient health and safety procedures.



Sustainable Development Goals and Targets

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 goals that align most closely with our corporate strategy and business priorities, namely Affordable and Clean Energy (Goal 7), Industry, Innovation and Infrastructure (Goal 9) and Climate Action (Goal 13).



In addition to reporting on our contribution towards achieving these three SDGs, we seek to align our sustainability efforts with other SDGs to make an even greater impact across our value chain.

Progress on Internal Targets on Material SDGs



GOAL 7 Affordable and Clean Energy

Internal targets

Maintain a safe and reliable electricity supply

▶ **Maintain better than 99.999% reliability rating**

Gain access to diverse and cost-competitive liquefied natural gas (LNG) supplies worldwide to alleviate considerable pressure on electricity tariffs due to increased consumption of natural gas

▶ **Commission the offshore LNG terminal in 2022**

Provide subsidies to underprivileged households for adopting energy-efficient electrical appliances

▶ **Subsidise 4,000 households by 2023**

Increase the use of RE

▶ **Increase aggregate electricity generated from RE sources of HK Electric and its customers to over 6 GWh/year by 2023**

Provide free energy audits for non-residential customers and subsidies to building owners for implementing energy efficiency enhancement projects

▶ **Complete 1,000 audits and subsidise 500 buildings by 2023**

Status in 2022



Achieved

A supply reliability rating of >99.9999% was achieved in 2022.



In progress

Installation of terminal topside structure and equipment and the sub-sea pipeline to LPS had been completed. Testing and commissioning was in progress. Due to unexpected challenges arising from logistical issues in 2022, operation of the terminal had been postponed to mid-2023 and the target commissioning year would be revised from 2022 to 2023.



In progress

~3,200 households had received subsidies as at the end of 2022.



Achieved

Aggregate electricity generated from the RE sources was over 8 GWh in 2022 and the target aggregate electricity generated would be revised from over 6 to over 9 GWh/year.



In progress

840 audits had been completed and subsidies approved for 450 buildings as at the end of 2022.

9 INDUSTRY, INNOVATION
AND INFRASTRUCTURE**GOAL 9**
Industry, Innovation
and Infrastructure**Internal targets**

Enhance asset integrity (in the face of climate change)

- ▶ Complete anti-flooding enhancement for low-lying substations within 100 m of Hong Kong Island northern coastal line by 2021

Deploy smart meters

- ▶ Complete full-scale deployment by 2025

Status in 2022**Achieved**

It was completed in 2021 and the status had been disclosed in the Sustainability Report 2021.

**In progress**

The roll-out of smart meters was ~40% complete as at the end of 2022.

13 CLIMATE
ACTION**GOAL 13**
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_{2e} per kWh by 2023

Engage stakeholders on combating climate change and adopting low-carbon lifestyles

- ▶ Organise 1,000 education and promotion activities by 2023

Build capacity in HK Electric's supply chain

- ▶ Update "Code of Practice for Suppliers" to address climate change concerns in 2020

Status in 2022**In progress**

L10 and L11 were commissioned in February 2020 and May 2022 respectively. For L12, major civil and E&M installation works had been substantially completed and operation is due to commence in early 2024 and its target commissioning year would be revised from 2023 to early 2024.

**In progress**

Average emissions amounted to ~0.68 kg of CO_{2e} per kWh in 2022.

**Achieved**

>1,000 activities had been organised as at the end of 2022 and the target number of activities would be revised from 1,000 to 1,200.

**Achieved**

It was completed in 2020 and the status had been disclosed in the Sustainability Report 2020.



Other Sustainability Targets

HK Electric plays a crucial role in supporting Hong Kong’s economic and social development. As a responsible business, we recognise our duty of care for the environment, the community, our employees and other stakeholders. To affirm these commitments, we regularly review our performance and set specific goals and targets.

Outlined below are the targets we set in the areas of Environment, Health & Safety, and Partners & Community, in addition to those in support of the SDGs. More specific targets on helping Hong Kong achieve carbon neutrality can be found in the chapter on [Running a Sustainable Business](#).

Status of Targets for 2022

ACHIEVED  **Environment**

- ✔ Collect at least 80,000 m³ 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 electric vehicle (EV) mileage in the fleet mileage in 2022 as compared to 2021
- ✔ Obtain at least one Wastewi\$e Certificate and one Energywi\$e Certificate under the Hong Kong Green Organisation Certification Scheme in 2022

ACHIEVED  **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

2022 **2023+**

ACHIEVED  **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 non-governmental organisations (NGOs), schools, and small and medium-sized enterprises (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% of the total number of items for general office commodity items group in 2022



Targets for 2023 and Beyond



Environment

- ◆ Collect at least 80,000 m³ of plant effluent and rain water for reuse at LPS in 2023
- ◆ Plant at least one more species of native trees or shrubs at LPS in 2023 to support biodiversity
- ◆ Reduce food waste at the canteen of LPS in 2023 as compared to 2022
- ◆ Reduce vehicle fleet's fuel usage in 2023 as compared to 2022
- ◆ Increase the proportion of EV mileage in the fleet mileage in 2023 as compared to 2022
- ◆ 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 2023
- ◆ Reduce total electricity consumption, water consumption, paper consumption and waste generation at 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 2019
- ◆ Improve the average Power Usage Effectiveness of two data centres at Electric Centre and Electric Tower by 5% in 2024 as compared to 2019
- ◆ Implement retro-commissioning in a building at LPS by 2023 and in Hongkong Electric Centre by 2024



Health & Safety

- ◆ Achieve a reduction in the Lost Time Injury Frequency Rate (LTIFR) in 2023 as compared to the average over the previous three years
- ◆ Achieve a reduction in the Lost Time Injury Severity Rate (LTISR) in 2023 as compared to the average over the previous three years
- ◆ Obtain at least three Excellent Class IAQ Certificates under the Government's IAQ Certification Scheme in 2023
- ◆ Organise a series of health talks and interest classes to enable our employees to maintain a healthy and balanced lifestyle in 2023



Partners & Community

- ◆ Fulfil all our customer service pledges, embracing supply reliability, speediness of provision of supply and other customer services, including emergency services, in 2023
- ◆ Complete at least 200 audits under Smart Power Energy Audit in 2023, particularly for NGOs, schools and SMEs
- ◆ Confirm energy efficiency enhancement project subsidies for at least 100 buildings in 2023, including residential buildings, commercial buildings, NGO premises and schools
- ◆ Launch a promotion programme on electronic billing and the HK Electric App in 2023 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 2023 to enhance plant reliability and availability, and to facilitate development of young engineers
- ◆ Support 12,000 senior citizens through various community programmes in 2023
- ◆ Engage 45,000 fans via our corporate and campaign Facebook pages in 2023
- ◆ Conduct a briefing on environment, social responsibility and cybersecurity aspects to selected suppliers in 2023
- ◆ Key divisions/departments perform fraud-risk assessment by 2024 to identify areas prone to fraud risks and enhance employee awareness of fraud risks





Running a Sustainable Business

Sharing
our Planet

Serving
Hong Kong

Working
with Partners

Investing for the Future







Running a Sustainable Business

Overview

At HKEI, we strive to fulfil our Vision, Missions and Core Values by integrating sustainability into every aspect of our operations as outlined in the Sustainability Policy and Sustainability Framework. Our business is carried out both by and on behalf of our stakeholders, including shareholders, employees, business partners, customers, local communities and authorities, among others. We prioritise consistent, open and effective communication to better understand our impacts, respond and adapt to developing in a rapidly changing world and deliver shared value.

Good corporate governance and sustainable business practices go together. Our corporate governance framework is aligned with the Corporate Governance Code from the Listing Rules of the Hong Kong Stock Exchange. Our commitment to upholding the highest ethical standards throughout our value chain underpins the efficiency and transparency of our operations, attracts investment, enhances shareholder value and helps protect the rights of all stakeholders.



As a public utility and responsible corporate citizen, it is incumbent upon HKEI to support and facilitate a fair and inclusive transition to a low-carbon economy. Recognising the impact of rising energy costs on vulnerable members of our community, we consider that technological improvements and innovation will be crucial for successfully navigating the low-carbon transition and managing climate-related risks. We nurture talent to lead our innovation efforts and foster a corporate environment that encourages creative problem-solving.

Key Corporate Policies

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

Corporate governance policies

- ▶ Anti-Fraud and Anti-Bribery Policy
- ▶ Board Diversity Policy
- ▶ Code of Conduct
- ▶ Director Nomination Policy
- ▶ Holder of Share Stapled Units Communication Policy
- ▶ Information Security Policy
- ▶ Media, Stakeholder Engagement and Donation Policy
- ▶ Personal Data Privacy Policy
- ▶ Policy on Inside Information and Securities Dealing
- ▶ Whistleblowing Procedure

Sustainability policies

- ▶ Sustainability Policy
- ▶ Code of Practice for Suppliers
- ▶ Complaints Handling Policy
- ▶ Corporate Security Policy
- ▶ Customer Services Policy
- ▶ Environmental Policy
- ▶ Health & Safety Policy
- ▶ Human Rights Policy
- ▶ Learning and Development Policy
- ▶ Quality Policy



Sustainable Long-term Growth

We strive to excel in the power business by supporting sustainable development of Hong Kong and delivering long-term value to our investors through the provision of safe, reliable, clean and affordable electricity. We acknowledge the urgency of reducing greenhouse gas (GHG) emissions to mitigate the worst effects of climate change and we are committed to collaborating with the Government on the best way forward to realise carbon neutrality for our city.

■ *The offshore liquefied natural gas terminal will help enhance the security and cost competitiveness of fuel supply for Lamma Power Station.*



To achieve our **Vision and Missions**,
We are guided by the following 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 in which its citizens enjoy a high quality of life. We are investing in various decarbonisation initiatives, including switching from coal to gas. Our target is to phase out coal-fired power generation by 2035. We are also introducing smart meters throughout our distribution network, promoting energy efficiency and conservation (EE&C) and renewable energy (RE) in the community, as well as facilitating widespread adoption of electric vehicles (EVs).

Steady Growth in our Asset Base

We will continue to undertake pragmatic investments in power generation, transmission and distribution that align with our business goals. These 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 by prioritising coal-to-gas transition, we fully support the Government's plan to achieve net zero for electricity generation in Hong Kong before 2050. In addition to promoting the development of a large-scale offshore wind farm, we are actively 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 to safeguard the affordability of electricity supply for our customers while delivering sustainable returns for our investors.



Corporate Governance

As the highest governance body of the Group, the Board oversees and is accountable for the Group's corporate governance framework, which addresses a broad range of ESG topics that are material to our business. In accordance with the Board Diversity Policy, members of the Board contribute an appropriate balance of skills, experiences and perspectives.

The Board is assisted by its Sustainability Committee and Audit Committee in overseeing implementation of the Sustainability Framework and ensuring that effective risk management and internal controls are in place. These committees are in turn supported by dedicated committees chaired by the CEO, namely the Sustainability Management Committee and the Risk Management Committee. Please refer to our [corporate website](#) for the Terms of Reference for the Board Committees.

In accordance with our Anti-fraud and Anti-bribery Policy, the Board is accountable for overseeing relevant initiatives across the Group, including risk management, internal controls, communication, training and monitoring. Executive Directors support the Board to ensure effective implementation of these initiatives, including investigating alleged/suspected fraudulent or corrupt activities.

In 2022, there were no instances of material non-compliance with relevant laws and regulations related to ESG issues for HKEI. There were also no ongoing or concluded legal cases regarding corrupt practices brought against HKEI or its employees.

For more information on our corporate governance and risk management, please refer to our [Annual Report](#).





Key Governance Practices



Risk management

- **Enterprise Risk Management Framework** to identify, assess, mitigate and monitor key business, financial, operational and compliance risks, including material ESG risks;
- **Compliance Framework** to ensure company-wide compliance with legal and regulatory obligations; and
- **Crisis Management Plan** supplemented by the contingency plans of individual business units to ensure business continuity and effective response to emergencies.



Business ethics

- **Code of Conduct** supplemented by comprehensive human resources policies and procedures to provide guidance for employees on ethical issues;
- **Anti-fraud and Anti-bribery Policy** and **Fraud Prevention and Awareness Policy** supplemented by a biannual anti-bribery and anti-corruption control assessment to minimise exposure to frauds or bribery risks;
- **Human Rights Policy** to uphold human rights across the organisation and encourage stakeholders throughout the value chain to protect and promote human rights;
- **Intellectual Property Policy** and **Copyright Guidelines** to protect the organisation's intellectual property and avoid infringing the rights of third parties;
- **Whistleblowing Procedure** to provide channels and guidance for employees and other stakeholders to report instances of suspected impropriety, misconduct or malpractice; and
- **Code of Practice for Suppliers** to encourage suppliers to uphold high standards of business conduct related to ethics, human and labour rights, health and safety, environmental protection and climate action, and cybersecurity.

Risk Management

Comprehensive and proactive risk management is integral to our corporate culture. Responsibility for risk management cascades from the Board throughout all levels of our organisation. Our Enterprise Risk Management Framework provides top-down and bottom-up approaches to identifying, assessing, mitigating and monitoring key risks in a proactive and structured manner, including material ESG risks such as climate-related risks. In 2022, we conducted a comprehensive review of potential ESG risks to the Group and refined our associated risk control measures.

We have a Crisis Management Plan (CMP) in place to ensure business continuity and effective response to emergencies. Under certain scenarios, a Crisis Management Team may be established to execute the CMP. We conduct regular drills to strengthen the efficacy of our crisis plans and procedures. For example, in 2022, we conducted a drill to test our emergency response in the event of a serious leak from the high-pressure subsea natural gas pipe supplying LPS.

Business Ethics

We continuously evaluate, update and refine our management approach to business ethics to ensure that our corporate governance system is effective and robust. In 2022, we launched a company-wide Anti-Fraud Promotion Programme to raise employees' awareness of this important issue, including fraud risk management initiatives and a new Anti-Fraud Tips Corner on our intranet portal for information sharing.

We reinforce the Group's high ethical standards through ongoing communication and training on related policies and procedures for key stakeholders, including members of the Board, employees and business partners. All employees need to attend mandatory training on anti-corruption and the Code of Conduct. There is also special training for new employees as part of their orientation.

In 2022, we conducted a range of relevant training and events. For example, 267 employees participated in anti-discrimination training to raise awareness about relevant legislation and internal policies and guidelines. Members of the Board were provided with training on anti-corruption topics. Webinars on the Prevention of Bribery Ordinance and Managing Integrity at the Work Site were attended by 293 and 240 employees, respectively. We also ensured that all contractors and suppliers were made aware of our anti-corruption policies and procedures by incorporating this information into our vetting and registration procedures.



Climate-related Disclosures

Climate change is undoubtedly one of the greatest challenges facing humanity. The World Economic Forum’s Global Risks Report 2022 ranks climate action failure as the top long-term threat, giving rise potentially to the most severe impacts over the next decade. However, the prospect of transitioning to a low-carbon economy also presents tremendous opportunities. With foresight, early action and transparency we can transform potential risks into opportunities for our business, customers and community.

We assess and manage climate-related risks and opportunities with reference to local and global best practices, such as recommendations from the international Financial Stability Board’s Task Force on Climate-related Financial Disclosures (TCFD) and relevant guidance from HKEX. In 2022, we conducted technical studies to test

our organisation’s climate resilience. We also initiated a scenario analysis to assess the potential impacts of climate-related risks and opportunities to our business, which is expected to be completed in 2023. We will continue to review and build upon our work and conduct further studies as and when necessary to improve our climate-related management approach and disclosures.

This section of the report provides an overview of how we manage climate-related risks and opportunities in four thematic areas of the TCFD recommendations: Governance, Strategy, Risk Management, and Metrics and Targets.



Governance

The Board is assisted by its Sustainability Committee in carrying out its responsibility for overseeing the Group’s Sustainability Framework, including climate issues. At management level, the Sustainability Management Committee, chaired by the CEO, supports the Sustainability Committee on development and implementation of sustainability initiatives, including assessing and managing climate-related risks and opportunities.

Communication and transparency is key for supporting both internal and external stakeholders to make informed decisions about our business. The General Manager

(Corporate Development) provides regular updates to the Sustainability Management Committee and senior management on climate-related matters. In accordance with a framework agreement concluded in 2021, HK Electric continues to collaborate with State Grid Shanghai Municipal Electric Power Company and State Grid International Development Company Limited on enhancing knowledge about energy and carbon issues and technologies.

For more information about our sustainability governance, please refer to the chapter on [Our Business and Approach to Sustainability](#).



Overview

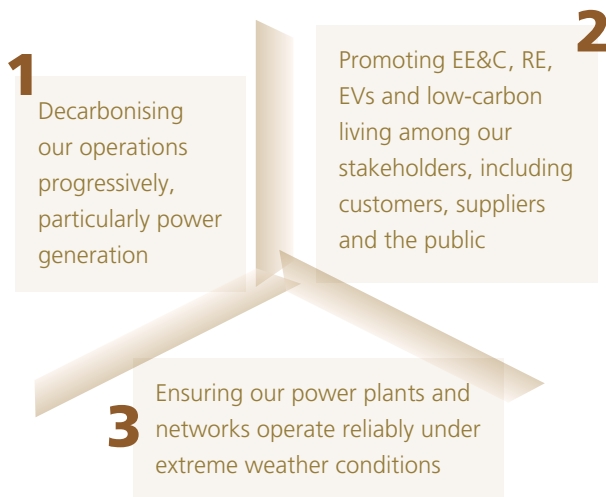
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Strategy

Our approach to managing transition and physical risks associated with climate change focuses on three key strategies:



The megatrend of transitioning to a low and ultimately zero-carbon economy poses both risks and opportunities for our business, particularly in the context of helping Hong Kong achieve its target of carbon neutrality before 2050. Our current SCA with the Government, which is valid from 2019 to 2033, provides short-term stability for the Group in terms of financial and service regulation. However, the Government's policies on air quality, decarbonisation and electricity market reform, among other factors, may impact the Group's performance in the medium to long term. Adoption of new and emerging decarbonisation technologies may involve extra costs and have implications for system reliability. There may also be reputational risks associated with failing to meet rising expectations from stakeholders and the public about taking decisive action on climate change.

We contribute to decarbonisation in Hong Kong by managing the direct impacts of our operations and seeking to influence indirect impacts throughout our value chain. We are making substantial progress on coal-to-gas transition and increasing RE. Since 2017, we have commissioned two more gas-fired units and retired three coal-fired units and one old gas-fired unit. We will continue to phase out coal-fired generation progressively, with the objective of ceasing coal-fired operations entirely by 2035.

At the same time, we are exploring new local RE sources and pathways to other advanced zero-carbon energy solutions such as green hydrogen. On top of our existing 0.8-kW wind turbine and 1.1-MW solar power system on Lamma Island, we are working to install additional solar panels equivalent to an extra installed capacity of 1.2 MW on the roof-tops of our existing premises by 2023. We are also planning to build an offshore wind farm located southwest of Lamma Island. This new project, if approved, is expected to contribute around 150 MW of additional RE generation capacity.

For more information on our decarbonisation efforts, please refer to the chapters on [Sharing our Planet](#) and [Serving Hong Kong](#).

Extreme weather events and gradual changes in weather patterns caused by climate change pose acute and chronic physical risks that could result in considerable financial impacts to our business. 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. To mitigate these risks, we continue to build climate resilience into our power infrastructure and operations in a strategic and systematic manner. A working group chaired by our Operations Director meets regularly to review the organisation's resilience to extreme weather events. We conduct regular climate resilience studies, ensuring adequate measures are in place to safeguard critical power infrastructure against climate hazards, such as flooding, and extreme heat and wind, with a progressive and adaptive approach, up to 2100.



■ Cable tunnels help protect our cables from adverse weather.



Key Adaptation Measures to Climate-related Physical Risks

Design guidelines and risk assessment

- ▶ Updating design guidelines for generation, transmission and distribution facilities, covering extreme sea level, rainfall, rise in ambient temperature and wind conditions, based on equipment design life and climate change projection that adopts selected Representative Concentration Pathway Levels, progressively and adaptively, up to 2100;
- ▶ Studying possible overtopping wave scenarios at our facilities during super-typhoons and formulating adaptation measures;
- ▶ Conducting risk assessments for substations subject to land-slide risk; and
- ▶ Reviewing and enhancing safety precautions for employees working under adverse weather conditions.

Enhancement measures

- ▶ Installing anti-flooding systems and enhancing flood walls at LPS;
- ▶ Installing tidal meters and wind sensors at LPS to monitor tidal level and wind speed, and sharing the 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;
- ▶ Installing flood 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 at substations during storm surge;
- ▶ Improving cable entry sealing at substations to prevent flooding of cables due to water seepage inside cable trenches;
- ▶ Converting 11-kV open-ring distribution feeders to 22-kV closed ring feeders that have more margin and greater resilience against high ambient temperatures; and
- ▶ Providing advice to property management in commercial and residential buildings with high flooding risk on installing anti-flooding systems in their switch rooms.



Emergency preparedness

- ▶ Arranging typhoon emergency teams on standby to undertake operations and repairs for different severity levels;
- ▶ Establishing a dedicated IT reporting platform with mobile applications for effective coordination of emergency response; and
- ▶ Decentralising storage of critical spares.



Overview

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Risk Management

Our Enterprise Risk Management Framework comprises top-down and bottom-up approaches to identifying, assessing, mitigating and monitoring key risks, including climate-related risks, at all levels of our organisation in a pro-active and structured way. Climate-related risks, including transition and physical risks, are in our corporate top risk register and reviewed regularly by the Sustainability Management Committee and Sustainability Committee, as well as the Risk Management Committee and Audit Committee.

For more information about our Enterprise Risk Management Framework, please refer to our [Annual Report](#).



Metrics and Targets

We disclose information about our GHG emissions inventory and performance in our annual Sustainability Report and in our response to the annual survey from CDP—an international non-profit organisation that provides leadership for disclosure in this field. Since 2021, our GHG accounting inventory has been expanded to include major sources of indirect (Scope 3) emissions in accordance with ISO 14064. In 2022, we received a “B” score from CDP, which indicates that we demonstrate evidence of managing our climate impacts.

During the year, we updated our science-based carbon reduction target and committed to reducing Scope 1 GHG emissions by 68.4% per kWh of electricity generated by 2035 from a 2019 base year. This target has been validated and approved by the Science Based Targets initiative, 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.

We have also developed internal targets measuring our contribution towards three United Nations’ SDGs that are considered most material for our business: Goal 7 (Affordable and Clean Energy), Goal 9 (Industry, Innovation and Infrastructure) and Goal 13 (Climate Action). More information about these targets and our other sustainability-related targets can be found in the chapter on [Our Business and Approach to Sustainability](#).

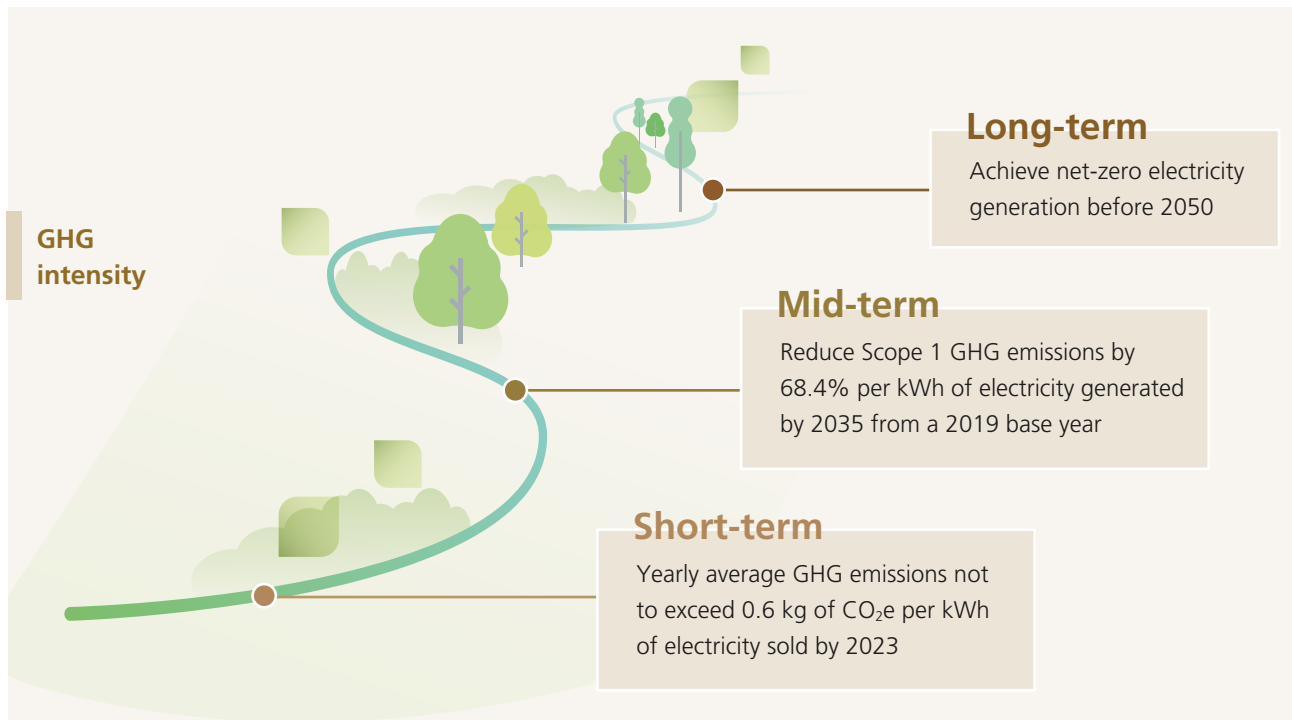


HK Electric -
Your Partner for a
Low-carbon Future





Key Targets on Carbon Reduction



Decarbonisation initiatives

- Commission three new gas-fired units according to our 2019-2023 Development Plan (the first and second units were commissioned in 2020 and 2022, respectively, and the third one is due to commence operation in early 2024);
- Commission an offshore LNG terminal (in partnership with CLP Power) by 2023;
- Cease coal-fired power operations by 2035;
- Install additional solar panels equivalent to an extra installed capacity of 1.2 MW on the roof-tops of our facilities by 2023;
- Increase aggregate electricity generated by RE sources of HK Electric and its customers to over 9 GWh/year by 2023;
- Develop an offshore wind farm southwest of Lamma Island with an installed capacity of around 150 MW, subject to government approval; and
- Explore the feasibility of introducing other zero-carbon energy solutions such as green hydrogen.

[HK Electric Expands its Solar Power Systems](#)





Stakeholder Engagement

Guided by our Media, Stakeholder Engagement and Donation Policy, we engage in open and effective dialogue with key stakeholder groups representing people who are impacted by and/or who have influence over our direct operations and value chain. Our formal stakeholder engagement process supports sustainable development of our business by providing comprehensive information about stakeholders' concerns and expectations regarding potential and actual impacts of our business on the environment, society and economy. The Sustainability Management Committee will review our stakeholder engagement performance twice per year.

In 2022, we launched a new stakeholder engagement digital platform with data analytics to help business units strategise, plan, record and review stakeholder engagement activities more effectively. The new platform utilises a central data repository on SharePoint featuring data input menus and Tableau dashboards for progress monitoring and reporting, data insights and planning.



Engaging with our Stakeholders

Stakeholder groups	Why are their views important?	Usual engagement channels
Customers	Electricity is a daily necessity for them.	1 2 3 4 5 6
Shareholders	We are accountable to their interests.	1 2 6
Employees	We have a responsibility to care for the well-being of our employees whom we depend on to ensure business success.	1 2 3 4 5 6
Business partners	Common values are important for sustainable business relationships.	1 2 3 5 6
Local communities	We are committed to giving back to our city and to minimising potentially harmful impacts.	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 businesses.	1 2 4 6





Examples of Engagement Activities in 2022

Below are some examples of our stakeholder engagement activities during the year and more examples can be found in other chapters of this report.

Media briefing session about our latest development



In-house education campaign on sustainability

The “Sustainability for All” in-house education campaign was launched in 2020. In 2022, it continued to be popular with our colleagues who attended themed talks on sustainability and climate change, as well as other topics such as community service, green procurement and green architecture. Best practices on sustainable development were also shared with colleagues, encouraging and energising them to come up with new ideas and take action.

Environmental Climate Index survey

We regularly seek employees’ feedback on the organisation’s environmental culture and performance. In 2022, we conducted a company-wide Environmental Climate Index (ECI) survey as part of our ongoing performance monitoring and improvement programme. The survey findings facilitate comparison of performance over time, thereby allowing us to glean valuable insights for formulating improvement action plans.

In 2022, our ECI score exceeded the result from our previous survey in 2019. This demonstrates our commitment to nurturing a robust culture of environmental protection and strong environmental performance.

Tours, site visits and workshops

Face-to-face activities continued to be suspended for most of 2022 following the impact of the fifth wave of COVID-19. When restrictions were gradually relaxed, we hosted a mix of activities to foster mutually beneficial relationships with various stakeholder groups, including tours, site visits and workshops. In addition to hosting members of our Customer Liaison Group in-person at LPS, we also arranged virtual tours for various others. During the summer, primary school students attended a workshop to learn the basics of maintaining a reliable electricity network. Our engineers also hosted a virtual tour of our distribution substations for the students.



Members of HK Electric Customer Liaison Group visit Lamma Power Station.



Engagement on Just Transition

“Just transition” has become a central theme in ongoing debate and discussion about transitioning to a low-carbon economy and achieving carbon neutrality. At HKEI, we support a fair and inclusive transition and strive to enhance the psycho-social well-being of our employees and other stakeholders via various initiatives, including regular communication sessions and dialogues. As set out in our Human Rights Policy, we respect human rights throughout our value chain and influence our business counterparts to do the same.

With employees

The strong commitment of our senior management team to engaging directly with colleagues at all levels is integral to our corporate culture. During the transition from coal-fired to gas-fired generation, we will ensure all workers employed in coal-fired generation will be retained and either retrained for working in our gas-fired plant or redeployed to other positions. This commitment has been communicated to relevant employees through various channels, particularly the Joint Consultation Committee, which is one of our key communication channels between the management and employees.

With suppliers

Our Code of Practice for Suppliers sets out high standards on business ethics, including respecting human rights. Our Tier 1 suppliers are required to submit their corporate social responsibility performance for our review. Major suppliers and contractors are required to register under our Recognised Tenderers Register (RTR) before tendering for our contracts. For entry, suppliers have to submit documents including financial reports and information about their sustainability performance. In 2021, we required all active suppliers in one of the categories of our RTR to respond to our Sustainable Procurement Survey. We have used this information to further evaluate suppliers' performance and to guide decision-making on how to enhance our sustainable procurement processes and procedures in future.

With customers

We recognise that the rising fuel price for cleaner energy will have certain impacts on our customers. We have a suite of funding and service schemes, known as Smart Power Services, supporting our customers to use electricity smartly and enhance energy efficiency. We are also deploying smart meters for all our customers, helping them to further optimise their energy use. There are various subsidies under the Smart Power Care Fund to care for those in need. Where necessary, we also provide relief measures to alleviate the tariff burden on small businesses and underprivileged families. More information can be found in the chapter on [Serving Hong Kong](#).

With communities

We consider green education an important engagement approach to encourage the public, particularly younger generations, to embrace energy efficiency and low-carbon lifestyles. Our Happy Green Campaign, supported by the Smart Power Education Fund, organises various green educational activities. More information can be found in the chapter on [Sharing our Planet](#).



We also care about the interests of relevant stakeholders who are impacted by our major decarbonisation projects. For example, Stakeholder Liaison Groups have been established for the offshore LNG terminal project and proposed offshore wind farm project comprising representatives from community organisations, environmental groups, academic institutions, fishermen organisations and others. Both liaison groups were convened twice during the year for participants to contribute their ideas, expertise and feedback.



Innovation

Innovation is about leveraging technology and new ways of working to achieve better outcomes for our business and our stakeholders. At HKEL, we recognise this is essential for delivering on our Sustainability Framework and charting a sustainable course for our business in a rapidly changing world. We strive to innovate continuously by supporting our colleagues to explore both incremental improvements and major breakthroughs. We also seek out opportunities for collaboration with independent research institutes, universities and business partners.

Our Innovation Steering Committee, which is led by the CEO, nurtures ideas and solutions for streamlining work processes, improving performance and enhancing customer experiences, such as mobile apps, big data and artificial intelligence (AI). The committee is supported in its work by internal policies and programmes promoting innovation and new technologies in line with our sustainability targets.

In recognition of our continuous efforts to promote innovation and related technological achievements, HK Electric was ranked among the top 20 Innovative Companies at the Corporate Innovation Index Awards Presentation Ceremony and Forum 2022. This is a joint initiative from the Asia-Pacific Institute of Business of the Chinese University of Hong Kong and the Hong Kong General Chamber of Commerce.

Innovation Culture

Our employees are in the best position to leverage their deep understanding of our business systems and processes to identify areas for improvement. We empower our colleagues to foster innovation through training, education and career development. In 2022, we updated our employee performance evaluation criteria to provide greater emphasis on forward thinking, innovation and continuous improvement. During the year, 35 employees attended two training programmes on Inventive Problem Solving and Design Thinking and applied their learning from these courses to serve as innovation advocates in their respective business units.

Our innovation culture is supported by an online community called Inno Hub, which brings together colleagues representing a diversity of roles and perspectives to exchange ideas. Since its launch in 2018, Inno Hub has captured over 300 new ideas at various stages of development from ideation and selection to scoping and delivery. Some business units have established smaller and more focused groups, such as the TechWatch Team and Innovation Forum, dedicated to identifying and advancing good ideas within their specific business areas. We also plan to launch an Innovation Zone in 2023 to provide a relaxed environment for colleagues to engage with each other, sparking creativity and collaboration.

In 2022, we continued to make investments in digital technology to facilitate operational efficiency and introduced over 10 innovation initiatives across the business. As at end 2022, colleagues from various departments have successfully developed and launched 190 mobile apps using our information technology platform, eConnect. We encourage colleagues throughout our organisation as well as our business partners to download and utilise these apps as needed.



We organise a theme talk on "How to Drive Innovation in Corporation – From Engineering to Innovation" to promote innovation among our employees.



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Innovation

Award Scheme to Incentivise Innovation

Building on the success of our Continuous Safety Improvement and Innovation Scheme in 2020, the Innovation Steering Committee launched in 2021 the HK Electric Innovation Award 2021/2022 with the objective of encouraging employees to generate creative solutions for adding value to our business. We have received 38 entries across four categories: Large-scale Innovation Projects, Medium and Small-scale Innovation Projects, Application of Market-ready Technologies, and Process Re-engineering and/or Digital Transformation.

In 2022, the entries were assessed on their merits for benefit to the business, innovation and potential for further application. After three rounds of judging, four projects received Gold awards, four projects received Silver awards and three projects received Bronze awards.



Innovation in Action



In-house solutions to improve supply reliability

HK Electric has robust backup systems in place but there are certain circumstances, such as a scenario referred to as an N-1-1 contingency which happens when two faults occur at the same feeder group of the 11-kV distribution network and our backup systems may not be sufficient to restore power supply. The System Control Department and Information Technology Division have joined forces to tackle this issue, developing an innovative in-house solution leveraging integration of AI data analytics and sophisticated computer systems to provide real-time optimisation measures for service restoration. The new approach has proven successful and the programme has now been deployed to our Distribution Management System.



Remote circuit breaker monitoring system

In 2022, our team of electrical engineers developed and patented a remote circuit breaker monitoring system to prevent mechanism failures in medium-voltage circuit breakers. The innovative approach monitors, assesses and identifies problems with medium-voltage circuit breakers. It employs statistical analysis to assist our team in creating a maintenance priority schedule that helps prevent equipment failures.



Upgrading backup systems with 11-kV mobile switchgear

In 2022, we installed an 11-kV mobile switchgear system to improve response times during emergency situations. The new system can significantly reduce unplanned customer minutes lost and average grid supply restoration time in case of failures of circuit breakers. It does not require regular refuelling and is considerably quieter, cleaner and more environmentally friendly than traditional methods of backup power supply, such as mobile generators. As a result, it is particularly well-suited for deployment in public settings such as hospitals, schools and convention centres.



Adopting AI for substation monitoring

Maintaining the health of our equipment in more than 4,000 distribution substations is critical to ensuring the reliability of our electricity supply. In collaboration with an industrial partner, we are currently experimenting with an AI-based system to identify and address potential problems in our distribution substations before they reach the point of equipment failure causing supply interruptions. Thermal cameras in combination with AI analysis detect abnormalities and raise the alert to our maintenance teams and System Control engineers.





Running a
Sustainable Business

Sharing
our Planet

Serving
Hong Kong

Working
with Partners

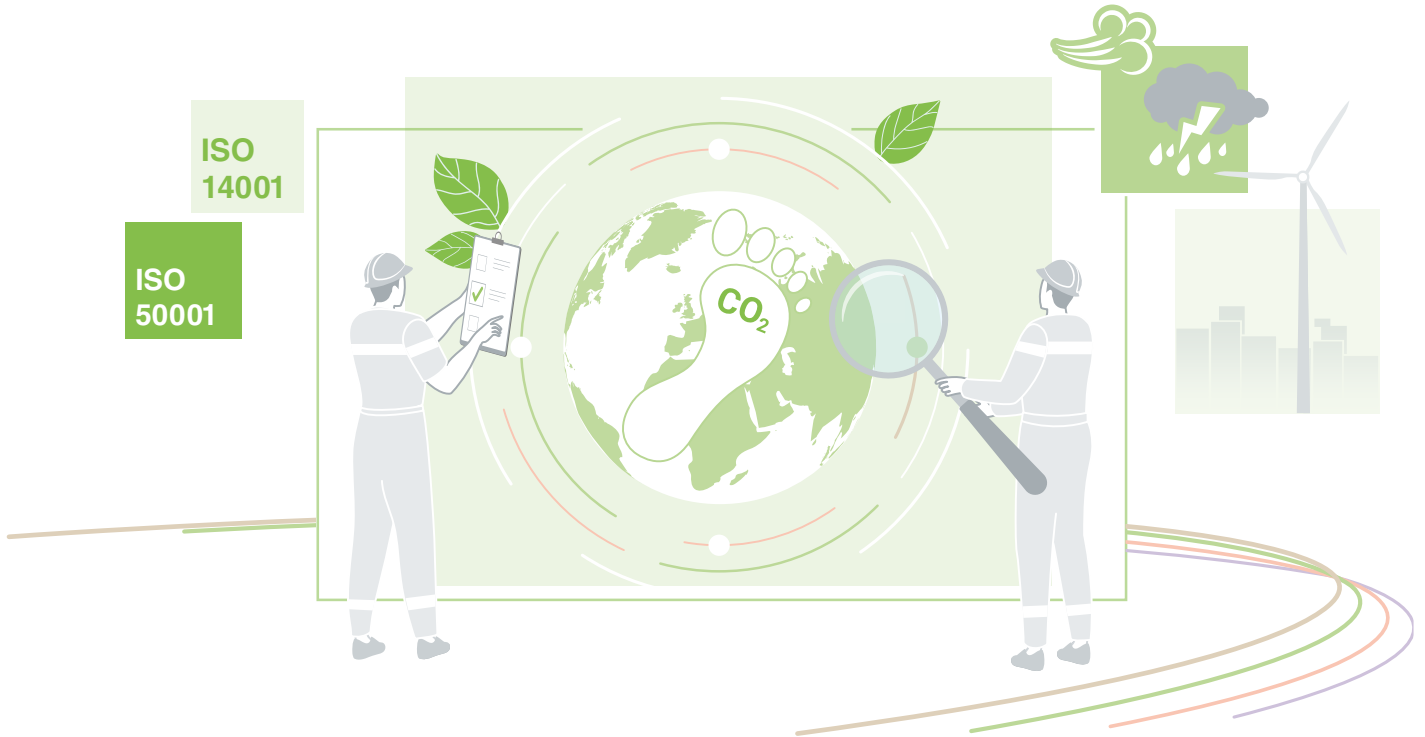
Cultivating a Greener World





Sharing our Planet

Overview



HK Electric recognises that the power sector has a crucial role to play in achieving long-term local and global decarbonisation goals. We strive to minimise our environmental impacts and endeavour to integrate environmental considerations into all aspects of our business. To this end, our priorities are to reduce our carbon footprint and improve local air quality. We wholeheartedly support the Government's carbon reduction targets and overall climate and environmental policies, not least by ensuring that our operations fully comply with relevant laws and regulations.

Our strategy and management approaches for safeguarding the environment are articulated in our Environmental Policy, which focuses on climate change, air quality, resource efficiency, waste management and biodiversity, among other topics. The policy outlines our commitment to protecting the environment and supporting sustainable development by addressing both direct and indirect impacts of our business, including work with suppliers, contractors, and other business partners to promote environmental stewardship.

We manage environmental risks as part of our Enterprise Risk Management Framework, including climate change, which has been identified as one of the principal risks to our business. We work systematically to prevent or mitigate adverse environmental impacts through environmental impact assessments, implementation of appropriate mitigation measures, and regular environmental monitoring and audits. We are also monitoring possible application of upcoming zero-carbon electricity-generation technologies in our business.

HK Electric's Environment Committee coordinates full integration of environmental considerations into all aspects of business planning and operations. We have in place robust Environmental Management Systems and Energy Management Systems certified to international standards ISO 14001 and ISO 50001, respectively. Implementation of these management systems is monitored through regular surveillance audits conducted by a third-party. In 2022, we formulated 61 management plans to improve our environmental and energy performance with reference to measurable targets.



Climate Action and Clean Air

Management Approach

As global pressure to act on climate change continues to mount, the 2022 United Nations Climate Change Conference (COP 27) that took place in Egypt in November has placed renewed emphasis on decarbonisation by increasing low-emission and RE sources, facilitating just energy transition partnerships and other cooperative actions.

HK Electric is committed to reducing carbon emissions across its entire value chain. We support the Government's zero-carbon electricity goal and other strategic partnerships to achieve carbon neutrality before 2050, including the Carbon Neutrality Partnership led by the Environment Bureau, the Net-zero Carbon Charter (previously known as Low Carbon Charter) led by the Business Environment Council, and Hong Kong Green Building Council's Advancing Net Zero programme. In 2022, we joined the Asian Corporate Coalition for Climate Change Resilience (A4CR) as a steering committee member to support strategic actions on climate resilience.

Our management approach to climate action and clean air is documented in our Environmental Policy. We are mitigating GHG emissions by increasing use of natural gas and RE, phasing out coal-fired generation, exploring zero-carbon generation solutions for the longer term, and facilitating community decarbonisation efforts. Switching from coal to natural gas also contributes to cleaner air and clearer skies for our city. We implement a range of emissions control measures for our coal-fired and gas-fired units to ensure full compliance with statutory emissions targets, and continuously monitor impacts of our operations on air quality.

Detailed disclosure of our climate impact and strategies can be found in our annual response to CDP's Climate Change questionnaire. We keep reviewing and reporting our GHG inventory in line with international standards and best practices. In addition to updating our science-based carbon reduction target in 2022, we continue to monitor physical and transition risks posed by climate change and to build climate resilience into our operations to ensure supply reliability. For more information about our climate-related disclosures, please refer to the chapter on [Running a Sustainable Business](#).



[With Power We Care](#)



Decarbonising Power Generation

In the process of undertaking a complete transition to zero-carbon power, switching from coal to natural gas is a clean and reliable way to reduce GHG emissions and improve air quality. The majority of our \$26.6 billion 2019-2023 Development Plan was allocated to facilitate this switch at LPS, which hosts three new highly efficient combined-cycle gas-fired units, L10, L11 and L12, featuring advanced Selective Catalytic Reduction emissions control technology. L10 was commissioned in 2020.

In 2022, we commissioned L11 and retired one aging gas-fired unit (GT57) and one aging coal-fired unit (L2), raising the gas-fired generation ratio to around 53% of LPS's total power output. A reduction of around 8% in absolute carbon emissions was also recorded compared with 2021. For L12, major civil and E&M installation works have been substantially completed and it is expected to commence operation in early 2024. When all three new gas-fired units are fully operational, the share of power generated from natural gas will increase even further resulting in fewer 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. This 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. We expect operation to commence in mid-2023, which is slightly behind schedule because of unexpected challenges arising from logistical issues in

2022. Nonetheless, important milestones were achieved in 2022, such as the installation of jackets and corresponding jetty topside structures and satisfactory completion of final hydrotests and baseline inspections of the subsea gas pipeline connecting the LNG terminal and LPS.

Moving forward to meet Hong Kong's goal of achieving net-zero electricity before 2050, we will cease to use coal for daily electricity generation by 2035 and we will continue to offer our full support to the Government on promoting low and zero-carbon energy sources and carbon reduction technologies.



[Farewell to the Coal Era - Usher in a New Era of Gas-fired Generation](#)



GHG Emissions Overview

HK Electric's direct (Scope 1) GHG emissions come mainly from power generation at LPS, while indirect (Scope 3) GHG emissions come from various activities throughout our value chain. We run a vertically integrated utility business, so all our electricity consumed is generated by ourselves and the associated indirect (Scope 2) emissions are covered in our Scope 1 emissions.

Our 2022 GHG emissions inventory has been independently verified with reference to ISO 14064-1:2018. Scope 3 emissions accounted for around 14% of total emissions and were mainly associated with fuel-related activities and capital goods. For more details, please refer to the section on [Key Statistics](#).

2022 GHG Emissions Breakdown

Scope 3
Emissions
14%

Scope 1
Emissions
86%



Managing SF6 Responsibly

Sulphur hexafluoride (SF₆) is an insulating gas commonly used by power companies in switchgears, transmission lines and other infrastructure to manage high voltages safely and reliably. Regrettably, it is also a potent GHG, so HK Electric has robust systems in place to manage its use and minimise leakage. In the short term, we are focused on collecting and reusing SF₆ from retired equipment wherever possible and properly treating SF₆ that is not suitable for reuse. In the longer term, we are exploring ways to substitute SF₆ with alternatives that have zero global warming potential.





Promoting RE, EE&C and EVs

Widespread adoption of RE, EE&C and EVs play an important role in reducing Hong Kong’s citywide emissions. To support local development of RE and decarbonisation, we offer a Feed-in Tariff (FiT) scheme and Renewable Energy Certificates (RECs) as part of our Smart Power Services package for customers. In 2022, uptake of the FiT scheme continued to increase with successful connection of around 150 new RE systems. Customers continued to take advantage of RECs for offsetting GHG emissions associated with their consumption of electricity. One hundred percent of green electricity produced in HK Electric’s power system during the year was fully sold as RECs. Besides promoting RE, our Smart Power Services also provide comprehensive services and engagement platforms assisting our customers and the community in achieving decarbonisation through enhancing EE&C, supporting EVs and adopting low-carbon lifestyles. Please refer to the chapter on [Serving Hong Kong](#) for more information.

HK Electric owns and operates a 0.8-MW wind turbine, known as Lamma Winds on Lamma Island, and a 1.1-MW solar power system at LPS. In 2022, these systems generated more than 2 GWh of green electricity. Together with RE produced under the FiT scheme and by our other small-scale RE installations, more than 8 GWh of green electricity was supplied through HK Electric’s power system, representing an increase of more than 45% compared with 2021.



■ Our Feed-in Tariff scheme supports local development of renewable energy.



■ A 1.1-MW solar power system is installed at Lamma Power Station.

As part of our ongoing commitment to expanding RE on Hong Kong and Lamma Islands, we plan to install additional solar panels on the roof-tops of our facilities and office buildings by 2023, which will provide an extra installed capacity of 1.2 MW. We are also exploring options for large-scale local RE generation, including construction of an offshore wind farm located southwest of Lamma Island. During the year, an application for variation of our existing environmental permit for this project was approved by the Government’s Environmental Protection Department, enabling us to increase the installed capacity of the proposed offshore wind farm to around 150 MW. This has the potential of generating around 400 million units of zero-carbon electricity per year.

Support for widespread adoption of EVs is another important way in which HK Electric contributes to reducing GHG emissions and improving local air quality. We operate 12 EV charging stations on Hong Kong Island, which hosted over 40,000 free of charge charging operations for EV drivers in 2022. Our own vehicle fleet comprises 174 EVs, representing 52.7% of all vehicles. Additionally, more than half of parking spaces located on our premises are fitted with EV chargers.



■ Our Lamma Winds on Lamma Island is the first commercial-scale wind turbine in Hong Kong



■ Photo montage of HK Electric's proposed offshore wind farm (view from Lamma Island)

Improving Local Air Quality

HK Electric operates state-of-the-art air pollution combating technology to reduce emissions of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and respirable suspended particulates (RSP) from our operations, including a Selective Catalytic Reduction plant for controlling NO_x emissions from gas-fired units and low NO_x combustion systems, flue gas desulphurisation plants, and highly efficient electrostatic precipitators for coal-fired units. In 2022, LPS achieved full compliance with the emissions allowances specified by the Government despite challenges from the volatile fuel market brought about by geopolitical conflicts.

We partner closely with the Government to refine its Air Quality Objectives and related initiatives for improving Hong Kong's air quality. We also monitor the impacts of emissions from LPS on ambient air quality with six monitoring stations located south of Hong Kong Island and on Cheung Chau. The data collected are submitted to the Government and published on our corporate website.



■ Over half of our vehicle fleet are electric vehicles.



Responsible Environmental Management

Management Approach

We implement environmental management and energy management systems to reduce our consumption of resources and alleviate our environmental impacts. In addition to adopting energy saving practices, we nurture a culture of responsible consumption and resource management based on the principles of 4Rs: Reduce, Reuse, Recover and Recycle.

In December 2022, the United Nations Biodiversity Conference (COP 15) concluded with a landmark agreement containing a new set of goals and targets to guide global action on nature conservation through to 2030. To mitigate risks of biodiversity loss, we seek

to minimise and mitigate the impacts of our major developments on local ecosystems early in the planning and design stages, and continuously monitor and manage our impacts during the construction and operational phases.



Partnerships to Protect the Environment

In 2022, we continued to promote responsible environmental management through various partnerships.

Energy Saving

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

Water Resources

- Let's Save 10L Water Campaign



Waste Management

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

Biodiversity

- Greening Partner Charter



Energy Saving Measures



At HK Electric, we are committed to pursuing green building design and management. We conduct regular carbon and energy audits to evaluate opportunities for energy savings. We also utilise data from energy meters to enhance energy monitoring in our buildings and fine-tune energy saving plans. In 2022, we expanded our ISO 50001 Energy Management System to encompass a total of five buildings at LPS and implemented nine energy reduction measures.

During the year, we continued to upgrade mechanical ventilation and air-conditioning systems with more efficient models, install additional smart energy meters and adopt building management systems to explore further energy saving opportunities. We also conducted retro-commissioning studies utilising AI-based systems to optimise air-conditioning.

As part of our continuous efforts to reduce energy consumption, we are trialing new energy saving measures for high power equipment and exploring ways to reduce auxiliary power consumption in our coal-fired units. These innovations are expected to achieve additional energy savings of up to 300,000 kWh per year.



We conduct regular energy audits for formulating energy saving plans.

Waste Management



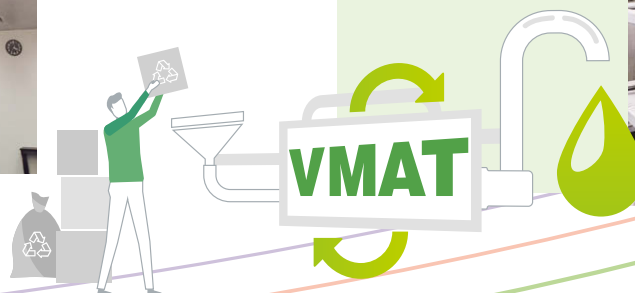
We prioritise waste prevention, reduction, reuse and recycling in accordance with our comprehensive waste management approach. When other waste management options have been exhausted, we dispose of our remaining waste in full compliance with relevant laws and regulations. Hazardous waste, such as waste oil, is 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 during cable jointing work, and to provide backup energy storage in substations.

Waste Oil Recycling

We recycle and reuse as much of our waste oil as possible. Our licensed waste contractor uses Vibratory Shear Enhanced Processing (VMAT) technology to re-fine and transform spent mineral, cable, and lubrication oils into environmentally friendly lubricants. In 2022, around 179,000 litres of our waste oil were recycled in this way.

We also collected and reused 4,800 litres of retired oil to lubricate coal unloading machinery at LPS.





During the construction phase of new gas-fired units at LPS, we have made proper arrangements to avoid, recover, reuse, recycle, store, collect, treat, and dispose of various waste categories in accordance with our Waste Management Plans approved by the Government’s Environmental Protection Department. In 2022, we generated approximately 25 kT of construction waste from our major construction projects, of which 91% was recycled for other uses such as public filling.

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 into inputs of production for other industrial purposes. As we progress with our plans to displace coal-fired power with natural gas at LPS, the volume of these by-products is expected to decline progressively.

We strive to avoid plastic waste by banning disposable tableware and plastic straws in our staff canteens. Additionally, we no longer supply beverages in plastic bottles through our onsite vending machines. As a signatory of the Food Wise Charter, we are committed to reducing food waste by various measures ranging from thoughtful meal ordering and meal preparation to separating food waste and transforming it into fertiliser using our on-site decomposer. After the COVID-19 pandemic, we look forward to resuming our previous practice of donating surplus food to a local charity.



We collect and recycle various types of waste from our office buildings, including food waste, paper, metal, plastics, used batteries, fluorescent lamps, compact fluorescent lamps and printer cartridges. We purchase recycled paper and reduce our paper consumption by digitalising work processes using e-forms and e-tendering arrangements. During our promotional period from 1 May to 31 December 2022, we encouraged customers to switch to e-bills and autopay/Faster-Payment System (FPS) by offering a one-off \$30 incentive that they could use to offset their electricity charges or donate to one of our designated environmental organisations.

Water and Effluents Management



We acknowledge the importance of managing water risks and seek to use water in a sustainable way. We use seawater for cooling generating units at LPS and utilise local municipal water supplies in our other operations. Using tools and methodologies provided by the World Resource Institute’s water risk framework, we have identified that our operations are at low risk and the majority of our raw material supply chains are not located in water-scarce regions. Our Environmental Policy outlines our commitment to implementing practical measures for reducing water consumption, reusing or recycling wastewater, and minimising the impact of effluents discharged from our operations into the local environment. We also disclose our water resource management practices and performance comprehensively in our annual response to the CDP water security survey.

At LPS, smart water meters are used to monitor water use in real time. We collect rainwater and plant processing water for water spraying at our coal yard and producing limestone slurry in our flue gas desulphurisation plants. In 2022, we collected and reused around 89,000 m³ of water. A new procedure was also established to collect and reuse water from washing caustic drums in our wastewater treatment plant at LPS.

We treat all wastewater in accordance with local regulations to remove oil, grease, suspended solids and heavy metals. In 2022, all effluent discharges from LPS met licence requirements. There are dedicated storage and treatment facilities for collecting and recycling wastewater during construction work at Lamma Power Station Extension (LMX) site.



Collection pits for rainwater and reusable wastewater at Lamma Power Station



Biodiversity Protection



As outlined in our Environmental Policy, HK Electric adopts a life-cycle approach to land and habitat stewardship, avoiding operations in areas with high biodiversity value and enhancing local biodiversity through proactive measures such as planting native trees. We adhere to relevant laws and regulations for safeguarding biodiversity and have systems in place to ensure compliance. There are established guidelines for working near sites of natural and cultural significance. We also seek expert guidance as needed, such as engaging qualified consultants to make recommendations when we need to trim or fell trees as part of necessary construction or maintenance work.



We place great emphasis on conserving the local ecology of Lamma Island.

We have conducted Environmental Impact Assessment studies for all major development projects, including the LPS Navigation Channel Improvement project, Offshore LNG Terminal, Offshore Wind Farm and removal of 132-kV Overhead Lines. During the implementation phase of the projects, we undertake environmental monitoring and audit programmes, including ecological field studies to ensure that recommended mitigation and remedial measures are fully carried out. As part of the Offshore LNG Terminal project, a Marine Conservation Enhancement Fund and a Fisheries Enhancement Fund have been established. In 2022, these funds approved 20 applications amounting to around \$28 million of support for conservation and sustainable development of local fishing industries.

We have a proud legacy of helping conserve the local ecology of Lamma Island by controlling air, noise, water and light pollution from LPS, while cultivating native plant species and protecting local biodiversity. In 2022, we planted 60 Camellia azaleas shrubs at LPS. Moreover, our fish deterrent system generates low-frequency sounds to deter fish from becoming caught up in seawater inlet culverts.

Protecting Local Birdlife

In 2022, the Hong Kong Bird Watching Society alerted us to roosting and nesting sites for House Swifts in our old carpark building at Ap Lei Chau that was planned for demolition. Birds of this species are common year-round residents in Hong Kong, breeding between May and September under the eaves and beams of man-made structures.

Following detailed inspection of the building and consultations with experts on how best to protect the birds, we have successfully removed the nests with supervision from the Government's Agricultural, Fisheries and Conservation Department (AFCD). All House Swifts nests were removed after it was confirmed with AFCD that there were no adult birds, fledglings or eggs in

the nests. Possible entrances were immediately blocked after nests removal. The scaffolding and tarpaulin were checked and fixed where necessary.

No trapped birds were observed by the final check, which was done after dusk. Other bird nests were also removed after inspection and confirmation by the AFCD and qualified ecologists affirming that nests were empty.





Education and Awareness

Management Approach

We recognise that environmental stewardship cannot be achieved in isolation, so we work closely with strategic partners such as NGOs on education campaigns and service and funding schemes. These initiatives promote environmental awareness and low-carbon lifestyles among our employees, business partners, customers, and members of the public with emphasis on engaging younger generations.



Happy Green Campaign

The Happy Green Campaign, which is supported by our Smart Power Education Fund, is our anchor green education programme for promoting EE&C, RE, and low-carbon living. In 2022, we continued to expand our target audiences by engaging kindergartens and tertiary institutions in addition to primary and secondary schools on the theme of “Decarbonisation: our New Mission”, encouraging green actions at all ages.





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Educating Children about Decarbonisation

For young children, grasping the concept of decarbonisation can be as easy as learning ABC. In 2022, more than 50,000 kindergarten and nursery students received an educational activity book entitled “Decarbonisation ABC”, which was co-created by HK Electric and a renowned local illustrator to showcase fun and relatable ways to reducing carbon emissions in daily life. The book features beautiful drawings and games that encourage kids to take small actions towards creating their own carbon-neutral worlds. To complement the book, we produced guided videos and arranged a series of training sessions for parents, teachers and other members of the public. During the year, nearly 40 schools signed up for related workshops on the book.



[Decarbonisation ABC](#)



Through interaction in the story-telling workshop, kids are motivated to learn about ways to practise low-carbon living. They can even take home what they have learned and build green habits together with their parents.

Principal Chan Sze Wai

C.C.C. Chai Wan Church Kindergarten



[Guided Video](#)

Environmental protection and carbon neutrality are difficult terms for children. The family workshop organised by HK Electric makes the concepts easier to understand and encourages children to learn how to protect our planet in a fun way.

Jenny Cheung

Participant in one of the parent-kid workshops





Decarbonisation Get Set, Go!



Pillar Box Design Competition



In 2022, we extended our “Green Energy Dreams Come True” competition to tertiary institutions in addition to secondary schools, challenging students to submit innovative projects promoting EE&C and RE on their campuses and in the community. During the year, seven shortlisted teams from tertiary institutions and 10 shortlisted teams from secondary schools received seed money of up to \$50,000 per team to implement their projects and compete for awards. The top prize for tertiary institutions went to a team from the University of Hong Kong who developed an innovative solar-powered bus stop featuring a self-sustaining green wall with watering system, fans, LED lighting, and mobile charging facilities. A team from Cognitio College (Hong Kong) won the championship for secondary schools with a project utilising solar energy to power an intelligent conditioning system in the school’s greenhouse as well as the mosquito repellent system and sprinkler system in the school’s garden.

During the year, our “Happy Green Schools” network continued to grow to include more than 540 primary and secondary schools. We offered many exciting Other Learning Experience (OLE) activities such as a new interactive drama promoting “Decarbonisation by All” that was staged and well received by more than 120 primary and secondary schools. Other OLE activities included virtual tours of our Smart Power Gallery, eco-heritage tours, and workshops conducted in partnership with the Learning through Engineering, Art and Design team of Hong Kong Federation of Youth Groups.

We continue to engage the public on decarbonisation through fun, interactive online initiatives, such as Green TV on our campaign’s mini-site and Facebook page. In 2022, we organised an online game called “Decarbonisation Get Set, Go!”, inviting local citizens to compete for prizes by taking photos of their favourite winning entries from our 2021 Pillar Box Design Competition and also submitting homemade videos on creative decarbonisation tips. The game attracted more than 320 participants and three winners were selected from different age groups.





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Extended Learning for Youngsters

In 2022, a winning team of the “Green Energy Dreams Come True” competition gained an extended learning opportunity, in addition to developing their project management and presentation skills throughout the competition. The winning team members, from the University of Hong Kong, were offered a one-week internship at HK Electric, during which they learnt more about the construction of new gas-fired facilities and our other actions to support sustainability, including how we encourage the public to join force in the city’s decarbonisation journey through our Smart Power Services.

[Green Energy Dreams Come True 2021/22](#)



This eye-opening learning opportunity was a very precious and memorable experience for us. During our visits to different departments of HK Electric, we have witnessed how a power company can support sustainable development of our society. It has inspired us to think about how we can contribute to decarbonisation in our future careers.



(From Left) **Koon Chiu Yue, Won Dzi Hei, Lam Cheuk Yin, Ng Cheuk Lun**
Members of the winning team in the Tertiary Institutions category of
“Green Energy Dreams Come True” Competition 2021/22





Cross Generation Powering up Green Missions

In October 2022, 55 Happy Green Ambassadors from secondary schools joined 43 Smart Power Ambassadors from the “University of 3rd Age” network to receive training on various green topics on the theme of “Decarbonisation for all and by all”. Despite their age differences, all participants were equally committed to building a greener world.



Other than classroom training, the two groups of ambassadors joined hands to collaborate with a local environmental artist to create an art piece by turning trash into treasure. The artwork will be placed on public display in 2023 to showcase the value of upcycling and promote saving resources for our planet.

This was the first time that I joined an activity with senior citizens and I was really impressed by their attitude and eagerness to learn about decarbonisation. We worked together to create an upcycling art piece and I was inspired by their enthusiasm, kindness and helpful input.

Letitia Yau
Happy Green Ambassador from
Po Leung Kuk Lo Kit Sing (1983) College





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Green Hong Kong Green

Our Green Hong Kong Green (GHKG) programme has been running for more than 18 years. 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 eco-heritage tours. The GHKG App, which provides information on eco-heritage routes and tour schedules has been downloaded more than 50,000 times.



Introduced during the pandemic amid social distancing measures, GHKG's virtual bi-monthly tours have continued to gain popularity. The tours cover seven eco-heritage routes and feature guest speakers who share stories about local ecology and history as well as interactive games. In 2022, they attracted over 3,600 participants via Zoom and YouTube. Tailormade tours were also offered to over 1,400 participants from schools and NGOs.

GHKG's eco-heritage tours are promoted through various channels, such as newspapers, radio, WhatsApp and email, as well on our website and through our customer bulletin. During the year, we continued to refine and update the GHKG programme by organising three training sessions with ecologists and local historians for GHKG eco-leaders. We also streamlined the enrolment process by adding a new online tour registration system.



Environmental Campaigns

We encourage our employees and others to participate in a range of green campaigns organised by the Government and NGOs. In 2022, we participated in the Business Environment Council's EnviroSeries Conference, Green Council's "Hong Kong Green Day" and "International Coastal Cleanup Hong Kong" 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 Chung Yeung Festival when it is traditional to burn joss paper offerings, giving rise to high fire risk in Hong Kong's countryside.

In celebration of the United Nations' World Environment Day on 5 June 2022, we launched a month-long in-house internal campaign promoting environmental awareness and green lifestyles. About 670 employees participated in a talk on sustainability and climate change, an environment-themed quiz, a vegetarian lunch and a recycling programme for books and electronic gadgets. We received more than 300 suggestions from employees on best practices for environmental protection. Colleagues from several divisions also co-produced a short video entitled "Only One Earth" to raise awareness about the global goal to achieve carbon neutrality before 2025.



World Environment Day 2022



Running a
Sustainable Business

Sharing
our Planet

Serving
Hong Kong

Working
with Partners

Powering up our Community

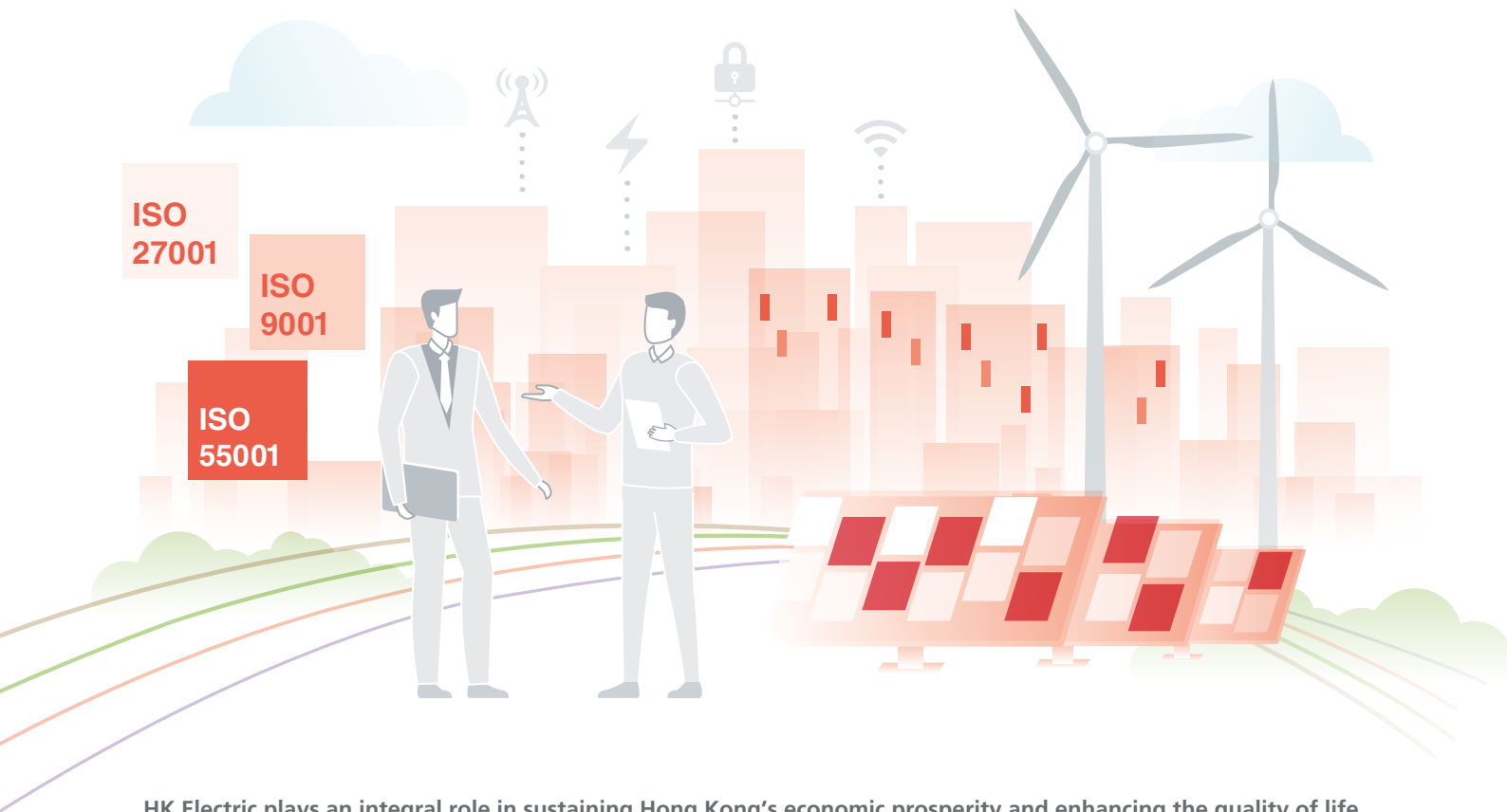






Serving Hong Kong

Overview



HK Electric plays an integral role in sustaining Hong Kong’s economic prosperity and enhancing the quality of life for residents of our vibrant, high-rise city. We supply highly reliable power for buildings, public transportation and electronic communications among other essential services, with a strong commitment to help make our home a prosperous, smart and caring city.

Throughout our operations, we implement quality management, asset management, and information security management systems certified to the international standards ISO 9001, ISO 55001 and ISO 27001, respectively. We also have a physical security management system for our key facilities and premises. On customer service, we monitor our service performance with reference to specific and measurable targets, including our pledged Customer Service Standards.

Caring is one of our key corporate values. We are proud to give back to Hong Kong in numerous ways by prioritising community engagement and building mutual trust, respect, and confidence with our stakeholders. In line with our obligations under the current SCA with the Government, we implement a range of funding and service schemes known collectively as Smart Power Services that help our customers and the community achieve decarbonisation through a range of initiatives.

Our community investment strategy strives to create and sustain long-lasting social impacts through partnerships. We work with community groups to build social capital through a range of programmes focused on environmental education and care for the elderly.



World-class Power Supply

Management Approach

HK Electric builds on its longstanding track record of world-class power supply to support sustainable development, including Hong Kong’s decarbonisation goals. In the face of energy market volatility and the increasing share of natural gas in our fuel mix, we remain steadfast in our objective to keep tariffs affordable and provide relief for customers experiencing hardship through energy efficiency promotions and other targeted measures.

In 2022, we achieved a supply reliability rating exceeding 99.9999% for the third consecutive year. The average number of voltage dips experienced by our customers was the lowest in 15 years. This outstanding performance has been sustained year after year through close coordination and various measures, including strategically investing in building and upgrading power infrastructure, adopting resilient designs, performing proactive and reliability-centred maintenance, using sophisticated control systems and enhancing contingency preparedness.

Our facilities, technology and information assets are safeguarded from physical and cybersecurity threats by comprehensive management systems certified to the international standards ISO 9001, ISO 55001 and ISO 27001. As outlined in our Information Security Policy and Corporate Security Policy, we have well established precautionary measures and contingency plans in place to handle security incidents and ensure supply reliability in the event of large-scale interruptions to our operations.



[With Power We Serve](#)



2022 Power Supply Performance



>99.9999%
supply reliability rating

(>99.999% for the 26th year in a row, since 1997)



<0.5 minute
unplanned customer minutes lost

(<1.0 minute for 14 consecutive years since 2009)



Reliable Power System

We adopt a proactive approach to ensuring the robustness of our power system through strategic investments. In addition to the major capital enhancement projects at LPS and the offshore LNG terminal, we invest continuously in maintaining, upgrading and improving our equipment, technology, and processes to enhance the capacity and reliability of our entire network. At LPS, besides building a new gas-fired unit, we are in the process of replacing aged open-cycle gas turbines to ensure the reliability of power generation during peak-opping and to maintain backup power supplies in the event of an emergency or other unforeseen event.

Despite challenges arising from the global COVID-19 pandemic, geopolitical tensions and economic downturn, we have continued to demonstrate business resilience. In January 2022, Indonesia imposed a month-long ban on coal exports interrupting coal supply to LPS from this important fuel source. In response, we took immediate and decisive actions to safeguard power generation, including increasing gas-fired generation, bolstering oil tank contingency reserve capacity for ultra-low sulphur diesel at LPS, and commissioning two new light oil tanks at LMX.

In 2022, we commissioned 27 new distribution substations or transformer pillars, converted seven distribution substations from 11-kV to 22-kV to improve supply reliability and adopted 360-kVA mobile electricity generators with parallel operation function to enhance emergency preparedness. We are continuously formulating new action plans to further enhance transmission reliability, such as erecting new zone transformers, implementing preventive measures to guard against damage to transmission cables and reviewing the necessity and feasibility of new zone substations and network configuration for managing load growth in the eastern and southern parts of Hong Kong Island.





[Collaboration with CAiRS on Utilising AI in Cable Condition Analysis](#)

We strive to operate the most reliable transmission and distribution network in the world, utilising remote online monitoring and control systems, early detection and advanced diagnostic techniques, and other innovative technologies to identify potential problems and implement timely repair or replacement of primary and secondary equipment. As an example, Process Intelligence System Explorer technology supports early fault detection in major equipment. We are also in the process of developing an Artificial Intelligence engine for cable condition analysis in collaboration with the Centre for Advances in Reliability and Safety (CAiRS).

Since 2021, 92 sets of new Low-voltage (LV) Fault Indicators have been deployed in Tai Hang, Wan Chai and Lamma Island. These devices, which were developed in-house, feature embedded connectivity to integrate with a planned LV network management system that will enable better load analysis, identification of faulty cable sections, and rapid isolation of faults. We plan to install enhanced LV Fault Indicators with additional functionalities for monitoring current and voltage in 2023.



Proactive Risk-based Asset Management for our Electricity Network

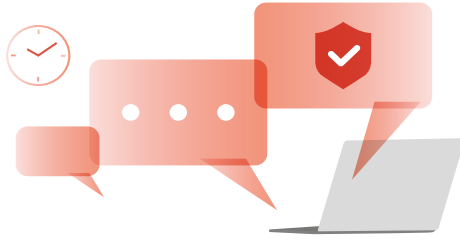
Risk monitoring approaches	Assets: Typical measures	Purposes
 <p>Condition monitoring and advanced diagnostic techniques for network components</p>	Switchgears: Advanced online partial discharge detection system	➤ Early detection of incipient faults to avoid potential component failure
	11-kV distribution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



2022 preventive and corrective actions

- ❑ **6** 11-kV cable faults were averted;
- ❑ **39** potentially faulty 11-kV cables were rectified;
- ❑ **501** cables were tested;
- ❑ **44** weak cable components were identified for replacement;
- ❑ **31** 11-kV and **24** LV faulty cable joints/bodies recovered for repair or replacement were dissected and failure modes such as partial discharge, water ingress and damage from prior works or termite attack were identified; and
- ❑ **23** aged 11-kV joints on cables with poor Health Index were replaced and dissected and defects leading to high dissipation loss factor in the cable circuits were revealed.

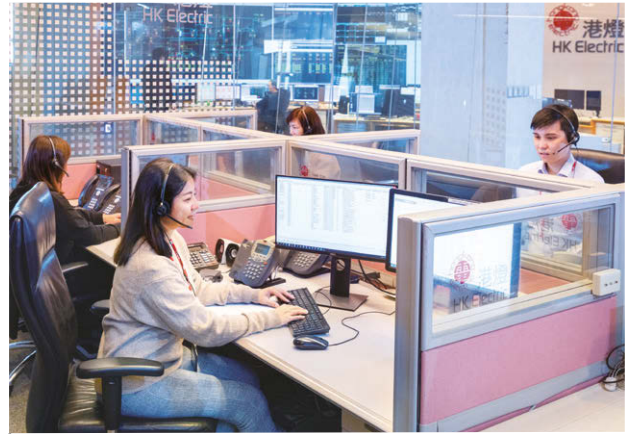
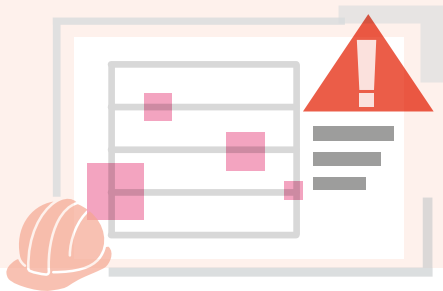




Our 24-hour System Control Centre plays a central role in ensuring safe, efficient, and reliable supply of electricity. It employs sophisticated real-time energy software systems with smart-grid features for controlling and monitoring power generation transmission, and distribution, including the Energy Management System (EMS) and Distribution Management System (DMS). To ensure operational continuity and emergency preparedness, we conduct changeover drills semi-annually for transfer of control from the in-service EMS and DMS to backup systems. Cybersecurity of the EMS and DMS are also subject to regular internal reviews and updates in line with relevant international standards. In 2022, for example, we enhanced our Emergency Load Shedding System and Distribution Fault Identification Expert System to assist System Control Engineers in making timely and appropriate decisions.

Enhanced Geospatial Information System

HK Electric has been a pioneer of mapping systems for geospatial information since the early 1980s. We continue to devote significant resources to enhancing our cutting-edge geospatial information management system. We are currently working on implementing a next-generation system utilising industry-leading mapping and spatial analytics software. The new system, which is due to be rolled out in 2023, will provide site engineers with critical information for expedited decision-making by identifying points of failure in power network assets and presenting geographical and schematic information in a single view.



Our 24-hour Customer Emergency Services Centre

Physical and Information Security

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

Our Physical Security Management System has been designed to identify potential threats and to implement, monitor and review appropriate measures for managing associated risks of our daily operations. It utilises facial recognition, two-factor authentication, video monitoring with analytics, car plate recognition and automatic detection of open access doors at key operational premises, among other measures. Levels of security zoning have been devised to address different requirements of physical security on company premises and appropriate security measures are adopted accordingly. We also review the fire hazard of transmission and distribution cable infrastructure regularly and carry out enhancement work as needed.

Our Cybersecurity Management Framework ensures the confidentiality, integrity and availability of all critical infrastructure and information assets by addressing technical, regulatory and managerial aspects of cybersecurity with a “defence-in-depth” approach. Overseen by an in-house team of cybersecurity specialists in close coordination with external service providers, the framework integrates multiple layers of security to identify, detect, protect, respond and recover from cybersecurity incidents.



Overview	World-class Power Supply	Serving our Customers	Smart Power Services	Caring for the Community
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Our System Operations Cybersecurity Incident Response Plan characterises and classifies reportable system operations cybersecurity events. We also have recovery procedures in place for critical Information Technology 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 ISO 27001 standards.

We have adopted seven strategies of defence for industrial control systems proposed by the United States' Department of Homeland Security. To defend our information assets against unauthorised access and malicious attacks, we implement a myriad of security measures such as Next Generation Firewall and Intrusion Prevention System, Advanced Persistent Threat Protection Solutions, Mail Security Gateway, Secure Web Proxy, and Anti-malware Systems.

In 2022, we updated various information security-related policies, including the Cloud Computing Policy, Cryptographic Control Application Policy and Wireless Network Policy. Several guidelines have also recently been updated, including the Access Control Guideline, Best Practice Guideline for Remote Access Service Users, Electronic Mail Guidelines, Guideline on Cyber Security for Internet of Things, and Network Service Guideline.

To achieve continuous improvement, we engage our employees systematically in a dedicated cybersecurity awareness programme. In addition to receiving regular training on data privacy and data protection, our employees enhance their vigilance against cybersecurity threats by accessing relevant training videos, quizzes, news and learning content at the "Cybersecurity Corner" on our Intranet.

Engaging with Employees on Cybersecurity

Frontline employees play an essential role in mitigating cybersecurity threats. We conduct regular cybersecurity training, including compulsory phishing awareness training for employees who demonstrate insufficient awareness of this type of threat during quarterly phishing simulation tests. New employees must read all our information security policies and complete mandatory cybersecurity awareness training with a follow-up quiz in order to be granted access to internet email and browsing services.

In 2022, we launched two instructional videos to facilitate better uptake of our cybersecurity guidelines on remote access service and Internet of Things (IoT). The videos outline essential security measures and guiding principles for employees to help protect HK Electric against malicious attacks and other threats from the Internet. During the year, we ran workshops on IoT and cloud security and conducted a town hall meeting on cybersecurity. These were attended by over 200 participants representing all business units.





Alleviating Economic Hardship

HK Electric remains steadfast in its commitment to supporting customers and the community through the current period of economic hardship by striving to maintain tariffs at an affordable level and providing targeted support for those in need.

In 2022, various factors outside of our control, such as geopolitical tensions in Europe and a ban on coal exports from Indonesia in the early part of the year, drove international coal and natural gas prices up to record levels. This placed significant pressure on our operations and gave rise to several adjustments to the Fuel Clause Charge reflecting changes in our actual fuel costs according to the established mechanism.

During the year, we froze the basic tariff and offered a special rebate of one cent per unit of electricity. We also supported the Government in its new round of electricity charges subsidy amounting to \$1,000 for every eligible residential account starting in June 2022. Meanwhile, we continued to implement concessionary tariff schemes for the most vulnerable members of society and offer a Super Saver Discount to encourage energy saving.

During the year, we set aside \$63 million for decarbonisation schemes under the banner of Smart Power Services, including targeted measures designed to benefit customers experiencing economic hardship. We provided electricity charges relief for households living in Sub-divided Units (SDUs) and expanded the eligibility criteria for beneficiaries of the Energy-efficient Community Subsidy Programme, Smart to Care Subsidy Programme and Energy-efficient Equipment Subsidy Programme.

In a continuation of previous efforts to support small and medium-sized enterprises (SMEs) impacted by the COVID-19 pandemic, we launched an electricity bill payment deferral scheme, for which 441 applications were approved in 2022. We also provided “Care and Share” dining coupons valued at \$200 each to 50,000 low-consumption, concessionary tariff or other underprivileged residential customers for use in more than 200 participating eateries on Hong Kong Island and Lamma Island.



Tariff Adjustment for 2023

Geopolitical tensions are posing challenges to HK Electric and our peer utilities around the world. As a result of skyrocketing fuel prices, our tariffs have increased during 2022. In the 2023 Tariff Review, HK Electric announced that the Average Net Tariff for January 2023 will be adjusted to 197 cents per unit of electricity.

Adjustments from the period of January 2022 to January 2023

Basic Tariff	109.0 ▶ 114.5 ¢/kWh
Fuel Clause Charge	27.3 ▶ 82.5 ¢/kWh
Special Rebate	-1.0 ▶ 0 ¢/kWh
Average Net Tariff	135.3 ¢/kWh ▶ 197.0 ¢/kWh

To alleviate the tariff burden on SMEs and underprivileged families, we have set aside \$95 million for a series of relief measures and energy efficiency promotions. \$40 million has been allocated to provide a Special Electricity Subsidy that will benefit approximately half of residential customers. The remaining \$55 million will fund dining coupons, electricity subsidies, catering subsidies and sponsorships for enhancing energy efficiency in buildings, as well as public education activities focused on energy efficiency and low-carbon living.

Looking ahead, the outlook for global energy markets in 2023 is uncertain and our fuel supply is expected to remain tight. We are nonetheless committed to ensuring procurement of sufficient fuel to maintain a stable power supply and will strive to control costs. We will also continue to support the Government’s decarbonisation objectives by continuously enhancing environmental performance.



Serving our Customers

Management Approach

HK Electric is committed to excellent customer service. We strive to meet and exceed customers' expectations by continually enhancing our services and engaging with customers in an open and transparent manner in line with our Quality Policy, Customer Services Policy and Complaints Handling Policy. 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. Our Stakeholder Satisfaction Steering Committee ensures swift and effective resolution of queries and complaints.

Our pledged Customer Service Standards specify monitorable targets for electricity supply, connections, accounts and meters, customer enquiries, emergency services and customer satisfaction. As a further layer of assurance, we have obtained ISO 9001: Quality Management System certification covering the design and provision of customer services, inspection services and meter testing.



■ HK Electric is named "Excellent Service Retailer of the Year – Flagship Store" by the HKRMA in the Quality Service Programme 2022.

We respect and safeguard the privacy of personal data in accordance with our Personal Data Privacy Policy that ensures compliance with the Personal Data (Privacy) Ordinance. Our Privacy Management Programme comprises robust privacy infrastructure supported by ongoing monitoring and review procedures.

Excellent Service

In 2022, we met or surpassed all 18 of our pledged Customer Service Standards and received several prestigious customer service awards. In addition to achieving an average customer satisfaction score of 4.7 out of 5 in after-service surveys, we received 1,961 positive commendations from our stakeholders. During the year, we also received six service-related complaints from our stakeholders, all of which were handled in accordance with established procedures.



We recognise that customers increasingly expect self-service options, particularly since the onset of the COVID-19 pandemic. To meet this need, we are enhancing our digital experiences via a suite of online platforms allowing for efficient and convenient management of account-related requests and details. Service requests can be made online via easy-to-use request forms and customers can access up-to-date progress on applications for supply, transfer, termination, special meter reading and autopay via an online portal.

In 2022, we added new features to the HK Electric App supporting multiple log-in methods and bill payment. The app now allows customers to access their Consolidated Account Report. Rising to the challenge of providing excellent customer services during the COVID-19 pandemic, we have optimised our Call Centre to support a hybrid working model that enables our customer service staff to manage customer telephone enquiries from home.



Progress on Roll-out of Advanced Metering Infrastructure

Smart meters can play an important role in helping our customers to reduce their energy consumption. In 2022, we continued to make strong progress on rolling out advanced metering infrastructure (AMI) throughout our entire distribution network.

As at the end of year, we met our interim target to install a total of 240,000 smart meters cumulatively since 2020. In addition to conducting site surveys that will facilitate the installation of a further 339,200 meters, we have implemented various upgrades to key systems, such as our Meter Data Management System and Remote Meter Reading System. We have also recently started work on a major upgrade to our AMI Head-End System.



[Smart Meter - Optimise Energy Use Part 1](#)



[Smart Meter - Optimise Energy Use Part 2](#)

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 on planned shutdowns and supply interruptions via our website and app



E-billing / E-payment / Group Billing / Bill of Small Outstanding Amount Services
Environmentally friendly 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 minority languages



For the Hearing-impaired
Videos supported with sign language, SMS enquiry service and teleloop system at service counters



For the Visually impaired
Voice-assisted e-bill service, Braille bills and a tactile guide path installed at our Customer Centre



For the Elderly
"Web for the Elderly" and express counters 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

At HK Electric, we engage with customers continuously and listen carefully to their feedback through various channels, including our corporate website, social media and virtual or in-person meetings. Recognising that rising fuel costs is a key concern for customers and community members, we are addressing this issue transparently through authentic communication. Energy saving tips are also incorporated on energy bills and our website to encourage efficient use of electricity.

Our Customer Liaison Group (CLG) is a valuable forum for exchanging ideas with customers and gauging public opinion on important issues. In 2022, the CLG comprised 45 members, including customer representatives and representatives from community organisations. During the year, a pre-recorded sharing and an in-person site visit were organised to help keep them up-to-date on our latest developments.



[KR44 TV] HK Electric Online

Other communication channels available to our customers include our customer service hotline, customer service survey, customer suggestion and feedback form, excellent service commendation form, customer services brochure and our quarterly newsletter "HK Electric On-line". In 2022, we held various seminars for key stakeholders to discuss major changes in our Guide to Connection of Supply that was published in 2021. We also continued to strengthen video communications through "KR44 TV", which is a multimedia version of "HK Electric On-line", and by producing various short videos about our work.

Our engineer explains the operations of Lamma Power Station to members of the Customer Liaison Group.

Personal Data Protection

We are committed to respecting and safeguarding customer privacy in accordance with our Personal Data Privacy Policy and Privacy Policy Statement to ensure compliance with the Personal Data (Privacy) Ordinance and other relevant codes of practice.

We implement a Privacy Management Programme that incorporates annual personal data inventory reviews and privacy impact assessments to evaluate the effectiveness of data handling and identify areas for improvement. It is overseen by our Personal Data Protection Officer and along with our Customer Personal Data Protection Officer and Employee Data Protection Officer, they are responsible for overseeing implementation of appropriate controls and raising awareness among our employees. Our Data Loss Prevention system aims to prevent unauthorised disclosure of personal data via the Internet, emails, portable storage devices or file transfers. In the event of a breach, automated incident procedures and response plans are in place to mitigate risks.

During the year, we updated our Guidelines on Privacy Impact Assessment to enhance the process and conducted a comprehensive review of our Guidelines on Handling Customer Personal Data to ensure best practices are being applied by employees throughout all business areas. During the Privacy Awareness Week, we organised an online training session for our employees to learn more about our Privacy Impact Assessment tool.





Smart Power Services

The built environment accounts for the vast majority of Hong Kong’s energy consumption, so EE&C measures are fundamentally important for reducing the city’s energy intensity and carbon emissions. HK Electric’s Smart Power Services provide comprehensive services and engagement platforms assisting customers and the community in achieving decarbonisation via supporting RE and EVs, enhancing EE&C and adopting low-carbon lifestyles. These measures are significant for helping progress Hong Kong’s journey to become a smart, zero-carbon and caring city. Smart Power Services target residential, commercial and industrial customers, including the construction industry and education and welfare organisations, with particular focus on members of the community who are most in need, such as underprivileged families and SMEs.

We raise awareness and engage with stakeholders about Smart Power Services through a range of channels, including our dedicated webpage and YouTube channel, mobile app, phone hotline, bill messages, newsletters, email enquiry service and customer services brochures.

In 2022, we held more than 120 events to promote Smart Power Services, including online seminars and workshops. Around 100 participants from 16 NGOs and private elderly centres attended our Smart Power Connect Webinar promoting the Smart to Care Subsidy Programme and smart robotic solutions. We also hosted around 100 in-person



The Smart to Care Subsidy Programme supports community centres for purchasing gerontechnology products.

and virtual tours of our Smart Power Gallery focusing on providing green education about climate change, RE and low-carbon lifestyles.

To engage with young people, we have introduced a simplified version of our Smart Power Gallery virtual guided tour to complement the “Decarbonisation ABC” activity book for nursery and kindergarten students. We have also designed new coding workshops for primary and secondary students promoting RE and green transport for integration into our Smart Power Gallery tours in 2023.



The Smart Power Gallery features multimedia displays, interactive games and STEAM workshops.





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2022 Accomplishments

Energy
Efficiency**Smart Power Building Fund**

Subsidies for building owners to enhance energy efficiency of communal building services installations (\$25 million allocated annually)



96 applications were approved representing 127 buildings and ~\$31 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



428 private residential buildings were supported to apply 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 and sufficient electricity supply for construction sites



17 construction sites' service requests were handled.

Smart Power for Data Centre

One-stop service for industry practitioners to develop low-carbon data centres



2 service requests were received and handled.

Renewable
Energy**Feed-in Tariff Scheme**

Purchase of electricity generated by customers' grid-connected RE power systems at Feed-in Tariff rates



~150 RE grid connections were made, amounting to >2.9 MW in total installed capacity.

RE Certificates

Sale of certificates to help customers achieve RE/ environmental targets while supporting local RE development



All green electricity generated in 2022 was fully sold.

Green
Education**Smart Power Education Fund**

Promoting EE&C, RE and low-carbon lifestyles through our Happy Green Campaign (\$5 million allocated annually)



>120,000 participants were recorded in various activities. (Please see the chapter on [Sharing our Planet](#) for more information.)

Supporting
the Needy**Smart Power Care Fund**

Subsidies for people in need to adopt low-carbon lifestyles, improve their living environment and enhance electrical safety



~56,000 underprivileged families benefited from:

- Energy-efficient Appliance Subsidy Programme
- SDU Electricity Charges Relief Programme
- SDU Rewiring Subsidy Programme
- "Care and Share" Dining Coupon Scheme
- "Breeze to Care" Programme

62 NGO community centres benefited from:

- NGO Catering Subsidy Programme

80 non-residential customers benefited from:

- Energy-efficient Equipment Subsidy Programme

45 projects were approved under:

- Energy-efficient Community Subsidy Programme
- Smart to Care Subsidy Programme



Promoting Smart Power with Care and Support

Supporting the Needy

Our Smart Power Care Fund demonstrates our commitment to helping underprivileged households adopt smart, low-carbon lifestyles and improve their living environments.

In 2022, we increased the subsidy amount for our SDU Electricity Charges Relief Programme from \$600 to \$1,000 per year and expanded the eligibility criteria of our Energy-efficient Community Subsidy Programme to include all non-residential customers.

During the year, we distributed “Care and Share” dining coupons valued at \$200 to 50,000 low-consumption or concessionary tariff residential customers. This was the third consecutive year we distributed these dining coupons. Under our new “Breeze to Care” programme, we also teamed up with NGOs and District Councillors to distribute 4,000 electric fan-packets to help people in need cope with hot weather in a more energy-efficient way.



[Hong Kong's First Private Property Development Completing an EHSS-funded Project](#)



Supporting customers and NGOs

HK Electric promotes uptake of EVs through various measures, including the Smart Power EV Charging Solution that provides a free one-stop service for customers seeking support from the Government’s \$3.5 billion EV-charging at Home Subsidy Scheme (EHSS) to install EV Charging-Enabling Infrastructure (EVCEI) in car-parking spaces at existing private residential buildings.

In 2022, we supported Stubbs Villa in Wan Chai to become the first private property development in Hong Kong to complete a project with funding from the EHSS. We helped guide this customer throughout the entire process of installing EVCEI for 35 parking spaces, from preparing and submitting applications to providing recommendations on project design and monitoring the construction process.

During the year, we also provided advisory services and technical support to The Conservancy Association on its Green Rehabilitation Bus Pilot Scheme, which supports NGOs providing rehabilitation bus services to switch to EVs.





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Caring for the Community

Management Approach

Caring for the community is integral to our corporate missions. For decades, our community investment strategy has strived to create and sustain long-lasting social impacts through partnerships focused on elderly care and green education. Over the years, we have established strong relationships with many leading NGOs. We engage with these community leaders to build social capital by contributing our technical skills, financial resources and professional expertise towards helping those in need.

In 2022, we supported 96 projects and events via donations and sponsorships ranging from education and engineering industry development to environmental protection and other community support. During the year, we were awarded the "10 years+ Caring Company Logo" by the Hong Kong Council of Social Service in recognition of our caring culture and performance on corporate social responsibility.



Caring for our Elders

"CAREnJOY for the Elderly" (CAREnJOY) is one of our signature community programmes through which we partner with nine NGOs to encourage elderly people to stay connected in their local communities. During the COVID-19 pandemic, we have continued to deliver a range of educational and entertainment programmes in a hybrid format, both in-person and online.



[HK Electric CAREnJOY
Puppet Show
- At Home with Greenie](#)



In 2022, we distributed approximately 1,200 giftbags containing personal care items to fight the COVID-19 pandemic and other daily necessities to elderly persons across Hong Kong and Lamma Islands. In August, we debuted an "At Home with Greenie" puppet show to 100 elders as part of our "CAREnJOY Electrical Safety Talk". In line with pandemic-related restrictions on social gatherings, we organised 11 district-based mini-talks in elderly centres promoting electrical safety and energy efficiency at home, among other messages. More than 360 elders on Hong Kong and Lamma Islands attended these events.

We also continued to enhance CAREnJOY digital-based services. Each week during the year, we reached out to approximately 10,000 elders and CAREnJOY ambassadors via mobile phone messages, providing useful information about electrical safety, health tips and low-carbon living.



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 Services in 2006. It aims to encourage local retirees to pursue their interests via lifelong learning, fulfil their dreams and continue to contribute to the community.


In 2022, we financed 34 self-learning centres operated by 15 social service agencies throughout Hong Kong via the HK Electric Centenary Trust. During the year, about 500 classes, workshops and visits were organised, providing more than 9,200 learning opportunities for local retirees.

U3A continues to promote positive impact through various channels. In 2022, a radio programme was produced featuring interviews with six outstanding U3A students who have overcome pandemic-related challenges to continue with self-learning and volunteering.



[Achievements of U3A - Aging Chill and Chic](#)

In 2022, the biennial Smart Power Ambassador Training programme adopted the theme of “Decarbonisation—For All and By All”. We conducted four training sessions covering a range of topics, including climate change, energy efficiency, waste reduction and gerontechnology. The programme was supported by several government departments and various green groups, including Green Earth, Green Power, Hong Kong Observatory and youth-led organisation 2041 Hong Kong. It was attended by 43 U3A students and 55 Happy Green Ambassadors representing 12 secondary schools.

 *Elderlies learn about decarbonisation and gerontechnology through the Smart Power Ambassadors Training Programme.*



Giving to Good Causes

HK Electric supports various charitable causes through sponsorships and donations to aid beneficiaries such as students of low-income families, NGOs, green organisations and community groups. In addition to funding the U3A centres, in 2022 the Centenary Trust provided scholarships for 70 secondary school students with financial needs. Since 2004, we have participated in a programme managed by Caritas that refurbishes used computers and related equipment for donation to underprivileged households. We contributed 233 computer items to this programme in 2022.

Please refer to the section on [Smart Power Services](#) for more information about our programmes to support people in need.





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HK Electric Volunteers

We encourage and support our employees to contribute their time, knowledge and expertise towards local community affairs. Since 2004, the HK Electric Volunteers team has grown from just a few hundred members to more than 1,200 employees. In 2022, we started to digitalise our service records to enable online access for our volunteers. The new system will be officially launched in February 2023.



During the year, we were grateful to resume in-person activities. Our volunteers contributed more than 1,500 service hours to 29 projects, such as:

- ▶ Preparing and distributing hot meals for the homeless and families in need (co-organised with the St. Banaba's Society and Home);
- ▶ Engaging with young cancer patients to support their rehabilitation (co-organised with the Children's Cancer Foundation);
- ▶ Teaching elders about basic smart phone functions, including how to use the Government's LeaveHomeSafe app (co-organised with Aberdeen Kai-fong Association);
- ▶ Book-recycling, tree planting, and countryside and coastal clean-up events (co-organised with local green groups and NGOs); and
- ▶ Online tutorial services for primary and secondary students (co-organised with the Christian Family Service Centre).

We engage with our employees to promote a culture of volunteerism. In 2022, we conducted focus-group interviews with colleagues to facilitate an exchange of ideas about team management and volunteering opportunities. The Agency of Volunteer Services also helped us conduct internal sharing sessions for 53 team members.



A wide variety of services are offered by HK Electric Volunteers Team.



Co-creating
Shared Value



Running a Sustainable Business

Sharing our Planet

Serving Hong Kong

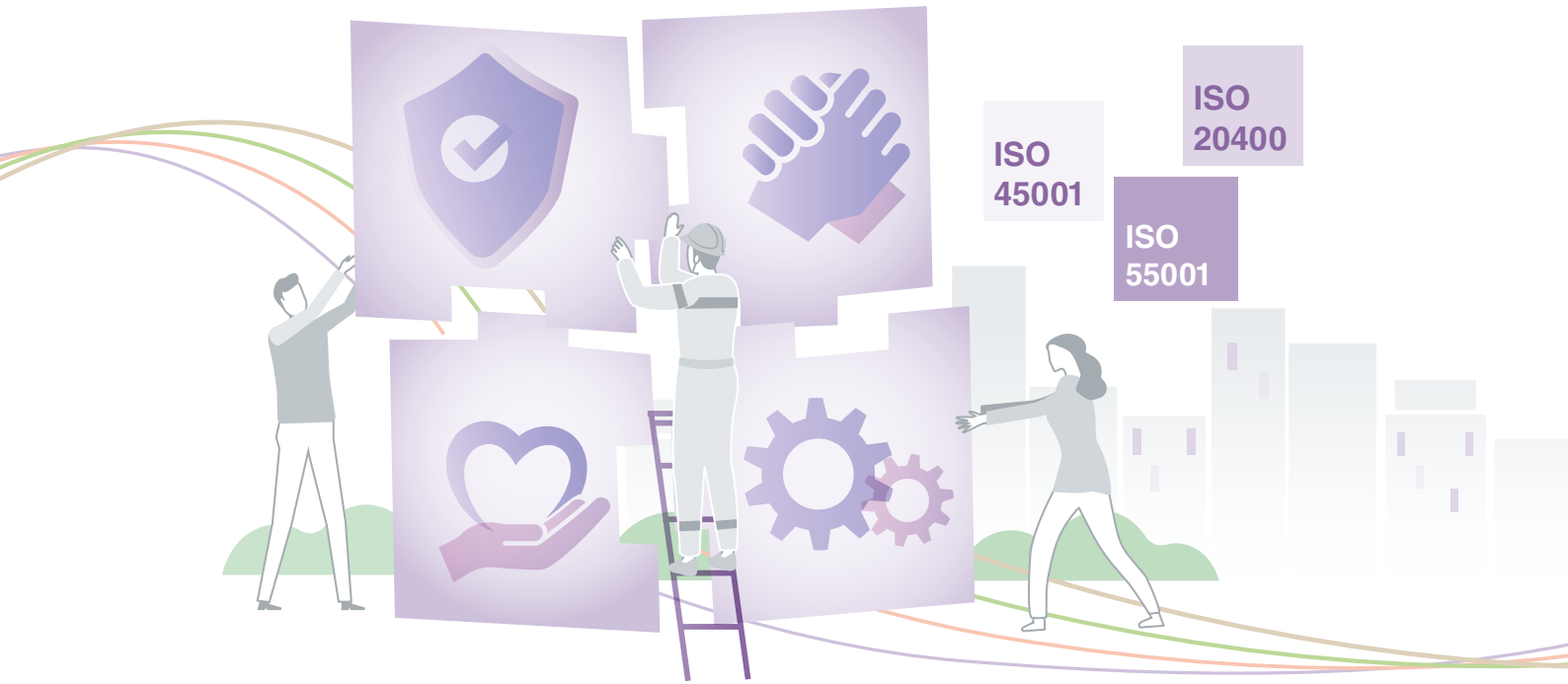
Working with Partners





Working with Partners

Overview



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 while maintaining safe and responsible business operations.

Recognising that our business is only as strong and resilient as our workforce, we are committed to cultivating a rewarding and fulfilling work environment. We empower our people to achieve their full potential through teamwork and open dialogue. We promote employee well-being through our comprehensive wellness programmes and invest in their professional development in accordance with our Learning and Development Policy.

We strive to provide safe, accident-free environments. This commitment is enshrined in 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 by our Health and Safety Board at least every two years. We have safety management and asset management systems in place conforming to the international standards ISO 45001 and ISO 55001, respectively. These help ensure the safety of our customers and the public, as well as our employees and contractors.

As a responsible corporate citizen, HK Electric requires all business partners to uphold the core values of our business and to work with us to achieve shared goals for sustainable development. Our Code of Practice for Suppliers specifies high standards for business ethics, human and labour rights, health and safety, environmental protection and climate action, and cybersecurity. As outlined in our Human Rights Policy, we encourage our business partners throughout our value chain to uphold human rights. Our procurement process has been verified for compliance with ISO 20400 Sustainable Procurement – Guidance, reflecting our commitment to integrating material sustainability considerations.



Human Capital Management

Management Approach

Our workforce is our most important asset. We strive to treat our colleagues fairly, reward their performance and take care of their well-being, while listening and responding to their needs. We are proud to be an “employer of choice” with the ability to attract and retain top talent. In 2022, HK Electric was ranked the fourth Most Attractive Employer in Hong Kong in the annual Randstad Hong Kong Employer Brand Awards.



We comply strictly with the Employment Ordinance of Hong Kong. Our management approach to human resources and employee relations are guided by our Code of Conduct and Human Rights Policy. The essence of HK Electric’s human resource value is captured by the acronym “SHINE”, which stands for Synergy, Holistic development, Ideal workplace, Nurture future leaders and Excellence.

Our Human Resources Steering Committee oversees the implementation of SHINE and is responsible for guiding our continuous efforts in nurturing a harmonious and productive workforce.

We offer competitive remuneration packages and extensive career development opportunities to attract and retain talent. To overcome labour supply challenges



facing our industry, we seek out both experienced candidates and fresh graduates embarking on new careers in the power sector.

We support our employees to achieve long-term career development goals by investing in their personal and professional growth in accordance with our Learning and Development Policy. Many colleagues enjoy long and fulfilling careers with our organisation. In 2022, the voluntary turnover rate was 7.7%, higher than 6.0% in 2021. This was attributed to an active job market compounded by 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, irrespective of gender, disability, family status, race, age, sexual orientation or other personal attributes. We uphold these principles in our recruitment processes by selecting new hires based on objective criteria and job-related requirements in strict accordance with the Employment Ordinance and Equal Opportunity Ordinance.

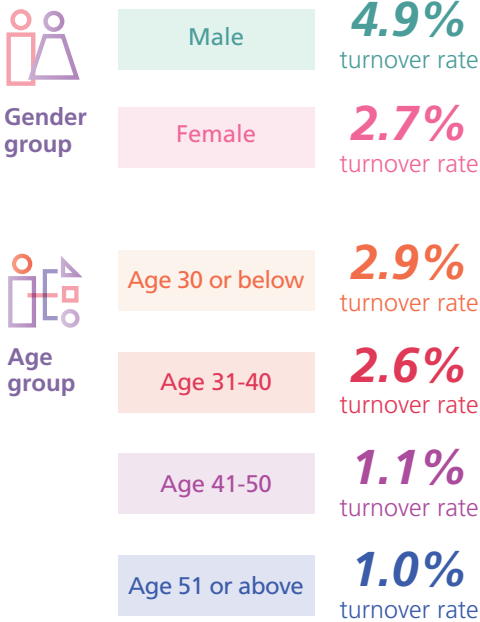
Discrimination, harassment, vilification or victimisation of our employees will not be tolerated under any circumstances. We encourage our employees to voice concerns about alleged misconduct. Formal procedures are in place to ensure that employee grievances will be handled promptly and fairly in a transparent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

We seek to cultivate a diverse workforce with a mix of talent, experience and perspectives that will enhance our business operations. Recognising that the power sector worldwide remains predominantly male-dominated, we strive to increase representation of women at all levels of our organisation.

We incentivise excellence through our pay-for-performance policy and offer competitive remuneration and benefits packages that are reviewed and benchmarked annually with reference to relevant industries and comparable organisations. All colleagues receive annual performance appraisals. We also offer extensive career advancement opportunities in accordance with our Promotion and Transfer Policy.

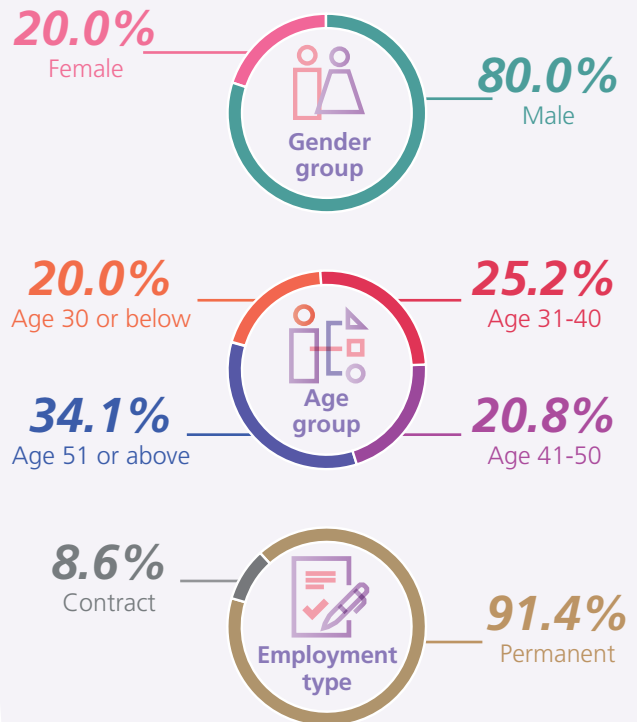
More information about employment benefits for our people can be found on our [corporate website](#).

2022 Voluntary Turnover Rate



7.7%
Overall turnover rate

2022 Employee Profile



Notes:

- All employees are based in Hong Kong and nearly all are locally employed. For more details about our employee profile, please refer to our [corporate website](#).
- Reported figures may not add up to the total due to rounding.



Joint Consultation committee meeting

Engaging with Employees

We prioritise timely, consistent and reliable two-way communication with employees to build constructive and productive relationships. Our Joint Consultation (JC) committee has been promoting effective and open communication between employees and management for more than 40 years. Over 70 directly elected representatives from various employee groups participate in six formal panels, enabling employees to share their ideas and opinions with management representatives. It is also an effective platform for management representatives to provide important information about corporate developments and policies.

In 2022, the JC committee convened 6 meetings via video conference to discuss a range of topics concerning business operations and employee welfare. Also, an online survey was launched among the JC members to collect their opinions on HK Electric's COVID-19 measures. The survey findings were reviewed by the management and channelled to concerned parties for enhancing relevant policies and practices. Transition to gas-fired generation is an important topic that has been addressed via various communication platforms between the management and employees over the past few years. We are committed to ensuring all workers employed in coal-fired generation will be retained and either retrained for work in our gas-fired plant or redeployed to other positions.

Hear Your Voice programme provides a platform for young employees to share their career development aspirations with senior executives.

Each year, we organise dedicated sessions to facilitate company-wide exchange of views. In 2022, over 60 employees from different parts of the business were invited to participate in quarterly focus-group meetings. Following its successful launch in 2021, we continued our Hear Your Voice programme in 2022. Around 70 talented young employees engaged in discussions with senior executives about their career development aspirations or other ideas.

Other internal communication channels include our intranet portal, My HKE mobile app, Ideas Click online suggestion platform, special taskforces, subject matter briefing sessions and an employee hotline.





Promoting Employee Well-being

HK Electric cares about and promotes employee well-being through a comprehensive wellness programme encompassing both physical and mental health, including healthy work-life balance. In 2022, we were proud to be recognised for the eighth consecutive year as a “Happy Company” by the Promoting Happiness Index Foundation and the Hong Kong Productivity Council. Throughout the year, we delivered a mix of face-to-face and online wellness activities for our employees.

From February to June 2022, we initiated an online table tennis challenge and produced two fitness videos to remind our employees to take regular exercise, particularly during the pandemic. In July we launched a month-long promotion of physical wellness during which our colleagues received weekly e-leaflets on physical exercise and healthy lifestyles. In May and August, about 100 employees attended two stimulating talks on Chinese herbal soup and Chinese medicinal diet strategies. During the year, we also organised online interest classes on Chinese paper cutting, lantern making for Mid-Autumn Festival and balloon twisting for over 150 colleagues.

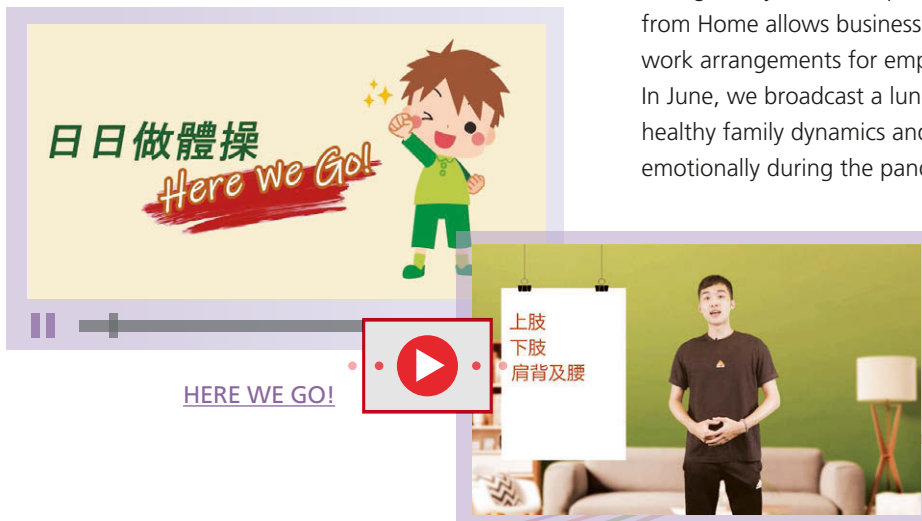
We strive to cultivate an empathetic and supportive work environment by empowering employees with tools to build their own emotional resilience and provide emotional support to one another. In 2022, we extended our psycho-social programme, established in 2021, with the aim of helping supervisors and managers cope with challenges. Nine classes were attended by about 160 employees.



Colleagues participate in an interest class on lantern making for Mid-Autumn Festival.

HK Electric’s Good Neighbours’ Club fosters an internal support network with over 70 employee-members who have previously been equipped with counselling skills so they can provide just-in-time emotional support to their peers in need. As part of our continuous efforts to promote this Club, inspiring stories and helpful tools and resources were shared via our internal communication channels. In July, 20 newly-recruited members attended a basic counselling workshop to enhance their skills for providing support to colleagues experiencing stress or emotional issues, especially in emergency situations. An intermediate workshop in September was organised for 19 members to refresh their skills and exchange experiences.

We pride ourselves on supporting our employees to nurture strong family relationships. Our Code of Practice for Work from Home allows business unit heads to implement flexible work arrangements for employees in special circumstances. In June, we broadcast a lunchtime talk on maintaining healthy family dynamics and helping children to cope emotionally during the pandemic.





2022 Wellness Initiatives



Physical and intellectual well-being

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



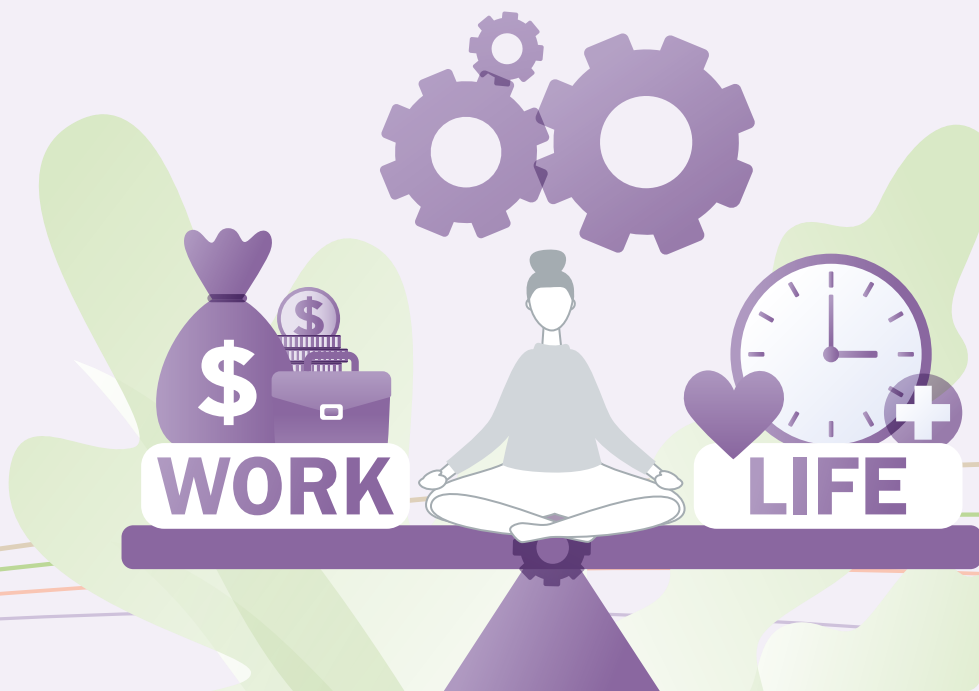
Emotional and social well-being

- ▶ Volunteering activities
- ▶ Employee Recreational Subsidy
- ▶ 24-hour Employee Counselling Hotline Service manned by professional counsellors
- ▶ Good Neighbours' Club providing timely emotional support to colleagues
- ▶ E-buddy programme helping new hires assimilate into our corporate culture
- ▶ In-house educational programme on psycho-social wellness



Good family relationships

- ▶ 5-day week
- ▶ Flexible work arrangements in special circumstances
- ▶ Lactation rooms for breastfeeding mothers
- ▶ Medical check-up plans and flu vaccinations for employees' family members at preferential rates
- ▶ Children's Education Subsidy
- ▶ Tips on parenting





[HK Electric Graduate Trainee – Achieving his Purpose and Mission](#)



■ We join the “E&M Go!” event to promote our Graduate Trainee Programme.



Attracting Talent

We strive to attract and retain 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 partner with relevant organisations and institutions to showcase our industry and promote our well-respected brand.

During the year, in addition to joining the annual “E&M Go!” event organised by the Hong Kong Electrical and Mechanical Industry Promotion Working Group, we participated in career fairs hosted by The Hong Kong Polytechnic University, City University of Hong Kong and The Hong Kong University of Science and Technology. We continued to promote our Graduate Trainee Programme through events organised by the Vocational Training Council and the Hong Kong Institute of Construction. We recruited 13 new Graduate Trainees in 2022.

Young people can gain meaningful on-the-job experience through various trainee and internship programmes. In 2022, one third-year bachelor’s degree student in IT-related disciplines joined our Industrial Placement Programme and 22 students participated in our eight-week summer Vacation Trainee Programme for second and third-year bachelor’s degree students.

Opportunities for Growth

HK Electric has received recognition from the Employees Retraining Board, earning the title of “Manpower Developer (2020-22)” in the Manpower Developer Award Scheme.

We provide upskilling and professional development opportunities to ensure our workforce is equipped with expertise and experience to continue to excel in all core areas of our business. The Managing Director conducts an annual succession planning exercise with support from the Human Resources Division. As part of our performance appraisal process, we regularly assess employees’ learning and development needs in consultation with line managers. Relevant divisions coordinate technical and functional training. The Human Resources Division is responsible for other learning programmes that are primarily geared towards building employees’ general competencies based on our Four-level Leadership Competency Framework.

In January 2022, participants in our Leadership Development Programme (LDP) presented innovative business solutions to management representatives at the Certificate Presentation Ceremony hosted by the Managing Director. During the year, alumni of LDP attended two hybrid group learning sessions on team building, strategic thinking and decision making. We also introduced a new three-year Accelerated Development Programme (ADP) to speed up preparation of the exceptionally high-potential young talent for leadership positions.



We provide various learning and development opportunities for our employees.



We encourage and support the professional development of young talent from our Graduate Trainee and Trainee Technician Programmes through targeted offerings such as sharing sessions, workshops on career planning and mentoring. Our Professional Development Programme (PDP) helps identify and nurture young recruits with leadership potential. In 2022, trainees and PDP members participated in a team building workshop on collective problem solving and collaboration to achieve shared goals.

We foster a culture of continuous learning. In addition to tailored learning opportunities, employees can engage in interactive learning via our Intranet portal and My HKE app on a continuous basis. In 2022, we delivered more than 46,000 hours of face-to-face and online learning programmes. About 400 employees attended "Learning for All" webinars on a range of topics such as building trust, effective communication, positive mindset and innovation. As part of our Supervisory Skills Series, mid-level leaders participated in small group leadership coaching programmes.

Moving forward, we plan to introduce a corporate Learning Management System to enhance our culture of self-directed, proactive career development and to facilitate seamless delivery and tracking of learning

programmes. The first phase of the project is due to launch in mid-2023. We also offer financial support for employees to further their formal education, including sponsorships for employees to enrol in bachelor's and master's degree programmes with local and overseas institutions. In 2022, we sponsored bachelor's and master's degree programmes for 17 employees.

HK Electric Institute nurtures the technical and professional competencies of our workforce by facilitating knowledge transfer from seasoned employees and retirees. In 2022, The Institute organised several learning courses and themed talks on electricity generation, transmission and distribution systems, the computer programming language "Python", climate change and sustainability among other topics. We also continue to collaborate with local universities to enrich learning opportunities and strengthen our industry's talent pool. We partner closely with The Hong Kong Polytechnic University to share professional and technical expertise, proprietary information and access to our equipment and facilities.



Investing in the Future Generation of Power Technicians

In 2022, HK Electric proudly introduced a bespoke programme in collaboration with the Employees Retraining Board (ERB) designed to support and deepen the talent pool of technicians for the power sector.

The “Tailor-made Programme for Generation Trainees” provides aspiring persons with education and on-the-job experience to excel in their field. In October, we invited persons over the age of 18 and interested to join the power industry to attend a briefing and interviews. Successful candidates who completed a complimentary 56-hour training programme were offered employment with HK Electric as Generation Trainees. Our aim is to provide these people with power knowledge, skills and experience



over a three-year period to prepare them for successful careers in HK Electric.

Learning and Development at HK Electric

Talent development

Programme/initiative	Purpose
Trainee and Professional Development Programmes	Support young recruits to build professional careers
Rotational Development Programme	Nurture untapped leadership potential through cross-functional job rotations
Accelerated Development Programme	Accelerate preparation of the exceptionally high-potential young talent for leadership positions
Young Talent Development Programme	Advance young talent into first-line leadership roles
Leadership Development Programme	Prepare mid-level leaders to succeed in critical leadership roles
Executive Education Programmes	Enable senior and mid-level leaders to benefit from inspiring learning experiences with external executives and develop business acumen


Knowledge sharing

Programme/initiative	Purpose
HK Electric Institute	Transfer knowledge and expertise to the next generation
Seminars, workshops and online learning platforms	Strengthen learning culture across the board
Knowledge inventory	Enable systematic planning for knowledge succession





2022 Employee Training

	Gender group	Employee category	Overall
 Percentage of employees trained (%)	Male	Senior staff	100
	Female	General staff	91.5
		Workman	78.5
 Average training hours per employee	Male	Senior staff	24.7
	Female	General staff	26.5
		Workman	5.7
			91.3
			25.0

Sharing Best Practices and Driving Innovation



In 2022, the “Belt and Road Advanced Professional Development Programme in Power and Energy” attracted a record-level of attendance. This popular annual event, which is a collaboration between HK Electric, State Grid Corporation of China, The Hong Kong Polytechnic University and Xi’an Jiaotong University, provides an invaluable platform for energy professionals around the region to share best practices, knowledge and expertise.

[Belt and Road Advanced Professional Development Programme in Power and Energy 2022](#)

corporate executives and academics from 26 countries and regions convened to share knowledge and exchange ideas on energy security and green energy transition, among other topics. HK Electric’s experienced engineers hosted technical sessions and workshops on reliable and energy-efficient distribution networks and applying the computer programming language “Python” to energy management and distribution systems.

This year’s programme featured five days of webinars and talks on the theme “Smart and Sustainable Power Systems for Green Living”. Over 300 energy professionals, including senior government officials,



Health & Safety

Management Approach

Our robust culture of safety is guided by our comprehensive Health & Safety Policy, which outlines our commitment to protecting the health and safety of employees, customers, contractors and the public. In 2022, we updated this policy to ensure that health and safety hazards related to climate change are fully addressed in our management systems.

Our Health and Safety Board (HSB), chaired by the Managing Director, oversees implementation of the Health & Safety Policy and related guidelines. The HSB is supported by divisional/departmental health and safety committees for monitoring health and safety performance. We also have dedicated sub-committees for engaging with employees and contractors on health and safety issues.

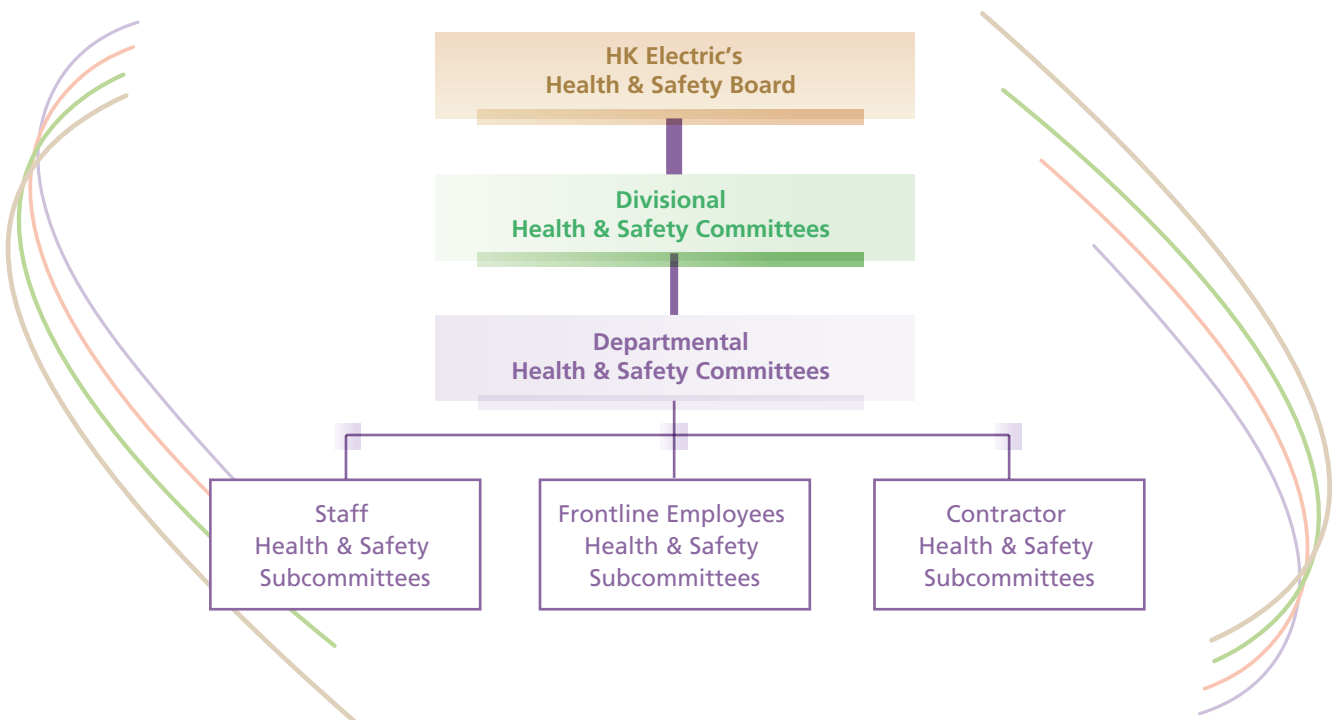
We strive to comply fully with all applicable health and safety laws and regulations and have comprehensive safety management and asset management systems in



place that conform to the international standards ISO 45001 and ISO 55001, respectively. These systems are complemented by a set of strictly enforced company-wide health and safety guidelines.

Our goal is to achieve zero accidents among our employees and contractors and to provide customers and the public with a safe and reliable supply of electricity. We implement a variety of health and safety programmes, maintain high standards in all facilities, deploy advanced technologies in our power network and ensure safety preparedness.

Health & Safety Governance Structure





Safety First

Our Corporate Health & Safety Manual aligns our safety management procedures and practices with recommendations from the Labour Department’s Code of Practice on Safety Management. It is reviewed and updated regularly to ensure compliance with industry best practices and government regulations.

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

Proactive engagement with employees and contractors is key to achieving excellent occupational health and safety



[Virtual Reality Safety Training at HK Electric](#)

performance. We promote health and safety awareness by educating our employees about safety culture, encouraging knowledge-sharing, and providing incentives for employees and contractors to maintain incident-free operations. In 2022, we launched an app on our internal e-Connect platform to manage Personal Protective Equipment (PPE) and educate employees on its proper use, including step-by-step video demonstrations. We also installed an alarm system at LPS to safeguard the operational area during ongoing construction activities.



Employees Recognised for Zero Accidents

HK Electric strives to continuously improve its culture of safety to reach our goal of zero accidents. At the end of 2022, our employees had achieved zero Lost Time Injuries for a record 14 consecutive months. All colleagues were honoured for this outstanding achievement with a Zero-accident Award.



Safety Performance

	2019	2020	2021	2022
Number of Lost Time Injuries	1	3	2	0
Lost Time Injury Frequency Rate*	0.05	0.17	0.11	0
Lost Time Injury Severity Rate*	1.02	19.35	10.06	0

*Per 200,000 employee-hours



Top Honours at Annual Safety Competition

In 2022, HK Electric won the championship at the annual Safety Quiz competition, an annual event co-organised by the Occupational Safety and Health Council and Labour Department and designed to promote health and safety awareness in a fun and engaging way. Among the 119 teams competing in the "Enterprise" category, HK Electric teams took the top three places in the Cup Final and won

the Championship and 1st runner-up in the Plate Final. The winning team will have the honour of representing Hong Kong at the Regional Safety Quiz in 2023.



Health and Safety Forum 2022



On 14 December 2022, HK Electric hosted a Health and Safety Forum themed "Safety is Everyone's Responsibility" to heighten safety awareness among our employees and contractors. Speakers included guests from the Occupational Safety and Health Council and our contractors, as well as our management and safety professionals. About 400 attendees joined the forum.



Health and 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 persons and authorised persons to ensure that only personnel with the necessary skills and experience can perform work on or near our facilities;
- ▶ Regular risk assessments and preventive or mitigation measures to eliminate or minimise risks;
- ▶ Ad hoc and regular safety audits and inspections to identify improvement opportunities;
- ▶ Systematic reporting and follow-up on every workplace incident to prevent recurrence;
- ▶ Work Safe Behaviour programme to eliminate risky behaviours 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 work environment;
- ▶ Oil-free distribution substations and zone substations to reduce potential fire hazards; and
- ▶ Contingency plans and procedures.

Encouragement

- ▶ Incentive and award schemes to recognise employees for zero-accidents;
- ▶ Incentive schemes for reporting near-miss incidents and safe driving;
- ▶ Supporting the "Charter on Preferential Appointment of OSH Star Enterprise" by giving preference to contractors that have effective safety management systems in place for repair, maintenance, alteration and addition works; and
- ▶ Supporting the "Construction Safety Charter" by continuously enhancing our safety culture.

Training and awareness

- ▶ Comprehensive safety training for employees using 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, such as Health & Safety Week; Safety, Health & Environment Day; Health & Safety Forum; Life First Campaign; Environmental, Health & Safety Quiz; and health and safety talks;



- ▶ Relevant safety information on our website for third-party contractors carrying out works near our power supply lines; and
- ▶ Engaging with the community to promote safe use of electricity.





Contingency Preparedness

Interruptions to the power supply may significantly affect community facilities, such as road traffic systems, communication infrastructure and lifts in buildings. We make every effort to provide 24-hour emergency customer support via telephone and SMS (Short Message Service). Contingency plans are in place to ensure smooth and efficient recovery from crisis situations such as natural disasters or other force majeure events. We review these plans regularly and update them as needed. We also have special contingency plans in place for hospitals and encourage customers operating life-support equipment to register with us so that we can provide advance notification of planned power supply interruptions.

Our contingency planning process considers health and safety risks for employees, contractors, customers and the public during potential emergency situations, including fire, oil and chemical spills, typhoons and flooding, giving rise to emergency evacuations, confined space rescues and treatment for heat-stroke or serious accidents. We conduct regular drills with our employees, contractors and customers to enhance response capabilities. In 2022, we conducted a review of fire risk and revisited our contingency plans for preventing fire damage to critical transmission cable circuits. We also analysed major blackout incidents worldwide to guide us in developing preventative measures for our own operations. Please refer to the chapter on [Serving Hong Kong](#) for more information about our supply reliability record and customer service.

We have a three-level contingency plan in place to manage outbreaks of influenza or other similar public health crises. Throughout the COVID-19 pandemic, our contingency plan has been at Emergency Response Level to reduce risk of infection for employees and contractors while maintaining

our operations and services. All business units have continuously reviewed and refined their plans to respond quickly and effectively to the evolving situation. We remain vigilant against the impacts of COVID-19 on our supply chain. To avoid disruptions, we have successfully sourced alternative materials and suppliers as needed.

Keeping our Employees Safe during the Pandemic

HK Electric adopts a multipronged approach to manage COVID-19 risks for our employees in a timely, transparent and compassionate manner. We prioritise disease prevention and mitigation, first and foremost by promoting vaccinations in line with the Government's policies and programmes. All employees are eligible to receive one day of personal Vaccination Leave for each of the first three doses and parents may take an additional half day of Childcare Vaccination Leave.

In 2022, we facilitated group vaccinations for employees at designated vaccination centres. Recognising that knowledge is key to helping our people manage physical and emotional impacts of the pandemic on their health, we produced eight educational videos on virus prevention, coping with illness and isolation, and post-recovery self-care tips. In addition to providing Rapid Antigen Test kits and face masks for employees' daily use, we also distributed COVID-19 care packs to them.

We also provided assistance to employees who fell ill with COVID-19 or who underwent quarantine for close contact exposure by making caring phone calls and delivering daily necessities to their residential units.

Regular meetings chaired by a senior executive and attended by the heads of all business units reviewed the trend of infections among our employees to ensure timely adjustments of precautionary measures and responses.



Fire drill at Lamma Power Station



Managing our Supply Chain

Management Approach

We work with a wide range of suppliers who help us construct, operate and maintain our power facilities and support our daily operations. We engage with these important business partners, ranging from contractors and consultants to vendors of input materials and technical equipment, to uphold our core values and promote sustainable development.

HK Electric’s Code of Practice for Suppliers (CoP) is reviewed and updated regularly. It sets out high standards on 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 codifies our expectations on health

and safety, cybersecurity, environmental protection and climate action, as well as protecting and promoting human and labour rights, including eliminating child and forced labour, respecting freedom of association and implementing anti-discrimination policies.

Our suppliers are expected to act in accordance with the CoP and to communicate the standards outlined in the CoP to their own employees and supply chains. We strongly encourage all suppliers to report publicly on their sustainability performance. Our procurement process has been verified for compliance with ISO 20400 Sustainable Procurement – Guidance, reflecting our commitment to integrating material sustainability considerations.

2022 Number of Suppliers by Geographical Region



888 Hong Kong	41 Asia (excluding Hong Kong and Mainland China)	13 Mainland China	12 United Kingdom	Total 980
11 Europe (excluding United Kingdom)	9 United States	4 Australia	1 Canada	



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. Procurement decisions for selected commodities consider environmental impacts together with other selection criteria such as quality, price, and punctuality. Suppliers found in violation of environmental legislation may be excluded or suspended from our registered supplier list.

The percentage of environmentally friendly products listed in our Electronic Ordering System accounted for 32% of general office commodity items in 2022, up from 27% in 2021. Our annual expenditure on these items amounts to about \$600,000.

Our supply chain comprises predominantly local companies, defined as those based in Greater China, including Hong Kong. Except for coal and natural gas, other major input materials at LPS are supplied by local companies. In addition, we procure 93% of other 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 case-by-case basis, including consideration of their corporate social responsibility and sustainability performance. In 2022, these suppliers accounted for approximately 1.5% of suppliers in our supply chain.

Major suppliers of other materials and services undergo screening for environmental, health and safety performance in order to be accepted onto our Recognised Tenderers Register (RTR). We periodically review the RTR and request suppliers to submit updates on their sustainability performance. In 2022, we evaluated 25 suppliers in this way and determined that their overall performance was satisfactory.

During the year, we carried out an in-depth analysis of the information obtained from the previous year's Sustainable Procurement Survey (SPS) for active suppliers in one major category of our RTR to enhance our understanding of suppliers' sustainability performance and actions. We are planning to extend the SPS to active suppliers in other categories of our RTR.

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.

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. There is also a merit and demerit point system in place for trench contractors to incentivise workplace safety.



We work with our suppliers to promote health and safety.

At the 28th Considerate Contractors Site Award Scheme co-organised by the Development Bureau and Construction Industry Council in 2022, HK Electric received four "Certificate of Supervisory Company" awards for our work with four nominated contractors who received a total of 17 awards under the scheme. During the year, we awarded 24 personnel employed by our contractors with "Healthy Stars", "Safety Stars" and "Environment Stars" to acknowledge their excellent performance.



Safety, Health and Environment Day 2022



On 7 December 2022, our Projects Division (PD) organised a Safety, Health and Environment (SHE) Day at Lamma Extension construction site. SHE Day is one of our major initiatives to enhance SHE awareness among our employees and contractors involved in the development of our energy infrastructure.

Besides encouraging messages from PD management, other highlights of the event included a heart caring programme from the Occupational Safety and Health Council to remind participants to adopt healthy lifestyles and a fantastic football performance to encourage

them to do more physical exercise. We also invited representatives from the Construction Industry Council Construction Innovation and Technology Fund and two innovative product suppliers to share their knowledge on the application of innovative technology to encourage our contractors to continuously improve and enhance inherent engineering operations at construction sites. Over 500 employees and contractor personnel attended this meaningful and fruitful event.





Key Statistics

Environment	2022	2021	2020
Fuel Consumed^[1]			
Gas (TJ)	40,150	40,201	40,981
Coal & oil (TJ) ^[2]	55,210	62,421	59,472
Licence Compliance			
Percentage of Compliance (%)	100	100	100
Air Emissions			
SO ₂ (kT) ^{[1][3]}	1.36	0.82	1.08
NO _x (kT) ^[1]	4.42	5.33	5.41
RSP (kT) ^[1]	0.10	0.12	0.13
CO ₂ (million T) ^[1]	6.73	7.35	7.16
Direct GHG emissions (million T of CO ₂ e) ^[4]	6.77	7.39	7.19
Indirect GHG emissions from imported energy (million T of CO ₂ e) ^[5]	0	0	–
Other indirect GHG emissions (million T of CO ₂ e) ^[6]	1.07	1.10	–
CO ₂ e per electricity unit sold (kg/kWh) ^[7]	0.68	0.71	0.71
Material Non-Hazardous Waste^[8]			
Ash collected for industrial uses (kT) ^[1]	123	162	154
Gypsum collected for industrial uses (kT) ^[1]	45	47	39
Construction waste from major construction projects for recycle (kT)	23	32	–
Construction waste from major construction projects for disposal (kT)	2	2	–
Material Hazardous Waste^[9]			
Waste oil collected for recycle (litre) ^[10]	178,880	0	0
Waste oil collected for disposal (litre)	159,138	151,800	82,700
Other material hazardous waste recorded in volume for recycle (litre)	0	0	0
Other material hazardous waste recorded in volume for disposal (litre)	8,944	13,600	19,800
Other material hazardous waste recorded in weight for recycle (kg)	7,339	17,750	0
Other material hazardous waste recorded in weight for disposal (kg)	8,872	16,080	53,248
Water Consumption/Discharge^[1]			
Marine water withdrawal & discharge (million m ³)	1,816	1,971	1,738
Town water consumption (million m ³) ^[11]	1.57	1.99	1.87
Wastewater discharge (million m ³)	0.19	0.24	0.25
Noise Abatement Notice			
Number of notices received	0	0	0
Certificate Accreditation			
Number of ISO 14001 certificates	3	3	3
Number of ISO 50001 certificates	1	1	1
Health & Safety^[12]	2022	2021	2020
Number of fatalities	0	0	0
Number of Lost Time Injuries	0	2	3
Lost Time Injury Frequency Rate (LTIFR) (per 200,000 employee-hours)	0	0.11	0.17
Number of days lost/charged (no. of employee-days) ^[13]	0	179	348
Lost Time Injury Severity Rate (LTISR) (per 200,000 employee-hours) ^[13]	0	10.06	19.35
Longest period without a Lost Time Injury (no. of days)	365	154	165
Number of reported traffic accidents (no. of cases)	3	10	7
Traffic Accident Frequency Rate (TAFR) (no. of cases per million km travelled)	1.8	5.9	3.8
Number of ISO 45001 certificates	3	3	3



Operations	2022	2021	2020
Customer Service			
Number of customers (thousands)	586	584	583
Average rating of customer satisfaction level (5-point scale)	4.7	4.7	4.7
Number of pledged service standards	18	18	18
Percentage achieved (%)	100	100	100
Installed Capacity^[1]			
Gas (MW)	1,095	1,060	1,060
Coal & oil (MW) ^[2]	2,305	2,555	2,555
Renewable energy (MW)	2.0	1.9	1.8
Performance			
Electricity sold (millions of kWh)	9,941	10,361	10,134
Plant availability (%)	86.6	89.0	89.5
Thermal efficiency (%)	38.9	37.6	37.6
Transmission and distribution losses (%)	3.5	3.3	3.4
Electricity Supply Reliability			
Supply reliability rating (%)	>99.9999	>99.9999	>99.9999
Unplanned customer minutes lost (minutes)	0.3	0.3	0.3
Certificate Accreditation			
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:

- ^[1] For power generation only.
- ^[2] Fuel oil is mainly used for starting and flame stabilisation of coal-fired units and hence specific breakdown for fuel oil is not given.
- ^[3] The increase in SO₂ emissions in 2022 was due to a prolonged maintenance issue with a critical piece of equipment.
- ^[4] HK Electric's direct GHG emissions (Scope 1 emissions) are mainly attributed to power generation. The figures are independently verified according to ISO 14064-1:2018.
- ^[5] HK Electric runs a vertically integrated utility business. All our electricity consumed is generated by ourselves and the associated Scope 2 emissions are covered in our Scope 1 emissions. Hence, our indirect GHG emissions from imported energy (Scope 2 emissions) are reported as zero. The figures are independently verified according to ISO 14064-1:2018.
- ^[6] HK Electric's other indirect GHG emissions (Scope 3 emissions) refer to indirect GHG emissions arising from its operations and activities, including those from transportation, products used, use of our products and other sources (i.e., our town water demand). The figures are independently verified according to ISO 14064-1:2018.
- ^[7] 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.
- ^[8] HK Electric's material non-hazardous waste streams are ash and gypsum generated from power generation and construction waste generated from major construction projects managed under the mandatory construction waste disposal charging scheme. All ash and gypsum generated were collected for industrial use, while all construction waste generated was recycled or disposed of.
- ^[9] HK Electric's material hazardous waste streams are those required to be managed under the mandatory trip ticket systems. All these waste streams generated were collected by licensed waste collectors for recycle or disposal at licensed waste management facilities.
- ^[10] The significant increase of waste oil collected in 2022 was due to the replacement of transformer insulation oil at two switching stations.
- ^[11] Town water is provided by the Water Supplies Department of the HKSAR Government. Please refer to Water Supplies Department's [website](#) for information about the source of water.
- ^[12] For our employees only. For our contractors' safety statistics, please refer to the [GRI Content Index](#).
- ^[13] For lost time injuries in which disability continued beyond the closing date (31 December) of a specific year, days lost of the year were estimated on the basis of medical opinion as to probable ultimate disability.
- ^[14] For our workforce data and other social data, please refer to the relevant chapters and the [GRI Content Index](#).
- ^[15] For economic/financial data, please refer to our [Annual Report](#).



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 2022, please refer to our [Annual Report](#).





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 2022 (“the Report”). The scope of HKQAA’s verification covers the data and information of HKEI’s sustainability performance for the period from 1st January 2022 to 31st December 2022. The Report conveys the information of HKEI’s commitment, strategies and progress towards sustainability to stakeholders.

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 Global Reporting Initiative’s (“GRI”) Sustainability Reporting Standards (“GRI Standards”) and GRI’s Electric Utilities Sector Disclosures, as well as 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

Based on 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 GRI Standards and GRI’s Electric Utilities Sector Disclosures;
- 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 is endeavoring to improve its disclosure transparency. The Report keeps stakeholders abreast of the latest sustainability information and actions undertaken by HKEI, including the emerging climate-related disclosures on climate change mitigation actions and management of related opportunities and risks with reference to the Recommendations of the Task Force on Climate-related Financial Disclosures (TCFD).

Signed on behalf of Hong Kong Quality Assurance Agency

Connie Sham
Head of Audit
March 2023



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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