



Power Assets Holdings Ltd.

電能實業有限公司

(Stock Code : 6)



# Driving energy transition towards net zero

Sustainability Report **2022**

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## About Power Assets

Power Assets Holdings Limited ("Power Assets" or the "Company", together with its subsidiaries, the "Group") is a global investor in energy and utility-related businesses with interests in the transmission of electricity, gas and oil, the distribution of electricity and gas, as well as the generation of energy from thermal, waste, and renewable sources.

From our origins in Hong Kong over a century ago, the Group now has a presence spanning four continents in nine different markets including the United Kingdom, Australia, New Zealand, Mainland China, Thailand, the Netherlands, Canada and the United States, bringing reliable, affordable energy to about 19.5 million homes and businesses. The bulk of our business derives from our interests in 520,100 km of power, gas and oil networks, supplemented by investments in around 9,800 MW of power generation and energy from waste facilities.

Our investments comprise primarily regulated energy infrastructures. In 2022, around 80% of our Group's share of total fixed assets of joint ventures and associates ("the Assets") comprise transmission and distribution of gas and electricity infrastructures. Power-generation assets account for around 12% of the Assets with coal-fired generating facilities having been reduced steadily over the years and currently down to less than 3% of the Assets.

We are delighted to share in this report our innovations and achievements to combat global warming in support of the decarbonisation efforts and COP27 commitments in the communities in which we operate. We trust you will find the chapters on hydrogen, a replacement fuel for natural gas, the digitisation and automation of electricity networks as well as our systematic power generation decarbonisation programme interesting – and exemplary.

Listed on the Stock Exchange of Hong Kong as a constituent share of the Hang Seng Index, Power Assets has been a constituent of the Hang Seng Corporate Sustainability Index since 2010.





## Driving energy transition towards net zero

The cover design of our 2022 Sustainability Report depicts a dynamic wind turbine design to represent our passion and commitment in driving the energy transition. The images of renewables and transmission infrastructure showcase our many initiatives to tackle climate change and progress towards net zero operations. The communities featured highlight our activities to care for and support our employees as well as disadvantaged members of the community.

# Our Business Portfolio

North America

## Canada

Canadian Power Holdings  

Husky Midstream Limited Partnership 

Energy Developments Pty Ltd  

## United States of America

Energy Developments Pty Ltd  

Europe

## United Kingdom

UK Power Networks 

Northern Gas Networks 

Wales & West Utilities 

Seabank Power 


Energy Developments Pty Ltd  

## Netherlands

Dutch Enviro Energy Holdings B.V. 

Asia

## Mainland China

Jinwan Power 


Dali Wind Power 

Laoting Wind Power 

## Hong Kong


HK Electric   


## Thailand

Ratchaburi Power 


Oceania


## Australia


SA Power Networks 

Victoria Power Networks 

Australian Gas Networks 

Australian Energy Operations 

United Energy 

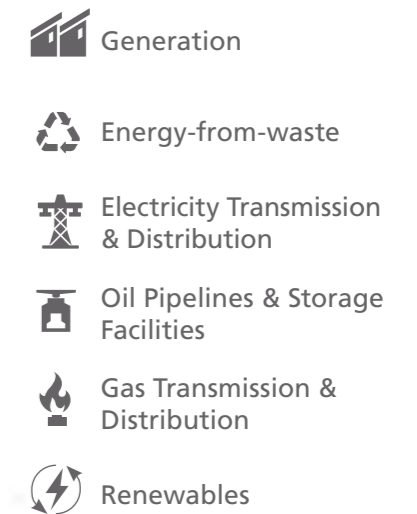
Dampier Bunbury Pipeline & AGI Development Group 

Multinet Gas 

Energy Developments Pty Ltd   

## New Zealand

Wellington Electricity Lines 





## Our Business Portfolio

### Generation Capacity

Renewable Energy/  
Energy-from-waste

**948** MW

Coal-fired  
**2,950** MW

Gas-fired

**5,258** MW

Oil-fired  
Standby  
gas turbine **555** MW

Diesel  
generators **64** MW

Employees

**17,882**

Customers



**19,457,000**

Power and Gas /  
Oil Network Length

Power Network  
**405,500** km

Gas / Oil Pipeline  
**114,600** km

### Canada

**Canadian Power Holdings  
(Canadian Power)**  

Meridian

Installed Capacity 220 MW  
Joined / Interest 2007 / 50%

TransAlta

Installed Capacity 1,064 MW  
Joined / Interest 2007 / 25%

Okanagan Wind Power

Installed Capacity 30 MW  
Joined / Interest 2021 / 50%

**Husky Midstream Limited Partnership  
(HMLP)** 

Oil Pipeline Length 2,300 km  
Oil Storage Capacity 5.9 million barrels  
Pipeline Gathering System Capacity 409,000 barrels/day  
Joined / Interest 2016 / 48.75%

**Energy Developments Pty Ltd (EDL)**  

Installed Capacity 11 MW  
Joined / Interest 2017 / 20%

### United States of America

**Energy Developments Pty Ltd (EDL)**  

Installed Capacity 202 MW  
Joined / Interest 2017 / 20%

### United Kingdom

**UK Power Networks (UKPN)** 

Network Length 189,800 km  
Customers 8,400,000  
Joined / Interest 2010 / 40%

**Northern Gas Networks (NGN)** 

Gas Pipeline Length 36,100 km  
Customers 2,700,000  
Joined / Interest 2005 / 41.29%

**Wales & West Utilities (WWU)** 

Gas Pipeline Length 35,000 km  
Customers 2,600,000  
Joined / Interest 2012 / 36%


**Seabank Power** 

Installed Capacity 1,151 MW  
Joined / Interest 2010 / 25%

**Energy Developments Pty Ltd (EDL)**  

Installed Capacity 54 MW  
12 MW in Greece  
Joined / Interest 2017 / 20%

### Netherlands

**Dutch Enviro Energy Holdings B.V.**  
(which owns AVR-Afvalverwerking B.V.  
(AVR)) 

Installed Capacity  
Waste-to-Energy Units 138 MW  
Biomass-Fired Units 30 MW  
Joined / Interest 2013 / 27%

### Mainland China

**Jinwan Power** 

Installed Capacity 1,200 MW  
Joined / Interest 2009 / 45%

**Dali Wind Power** 

Installed Capacity 48 MW  
Joined / Interest 2007 / 45%

**Laoting Wind Power** 

Installed Capacity 49.5 MW  
Joined / Interest 2008 / 45%

### Hong Kong

**HK Electric**   

Installed Capacity 3,402 MW  
Network Length 6,900 km  
Customers 586,000  
Established / Interest 1889 / 33.37%

### Thailand

**Ratchaburi Power Company  
(Ratchaburi Power)** 

Installed Capacity 1,400 MW  
Joined / Interest 2001 / 25%

### Australia

**SA Power Networks (SAPN)** 

Network Length 90,200 km  
Customers 907,000  
Joined / Interest 2000 / 27.93%

**Victoria Power Networks (VPN)**   
(which owns Powercor and CitiPower)

Powercor

Network Length 92,700 km  
Customers 925,000  
Joined / Interest 2000 / 27.93%

CitiPower

Network Length 7,500 km  
Customers 337,000  
Joined / Interest 2002 / 27.93%

**Australian Gas Networks (AGN)** 

(a member of Australian Gas  
Infrastructure Group (AGIG))  
Gas Pipeline Length 27,000 km  
Customers 1,400,000  
Joined / Interest 2014 / 27.51%

**Dampier Bunbury Pipeline and  
AGI Development Group** 

(collectively known as "DBP")  
(a member of AGIG)  
Gas Pipeline Length 4,100 km  
Joined / Interest 2017 / 20%

**Multinet Gas (MGN)**   
(a member of AGIG)

Gas Pipeline Length 10,100 km  
Customers 720,000  
Joined / Interest 2017 / 20%

**United Energy** 

Network Length 13,500 km  
Customers 709,000  
Joined / Interest 2017 / 20%

**Energy Developments Pty Ltd  
(EDL)**   

Installed Capacity 763 MW  
Joined / Interest 2017 / 20%

**Australian Energy Operations (AEO)** 

Network Length 71 km  
Joined / Interest 2012 / 50%

### New Zealand

**Wellington Electricity Lines  
(Wellington Electricity)** 

Network Length 4,800 km  
Customers 173,000  
Joined / Interest 2008 / 50%

## Message from Chief Executive Officer

As a key global player in the energy industry, we invest in and manage critical infrastructure and provide reliable and secure energy to millions of families spanning nine markets on four continents. We firmly believe that sustainable practices and long-term value creation go hand in hand. In 2022, we continued to extend our best efforts to support local communities across all our markets of operation in achieving energy transition and the decarbonisation goals. This Sustainability Report presents the strategy, commitment, and initiatives of the Group and all operating businesses to realise our sustainability mission, values, and vision.

During the year, all our business units remained on course to achieve their long-term net-zero goals, despite challenging operating conditions worldwide such as fuel scarcity and supply chain disruptions created by geopolitical tensions. We continually explored and leveraged the opportunities arising from the low-carbon transition to help the industry and community move forward on the net-zero journey.

### Appropriate structures and governance systems

To ensure alignment around a set of common principles and practices, we have a holistic sustainability framework consisting of five pillars – business, people, environment, community, and value chain. Our operating companies are highly diversified in location, sector, and scale, but all have the common goal of meeting or exceeding local government greenhouse gas (GHG) reduction targets. As a Group, our goal is to reduce GHG emissions by 67% by 2035 as compare to 2020.

Our board-level Sustainability Committee ensures policies and systems are in place and provides oversight and guidance to our teams worldwide. We support the disclosure recommendations of the UN Environment Programme's Task Force on Climate-Related Financial Disclosures (TCFD) by moving towards making climate-related financial disclosures in compliance with TCFD guidelines, building upon the reporting done in previous years. We have also signed the UN Global Compact (UNGC) and will strive to achieve our sustainability commitments while following its ten principles. Joining over 20,000 fellow signatories, we are



committed to using our expertise, resources, and infrastructure to create a 'Just Transition' culture in our workforce. Learning that climate change does not affect everybody equally and different parts of the society have various level of preparedness, we trust that embracing 'Just Transition' will help us tackle society's challenges, mitigate socio-economic & environmental risks, and drive new change more effectively.

### Transitioning our portfolio

One of our top priorities is to decarbonise our business portfolio. Accordingly, we continued our efforts to increase the use of low-emission energy and renewable energy, echoing the decisions reached by the global climate leaders in the COP27 summit and the decarbonisation visions of the respective local jurisdictions. Increased use of natural gas, named a "transitional source of energy" by the COP27 President, is a key interim plan for our evolution. Our power-generation businesses in Asia and North America are undergoing a comprehensive fuel mix shift from coal to gas and leverage renewables to substantially cut GHG emissions. From a heating perspective, our operating companies in the UK and Australia are pioneering the decarbonisation of existing gas distribution networks. For example, they are blending green hydrogen into the gas network and producing hydrogen using renewable energy for the communities' gas pipelines. In the longer term, our goal is to replace natural gas with hydrogen for providing energy to finish the last miles of the decarbonisation journey.

Our businesses also explored other carbon-reduction strategies, including the integration of circularity into business processes. Our business in the Netherlands is a beacon for the industry in this regard, reusing household and industrial waste to generate power and capturing emitted carbon for use as a growth enhancer in the glasshouse horticulture sector. In the area of electricity distribution, our operating companies in the UK and Australia are transitioning from a role as distribution network operators (DNO) to distribution system operators (DSO). DSO focuses on leveraging the latest smart grid technologies and advanced metering infrastructure to ensure safe and reliable

power flows as a result of the increase in distributed renewables due to heightened awareness of climate change within the community.

### Ensuring a just and equitable lifestyle for everyone

In parallel, we recognise the significance of people in this sustainability journey. It is our aspiration to serve with integrity and excellence, safeguarding and improving the welfare of all stakeholders. To achieve our goal, we proactively collaborate with local authorities, non-governmental organisations, and communities in helping the underprivileged. A key focus is supporting local communities in the alleviation of fuel poverty. Our businesses in the UK are very active in this regard, and our electricity supply business in Hong Kong also offers tariff subsidies and an array of relief measures for SMEs and the underprivileged to help them alleviate their economic pressure.

Under the 'Just Transition' ethos, we are also running a range of employee reskilling programmes to ensure the workforce can move ahead with the industry as we embrace new technologies and ways of working. The Group and its businesses develop responsible business practices and identify potential decarbonisation pathways.

While we have made tremendous decarbonisation advancements in the past year, much more still needs to be done to reach net-zero operations. We will continue to develop a greener business portfolio through our key strategies: integrating renewables, driving the adoption of hydrogen-based heating; supporting electric vehicle rollout, creating smarter, more resilient electricity and gas networks, and maintaining robust energy infrastructures.

We would like to express our gratitude to our dedicated and empowered colleagues who ensure our vision is realised, and to our stakeholders for your trust and support. We invite you to join us in this journey towards a greener planet.

**Tsai Chao Chung, Charles**  
Chief Executive Officer  
Hong Kong, March 2023

## 2022 Highlights

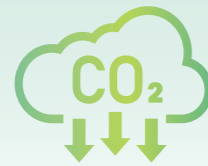
### ENVIRONMENT



Further to our prior commitment to phasing out coal at all our business operations by 2035, committed to

**67% reduction**

in Scope 1 and 2 emissions by 2035 against the 2020 baseline



**3.4% reduction**

in Scope 1 and 2 emissions compared to 2021



Committed to reporting more of our carbon footprint by monitoring and disclosing **Scope 3 emissions** – our Scope 3 emissions from the Group's business operations, which cover a total of 63% of our attributable revenue<sup>1</sup>, were

**548,308 tCO<sub>2</sub>e** in 2022



**Over 77%**

of the Group's attributable revenue<sup>1</sup> were covered by ISO 14001 or other EMS certificates

### SOCIAL



**0.19**

lost time injury rate



**36.0**

training hours per employee



**↓ 28%**

lost days due to work-related injury (vs 2021)



**94.5%**

of our full-time employees received training



**83.3%**

of employees covered by OHSAS 18001/ISO 45001

### GOVERNANCE



Signed the **UN Global Compact** and committed to achieve our sustainability pledges while following its ten principles



Conducted the materiality assessment to update the list of **material sustainability issues**



Increased the number of SDGs that are most relevant to our **sustainability strategy** from three to five



Started our journey towards incorporating **TCFD recommendation**



<sup>1</sup> Percentage of attributable revenue represents the revenue of each business multiplied by the effective interests owned by the Group on see-through basis, divided by the summation of the attributable revenue. This is an illustration of the scale of each business to the Group, and the figures do not represent the consolidated revenue for the Group.



# PAH's Low-Carbon Transition Plan

As a strategic global investor in energy and utility-related businesses, we firmly believe that a sustainable profile is critical for long-term value growth. Driven by our established sustainability strategy on decarbonisation, the Group is committed to accelerating the transition to a low-carbon world through transforming our portfolio and helping customers incrementally reduce their GHG emissions by investing in green energy and innovative solutions. With a strong presence in countries across four continents, we continue to look for suitable opportunities and support the net-zero carbon goals set by various jurisdictions in which the Group operates.

## Strategy

Decarbonising the generation portfolio by replacing or converting coal-fired units to renewable and gas-fired units, and expanding renewable energy, waste-to-energy, RNG, and carbon capture and utilization capacity



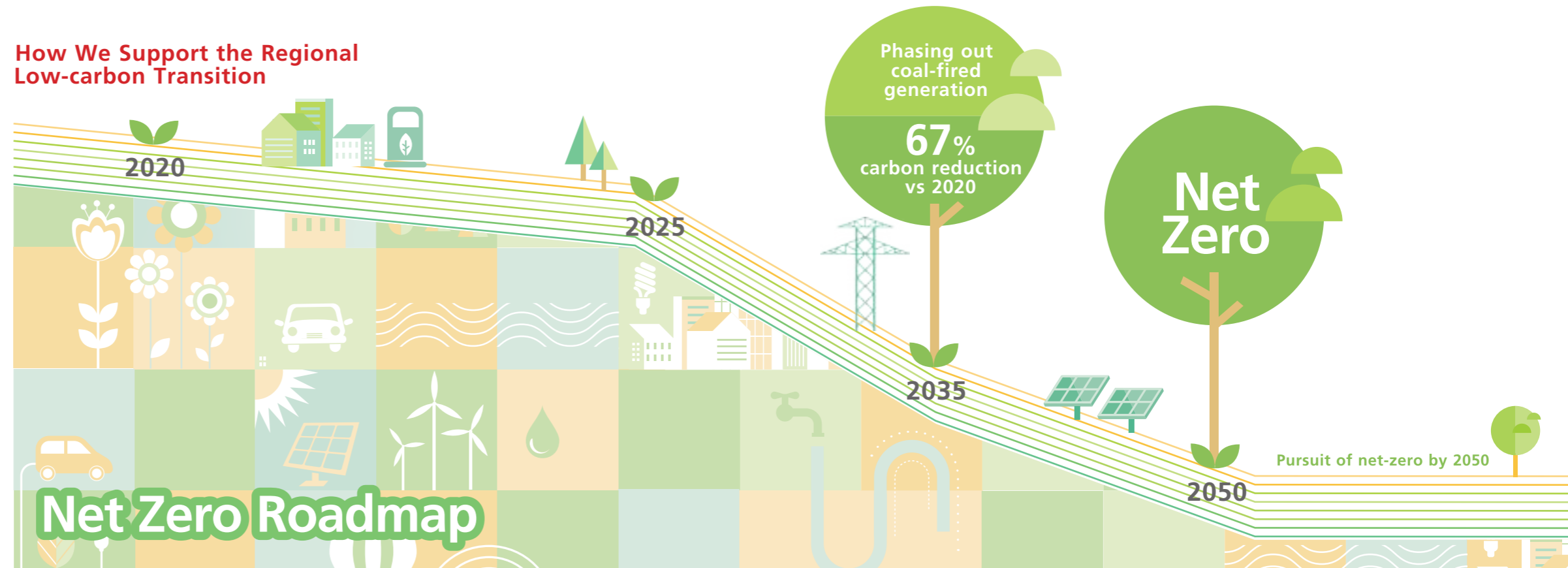
Accelerating and supporting decarbonisation by continually modernising and digitising electricity networks to accommodate the projected influx of distributed renewable energy sources as well as the anticipated surge in the required charging networks for a massive uptake of electric vehicles



Decarbonising our gas network by blending hydrogen and biogas into existing gas distribution networks and ultimately replacing natural gas with hydrogen and biogas to achieve the net zero targets set by local government



## How We Support the Regional Low-carbon Transition



## Key Initiatives / Targets

### North America

#### Canadian Power

- Pursue carbon capture opportunities at existing power generating assets and expand renewable generation footprint

#### HMLP

- Aim to become net-zero by 2050
- Evaluate carbon credit allocation through Power Purchase Agreement
- Explore investing in carbon capture, utilization and storage infrastructure

### Asia

#### HK Electric

- Pursue coal-to-gas transition
- Phase out coal-fired generation by 2035
- Ramp up renewable adoption like planning of an offshore wind farm
- Explore other zero-carbon technologies including the possibilities of using hydrogen in power generations

#### Jinwan Power

- Convert its conventional coal-fired unit to co-generation cycle, which will increase the cycle efficiency and reduce emissions

#### Ratchaburi Power

- Continue to expand solar energy capacity

### Europe

#### UKPN

- Achieve net-zero for its controllable Scope 1 and 2 emissions (excluding network losses) by 2028
- Transition to electric vehicles and cleaner engines
- Improve controls to unmetered supply
- Purchase renewable energy and implement energy efficiency improvements in office and depots

#### WWU

- Achieve net-zero by 2050
- Facilitate green gas connection
- Reduce gas shrinkage through replacement of old metal pipe
- Convert to ultra-low emission vehicles where market and conditions allow

#### NGN

- Achieve net-zero by 2050
- Continue working on H21, a suite of gas industry project, demonstrating the role of clean hydrogen in heating homes
- Transport 100% hydrogen by 2050

#### AVR

- Achieve net-zero by 2050
- Continue to expand carbon capture and utilisation capacity at the waste-to-energy facilities

### Oceania

#### EDL

- Focus on development of low-carbon energy projects such as renewable energy (RE) and renewable natural gas (RNG)

#### AGN, DBP & MGN

- Achieve net-zero by 2050
- Replace old pipeline to reduce gas shrinkage
- Achieve full renewable gas conversion for distribution network no later than 2050

#### United Energy & VPN

- Increase renewables into the local electricity grid, and increase use of solar power at depots

#### SAPN

- Achieve net-zero by 2035
- Facilitate uptake of renewable and clean energy sources, conversion of fleet vehicles to electric vehicles, installation of LED street / public lights, and phase out the use of Sulfur hexafluoride (SF<sub>6</sub>)

# Governance

We aspire to constantly enhance how energy is being generated and delivered to all our markets of operation to create a more sustainable planet for future generations. We also aim to be a positive force in people's lives as a best-in-class employer, supportive partner, and caring corporate citizen operating with the highest ethics and values.





## Sustainability Governance

The Group's sustainability governance structure provides a solid foundation for developing and delivering its commitment to sustainability. This is embedded at all levels of the Group, including the Board, the Sustainability Committee and the Sustainability Management Committee, comprising the CEO and selected management members. The Sustainability Committee and the Sustainability Management Committee provide guidance to our businesses to maintain consistency in implementing their own sustainability strategies, managing goals, targets, and reporting processes, strengthening relations with internal and external stakeholders, and ensuring overall accountability. To oversee the target setting and performance of our major operations, the Group delegates its directors and executives to sit on the board-level Sustainability Committees of our key business units.

The Group has formulated separate policies on sustainability, environment, supply chain management, and human rights. These policies are primarily intended to serve as the ultimate guiding principles for sustainability practices within the Group, putting its values into action across the businesses and detailing the Group's commitments to business integrity, people, environment, and the communities in which the Group operates.

To support the Group's needs as the business environment evolves, board members and employees occasionally participate in ESG-related training programmes. In 2022, a group-wide compulsory ESG and sustainability training programme was organised to equip our employees, especially those functions that manage our ESG performance and reporting, with the latest ESG-related information.



Top-down STRATEGY

### The Board

- Has ultimate accountability for the Group's sustainability strategy, management, performance, and reporting.
- Examines and approves the Group's sustainability objectives, strategies, priorities, initiatives, goals, and targets as well as the corresponding policies and frameworks that support their achievement.
- Our directors or executives are appointed to the boards and management committees of all material investments for overseeing and monitoring the sustainability performance of each business.

### Sustainability Committee

- Established as a Board committee.
- Chaired by Mr. TSAI Chao Chung, Charles, Chief Executive Officer and Executive Director. Its other members are Mr. CHAN Loi Shun, Executive Director, and Mr. IP Yuk-keung, Albert, Independent Non-executive Director and Chairmen of the Audit Committee and the Nomination Committee.
- Has an overarching role in supporting the Board on matters of sustainability; overseeing the implementation of the sustainability initiatives of the Group, including reviewing the related policies and practices and assessing and making recommendations on matters concerning the Group's sustainability governance, strategy, planning, and risks.
- For more information, please refer to the Terms of Reference of the Sustainability Committee.

### Sustainability Management Committee

- Composed of Chief Executive Officer, an Executive Director, Chief Financial Officer, Group Legal Counsel and Company Secretary, and selected members of the Group's management, the Sustainability Management Committee focuses on addressing sustainability issues and policies and driving strategic initiatives across the Group.
- Reports to, and receives feedback from, the Sustainability Committee on a regular basis.

### Management of Business Units

- Identifies operational-specific sustainability-related risks and opportunities.
- Monitors and tracks progress against agreed targets and initiatives.
- Provides feedback to the Sustainability Management Committee on sustainability-related achievements and progress.

Bottom-up INFORMATION FLOW

## Approach to Sustainability

We operate our businesses in a responsible and sustainable way whilst remaining transparent and accountable to our stakeholders. The Group is committed not just to its shareholders, but also to a wide range of stakeholders including employees, customers, suppliers, the local community, professional institutions, NGOs, and related government authorities.

### Sustainability Pillars and Policies

The Group's overall sustainability approach and priorities are built on five pillars: the Business, Human Capital, the Environment, the Community, and the Value Chain. Each pillar is supported by Group-wide policies, leadership at the Group level, and collective efforts across its businesses. These five pillars guide the Group in integrating sustainability across all our operations.

The Group has policies, procedures, and guidelines in place to support management in addressing material sustainability issues across the Group, as described throughout this Report.

These principles are adopted group-wide and implemented by each operating company based on local social, economic, and environmental needs. The execution and compliance are monitored continually through regular management reviews and reporting. These pillars clearly articulate our direction to be one of the leading sustainable development contributors in our industry.

For more information on relevant policies and procedures in place, please refer to the Corporate Policies on the Group's corporate website.

### The Group's Sustainability Pillars

#### The Business

A sound business model is imperative to help us stay competitive within the market. It also permits us to attract new investment opportunities, retain talents and motivate staff to pursue sustainable development.

#### Our Key Achievements

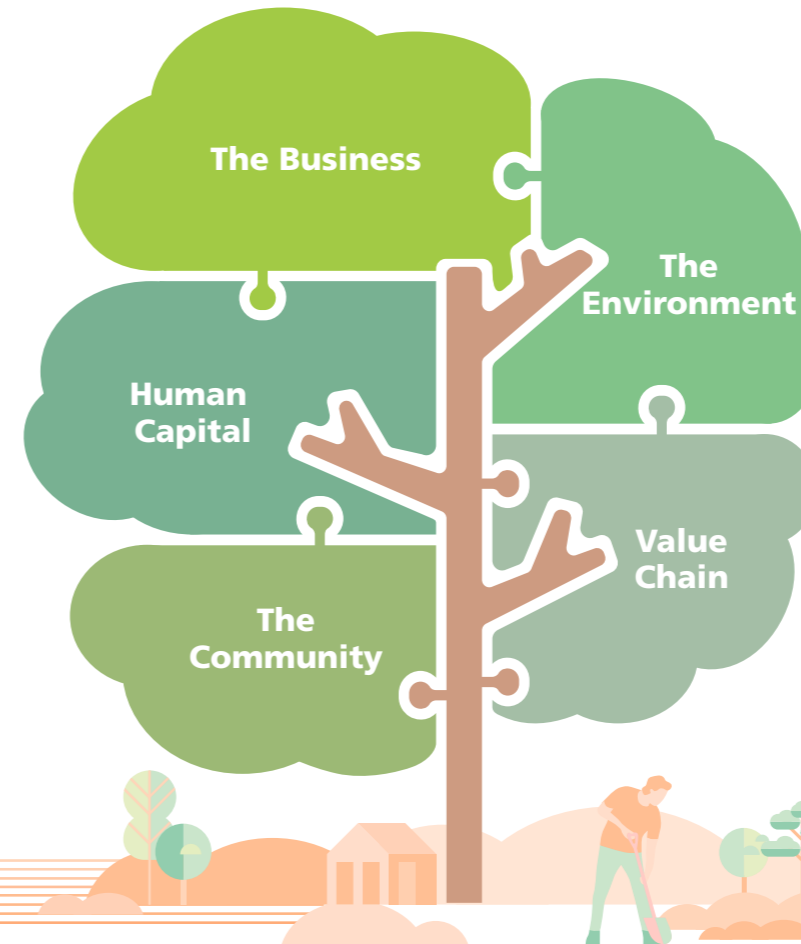
- Deliver stable and long-term values for shareholders
- Conduct business with uncompromising integrity and safeguard against unfair business practices
- Maintain a high standard of corporate governance
- Comply with all relevant and applicable laws and regulations

#### Human Capital

Human capital is at the heart of our operations and remains an indispensable element to our corporate success. We strive to create an inclusive, diverse and fair environment for all our employees.

#### Our Key Achievements

- Uphold a high standard of business ethics and the personal conduct of employees
- Provide a safe and positive work environment that values the wide-ranging perspectives inherent in a diverse workforce
- Foster individual growths and achievement of business goals via wide range of training and development opportunities
- Maintain proper systems to ensure internal equity and external competitiveness of staff remuneration and recognition



#### The Environment

Environmental protection is one of our corporate principles and sustainability strategies. We firmly believe that as a global energy investor, we must lead in the decarbonisation of our sector and manage our energy assets responsibly.

#### Our Key Achievements

- Support the transition to low-carbon future and various government's decarbonisation plans
- Embrace environmentally friendly energy sources and technologies in our operations
- Implement initiatives to minimise the environmental impacts arising from our operations
- Encourage and provide support for our conservation and environmental protection programmes

#### The Community

Community is crucial to the realisation of our decarbonisation pursuits. We work hard to engage with our stakeholders frequently to strengthen our communication channels, learn their needs, and ultimately improve our sustainability performance.

#### Our Key Achievements

- Undertake a wide range of philanthropic efforts catering to the needs and benefits of the local communities
- Educate the public on the importance of practicing energy efficiency and low-carbon lifestyles
- Implement internal guidelines and controls on donations and contributions to safeguard shareholders' interests
- Encourage employees to play a positive and active role in community

#### Value Chain

Value chain helps increase our business efficiency and provides a step-wise business model that brings various business activities together to create value for our customers.

#### Our Key Achievements







- Operate with sound management systems that effectively identify and mitigate our supply chain risks
- Uphold the principles of the Group's Suppliers Code of Conduct
- Support human rights and exercise due diligence throughout the supply chain
- Invest in technologies and innovative solutions to improve business resilience

## Stakeholder Engagement and Materiality Assessment

### Stakeholder Engagement

The Group recognises the significance of effective stakeholder engagement and collaboration. As our diverse business operations involve a variety of stakeholder groups including employees, customers, business partners, suppliers, and investors, as well

as regulatory authorities, government officials, NGOs, and the community, their inputs facilitate our ability to respond to sustainability challenges and opportunities.

Stakeholders	Our Engagement Channels
 <b>Employees</b>	<ul style="list-style-type: none"> <li>• Inductions</li> <li>• Surveys</li> <li>• Interviews</li> <li>• Trainings</li> <li>• Virtual and in-person forums</li> </ul>
 <b>Customers</b>	<ul style="list-style-type: none"> <li>• Websites</li> <li>• Social media</li> <li>• Customer service</li> <li>• Satisfaction surveys</li> </ul>
 <b>Suppliers</b>	<ul style="list-style-type: none"> <li>• Supplier screenings and assessments</li> <li>• Online surveys</li> <li>• Technical briefings</li> <li>• Informative training</li> </ul>
 <b>Investors and Business Partners</b>	<ul style="list-style-type: none"> <li>• Annual General Meetings</li> <li>• Investor relations</li> <li>• Annual reports</li> <li>• Presentations</li> </ul>
 <b>Government and Regulatory Authorities</b>	<ul style="list-style-type: none"> <li>• Statutory filings and announcements</li> <li>• Letters to institutions</li> <li>• Direct meetings</li> <li>• Annual reports</li> </ul>
 <b>NGOs and Community Partners</b>	<ul style="list-style-type: none"> <li>• Focus groups</li> <li>• Donations</li> <li>• Volunteering</li> </ul>

The feedback from stakeholders of different backgrounds also helps the Group and its operating companies understand ever-changing market demands and global sustainability trends. This in turn informs the Group's decision-making regarding its sustainability practices, initiatives, and disclosures. Through our stakeholder engagement activities this year, we gathered comments from stakeholders in relation to the environmental, social, and governance aspects of our business, and turned them into actions.

Understanding that a sound strategy involves people and not just technology and processes, we are committed to promoting Just Transition in a co-constructive way. Just Transition is an emerging

concept in which the social wellbeing of the community is considered equally during the energy transition to a low-carbon economy. Through proactive collaboration with local governments and other industry alliances, the Group and its businesses develop responsible business practices and identify potential decarbonisation pathways. To strengthen our commitment to this cause, the Group joined the UN Global Compact this year, making the UN Global Compact and its principles part of our strategy, culture, and day-to-day operations. With the resulting networking access to other signatories all over the world and guidance on industry best practice, our sustainability strategy can be improved even further.

The figures for stakeholder engagement in our major operating markets are given below:

Major Operating Markets	Number of Stakeholder Engagements Held	Number of Stakeholders Engaged
Australia and New Zealand	53	Over 4,000
United Kingdom	526	Over 217,000
<b>Total</b>	<b>579</b>	<b>Over 221,000</b>

### Materiality Assessment

Understanding and responding to the shifting global situation is essential to having a positive impact on the world. By conducting material assessments, we can identify sustainability issues that most impact our business and stakeholders, guiding the Group in formulating sustainability strategy and reporting.

In 2022, the Group, with the assistance of an independent advisor, conducted a materiality review to update the list of material sustainability issues that are considered to be most significant to the Group and its stakeholders. The list of material issues is reviewed and endorsed by the Sustainability Committee.



## Materiality Assessment Process

### Identification

- Applied a four-part analysis which looked at industry standards, industry peers, ESG ratings and the operating companies' previous stakeholder engagement results.
- Identified a potential list of material sustainability issues that are considered relevant and important to our business and its stakeholders.

1

### Evaluation and Prioritisation

- Engaged with institutional investors and ESG rating agencies via online survey to gain insight on material issues and alignment with sustainability priorities.
- Prioritised issues that have a significant impact on the Group's ability to create long-term and sustainable value based on results from stakeholder engagement and desktop research.

2

### Validation

- Reviewed and approved the material issues by the Sustainability Committee.

3

Through the materiality review, 12 sustainability issues were identified as material sustainability topics relevant to the whole Group or specific businesses based on their circumstances and are categorised as follows:

#### Environment



- Decarbonisation, Hydrogen Economy and Energy Transition
- GHG Emissions
- Preserving the Natural Environment and Environmental Management
- Innovation and Digitalisation



#### Governance

- Corporate Governance
- Business Ethics

#### Social



- Human Capital Management
- Occupational Health and Safety
- Reliability, Asset Integrity and Cybersecurity
- Customer Services and Helping Customer with Low-Carbon Transition
- Community Engagement and Investment
- Supply Chain Management

To better reflect the Group's efforts on low-carbon transition and align with the latest reporting standards, 'GHG Emissions', 'Decarbonisation, Hydrogen Economy and Energy Transition' and 'Innovation and Digitalisation' have been added to the list of material sustainability topics. We also added 'Customer Services and Helping Customers with Low-Carbon Transition' as our business units and industry peers have rising concerns on the topic.

The materiality results set the focus of this Sustainability Report, as described in the sections below including the disclosures on the material sustainability issues, key initiatives and performance in the reporting year.

The feedback from stakeholders of different backgrounds also helps the Group and the operating companies understand the everchanging market demands and global sustainability trends. This in turn informs the Group's decision-making regarding its sustainability practices, initiatives, and disclosures. Through our stakeholder engagement activities this year, we gathered comments from stakeholders in relation to the environmental, social and governance aspects of our business, and turned them into actions.



## Contribution to UNSDGs

The United Nations 2030 Agenda for Sustainable Development identifies 17 Sustainable Development Goals (SDGs) that represent common goals for sustainable development and provide an international reference for advancing global challenges. In this context, the energy sector plays a strategic role in all countries. We evaluate our contribution to the SDGs by connecting them to our targets, annual progress, material focus areas, and future strategic direction. During our biannual exercise of target setting and review conducted in the first half of 2022, we increased our scope of coverage by requesting that most of our business operations submit their targets that could be aligned with the SDGs. We then conducted a



mapping exercise to collate and consolidate our business units' targets.

Through these exercises, the Group identified five SDGs that are most relevant to our sustainability strategy, and where we can contribute. In implementing our strategies, we focus on both the value we generate for ourselves and our stakeholders and how we can enable concrete actions to achieve the following SDGs.

### Governance

#### Stakeholders' Concern

“How does the Group align operational management to motivate sustainability transition?”

#### PAH Reply

Robust sustainability governance framework is established on Group-level and business-level as all business units implement managerial oversight on sustainability matters. Furthermore, to guide sustainability efforts across operations, a group-wide decarbonisation target of 67% by 2035 is set along with the sustainability-related policies, procedures and the five sustainability pillars.

### Environment

#### Stakeholders' Concern

“How does the Group reduce the reliance on fossil fuels?”

#### PAH Reply

Our businesses are actively researching on generation portfolio decarbonisation opportunities. Power generators using coal are gradually phased out while the use of renewable energy has increased. The potential of blending hydrogen into an existing gas network is also being explored to lower GHG emissions.

### Social

#### Stakeholders' Concern

“How does the Group ensure cybersecurity and customer privacy protection?”

#### PAH Reply

The Group has implemented a variety of measures and initiatives to safeguard cybersecurity and customer privacy. Through regular awareness training sessions, privacy impact assessments and asset integrity management, risks of failure to protect confidential data and utility and information assets are minimised.



### SDG 7 | Affordable and Clean Energy

- 7.1 Ensure universal access to affordable, reliable and modern
- 7.2 Increase substantially the share of renewable energy in the global energy mix
- 7.3 Double the global rate of improvement in energy efficiency

Power Assets is actively promoting the transition towards a new energy model by providing modern forms of energy with environmentally sustainable and financially affordable options. We are constantly striving to evolve and grow while adapting our services to be inclusive and accessible to everyone, including vulnerable customers.

Through expanding renewable energy, waste-to-energy, renewable natural gas and carbon capture capacity, we put significant effort into optimising our business while reducing GHG emissions. Being a part of the solution is also crucial for us through the energy transition as we support the hydrogen and renewable gas economy by blending renewable gas into existing distribution networks and ultimately replacing natural gas to achieve the last mile of our net-zero journey.

Launched more than

**11** initiatives

such as subsidies and concessionary schemes during the year to promote access to affordable energy



**100%**

of our gas distribution companies commissioned plans to blend renewable gas into existing gas distribution



8

**SDG 8 | Decent Work and Economic Growth**

- 8.2 Achieve higher levels of economic productivity through diversification, technological upgrading, and innovation
- 8.7 Take immediate and effective measures to eradicate forced labour and end modern slavery, human trafficking, and child labour in all its forms
- 8.8 Protect labour rights and promote safe and secure working environments for all workers

**36.0**training hours  
per employee**94.5%**of our full-time employees  
received training

Power Assets is committed to the well-being of our people as we believe our ability to transition into a cleaner energy future is highly dependent on them. We prioritise the health and safety of our employees and contractors. We also provide training and development opportunities for our full-time employees to help them reach their full potential.

We are intent on cultivating a workplace that draws out the best ideas from our people emphasising inclusion and collaboration. By promoting gender and racial diversity and sustainable work practices, we build relationships across functions and geographies, and embrace differing perspectives with our business partners to make better decisions.

9

**SDG 9 | Industry, Innovation and Infrastructure**

- 9.1 Develop quality, reliable, sustainable and resilient infrastructure with a focus on affordable and equitable access for all
- 9.4 Upgrade infrastructure and retrofit industries to make them sustainable, with increased resource-use efficiency and greater adoption of clean and environmentally technologies

Power Assets is fostering the sustainability of energy supply by making significant investments in sustainable and resilient energy infrastructure. We aspire to enable resilient future energy systems by investing in technology and innovative solutions such as EV charging facilities and smart meters to promote renewable energy, maintain high electricity supply reliability and improve the convenience for our customers.

Apart from acting on our own, we educate the community on sustainability, energy efficiency and renewable energy. Together with partners across sectors, our collective efforts can have transformative and long-lasting impacts on the communities.

**100%**of our electricity transmission and  
distribution companies committed to  
investing in smart energy solutions

Deployed more than

**120,000**  
smart meters

on our customers' premises

12

**SDG 12 | Responsible Consumption and Production**

- 12.4 Achieve environmentally sound management of all waste throughout its life cycle to minimise adverse impacts on human health and the environment
- 12.5 Reduce waste generation through prevention, reduction, recycling and reuse

Power Assets works to promote and protect the environment through sustainable production patterns. We promote a circular economy by investing in energy-from-waste projects and embed circular principles across our activities and value chain where appropriate.

By reducing our environmental impacts through strategies such as diverting waste from landfill through waste reuse, practicing reduction and recycling, we continue to play an active role in minimising the impact of our business operations on the environment.



Energy consumption –

**17,720,670**

MWh

(~4.4% reduction vs 2021)



Water consumption –

**1,085,874**thousands of m<sup>3</sup>

(~3.8% reduction vs 2021)

13

**SDG 13 | Climate Action**

- 13.1 Strengthen resilience and adaptive capacity to climate-related hazards and natural disasters
- 13.2 Integrate climate change measures into national policies, strategies and planning
- 13.3 Improve education, awareness-raising and human and institutional capacity on climate change mitigation, adaptation, impact reduction and early warning

Scope 1 and 2 emissions –

**8,040,826** tCO<sub>2</sub>e

(~3.4% reduction vs 2021)



Scope 3 emissions –

**548,308** tCO<sub>2</sub>e(from the Group's business  
operations which cover  
a total of 63% of our  
attributable revenue<sup>1</sup>)

Power Assets is strongly committed to continuously identifying and pursuing strategies that help mitigate the impacts of climate change. Recognising that we have an important role to play in reducing emissions within our sector, we have focused our efforts on expanding our renewable energy capacity while also gradually reducing reliance on fossil fuels for our power generation business.

In our gradual shift towards a less emission-intensive energy mix, we also reduce GHG emissions by modernising, digitalising and upgrading our electricity and gas networks. We believe it is imperative to work together with the rest of the world to reverse the climate crisis and supporting government-led policies and incentives to expedite the climate action process.

<sup>1</sup> Percentage of attributable revenue represents the revenue of each business multiplied by the effective interests owned by the Group on see-through basis, divided by the summation of the attributable revenue. This is an illustration of the scale of each business to the Group, and the figures do not represent the consolidated revenue for the Group.



## Reporting on Task Force on Climate-related Financial Disclosures (TCFD)

Today, the real and potential impacts of climate change are top of mind for many stakeholders. As recently highlighted by the World Economic Forum (WEF), global business leaders rank failure to act on climate change as the most severe risk we face over the coming decade. In this context, we recognise the risks and opportunities presented by climate change in our business. In response, we maintain transparency regarding the climate-related risks and opportunities affecting our business and disclose our performance on climate-related matters to give our stakeholders insight into the strategic decisions and actions we are taking to address climate change.

To increase transparency surrounding our climate change initiatives, we have been working towards alignment with the TCFD recommendations. In 2022, we preliminarily identified climate-related risks and opportunities that the Group is facing, and initiated our first climate scenario analysis exercise to identify the potential financial impacts of these risks and opportunities on our business. We will complete the scenario analysis, and also refine our metrics and targets, based on the outcomes of the scenario analysis as we continue to evaluate our strategy and identify new opportunities.

This year's report reflects our progress towards incorporating TCFD recommendations, which we expect to bring to completion in 2023. Our latest TCFD disclosures are set forth in the following sub-sectors: Governance, Strategy, Risk Management, and Metrics and Targets.



Governance	Strategy	Risk Management	Metrics and Targets
Emphasis on addressing climate change and all the associated risks and opportunities	Assess all potential materiality of the risks and opportunities to maximise positive impacts and minimise negative impacts	Identify, assess, and control climate-related risks material to PAH	Facilitate in managing climate-related risk and opportunities material to PAH

### Governance

#### Board Oversight

The importance of climate change for Power Assets is reflected in our governance. The Board has established clear lines of authority and oversight over the assessment and management of climate-related risks and opportunities. The Board understands the potential impacts of climate change on our future growth, as well as how we prepare our business to adapt to the effects of climate change.

To ensure the Board has sufficient oversight of the Group's sustainable business strategy and performance, the Sustainability Committee oversees the management of and advises the Board on the development and implementation of sustainability initiatives, including matters concerning the Group's climate governance, strategy, planning, and risks. Oversight of climate-related issues includes discussion of physical and transition risks from climate change, emissions-reduction initiatives, renewable energy, business plans, and emerging clean energy technologies. In 2022, the Sustainability Committee met twice to review the Group's sustainability plans, including the incorporation of TCFD and other relevant targets and metrics into the reporting system.

To affect the achievement of agreed strategic decisions, the Board's assessment of risk is reflected both in the strategic decisions it takes, and in the identification of the Group's key risks and material emerging risks at corporate and business unit level. The Risk Management Committee, supported by the Internal Audit department, assists the Board and the Audit Committee to review and monitor key risks, including climate-related risks faced by the Group. The Risk Management Committee has oversight of the material climate-related risks, as well as an overview of the level and effectiveness of key controls in place to manage the risks, which are reported on a biannual basis.

#### Management Leadership

Strategy is implemented by the Sustainability Management Committee, which is supported by the management of business units, through the

operational management of sustainability issues and performance monitoring in line with the Group's strategic initiatives. The Sustainability Management Committee provides feedback to the Sustainability Committee on a regular basis.

In addition to the biannual enterprise risk assessment described above, our Sustainability Management Committee completed a climate-related risk and opportunity assessment, along with a scenario analysis to better understand the potential impact and mitigation measures of relevant climate-related risks and opportunities. Top ESG-related risks, including physical and transition risks from climate change are, when applicable, integrated into the annual enterprise risk assessment, which is ultimately presented to the Board, informing climate-related strategy setting. Recognising the urgency to combat climate change and its impacts, we implement a broad range of initiatives and adaptation measures at both the Group and business unit levels.

Please refer to the section "Sustainability Governance" for a concise overview of sustainability governance within the Group. More information on the functions of the board committees is available in our Annual Report.

### Strategy

We recognise that both climate-related risks and opportunities have the potential to impact our business. We have therefore taken the necessary steps recommended by the TCFD to identify and assess the potential materiality of the risks and the opportunities, so we can maximise the positive impacts and minimise the negative impacts on our business. In alignment with the TCFD recommendations, we categorise climate-related impacts into physical and transition risks. Physical risks refer to the exposure of a business and/or value chain to physical hazards associated with a changing climate. Transition risks refer to the exposure of a business to regulators and market responses associated with a transition to a low-carbon economy to address mitigation and adaptation requirements related to climate change.

## Scenario Development

To facilitate discussions and analyses on the potential impacts of climate-related issues under different conditions, a high emissions/business-as-usual pathway (4°C scenario) and a stringent pathway striving to achieve a lower-carbon economy (1.5°C scenario) are used to adequately consider

both physical and transition risks, and to develop an understanding of how the key value drivers of our businesses might be affected under different future states. These scenarios align with the TCFD recommendations.

Scenario Details	4°C Business-as-usual Scenario	1.5°C High-transition Scenario
<b>Decarbonisation trends</b>	<ul style="list-style-type: none"> <li>Emissions continue to increase in line with current business-as-usual pathway</li> </ul>	<ul style="list-style-type: none"> <li>Global decarbonisation trajectory in line with achieving 1.5°C pathway</li> </ul>
<b>Policy expectations</b>	<ul style="list-style-type: none"> <li>Government or state intervention on climate change does not exceed current levels</li> </ul>	<ul style="list-style-type: none"> <li>Up to 2030, Nationally Determined Contributions (NDCs) are successfully delivered by countries as pledged in the 2015 Paris Agreement and consolidated into a pledged pipeline</li> <li>Post-2030, cost-effective emission reduction measures are implemented by countries to achieve the global 1.5°C target, in proportion to their pledged NDCs</li> </ul>
<b>Physical impacts</b>	<ul style="list-style-type: none"> <li>Likely increased severity and frequency of climate change-related weather events</li> </ul>	<ul style="list-style-type: none"> <li>Reduced likelihood of severe climate change-related weather events</li> </ul>
<b>Economic constraints</b>	Aligned to Shared Socioeconomic Pathway 2 (SSP2) middle of the road assumption: <ul style="list-style-type: none"> <li>Global population growth is moderate and levels off in the second half of the century</li> <li>GDP continues to grow in line with historical trends</li> </ul>	

## Climate-related Risks and Opportunities Identification

In 2022, we initiated a preliminary identification and assessment of climate-related risks and opportunities through review of the Group's value chain, to understand the potential revenue and cost exposure to climate-related risks and opportunities, in order to select those which may be most significant to the financial performance of the Group.

While we are still in the process of conducting climate scenario analysis to identify the potential financial impacts from relevant climate-related risks and opportunities, so far, we have preliminarily identified the following key climate-related risks and opportunities for the Group in the short (up to 2026), medium (up to 2035), and long term

(2050). We considered a number of factors to select actionable time frames, including the rapid changes we have seen in the last couple of years with new climate-related regulations, the volatility of energy prices, and the latest United Nations Intergovernmental Panel on Climate Change (IPCC) report.

### Identification of Physical Risks

The identification process shortlisted six potential physical risks, which cover many of the key hazards that the Group is likely to be exposed to, based on historical experience to date and expert judgement about the likely risk profile of the regions considered. The risks include a combination of chronic and acute physical hazards.

Risk Type	Hazard	Description
Acute/Chronic	Coastal inundation	Sea water flooding due to high tides, wind, low air pressure and waves can damage coastal land, infrastructure, and buildings.
Acute	Surface water flooding	Surface water flooding can damage low-lying buildings or infrastructure assets. Increased frequency of extreme rainfall also leads to overland flooding.
Acute	Riverine flooding	Riverine flooding can damage low-lying buildings or infrastructure assets. Changes in precipitation in a catchment also cause a river to exceed its capacity, inundating nearby areas.
Chronic	Extreme wind	Changes in wind regimes, sea surface temperature, and wind speeds. High wind conditions may exceed a building's design specifications.
Acute/Chronic	Extreme heat	Electrical and mechanical components can fail or send spurious signals when their design temperature is exceeded.
Acute	Forest fire	A destructive fire that spreads via trees and forest. Flames and heat from burning vegetation can damage buildings and infrastructure.

### Identification of Transition Risks and Opportunities

The identification process shortlisted six transition risks and opportunities to which the Group was considered to be potentially significantly exposed.

Risk Type	Risk/Opportunity	Overview	Description
Market/ Technology	Risk	Changing Demand for Electricity from the Grid	Reducing electricity consumption in an aggressively transitioning world and introducing solar panels as a local electricity source will reduce demand for electricity from the grid. This may be offset by other factors, such as the transition away from gas as a fuel source.
Market/ Regulation/ Reputation	Risk	Changing Demand for Gas	Limiting global temperature increases to 1.5°C requires a significant reduction in gas consumption as an energy source as an interim measure. The above is likely to be driven by changing social attitudes, economic activities, and governmental policies, reducing demand due to surge in gas prices, and introducing other zero-carbon gases, e.g. biomethane and hydrogen.
Market	Risk	Increasing in Operational Expense	Operational expenses, e.g. fossil fuel and labour costs, may change due to resource scarcity, changes in market needs, carbon price implications, and a revamp in the fuel mix and technological innovation.
Policy and Legal	Risk	Introduction of Carbon Taxes	A carbon tax mechanism is often introduced to the market due to heightened carbon emission objectives. This mechanism will likely be instigated in markets where carbon markets do not currently exist, which could impact all organisations with a significant quantity of Scope 1 emissions.
Market	Risk	Increasing Prices of Raw Materials	Supply-side disruptions could significantly impact raw material costs, which drive up supply chain costs for each business unit. The increase in the price of raw materials may have a knock-on effect on the costs of procurement activities.
Market/ Technology	Opportunity	Increasing Demand for Zero-Carbon Energy	Fossil fuels will be significantly offset by the increasing demand for energy from renewable energy sources in power generation. Increased demand for green gas sources such as green hydrogen and new technologies will also present new business opportunities.

### Strategy Resilience

Overall, these climate-related risks and opportunities are being integrated into our business strategy and objectives through policies, procedures, products, and services. The development of our GHG emission reduction targets is an example of how issues related to climate change have influenced our strategy, which enables group-wide engagement in actions that help us seek to meet our GHG emission reduction targets.

### Management of Climate-related Risks

We have been establishing an iterative process for climate-related risk management since the beginning of our TCFD journey. When considering both physical and transitional climate risks, we benefit from the enterprise risk management framework already in operation.

### Identification and Assessment of Climate-related Risks

The evolution of climate change-related topics as a robust dimension of business value creation makes it a relevant consideration in the Group's risk management framework and process.

Identification and assessment of climate-related risks are conducted at different levels within the Group and risks are profiled using a risk map based on the magnitude of their potential impact and likelihood of occurrence.

As required by our risk management framework, once the risk is identified and assessed, a risk owner is responsible for developing and implementing the mitigating controls. The risk management process also includes a review of the control mechanism for each risk, and the effectiveness of each control is assessed.

This helps to balance the importance of having consistency of approach, measurement, and risk categorisation across the Group.

Please refer to our Annual Report for more information on our risk management and internal control systems.

### Metrics and Targets

The power sector has undergone profound and rapid changes, particularly since 2015, the year of COP21 in Paris. Anticipating these trends, we are committed to reducing our installed coal-fired generation capacity by half – to about 24% of our total generation portfolio – by 2023, against 2016 levels, and phasing coal out of our generation business by 2035. This year, we set GHG emissions reduction targets to signal the importance of doing our part against climate change, to ignite innovation in projects that may reduce emissions, and to drive results to progress in the right direction. We are now targeting a 67% reduction in our Scope 1 and 2 emissions by 2035 compared to 2020 levels. We also aim to support various government decarbonisation plans and net-zero commitments proactively, and abide by the corresponding changes in the regulatory landscape.

As we work to reduce our own emissions, we recognise that it is equally important to address emissions associated with our value chain, as Scope 3 emissions provide the most significant opportunity to address climate change globally. Understanding the amount and sources of Scope 3 emissions better enables us to find ways to reduce them. We therefore began to report on our estimated Scope 3 emissions as a first step to developing opportunities to reduce Scope 3 emissions.

Please refer to the section "Combating Climate Change" for details of our climate targets and the measurement of progress towards these targets.



## Upholding Business Ethics and Integrity

### Next Steps in our TCFD Journey

The adoption of climate strategies and targets and monitoring of the progress towards them are just the beginning of the transformation to a low-carbon society. We are in the process of evaluating how our businesses perform under the two selected temperature pathways through a climate scenario analysis, to test the resilience of our business strategy and to help with informed decision-making. The results of the scenario analysis will be used to analyse the factors that could influence the Group's enterprise value and its ability to achieve sustainability strategies by capturing business opportunities created by the transition to a low-carbon future.

We recognise that a successful energy transition will require more than technical solutions, as it also involves radical transformation of the economy and society. To address the social impact of climate action, it is crucial to acquire broad public acceptance of these transformations, as well as systematically mitigate the adverse social consequences of the energy transition.

As we continue to study the potential implications of our low-carbon transition plan as part of our evolving engagement with the emerging concept of 'Just Transition', we expect to provide updates on current developments and initiatives and further expand our climate-related disclosures in the coming years. We aim to provide our stakeholders

a more detailed overview of the Group's own transition towards a circular, low-carbon, digitalised business model that prepares us to continually offer consistent, comparable, and useful information to our stakeholders.

As we support the local communities to embrace the energy transition and become more sustainable, there is also a growing recognition that not only the pace of the transition but also integrity and accountability matter. We recognise that managing our businesses responsibly and transparently, while maintaining close ties with regulators, suppliers, third-party contractors, and customers, are the basis of a successful business.

Even though our business is regulated by the jurisdictions in which we operate, we still strive to take a proactive and holistic approach to avoid any incidents of bribery and corruption. Transitioning to a low-carbon future requires a strong governance structure and responsible practices that balance stakeholder interests, uphold our values, and influence our supply chain to uphold the same standards in their business activities.

### 2022 Performance Highlights



**6,710** hours of training provided to employees on anti-corruption, ethics, and integrity

### Commitments and Actions

The Group is committed to upholding the highest ethical standards, including business integrity, honesty and transparency across all operations and businesses. We have zero tolerance for any form of fraud or bribery, and are committed to the prevention, deterrence, detection, and investigation of all forms of fraud and bribery.

The Board holds the overall responsibility for business ethics as an essential part of its corporate governance responsibilities. The Executive Directors assist the Board in overseeing the Group's legal and regulatory compliance efforts.



## Governance Policies

Relevant policies for our stakeholders are established to stipulate the Group's expectations and requirements for maintaining fair competition in all business activities.

The Code of Conduct (the "Code") sets out the professional and ethical standards for the Directors and employees of the Company to observe in all business dealings, including provisions dealing with conflict of interest, fair dealing and integrity, corruption, political contributions, personal data protection and privacy, as well as requisite reporting of illegal and unethical behaviour. The Code applies to all subsidiaries and controlled affiliates of the Group, where every Director adheres strictly to the Code including all applicable laws, rules, and regulations within the jurisdictions in which the Group operates. For non-controlled affiliates, employees serving as directors should, to the extent possible, encourage those affiliates to adopt and follow the Code.

Business partners and suppliers of the Group are encouraged to maintain the highest standards of ethical conduct and professionalism in accordance with the Supplier Code of Conduct. They are required to implement appropriate anti-fraud and anti-corruption policies as well as compliance programmes to verify their compliance with the policies. Relevant anti-fraud and anti-corruption clauses are incorporated into the contracts with business partners and suppliers to ensure they are fully aware of the Group's requirements.

The Anti-Fraud and Anti-Bribery Policy outlines the Group's zero-tolerance stance against bribery and corruption and assists employees in recognising the circumstances that may lead to or give the appearance of corruption or unethical business conduct. It includes provisions dealing with kickbacks, political and charitable contributions, facilitation payments, gifts and hospitality, and procurement of goods and services. The Group's general policy is to avoid any form of donations to political associations or individual politicians.

Other policies relevant to ethics and compliance include:

- Information Security Policy;
- Media, Public Engagement and Donation Policy;
- Policy on Inside Information and Securities Dealing; and
- Whistleblowing Policy.

## Communication and Training

The Code forms part of the mandatory induction training which all employees attend upon joining the Group. It is the responsibility of every Director and employee (whether full-time or part-time, contract or temporary staff) to familiarise themselves and comply with the Code. During the year, the Group provided a seminar relating to business ethics, including anti-money laundering, to the Directors to help them keep abreast of current trends and issues facing the Group. Regularly, tailor-made training on specific topics such as anti-fraud and anti-corruption are assigned to employees based on their role and area of responsibility.

## Whistle-blower Programmes

All directors, employees and other relevant stakeholders are expected to report any potential violation of the Code or other group policies. Escalation channels are set up to allow reporting of improprieties or business conduct concerns, with the option of anonymous reporting. All reported incidents are treated confidentially, and informants are protected from any retaliation such as unfair dismissal, victimisation or unwarranted disciplinary action. All breaches are recorded, investigated, and reported to the Board through the Audit Committee, and substantiated violations would result in appropriate disciplinary actions, including termination of employment.

In addition to the group-level processes, each core business derives its own set of internal escalation procedures to cater to its operational needs. Each operating company has its own whistleblowing

system for internal and external parties and reports to the Group's Head of Internal Audit. Some of our operating companies also provide independent, confidential, and free service lines, which are available 24 hours a day, 7 days a week, to ensure

employees have access to a whistle-blowing channel at any time. The Internal Audit Department manages the system and reports serious issues to senior management and the Audit Committee.

# OCEANIA

## AGIG, EDL, United Energy and VPN – Enhancing Staff Awareness on Business Ethics

AGIG appointed external training providers to prepare learning modules on anti-bribery and corruption, fraud, and other corrupt business practices. Training modules are available to all employees via the internal Learning Management System (LMS) and are mandatory for new hires. Anti-corruption is also covered as part of the induction process for new employees at EDL, United

Energy and VPN. On top of induction training, EDL has set up an online portal for all staff to take regular refresher awareness training on anti-corruption matters.

## Regulatory Compliance

As mentioned above, the Group recognises the importance of regulatory compliance. It has established respective preventive, monitoring, and control measures to ensure compliance with respective laws and regulations relating to bribery, extortion, fraud, and money laundering in relevant industries. The Group is not aware of any material breach of laws and regulations relating to bribery, extortion, fraud and/or money laundering that would significantly impact on the Group during the Reporting Period.



# Environment

The Group recognises the broader influence we have on protecting the environment. We have made a clear public commitment to phase out coal-fired generation by 2035, and our low-carbon transition plan illustrates the Group's commitment and strategies to achieve net-zero by 2050. We also collaborate proactively with our business units and customers to identify green energy alternatives, and innovative solutions to reduce GHG emissions and promote sustainable practices throughout the industry. The Group will continue closely monitoring the corresponding changes within the regulatory landscape and actively support the government's decarbonisation plans and initiatives.





## Environmental Stewardship: Our Commitment to Energy Transition

Our businesses provide the backbone of the energy transition and play a significant part in the decarbonisation of society. Reducing our carbon footprint and striving to curb our emissions are important components of our low-carbon transition plan. We develop our low-carbon transition plan in consideration of the present challenges posed by climate change. As we see weather growing more extreme and more people across the globe being affected by climate change, we believe working to address this challenge will steer our customers towards a sustainable lifestyle and support their journeys towards net zero.

While gearing towards the continuous growth of green and innovative solutions, our strategic environmental initiatives also include respect for the environment and the protection of biodiversity. Promoting efficient and responsible use of natural resources and preventing pollution through continuous improvement of technologies enable us to control and minimise our impact on nature and continue to be an exemplary environmental steward of the biosphere and landscapes near our operations.

### Combating Climate Change

Human-induced climate change can be detrimental to the nature and livelihood of humans. Although many countries worldwide have taken tangible

steps to limit the spread of impacts of climate change, the GHG concentration in the atmosphere still continues to rise and thus inevitably intensifies the impacts of climate change. The most recent United Nations Climate Change Conference (COP27), held in Egypt in November 2022, aims to deliver pragmatic actions on various issues critical to tackling the climate emergency, including more ambitious emission reduction targets and new funding schemes to help vulnerable countries cope with climate-induced damage. In particular, the transformation and decarbonisation of the energy sector remains a prerequisite for the implementation of the Paris Agreement and for limiting the average global temperature increase to 1.5 °C compared to the pre-industrial revolution. Energy is a key sector for each jurisdiction to accomplish their respective climate goals by mid-2100.

The Global Methane Pledge (GMP), initially introduced in COP26, invites countries to take voluntary action to reduce global methane emissions. In COP27, the commitment of GMP was further intensified with 150 countries signed up for the pledge, including Australia, Canada, the UK, and the USA. Building upon the aims set out in COP27 and the global urgency to cut anthropogenic methane emissions, we are boosting our commitment to fight against climate change by adapting our services to be inclusive and accessible to everyone, accelerating emissions reduction, including methane, by modernising, digitalising and upgrading electricity

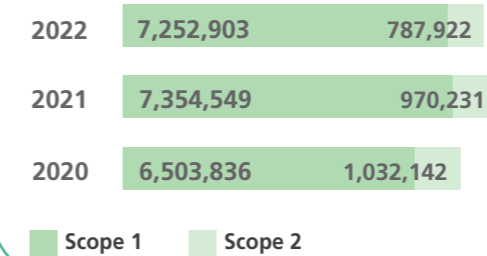
and gas networks; and expanding renewable energy, waste-to-energy, renewable natural gas, and carbon capture capacity.

It is more important than ever for companies to show how they are doing their best to act on

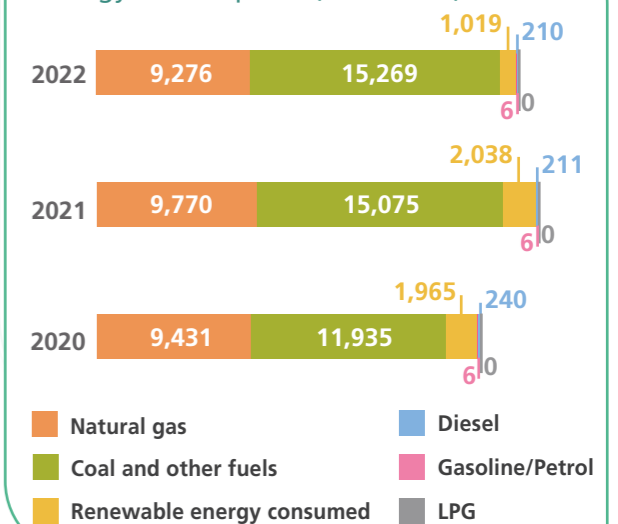
climate change. A successful transformation to a low-carbon economy will require far-reaching and permanent structural changes across society. These changes pose challenges to our operations, but also create new opportunities for us to grow and make our business more resilient and innovative.

### 2022 Performance Highlights

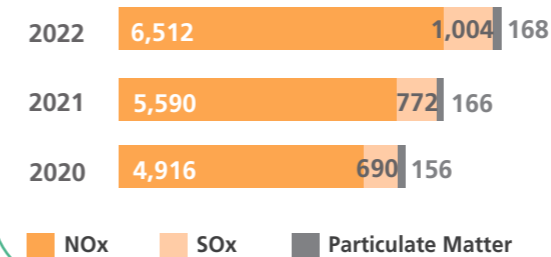
#### GHG Scope 1 and 2 emissions (tCO<sub>2</sub>e)



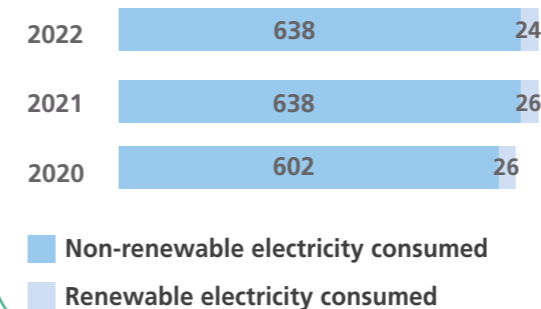
#### Non-renewable and renewable energy consumption ('000 MWh)



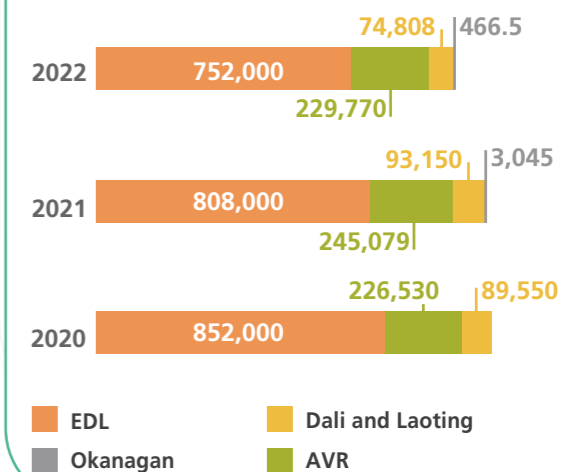
#### Air emissions (tonnes)



#### Purchased electricity for own consumption ('000 MWh)



#### Carbon abatement (tCO<sub>2</sub>e)



Following a severe storm, VPN crew toil through seriously damaged area to resume customers' power supply.

In 2022, we observed a noteworthy reduction in the Group's overall GHG emissions. Our Scope 1 and 2 GHG emissions decreased by 3.4%, with a significant 18% reduction in Scope 2 emissions. This substantial decrease in Scope 2 emissions can be attributed to two key factors: grid decarbonisation and reduced electricity consumption.

The grid decarbonisation results from an increased integration of renewable energy sources in the electricity networks of the UK and Australia. This shift towards cleaner energy options has contributed to a lower carbon intensity of the electricity consumed by our operations. Furthermore, our business units have made conscious efforts to reduce electricity consumption, leading to a decrease of approximately 6% in the amount of electricity purchased in 2022.

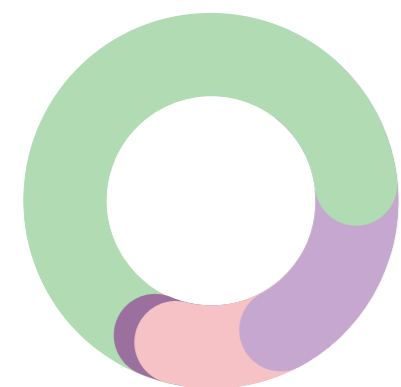
## Commitments and Actions

Given the umbilical connection between energy and the environment, energy systems must transform radically. The Group made a clear public commitment last year to phase out coal-fired generation by 2035. Recognising the importance of decarbonising the power sector, we further iterate our ambition and are now targeting 67% reduction in our Scope 1 and 2 emissions by 2035 compared to the 2020 levels. We also aim to proactively support various governments' decarbonisation plans and net-zero commitments and abide by the corresponding regulatory landscape changes.

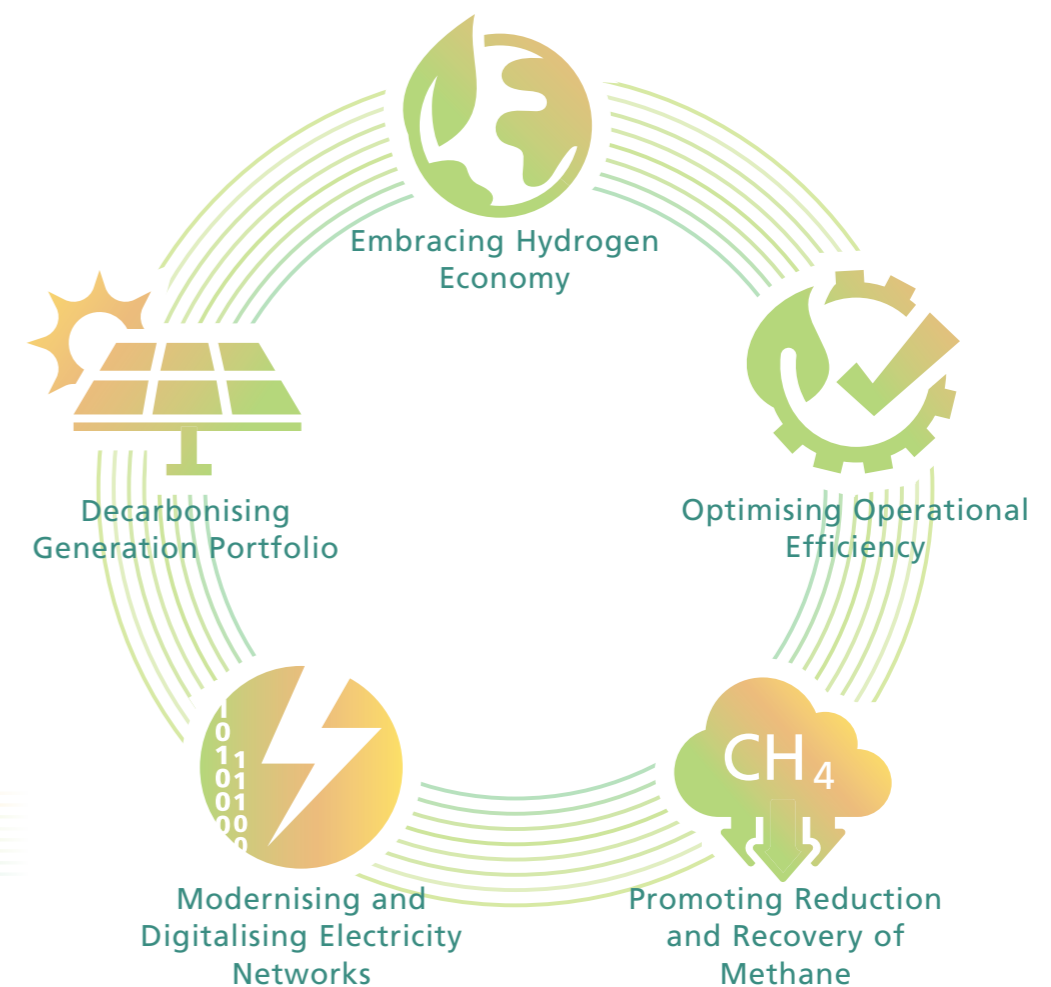
To achieve the goals of the Paris Agreement, society must address emissions across the value chain. Scope 3 emissions are the result of activities not owned or controlled by us but that are a consequence of the work we do. In 2022, our estimated Scope 3 emissions from the Group's business operations, which cover a total of 63% of our attributable revenue<sup>1</sup>, were 548,308 tCO<sub>2</sub>e. As reporting Scope 3 emissions includes indirect emissions resulting from activities outside our control, our estimated Scope 3 emissions only cover a limited number of Scope 3 categories. However, we are committed to improving the quality of our Scope 3 emission data in subsequent years.

We recognise that there are short- and long-term steps towards decarbonisation. On that pathway, we must continue to create value for shareholders while effectively executing our business strategy. We are also seeing a growing focus on developing and deploying cleaner energy technologies such as smart energy systems and hydrogen to help reduce the reliance on fossil fuels. Our focus has been on continually monitoring and modernising our businesses to align with the Group's decarbonisation strategy through the following measures:

### Scope 3 Emissions by Categories



- 12%** Category 1 - Purchased goods and services
- 20%** Category 2 - Capital goods
- 67%** Category 3 - Fuel and energy related activities
- 1%** Other Scope 3 categories



<sup>1</sup> Percentage of attributable revenue represents the revenue of each business multiplied by the effective interests owned by the Group on see through basis, divided by the summation of the attributable revenue. This is an illustration of the scale of each business to the Group, and the figures do not represent the consolidated revenue for the Group.



## Decarbonising Generation Portfolio

## ASIA

HK Electric –  
Decarbonising Fuel Mix

To combat climate change and improve local air quality, HK Electric has been increasing the proportion of natural gas in its fuel mix for many years. In 2022, gas constitutes around 53% of the company's fuel mix. To help realise the government's carbon neutrality goal before 2050, HK Electric plans to further increase gas-fired generation and phase out coal-fired generation by 2035.

Fuel security also goes in conjunction with energy transition. To ensure the operational viability of the coal-to-gas transition, HK Electric is partnering with another energy utility in Hong Kong to build an offshore Liquefied Natural Gas terminal using the Floating Storage and Regasification Unit (FSRU) technology. This terminal will bring an array of benefits to the city's green energy future, including strengthening fuel security and cost competitiveness

of fuel supply by creating a new channel to receive natural gas from diverse international markets.

In terms of renewables, HK Electric is installing additional PV systems at its premises and planning to develop an offshore wind farm southwest of Lamma Island, allowing the harness of wind resources in Hong Kong. We believe these measures will help Hong Kong progressively achieve carbon neutrality before 2050.

HK Electric has launched a Feed-in Tariff (FIT) Scheme and the Renewable Energy Certificates (RECs) in 2018 and 2019 respectively under Smart Power Services. Both schemes have been received well by the public and continue to play an indispensable role in supporting the renewable development of Hong Kong.



HK Electric is increasing its gas-fired generation at Lamma Power Station to reduce carbon emissions.

## OCEANIA

VPN – Enabling Renewable Transition on  
Energy Grid by Solar Farm Construction

Beon Energy Solutions (Beon), a VPN undertaking, has been enabling the renewable transition on the regional energy grid through the commissioning of the Metz Solar Farm in New South Wales in 2022. The solar farm is currently generating at full capacity and has the capacity to generate 115MW, which is the equivalent of powering 40,000 households annually.

Beon has also completed the construction of a 20MW solar farm for Melbourne Water Corporation. Being one of the biggest single commercial PV arrays to be installed in Australia, the solar farm will provide 22% of the energy needs for the operations at Melbourne Water Eastern Treatment Plant, which treats 40% of Melbourne's sewerage.

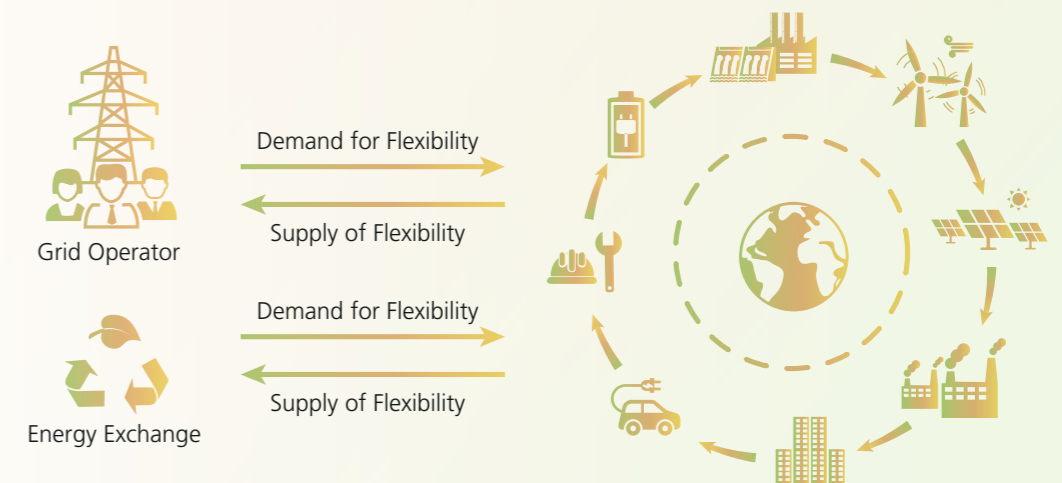
SAPN – Helping Deliver the World's Largest  
Virtual Power Plant

Enerven, a subsidiary business under SAPN, has been supporting Tesla in the development of the world's largest Virtual Power Plant (VPP). The VPP will form a network of potentially 50,000 home solar PV and battery systems across both regional and metropolitan South Australia. The VPP is designed to provide more affordable, reliable and secure electricity for the local communities while

increasing homeowners' visibility of their energy use and supporting South Australia's transition to a renewables-based economy.

To date, Enerven has been involved in the coordination and installation of about 50% all Tesla VPP installations across both regional and metropolitan South Australia.

Virtual Power Plants (VPPs) – where individual household batteries are aggregated under central control, play an important role in balancing supply and demand in future.






## EDL – Decarbonising Energy Generation in Remote Communities

EDL has won the 2022 Asian Power Awards' Solar Power Project of the Year – Australia in recognition of its successful Jabiru Hybrid Renewable Project in the Northern Territory, Australia. The Jabiru Hybrid Renewable Project, which integrates a 3.9MW solar farm with a 3MW/5MWh battery and 4.5MW diesel generation, is the Northern Territory's highest renewable penetration microgrid of its scale.

The project provides a sustainable model for remote communities to reduce dependence on expensive fossil fuels and is a blueprint for isolated off-grid communities seeking a reliable, clean energy solution. Relatively poor energy reliability in remote communities undermines the quality of life and limits growth and investment opportunities. The new power station offers Jabiru's 1,000 residents equitable access to 99.99% reliable energy.

Since the power station was switched on in February 2022, it has drawn on 100% solar energy to supply Jabiru during the day. The battery stores the excess solar energy produced to extend renewable energy penetration beyond daylight hours. This enables the power station to deliver more than 50% renewable energy.



 Solar farm at EDL's Jabiru Hybrid Renewable Power Station provides clean energy.

## Modernising and Digitising Electricity Networks


### ASIA

#### HK Electric – Smart Meter Deployment to Support Network Digitalisation

HK Electric has been deploying smart meters for customers since April 2020 with a new HK Electric App launched in December 2021. Customers who have smart meters installed at their premises can log into the "Account-On-Line" Service via the App to check and track their electricity consumption data at half-hourly, daily and monthly intervals as well as generate the energy usage projection for their next bill.

The App provides various options for personalised settings, including an alert when the electricity consumption has reached a selected percentage of the consumption of the last billing cycle. These services could help customers better understand their consumption habits and patterns and, by taking corresponding measures, optimise energy use. By December 2022, around 40% of customers were equipped with smart meters.



 Smart meters facilitate energy management for HK Electric's customers.

### EUROPE

#### UKPN – Engaging with Stakeholders to Decarbonise the Heat Sector

The heat sector must decarbonise to enable the UK to achieve net-zero by 2050 and UKPN plays a vital role in facilitating this. A core pillar of our heat strategy is to inform heat decarbonisation policy development through research, data and evidence. As proposed by the UK Government, UKPN is utilising the opportunities of a blended pathway – decarbonising heat through hydrogen and electricity for our customers.

UKPN, together with WWU, engaged with 1,000 customers across Great Britain to explore attitudes and barriers to adopting hybrid heating and found that comfort and reliability are key concerns in

making the switch. Almost 60% of respondents also said they had little to no understanding of heat pumps and even fewer understood other low carbon heating technologies. Therefore, the partnership expanded the range of heat guidance to give customers more information.

The partnership then engaged with manufacturers to combine the gas boiler and heat pump into a first-of-a-kind hybrid unit and install these in customers' homes, significantly reducing the space requirements and installation disruption compared to existing separate-unit alternatives.



## OCEANIA

### AEO – Strengthening the Power System to Increase Renewable Energy Capacity

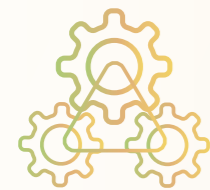
AEO has been awarded by the Australian Energy Market Operator and the Victorian State Government to provide system strength services to the Western Renewable Energy Zone in Victoria. The project involves the development and construction of a 250 MVA synchronous condenser, which is

expected to provide up to 600 MW of additional renewable generation capacity in the Western Victoria region to be deployed. The project is expected to be operational in the latter half of 2025 to support the Victorian Government's efforts to reach its target of 50% renewable energy by 2030.

#### How Synchronous Condenser Support the Power System?

Synchronous condenser has been a proven technology, which is coupled electromagnetically to the power network via its rotating shaft, to provide the power system with energy and support system strength, inertia and voltage control. However, renewable generation are often connected to the power system via power electronics without synchronous connection, which leads to reduced system strength in some parts of the network, making it less able to respond effectively to disturbances and more difficult to control the frequency and voltage.

To address these challenges, a synchronous condenser provides improved voltage regulation and stability by continuously generating and absorbing adjustable reactive power as well as improved short-circuit strength and frequency stability. Its purpose is not to convert mechanical power to electric or vice versa, but to make use of the machine's reactive power control capabilities and the synchronous inertia.



Flywheel (if required)



Synchronous Condenser



Electronic / Renewable

### VPN – Enabling Access to More Renewables



VPN is involved in the Victorian Government's Neighbourhood Battery Programme Initiative to install a 120-kW/360-kWh battery system in Tarneit. Tarneit and the surrounding community are leading Victoria's renewable energy boom with more than 40% of local homes connecting solar panels to the network. The battery system will store any excess solar power being generated by households during the day and deliver it back to all customers when electricity demand is high. The battery system is expected to enable up to an additional 129,600 kWh of solar power and provide benefits to up to 170 homes connected to the local network by improving energy reliability and reducing GHG emissions as more households gaining access to more renewables.

To enable more large-scale renewables onto the grid and reduce the connection costs of wind and solar farms, VPN, together with other industry partners, have developed the High Voltage Distributed Energy Resource Management System (HV-DERMS), which allows new renewable generators to access existing network capacity more efficiently without requiring poles and wires upgrades. The system also provides real-time operating limits to dynamically adjust the energy output of generators based on the network conditions. Commenced in March 2022, the system in August included 36 existing wind and solar generators totalling 1.07 GW of renewable energy capacity, which supports Victoria's clean energy transition and GHG reduction targets by enabling more solar and wind connections within the capability of existing assets with flexible exports.



The Metz Solar Farm in New South Wales generates enough power for 40,000 households annually.



## SAPN – Enabling the Net-Zero Transition through Transformation of Energy System

To enable the transition to the new energy future, SAPN is determined to develop new DSO capabilities for managing an enormous capacity of distributed energy resources (DER) on the network to ensure network safety and reliability, as well as system security.

A 'Distributed Energy Transition Roadmap 2020-2025' has been developed to outline some of the initiatives underway in the next five years

that will help enable the transition, including plans to double the amount of solar that can connect to South Australia's electricity distribution network by 2025. To realise the goal, SAPN is working with DER industry to enable enhanced network access for other smart DER like batteries and smart loads, and working with VPP operators to help maximise the opportunity for customers' batteries to trade in energy markets without overloading the local network.



With the local government, SAPN develops the Franklin Adelaide area and provides urban charging stations.

## EUROPE

### UKPN – DSO Transition

UKPN is supplementing its traditional role of being a Distribution Network Operator (DNO) by establishing and implementing a separate Distribution System Operator (DSO) function. It aims to be the leading DSO and envisions a dynamic distribution system, with electricity demand and supply flexing in response to distribution-level conditions and market signals. DSO focuses on leveraging the latest smart grid technologies and advanced metering

infrastructure to ensure safe and reliable power flows as a result of the increase in distributed renewables generations contributed by heightened awareness of climate change within the community. This will lead to a smarter and more highly utilised distribution network, with faster and cheaper access to the low carbon technologies needed to achieve net-zero.

#### Ambition as the leading DSO

UKPN's DSO strategy builds on its strengths and its achievements in RIIO-ED1. It is an ambitious plan through which UKPN will continue to lead the way in establishing a DSO, both in the UK and globally:

1. It will deliver the first independent DSO and set the benchmark in transparent decision-making.
2. It is committing UKPN to deliver significant cost savings whilst enabling unprecedented low carbon technology growth.
3. It will formalise a joint whole system planning approach that considers factors beyond UKPN's immediate control.
4. It will facilitate an open marketplace for distribution flexibility services.

Also, UKPN is committed to collecting real time data through monitoring in all LV networks where the company is forecasting constraints over 2023-2028 and will target 100% coverage of the rest of the network through advanced analytics using smart meter data. This will give better insight to run the network at higher utilisation and to defer reinforcement actions for as long as possible.

For a detailed story, please visit UKPN website at <https://smartgrid.ukpowernetworks.co.uk/>



Ofgem officials review how UKPN's Distribution System Operator plans could balance the energy system at a local level.



## Embracing Hydrogen Economy

## OCEANIA

## AGN – Expansion Planned for Hydrogen Park South Australia

AGN constructed Australia's first MW-scale electrolyser – Hydrogen Park South Australia (HyP SA) and it has been operational since May 2021, delivering up to a 5% by volume hydrogen blend to around 700 homes in Adelaide. Since its establishment, the HyP SA has welcomed over 3,000 visitors and received 5 awards, including the Hydrogen Project of the Year Award at the Connecting Green Hydrogen MENA 2022 Hydrogen Future Awards, demonstrating international recognition for the project's contribution to hydrogen economy transition.

In 2022, AGN also commenced supply of 100% renewable hydrogen to industry from HyP SA, via tube trailer delivery by road, and announced plans to deliver 5% hydrogen blended gas to thousands of additional customers. Pending Government approvals, first production at Hydrogen Park Gladstone is expected in 2023 serving a small

network with up to 10% hydrogen by volume. Following this, Hydrogen Park Murray Valley further aims to deliver a 10% blend to up to 40,000 connections with first production expected in 2024. The scaling to commercialisation further supports grid stability and decarbonisation in Australia.

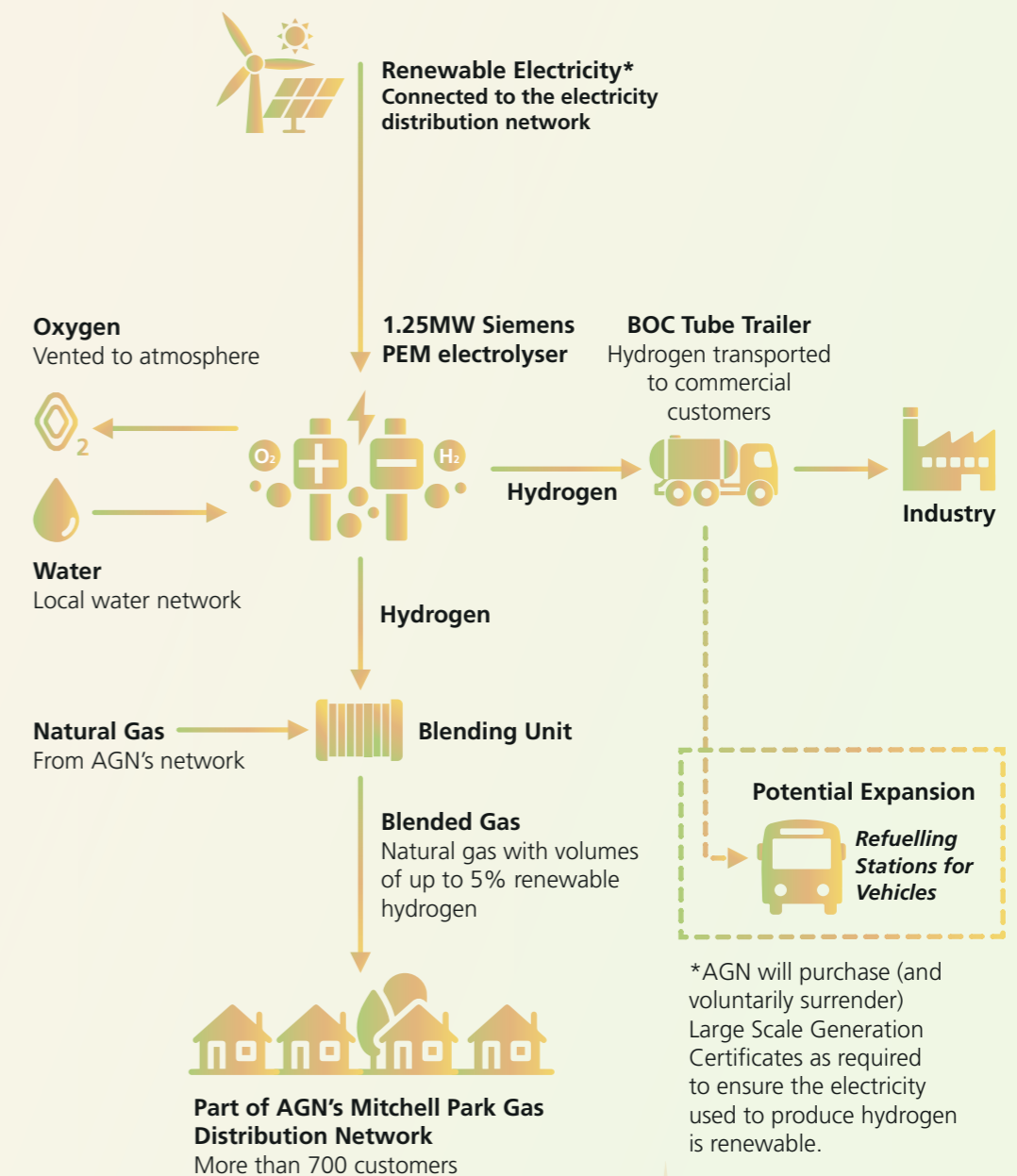


Entrance to the Hydrogen Park South Australia.



The Hydrogen Park South Australia will provide clean energy to more customers.

## Project overview



## EUROPE

### NGN – Aiding the Community to Safely Transition to a Hydrogen Economy

Pioneering the safe use of blended hydrogen in gas networks to reduce GHG emissions, NGN is involved in the UK's first hydrogen blending deployment project, HyDeploy, establishing the safety case for blending up to 20% hydrogen by volume within natural gas networks. Running from August 2021 to July 2022, NGN has been actively delivering blended gas containing up to 20% hydrogen to over 650 properties in the local region to receive blended gas via public network. This exciting project is a vital step towards using hydrogen in the public gas network and the results will be submitted to the UK Government to help form policies about the future of gas to demonstrate the potential of this energy solution.

Since 2016, NGN has partnered with other industry peers on a series of bespoke research projects to establish the safety case for conversion of the UK gas networks to 100% hydrogen. To aid this transition, NGN has recently established a pair of demonstration homes fuelled by 100% hydrogen appliances to enable stakeholders to experience this new technology. NGN has also been awarded by the UK government to undertake the front-end engineering design work and stakeholder engagement for the UK's first 100% hydrogen village trial, which would see up to 2,000 homes and businesses in part of a local town in North Yorkshire being converted to 100% hydrogen for a period of two years to further demonstrate the possibility of hydrogen being used as a fuel.



Engineers test operational gas procedures under hydrogen conditions at H21 South Bank site in Middlesbrough.



### WWU – Supporting the Transition to Hydrogen Economy

WWU has participated in the Redcar Hydrogen Community Project which aims to supplying around 2,000 homes in the area of Redcar and parts of Kirkleatham with locally produced, clean-burning hydrogen from 2025. The project also serves as a demonstrator of the viability of hydrogen in a UK setting.

During the year, WWU has also announced plans for a major hydrogen pipeline in south Wales to accelerate decarbonisation plans for industry and gas customers in the region. The pipeline is anticipated to pave the way for commercial scale hydrogen production in the region while also providing infrastructure for energy intensive industrial customers to begin

fuel-switching their processes to hydrogen in the 2030s or earlier. The project could also facilitate the conversion of home heating to hydrogen, enabling South Wales towns to go green while keeping disruption to homes and communities to a minimum.



WWU employee inspects biomethane site connection, which supplies renewable gas for the network.

### Promoting Reduction and Recovery of Methane

## OCEANIA

### EDL – Avoiding Methane Emissions and Displacing Further Emissions through Methane Recovery

EDL's landfill gas and waste coal mine gas sites across Australia, North America and Europe have helped landfill and coal mine customers capture and convert into electricity or renewable natural gas.

EDL's operations, including generation of electricity and renewable natural gas (from landfill gas and waste coal mine gas), and remote renewable energy collectively abate approximately 4 million tCO<sub>2</sub>e per year, avoiding 2 million tCO<sub>2</sub>e of methane that would have been emitted directly to the atmosphere and displacing 2 million tCO<sub>2</sub>e from electricity grids or gas networks by converting the captured methane to produce electricity or renewable natural gas.



## EUROPE

### NGN and WWU – Reducing Methane Leakage from Gas Distribution Pipe Network

Gas leakage makes up the majority of the carbon footprint of gas transmission and distribution operations. To proactively reduce gas leakage and the associated methane emissions, NGN and WWU, our gas distribution companies in the UK, have deployed gas mains replacement programmes to replace vintage metallic gas pipes with modern plastic pipes. These replacement programmes have significantly reduced the number and frequency of gas leaks from mains and services.

NGN is also working on further reducing its gas leakage by effectively managing the pressure of gas passing through the network, to avoid putting unnecessary strain on the pipes and thereby reduce leakage, and by adding a chemical called monoethylene glycol to the gas to saturate and swell metallic joints which otherwise might leak

gas. These efforts are expected to help reduce gas leakage by 24% between 2021 and 2026. NGN is also collaborating with WWU to conduct a research project to investigate alternatives to gas venting to reduce the impact of gas transmission operations.



Workers replace legacy gas mains to eliminate emissions from gas leaks.

#### How We Support the Global Methane Pledge



The Global Methane Pledge (GMP) has generated unprecedented momentum for global methane actions since COP26. Achieving the GMP goal of cutting anthropogenic methane emissions by at least 30% by 2030 from 2020 levels is the fastest way to keep a 1.5°C temperature limit within reach. In COP27, the number of GMP signatories grew, and now 150 nations are now part of the drive to slash methane in the coming decades.

GMP has been touted as one of the key components of efforts to address the climate crisis, as methane is a powerful greenhouse gas that accelerates global warming, and a

reduction in its concentration can significantly contribute to climate change mitigation efforts. Joining other signatories, we believe that achieving goals in GMP will drive gains in every aspect.

To reduce methane emissions, our gas distribution companies implement practices such as regular equipment maintenance, leak detection and repair, and the use of low-emission technologies. Other businesses have also invested in technologies that reduce methane emissions, such as capturing and utilising methane from landfills and coal mines, as well as collaborating with industry peers to share best practices. By taking these steps, we are striving to reduce methane emissions and support the GMP with collective solutions.

### Optimising Operational Efficiency

## EUROPE

### AVR – Increasing Efficiency through Simultaneous Production of Electricity and Low-pressure Steam

AVR commenced the operation of its new back-pressure turbine at the Rozenburg facility to deliver electricity, process steam and district heat. The new turbine also ensures that far less energy is discharged unused as the hot, high-pressure steam that drives the turbine, which produces electricity, is still hot enough for district heat. Operating at full

power the turbine will enable AVR to supply process steam to businesses in its immediate vicinity and, at the same time provide 60,000 households with electricity and 100,000 households with heat. The new turbine has also given AVR more possibilities to respond flexibly to customers' heat demands.



### WWU – Modernising Buildings to Support Energy Efficiency

WWU completed the development of its depot in Bristol in 2022 as part of its Property Strategy. The depot was consolidated into a single, energy-efficient building as opposed to the several, temporary, single-glazed and insufficiently-insulated

buildings that were spread out across the site. In addition to modernising buildings, WWU continues to identify opportunities for improving energy efficiency.



The new WWU Bristol depot streamlines on-site energy usage.



## Preserving the Natural Environment

Preservation of the natural environment is one of the top priorities in the power sector. Research shows that fostering biodiversity and nature contributes to the mitigation of climate change. An increasing number of stakeholders are concerned about the environmental management approach to operating asset sites and infrastructure projects.

Government bodies are tightening environmental regulations and putting utilities under more rigorous scrutiny. It is more prevalent for businesses

and supply chains to recognise risks from the loss of nature and biodiversity. The introduction of reporting standards Task Force on Nature-related Financial Disclosure (TNFD) and Corporate Sustainable Reporting Directive (CSRD) in 2023 and 2024 respectively also reflects greater environmental concern from investors and the public. These events demonstrated the increasing importance of putting ecological considerations into the project lifecycle to minimise the Group's impact on the local biodiversity and ecosystem.

### 2022 Performance Highlights



Over **77%** of our attributable revenue<sup>1</sup> were covered by ISO 14001 or other EMS certificates



**↓ 3.8%** water consumption (vs 2021)

### Commitments and Actions

The Group is committed to protecting the environment and biodiversity and supporting sustainable development by conducting our business in an environmentally responsible manner.

We aim to minimise the impact of our operations on the environment while addressing global concern about climate change. We comply fully with all applicable laws and regulations and endeavour to integrate environmental considerations into all aspects of our business operations. We seek to minimise and mitigate the impact of our developments before we begin a project, and continuously monitor the potential impact of operating projects on biodiversity.

As a player in an essential utility sector in numerous markets around the world, we are also committed to supporting local governments in achieving the goals set by the United Nations Framework Convention on Climate Change.



<sup>1</sup> Percentage of attributable revenue represents the revenue of each business multiplied by the effective interests owned by the Group on see-through basis, divided by the summation of the attributable revenue. This is an illustration of the scale of each business to the Group, and the figures do not represent the consolidated revenue for the Group.

	Key Initiatives and Targets by Our Business Units	2022 Status
Asia	<b>Water Reduction</b> HK Electric <ul style="list-style-type: none"> <li>Reduce total water consumption of key office premises by 1% in 2025 as compared to the baseline figures in 2020</li> </ul>	On Track
	<b>Waste Reduction</b> HK Electric <ul style="list-style-type: none"> <li>Reduce production of ash and gypsum at LPS by 37% in 2024 as compared to the baseline figures in 2019</li> <li>Reduce waste generation of its key office premises by 10% in 2025 as compared to the baseline figures in 2020</li> </ul>	On Track
Oceania	<b>Waste Reduction</b> SAPN <ul style="list-style-type: none"> <li>80% waste diverted from landfill in 2022</li> </ul>	Achieved
	AGIG <ul style="list-style-type: none"> <li>Improve monitoring and measurement of waste minimisation, recycle and re-use by end of 2024</li> </ul>	On Track
Europe	<b>Biodiversity Protection</b> UKPN <ul style="list-style-type: none"> <li>Achieve 10-20% Biodiversity Net Gain (BNG) increase at all new grid and primary sites</li> <li>Achieve aggregate BNG increase of 30% at 100 existing sites</li> </ul>	On Track
	<b>Water Reduction</b> UKPN <ul style="list-style-type: none"> <li>Reduce 10-15% water consumption at top 6 depots by 2023 as compared to 2018/19</li> <li>Reduce 10% water consumption during the next price control period 2023-2028</li> </ul>	On Track
	<b>Waste Reduction</b> NGN <ul style="list-style-type: none"> <li>Send less than 0.1% of excavation spoil by mass to landfill annually by 2026</li> <li>Reduce amount of office and depot waste created by 20% between 2018 and 2026</li> <li>Use no more than 2.5% virgin aggregate annually by 2026</li> </ul>	On Track
	WWU <ul style="list-style-type: none"> <li>Send a maximum of 20% excavated spoil materials to landfill by 2026 as compared to 2019</li> </ul>	On Track

## Environmental Management

Power Assets is implementing an Environmental Management System (EMS) with the aim of contributing to the 'environmental pillar' of the company's sustainability development. This EMS ensures continual environmental improvement, monitors compliance with relevant laws and regulations, fulfils supply-chain requirements, promotes staff environmental awareness, and

increases financial savings resulting from resource saving and cost reduction. Overall, in 2022, 77% of the Group's attributable revenues were covered by ISO 14001 or other EMS certificates. Also, 84% of the Group's attributable revenues underwent external environmental/energy audits during the year, highlighting the emphasis on improving our environmental performance.

	% of Group's Attributable Revenues <sup>1</sup> Certified with ISO14001 or Other EMS Certificates	% of Group's Attributable Revenues <sup>1</sup> that Conducted External Environmental/Energy Audits During 2022
Total	77%	84%

<sup>1</sup> Percentage of attributable revenue represents the revenue of each business multiplied by the effective interests owned by the Group on see-through basis, divided by the summation of the attributable revenue. This is an illustration of the scale of each business to the Group, and the figures do not represent the consolidated revenue for the Group.

## EUROPE

### WWU – Building Staff Environmental Awareness

WWU, one of our gas distribution companies in the UK, has launched a sustainability e-learning module covering awareness of climate change and GHG emissions. Colleagues can acquire useful information on how to support environmental management within the company.



WWU builds environmental awareness within the community via e-learning platforms.

## Protecting Biodiversity

The Group is committed to protecting the biodiversity and habitats in the area around our projects. All business units have managerial oversight on biodiversity issues, land closure and rehabilitation which are part of the environmental management system. We seek to minimise and mitigate the impact of our developments before we begin a project, and continuously monitor the potential impact of operating projects on biodiversity. To provide clear guidance on the management procedures, we engage with external specialists to develop management plans at high ecological risk sites on top of regular impact assessment processes. This furthers the integration of biodiversity into planning considerations. We also strive to have a 'net positive impact' on biodiversity, giving back more than what we take from the environment.

To achieve our goal, we require our operations and supply chain to avoid operational activities in proximity to the World Heritage areas and IUCN Category I-IV protected areas. And they must apply the mitigation hierarchy – avoid, minimise, restore, and offset – when operating in areas in proximity to critical biodiversity. Furthermore, the Group has set aside sufficient funds to support site closure and rehabilitation work.



WWU staff participate in planting efforts to bolster biodiversity.



## OCEANIA

### SAPN – Individual and Collaborative Initiatives on Wildlife Protection

SAPN has implemented a wide range of measures to mitigate against risk of harm to wildlife and conserve habitat. A robust EMS is maintained which outlines procedures for wildlife management, and an environment assessment process is applied to new projects and significant infrastructure upgrades, reducing impacts to the environment including minimised clearance of native vegetation. They work closely with Fauna Rescue, Bat Rescue SA, Koala Life, Birds SA, and the Department of Environment and Water to ensure that the welfare of wildlife is being appropriately managed during work activities and innovative solutions are sought for high risk issues. For instance, nest rings are installed on poles to offer birds an alternative location to build their nests, installing animal guards to stop access to powerlines, and engaging specialist ecologists

to undertake fauna assessments and develop management plans for projects at sensitive sites. In 2022 an Asset Coverup Programme commenced, with the aim of covering electrical infrastructure at high risk of impacting native fauna.

SAPN is in the process of developing a Biodiversity Action Plan. The plan will align with the guidance of the Task Force on Nature-related Financial Disclosures (TNFD) and is expected to be established in 2023. In addition, the Protocol for vegetation management near powerlines has been revised in 2022, mitigating bushfire risk with a better bushfire management process.

### VPN – Biodiversity Management Approach

VPN has in place a Network Environment Strategy which provides guidance for the management of environment risks throughout electricity network assets' lifecycle.

Other than pre-project risk and impact assessments, management plans, land contamination assessments are being conducted for high-risk sites. These assessments allow the identification, management and mitigation of any legacy environmental impacts arising from VPN's operations.




## EUROPE

### NGN – Homes for Nature

NGN carefully manages the vegetation on over 5,000 operating sites, out of which 200 are of a significant size (over 0.25ha), to ensure fire risks are minimised and safe site access is guaranteed. To help promote biodiversity, NGN has committed to creating 'homes for nature' at 250 of its sites by 2026.

By the end of 2022, 67 of the sites have undergone the installation of new habitats or change in vegetation management practices to promote biodiversity. For instance, mounting bat and bird boxes, stacking felled timber on site as hibernacula, and no mowing in May to enable growth of wildflowers to facilitate pollination.



 Wildflowers bloom at NGN operating site, part of the company's Homes for Nature biodiversity programme.



### WWU – Biodiversity Net Gain Enhancements at New Depot

WWU is working closely with local ecologists to undertake a variety of biodiversity net gain (BNG) enhancements at the new depot at Bristol. The site is part of the Bristol Wildlife Network Sites, which provide wildlife corridors in designated areas in the region.

The enhancements may potentially attract and host a range of species such as bats, reptiles, great crested newts, and specially protected birds.

It is the long-term ambition of WWU to achieve BNG across all activities by 2039.



## Water Management

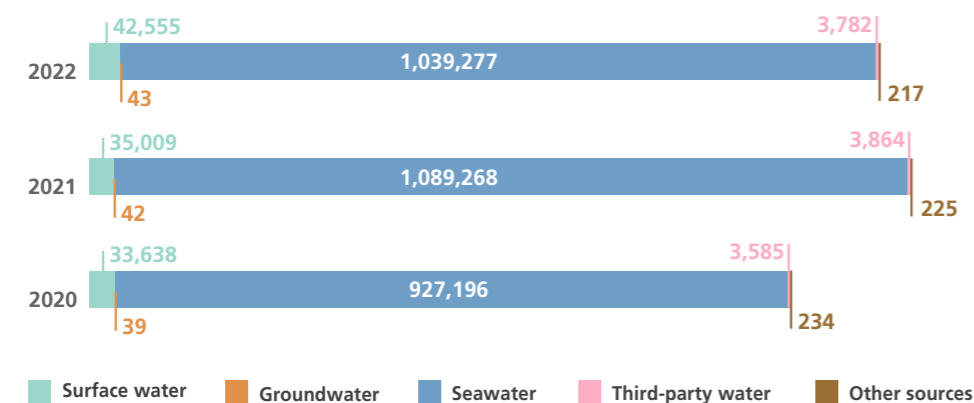
Water is an essential and irreplaceable natural resource. The Group is committed to providing water stewardship and security through responsible management and identifying risks posed by water scarcity. All business units have managerial oversight on environmental topics which involve water use in operations. We have devised a plan for water conservation with water scarcity taken into account. In 2022, we had no have any operations that used freshwater in water-stressed areas.

We are committed to reducing our water footprint and have made significant efforts to reuse and recycle the water we withdraw. These efforts include utilising collected rainwater, reusing wastewater and reducing discharge by the installation of water-saving and water-efficient appliances in our offices.

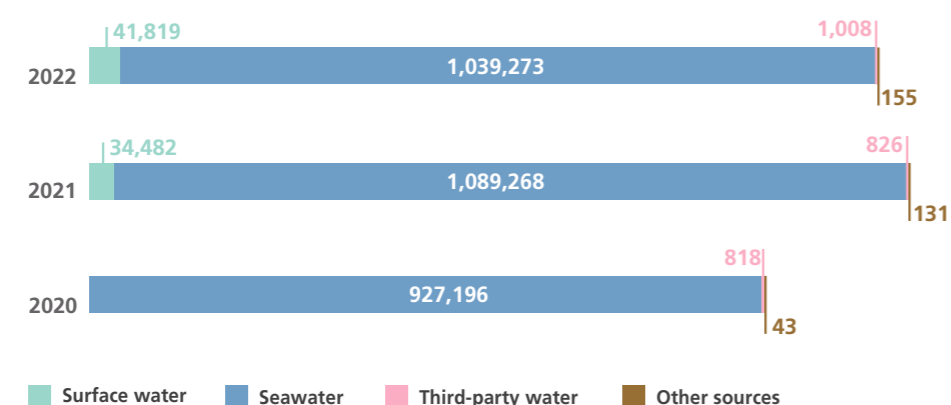
We are committed to ensuring that untreated water is not disposed of into any body of water, and we take necessary measures to remain in compliance with statutory threshold values.

In 2022, the overall water consumption experienced a decrease of 3.8%, with a specific focus on the reduction of seawater consumption, which declined by 4.6% from 1,089,268,000 m<sup>3</sup> to 1,039,277,000 m<sup>3</sup>. This significant decrease in seawater consumption can be attributed to the commissioning of a new gas-fired unit with higher efficiency than the old units in HK Electric during the year.

Water consumption ('000 m<sup>3</sup>)



Water discharge ('000 m<sup>3</sup>)



## ASIA

### HK Electric – Water Saving across Business

In 2022, HK Electric collected around 8,900m<sup>3</sup> of plant effluent and rainwater for reuse purposes at Lamma Power Station (LPS).

HK Electric also targets to reduce total water consumption of key office premises including Hongkong Electric Centre, Electric Tower, Electric Centre and seven main buildings at LPS by 1% in 2025 as compared to 2020.



Rainwater and plant effluent is collected and reused at Lamma Power Station.

## EUROPE

### UKPN – Monitoring of Water Use, Leak Detection and Metering

It is a standard procedure in UKPN to install water reduction technology at offices and depots when they are refurbished. These water-saving devices include push taps, sensor taps, instant hot water taps, etc. To enable speedier resolution of water leaks,

regular monitoring is adopted by our water service provider, and where required we have installed automated meter readers that provide more regular and accurate readings. Furthermore, constant flow reports are published to flag up potential leaks that can be timely investigated and resolved when necessary.

## Effluent and Waste

The Group is committed to minimising our waste footprint, managing effluent, and facilitating ways to encourage more reuse and recycling. The principle of the circular economy is integrated into business strategies as we strive for responsible sourcing, and efficient production processes and product design.

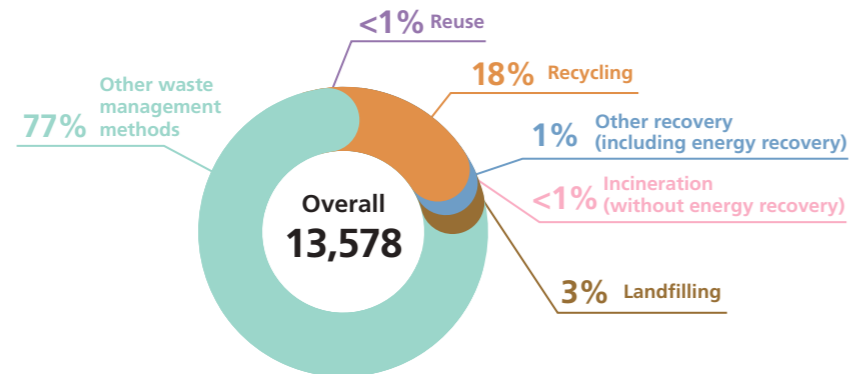
A waste management plan was devised to enable sound waste and effluent management. Moreover, collaboration with external parties is also essential to improving our materials management, including working with waste contractors to enhance data capturing of waste streams.

In 2022, we continued to focus our efforts on recycling and resource recovery when possible.

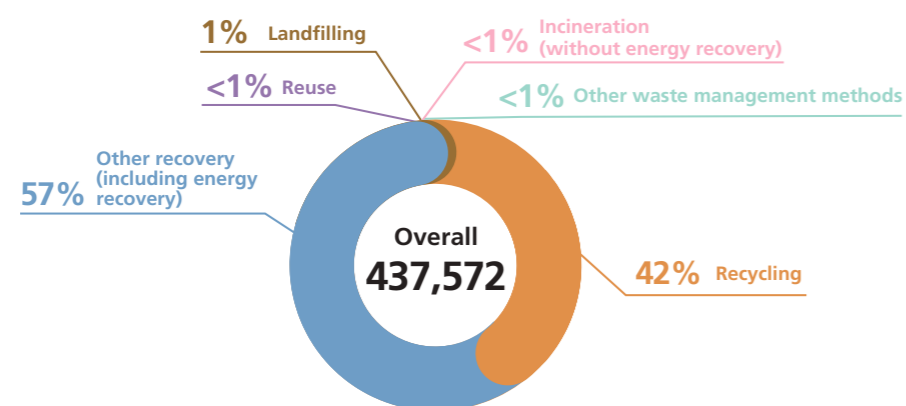
For hazardous waste, the majority is comprised of AVR's fly ash (~77% of total hazardous waste). This waste is managed by specialised waste processors who possess the necessary expertise and equipment to treat such materials in an environmentally responsible manner. In terms of non-hazardous waste, we also endeavor to divert as much waste as possible from landfills by implementing recycling, energy recovery, and other waste reduction strategies. This approach is in line with our broader sustainability objectives and supports our ongoing efforts to minimise the environmental footprint of our operations.

As we progress, we will consistently monitor our waste generation and management practices, seeking continuous improvement and exploring innovative solutions to further lessen our impact on the environment.

### Total hazardous waste produced (tonnes)



### Total non-hazardous waste produced (tonnes)



## ASIA

### HK Electric – Embedding “4R” Approach in Business

“4R” approach of “reduce, reuse, recycle and recover” runs through HK Electric’s business. A Waste Management Plan is established to guide avoidance, reuse, recovery and recycling, storage, collection, treatment, and disposal of different categories of waste generated from construction activities.

“4R” is also implemented in office locations, where different types of waste are collected and recycled, including wastepaper, metal, plastics, used batteries, compact fluorescent lamps and printer cartridges.

Moreover, waste from power plant operations, such as ash and gypsum, is collected by contractors for industrial uses. Temporary wastewater storage and treatment facilities have been installed at the Lamma Extension site to recycle wastewater generated from the construction work to reduce effluent discharge.



HK Electric adopts a comprehensive waste management approach based on the 4Rs principles.

## OCEANIA

### United Energy – Understanding Waste Streams

To facilitate waste management, United Energy uses the Victorian Environment Protection Agency waste tracker portal to track all its hazardous waste to ensure they are properly disposed.

United Energy has also engaged with a contractor for a waste mass balance. Data regarding source and management approach of waste has been collected, allowing for an analysis to understand material recycling and reuse opportunities, increasing waste diversion from landfill.



## EUROPE

### NGN – Decommissioning of Low-pressure Gas Holders

Between 2013 and 2022, NGN fully decontaminated and demolished 29 gas holders. Each contains significant sources of liquid and semi-solid contamination which could have polluted the environment if left in-situ or, not treated with the appropriate procedures for removal.

The contaminated water underwent a sophisticated onsite treatment process before being released to public sewers under consent to avoid the use of road tankers to remove the water off site. The oil/water mix and sludge are dewatered on site to reduce their volume and then the concentrate is

removed offsite for disposal to a permitted waste management facility. Furthermore, all metals from the demolished gas holder structures are collected and recycled.

The initiative delivers long term environmental enhancement by permanently removing the contamination source, and minimising the adverse environmental impacts arising from the decommissioning work. NGN is committed to decontaminating and demolishing the remaining 18 gas holders by 2026.

### AVR – Upgrading Flue Gas Treatment Material

AVR is currently running a feasibility study to upgrade flue gas treatment material, such that it can be applied as a construction material. Through the recovery of minerals and metals from fly ash, the treatment materials can be diverted from landfills, reducing hazardous waste produced by business activities. The feasibility study is expected to be completed by 2024.



## Regulatory Compliance

Compliance with laws and regulations is our utmost priority. We are fully aware that environmental regulatory engagement not only protect our business but also central to assisting the Group in realising our corporate net-zero goals in the coming future.

We believe that environmental regulations across different jurisdictions remain central to help us transition to a greener future, for instance the European Climate Law in Europe and the Climate Change Act 2022 in Australia. On the other hand, we also establish policies and accountability mechanisms to ensure regulatory compliance across operations in all business units. The management is committed to staying abreast of the latest regulatory developments and providing all necessary training for relevant personnel. We also dedicate extensive efforts to ensure effective monitoring and detection measures to track regulatory compliance.

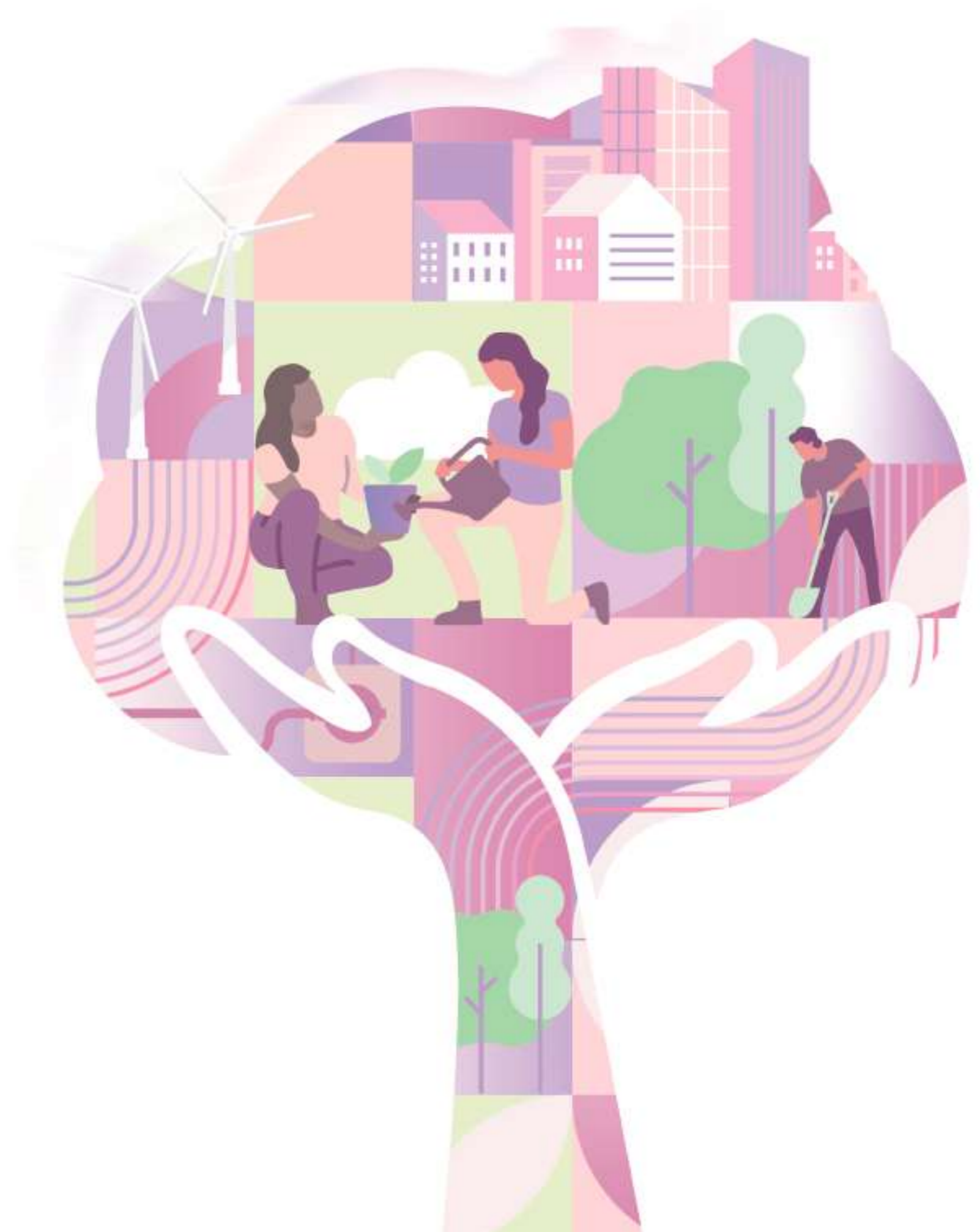
During the reporting period, we were not aware of any non-compliance with laws and regulations having a significant impact on the Group relating to air and GHG emissions, discharge into water and land, and generation of hazardous and non-hazardous wastes.





# Social

The Group recognises the value of relationships with our employees, customers, contractors and communities. We focus on protecting the rights of our employees by joining the UN Global Compact and cultivating a workplace that draws out the best ideas from our employees, emphasising inclusion. We also prioritise our employees' and contractors' health and safety through the health and safety management system. To positively impact the communities in which we operate, the Group has provided access to basic services and organised different impactful social initiatives to address the needs of the underprivileged.



## Social Responsibility: Our Efforts to Support a Just Transition

The Group aims to use our broad influence to positively impact society, focusing on the wellbeing of everyone with whom our operation interacts. We protect our employees' rights by maintaining good relationships, promoting human rights, and making every workday healthy and safe. We also play an active role in supporting and developing the communities in which we operate by listening to and advocating for their needs.

Our Human Rights Policy is guided by international human rights principles encompassed by the Universal Declaration of Human Rights, including those contained within the International Bill of Human Rights and the International Labour Organisation's 1998 Declaration on Fundamental Principles and Rights at Work. We also respect the international human rights principles under the United Nations Guiding Principles on Business and Human Rights.

Considering the imperatives of a just transition of the workforce and the importance of creating decent work and quality jobs, the Group recognises that the transition to a green economy is both environmentally and socially sustainable. We are fully behind the principle that a healthy economy and a clean environment can and should co-exist. This framework will continue to be a key tool to ensure that energy transition happens in a fair and lawful manner. Alongside our decarbonisation journey, we continue to enhance the social well-being of our employees and stakeholders via different initiatives to amplify our respect for human rights within our entire value chain, build an inclusive economy, and improve their quality of life.



## Empowering Employees in the Workplace



Motivating employees is vital to the long-term success of the Group's business. The breadth of our operations requires manpower to provide the goods or services we offer. The fast expansion of the utilities industry in recent years has created new demand for employees with IT and data analytics capabilities to promote the modernisation of the grid. The risk of increased turnover and associated costs of rehiring, loss of intellectual capital, and lack of training and career development may threaten our ability to attract and retain talent.

According to the International Labour Organisation (ILO) report on "Transforming Enterprises Through Diversity and Inclusion", a more diverse workforce, supported by inclusive cultures, has

the potential not only to increase the productivity and performance of individual enterprises but also to contribute to increasing the annual global income growth rate and overcoming global talent shortages.

Since the global outbreak of the COVID-19 pandemic, there has been growing demand for employers to provide remote and hybrid work opportunities. Responding to this need, along with increasing the participation of women in the utilities sector, emphasising diversity and inclusion, and generally promoting workplace flexibility, will likely improve the industry's ability to meet its workforce needs and facilitate a more engaged workforce.

### 2022 Performance Highlights

 **36.0** training hours per employee  
 **94.5%** of our full-time employees received training

 **87.3%** of our employees were covered by collective bargaining and unionised by 2022 in support of the United Nations Global Compact (UNGC)

### Awards & Recognitions

<b>EDL</b>	<ul style="list-style-type: none"> <li>Employer of choice for women endorsed by WORK180</li> </ul>
<b>HK Electric</b>	<ul style="list-style-type: none"> <li>Ranked 4<sup>th</sup> among the top 10 most attractive employers in Hong Kong according to the Randstad Employer Brand Research in 2022</li> <li>Recognised as one of the Happy Companies in Hong Kong under the Happiness-at-Work Promotional Scheme for the 8<sup>th</sup> year in a row</li> <li>MPFA Good MPF Employer 5 Years +</li> </ul>
<b>Seabank Power</b>	<ul style="list-style-type: none"> <li>Investors in People award – Reaccreditation</li> </ul>
<b>WWU</b>	<ul style="list-style-type: none"> <li>Silver level Investors in People accreditation</li> <li>Chartered Institute of Personnel &amp; Development 2022 – Highly commended HR Team of the Year</li> </ul>
<b>UKPN</b>	<ul style="list-style-type: none"> <li>Employer of the Year – Utility Weeks Awards 2021</li> </ul>



## Commitments and Actions

The Group believes human resources are the key to our continued success. We are committed to employing our talent equally and providing them with the right tools and an environment in which

they can grow and develop professionally. We also instil in our employees the ideals of candour, courtesy, and the ability to deal with change, and respect for humanity, personal dignity, and privacy.

## Management-driven Policies

As stated in our Sustainability Policy, we are committed to:

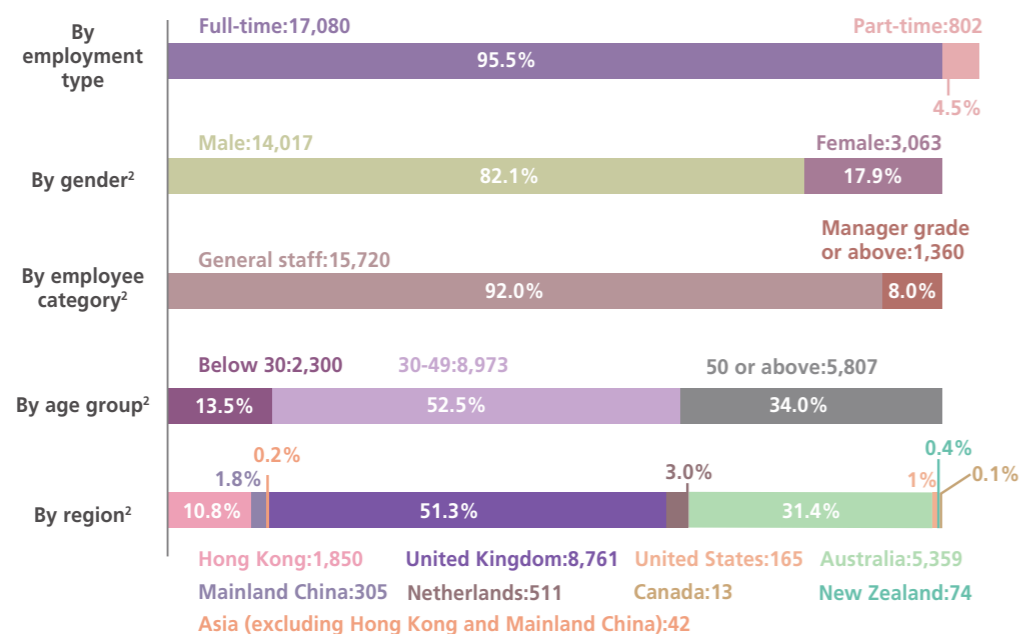
Being an equal opportunity employer

Caring for the wellbeing and health of our employees and aiming to achieve a workplace free of injuries

Creating a diverse and inclusive workplace by respecting the values, customs, and traditions of our employees in different operating markets

Assisting staff to develop in an engaged workplace and caring for them and their families

### Employee Profile<sup>1</sup>



<sup>1</sup> Exclude Husky Midstream, as all the employees are outsourced from Husky Energy

<sup>2</sup> Full-time employees only

### Employee Turnover<sup>1</sup>

Overall : **9.1%**  
 Male : **8.6%**  
 Female : **11.4%**

**Asia**  
 Hong Kong : 7.6%  
 Mainland China : 7.9%  
 Others : 2.4%

**Europe**  
 United Kingdom : 8.3%  
 Netherlands : 9.8%

### Age

Below 30 : **9.3%**  
 30-49 : **8.1%**  
 50 or above : **10.6%**

**Oceania**  
 Australia : 10.3%  
 New Zealand : 24.3%

**North America**  
 Canada : 7.7%  
 United States : 24.8%

<sup>1</sup> Turnover rate refers to full-time employees only, which is calculated based on the employee departure during the year, divided by the average total number of employees as at 31 December 2022.

## Promoting an Equal and Fair Employment

The Group offers equal and fair employment and aims to foster a respectful and inclusive workplace. Our recruitment process adheres to the strictest guidelines on equal opportunity, and we are committed to providing a work environment free from all forms of discrimination based on race, ethnicity, sex, religion, age, or disability. We also enforce anti-discrimination policies to respect and promote diversity and inclusion. A Diversity Committee, made up of representatives from various business units, acts as a liaison to increase our employees' understanding of diversity in our operations worldwide.

Beyond providing jobs on a just and equitable basis, we employ a well-structured performance review process and invest significantly in training to upskill our employees to form the foundations of positive, long-term employee relations. Our employee performance review process encourages two-way feedback and connects compensation with individual goals and business objectives. We also embrace all kinds of talents and make good

use of various recruitment activities such as campus recruitment and apprenticeship programmes to seek and gather high-end talents from all around the world.

To understand the needs and concerns of our employees and facilitate a more engaged workforce, the Group maintains flexible working arrangements for applicable employees, provides flexible benefits schemes, and offers various effective communication channels to shape an open work environment that encourages idea sharing, promotes employee engagement, and inspires their work performance.

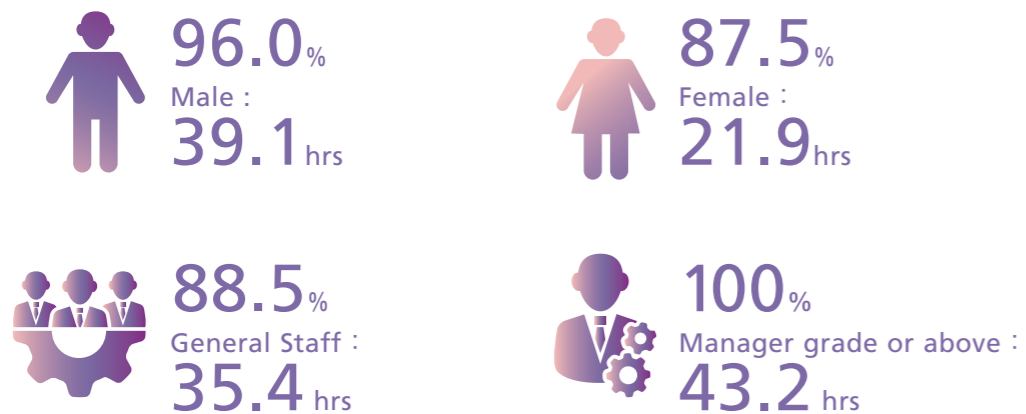
We believe that collective bargaining is an essential tool for ensuring our business is conducted ethically and responsibly. As of year-end 2022, we are proud to report that 87.3% of our 17,882 employees from all our business units are covered by collective bargaining rights. We will continue to work with our employees and their representatives to ensure that fair and equitable labour practices are at the heart of everything we do.

## Providing Fair Promotion and Training Opportunities

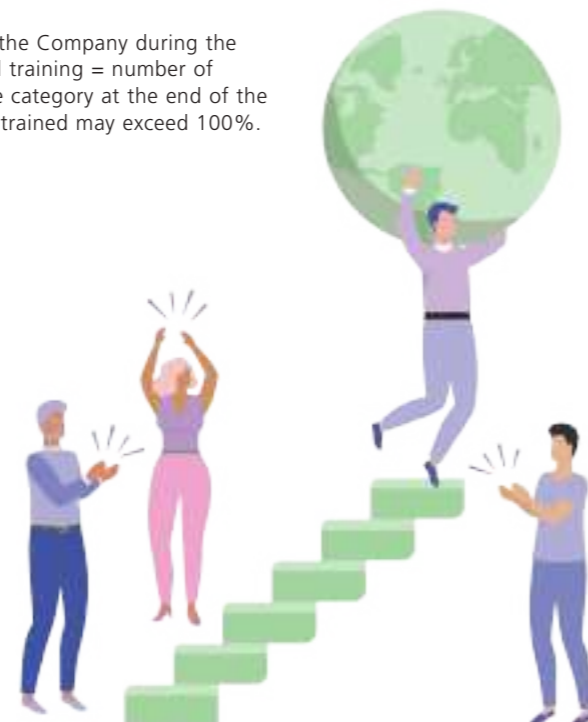
Recognising that the success of our business largely depends on the knowledge and skills of our employees, we promote our employees based on their strengths and work performance while supporting their individual development. We integrate new employees and contractors into our training programmes during their relevant onboarding and orientation. Training programmes

are also periodically reviewed to ensure they remain relevant and appropriate. In 2022, all of Power Assets' employees were required to attend an online course on Sustainability Essentials for Business, offered by a leading university, to take a closer glimpse into the various facets of sustainability issues and learn how they may be addressed in a business setting.

### Percentage of employees who received training<sup>1</sup> and average hours of training per employee by gender and by employee category



<sup>1</sup> Full-time staff including terminated employees who left the Company during the reporting period. Percentage of employees who received training = number of employees trained in the category/total workforce of the category at the end of the reporting period x 100%. The percentage of employees trained may exceed 100%.



## Recruiting and Retaining Diverse Talent

# OCEANIA

## United Energy and VPN – Building a Pipeline of Diverse Future Talent

United Energy and VPN organise University Graduate Programme every year, and the programme expanded in 2022 to include corporate graduates for rotations in Strategy, Health and

Safety and Corporate Affairs. It is a comprehensive three-year programme that offers a high level of support, skills and development, and career advancement. Graduates will be working with the most experienced and respected people across the business on some of the most important projects in the energy sector. In 2022, United Energy and VPN hired engineering and IT graduates in April/May and completed the recruitment for corporate graduates in September.

A dedicated Diversity and Engagement Lead was engaged by United Energy to coordinate and expand United Energy's activities to build a pipeline of diverse future talent. The Diversity and Engagement Lead has introduced a programme of work in 2022 focusing on attraction strategies to target female and other diverse candidates for the business.



United Energy and VPN's Inclusion and Diversity strategy encourages women to pursue electrical trades.

# EUROPE

## WWU – Fostering Work-life Balance through Flexible Work Arrangement

WWU has launched a Hybrid Working Guideline outlining the introduction of a hybrid working arrangement offered to eligible employees. They are optimistic that these guidelines will bring various benefits to their employees, such as providing them with the flexibility to arrange their working hours and locations while continuing to improve the commitment to uplifting their employee well-being.



WWU's hybrid working arrangement fosters flexible schedules.



## Fostering a Culture of Continuous Learning

# ASIA

## HK Electric – Providing Comprehensive Training Programmes to Employees

HK Electric offers a wide range of competency-based programmes for nurturing its employees. For example, workshops on presentation skills, problem-solving, supervisory skills, strategic thinking, and decision-making are provided to equip staff with the right skills they need to excel in their current roles. Furthermore, HK Electric has arranged internal education theme talks for its employees to deepen their understanding of sustainability in 2022. The theme talks covered topics such as climate change and green procurement with an aim of enhancing employees' sustainability awareness in their everyday work.

To motivate young talents, HK Electric also organises Graduate Trainee and Technician Programmes to

bridge the gap between study and work life. These programmes, covering a wide range of tailor-made learning topics such as career development, presentation skills, email writing, and team building to help unleash their leadership potential and improve future leaders' managerial skills and abilities.

Sponsorship is also offered to encourage continuous learning and support employees to undertake job-related degree programmes, professional examinations, and overseas and local training. The sponsorship aims to enhance employees' expertise and assist them in gaining professional qualifications within their career field.



HK Electric is committed to educating and coaching its employees.

# OCEANIA

## Wellington Electricity – Implementing Effective Succession Planning

Wellington Electricity has introduced development plans for all staff, and they are reviewed on a half-year basis with the management. During the year, a full induction programme is developed and implemented for its new employees and management, which provides a systematic succession plan for individual roles to motivate talent.

In addition to the induction programme, Wellington Electricity offers internal mentorship programmes to promote internal involvement within their business operations, providing valuable insights and unique perspectives that mentees can apply throughout their careers.

## EDL – Apprenticeship Programme and Internship Programmes



Female participants in EDL's apprenticeship programme, which seeks to increase diversity in mechanical and electrical trades.

To encourage new generations of expertise and innovation, EDL has developed an apprenticeship programme for female high-school students who would like to develop a career in non-traditional mechanical or electrical trade roles and a graduate engineering programme targeting female STEM students. EDL also provides internship programmes through non-profit organisations, CareerTrackers and Career Seekers, to support indigenous university students, refugees, and asylum seekers in professional employment.

# EUROPE

## NGN – Supporting Colleagues to Obtain Additional Professional Qualifications



NGN offers to support its colleagues in obtaining additional professional qualifications related to their roles, which can open up new career growth opportunities, increase job satisfaction and increase efficiency within the workplace.



NGN apprentices advance their careers by enhancing their qualifications.



## Promoting Diversity and Equal Opportunities

# ASIA

## HK Electric – Joint Consultation (JC) Panel and Quarterly Focus Group Meetings

HK Electric has implemented various effective communication channels to shape a work environment that promotes employee engagement and inspires work performance. 6 Joint Consultation (JC) Panels, represented by more than 70 elected members, provide a regular channel for employees to reflect their opinions to the management and convey company policies and directions to employees. In 2022, 6 JC meetings were held to facilitate communication between HK Electric and its employees through joint consultation efforts. An online survey was launched among JC members to collect their opinions on the company's COVID-19 measures. The opinions were channeled to relevant parties for consideration and improvements.

Quarterly focus group meetings are held by HR representatives, with employees of different business units invited randomly to voice out their opinions or suggestions to the Management. The meetings were held in the form of telephone

interviews to reduce face-to-face meetings due to the COVID-19 pandemic. 12 quarterly focus group meetings were held in the form of telephone interviews with 64 employees in 2022 to collect their opinions and suggestions. The comments and issues have been shared with relevant parties for attention, consideration, or follow-up.



Employee representatives attend Joint Consultation meetings to share views on employee wellness and business operations.

# OCEANIA

## EDL – WORK180 Employer for Women



An EDL employee operates the Agnew Hybrid Renewable Microgrid in Australia.

EDL was endorsed as a WORK180 Employer for Women globally. (WORK180 is a global job network with a vision to create a world with fair and equal representation, opportunities, and pay for all women.) This endorsement demonstrates EDL's commitment to supporting women at work by providing equal pay, flexible working, equal opportunities, and paid parental leave, allowing EDL to advertise jobs on WORK180's website to connect with women for vacancies filling.

## United Energy and VPN – Inclusion in Action Training Sessions

To better integrate diversity and inclusion into the workplace, United Energy and VPN have launched and delivered Inclusion in Action training sessions in 2022. These training sessions were conducted with all people leaders to enhance their knowledge about inclusive behaviours and how to create an inclusive workplace.



United Energy and VPN encourage women to pursue electrical trades.

## AGN, DBP and Multinet Gas – Regularly Assessing and Evaluating Diversity, Equity and Inclusion Performance

AGN, DBP, and Multinet Gas have launched a Diversity and Inclusion (D&I) Action Plan, which outlines a series of initiatives and actions against existing D&I strategies and policies. Diversity data in the Employee Self-Services (ESS) portal provides annual diversity data to enable us to set relevant D&I strategic targets for setting future metrics.



AGIG's Diversity and Inclusion Action Plan tracks corporate diversity data.



AGIG employees participate in Diversity and Inclusive Action Plan activities.



## EUROPE

### NGN – Inclusion & Belonging Strategy and Steering Group

NGN has developed an Inclusion & Belonging strategy document outlining short- and long-term objectives to combat its diversity and inclusion challenges. It also created colleague communities for employees to set their ambitions relating to the needs of their group. For example, a travel policy review is conducted to consider the needs of less able colleagues and females traveling alone.

Furthermore, NGN also created an Inclusion & Belonging Steering Group, along with setting up colleague-led community groups. The colleague-led community groups are comprised of various employees as members and allies of ethnic minorities, LGBTQ+, women groups, parents/carers, etc., aiming to improve inclusion in the workplace for these groups and attract other underrepresented groups into the business.



NGN's Inclusion and Belonging Workshop participants engage in a discussion.

### UKPN – Neurodiversity Education Campaign and Diversity Data Gathering



UKPN's Neurodiversity Education Campaign leader explains roadshow data-gathering strategies.

In an effort to ensure that employees understand the importance of diversity, UKPN has organised a neurodiversity awareness-raising campaign which commenced in October 2022 and will reach a target audience of 2000 field employees. Diversity data is also gathered at the directorate roadshows and operational wellbeing events by the learning and development team with the aim of increasing the directorate's data disclosure by 40%.

## Maintaining a Safe and Healthy Environment for All

The Group places great emphasis on health and safety in our global business, with the aim of providing a safe and modern work environment for all our employees. We understand that, in some of the industries in which the Group operates, our employees and contractors may be exposed to various health and safety risks. According to the Global Risk Report 2023 published by the World Economic Forum, the post-COVID-19 condition is impacting the occupational status of individuals, contributing to work absences, early retirements, tighter labour markets, and a decline in economic retirements.

Inadequate safety measures can increase a company's operating costs and damage its corporate reputation by increasing the likelihood of work-related incidents, injuries, diseases, and deaths. Therefore, health and safety is a huge consideration for our operations, and the vast majority of our operations-associated risks can be avoided with proper health and safety measures.

### 2022 Performance Highlights



**0.19** Lost time injury rate\*

**↓ 28%** lost day due to work-related injury (vs 2021)

\* Per 200,000 employee-hours



**83.3%**

of employees covered by OHSAS 18001/ISO 45001

### Awards & Recognitions

WWU

- Royal Society for the Prevention of Accidents (RoSPA) Gold Award

### Commitments and Actions

The Group is firmly committed to promoting operational health and safety and continually works to improve and monitor the health and safety mechanisms within our business activities. We make every effort to provide our employees, contractors, customers, and other stakeholders with a safe and healthy environment when they are at the Group's facilities and premises.

### Management-driven Policy

Our top management commitment to health and safety is clearly outlined in the Group's Health and Safety Policy, which provides the framework and sets out minimum requirements on health and safety that each Group operating company shall adopt, subject always to an applicable legal requirement. As stated in our Health and Safety Policy, we are committed to:

Complying fully with all applicable laws and regulations and integrating health and safety considerations into all aspects of our business activities

Nurturing and supporting a company culture that promotes employee wellness and enhances health and safety awareness among our stakeholders by providing appropriate and timely information and training to identify hazards and manage risks

Adopting and maintaining safety management systems and measures to monitor and manage the health and safety performance of our business and its contractors and suppliers

Ensuring commitment from our stakeholders in all our markets to share the same vision, values, and responsibilities for health and safety and meet the same standards

## Implementing a Robust Health and Safety Management System and Conducting Health Risk Assessments

The Group complies with the certification standards and legal requirements for health and safety within the countries in which we operate and has adopted well-established Health and Safety Management Systems (“HSMs”) to maintain health and safety working conditions beyond mere regulations. Internal and external audits programmes are also performed and undertaken across different business units throughout the year to assist in the continual improvement to protect our stakeholders from harm.

We also leverage Health and Safety Committees to effectively manage and lead risk assessments for their respective operations and monitor and address our work-related injury risks. We offer role-specific and safety awareness training to further build our employees’ health and safety awareness and knowledge. Topics covered include health and safety-related trends, occupational health, and emergency rescue.

	2020	2021	2022
Number of lost days due to work injury	1,556	1,213	875
Number of lost time injury incidents	38	29	31
Lost time injury rate	0.27	0.21	0.19

## Ensuring Safe Working Condition for Our Contractors

Due to the nature of the Group’s operations, our employees and contractors are exposed to various health and safety risks that could be mitigated through proper management. Beyond caring for our employees, the Group also makes great efforts to protect our contractors’ safety within our operations. We employ several mechanisms to manage our contractors’ safety performance, including pre-screening contractors for their safety performance and requesting contractors to comply with baseline health and safety policies, and only working with approved contractors with good health and safety performance. Various trainings and forums are organised to ensure all contractors are aware of the Group’s safety policies and requirements.

The Group cares about our employees and takes a holistic approach to address and support their wellness and mental health. During the year, we organised different wellness initiatives such as online interest classes and provided health tips for employees to improve both their physical and emotional wellness, as well as maintain a work-life balance.



## Promoting Employee and Contractor Safety

### ASIA

#### HK Electric – Employees’ Health and Safety Training Programme

HK Electric has organised on-going health and safety promotion campaigns (such as forums, health talks, webinars, and safety quizzes) and training across its operations to assure compliance with all relevant laws and regulations as well as to enhance its employees’ health and safety awareness, with the ultimate goal of achieving zero accidents.



HK Electric organises health and safety events at Lamma Power Station to enhance employee awareness.

### OCEANIA

#### SAPN – External and Internal Health and Safety Audits

SAPN carries out external and internal health and safety audits to identify potential work-related hazards, including engaging an external consultancy firm to certify and monitor compliance with ISO 45001. Internal health and safety audit activities are scheduled on a three-yearly basis and covered within the Corporate Risk Framework, including the review of directives, policy, and procedure, as well as the application and compliance in different fields. 20 fields are covered for the internal audit period between 2021-2023, including safety management systems, working at heights, hazardous substances, and excavation work.

SAPN has also placed great emphasis on the safety performance of contractors. All potential contractor companies submit a Supplier Information Form which includes statistics on their health and safety performance, such as Reporting of Injuries Diseases and Dangerous Occurrences, Lost Time Injuries (LTIs), Health & Safety Executive actions, etc., and

request them to state whether they are accredited to a known health and safety standard. A copy of the contractors’ health and safety policy is also requested to determine the contractor’s suitability. The returned forms are reviewed by SAPN’s Contract Officer, and only contractors with good health and safety performance will be approved and allowed to be engaged within SAPN.

Furthermore, SAPN implements a partnered approach to contractor engagement and organises Contractor Forums for contractors from all service areas. These forums are intended to provide up-to-date corporate strategic news, guest speakers, delivery of corporate programmes, e.g., elements of the Safety Leadership Academy, as well as sharing information relating to serious events that have operational implications or significant lessons learned in order to enhance contractors’ knowledge in health and safety.



## EDL – Pre-screening on Contractors for Safety Performance and Contractor Training

EDL requires contractors to submit their health and safety performance data, such as Lost Time Injury Frequency Rate (LTIFR) and Total Recordable Injury Frequency Rate (TRIFR), and to report if they have had any improvement notices or fines issued by the regulators onto the system before contracting with EDL. Contractors without approval will not be allowed to start their work with EDL.

Prior to commencing work, EDL also requires its contractors to undertake a suite of training courses that are allocated on EDL's training portal. The contractor's training records are monitored by supervisors and shared service support staff to ensure all training sessions are completed in order to maintain a safe working environment by promoting safety awareness.



## EUROPE

### UKPN – Emergency First-aid Training

UKPN holds the Emergency First-aid Training for all operational teams, including contractors and nominated first aiders, which is completed every three years. The training is required as part of the employee competence to work on the network and checked at audit to ensure that staff can carry out basic first-aid on colleagues should the situation arise.

Besides, UKPN provides various refresher training to ensure its employees remain up-to-date with the Distribution Safety Rules. Furthermore, regular audits will help to ensure compliance with competency requirements and monthly reports will help to monitor performance.



UKPN workers practice cardiopulmonary resuscitation techniques during emergency first-aid training.



## Implementing Employee Well-being Initiatives

## ASIA

### HK Electric – Health and Wellness Initiatives



HK Electric has organised a wide range of initiatives, including conducting online interest classes and providing health tips for its employees to improve both its employees' physical and emotional wellness and maintain work-life balance.

The HK Electric Runners Club is one of the most popular employee wellness initiatives.



## OCEANIA

### Wellington Electricity – Wellness Policy

Wellington Electricity has a comprehensive wellness policy to promote its employees' health and wellbeing. It also encourages its employees to take breaks throughout the day and participate in activities for mindfulness reflection to create a supportive and healthy workplace culture.



Wellington Electricity worker uses biking equipment purchased through staff wellness grant to encourage healthy activities.






## EUROPE

### NGN – Health and Wellbeing Programmes

NGN designed various programmes to address its employees' mental health and wellbeing. For example, a 24-hour employee assistance programme is offered by NGN to provide a platform for its employees to share their health-related concerns and increase morale in the workforce.

Furthermore, a two-day mental health training course was designed to build awareness of mental health and educate managers on the signs and symptoms of adverse mental health and how to proactively reduce mental health issues in the workplace and ensure its employees are focused on tasks to be carried out and work in a safer manner.



 NGN colleagues attend a discussion about making NGN a safer place for female colleagues.



### Working with External Stakeholders to Improve Safety Practices

## ASIA

### HK Electric – Mechanisms for Stakeholders to Report Emergencies

HK Electric provides a 24-hour emergency services hotline for its customers to report any abnormality in electricity supply and follows the mechanism of Electrical and Mechanical Service Department (EMSD) for the reporting of power company incidents to ensure a timely reporting to the EMSD

on the cause of the incidents, the remedial actions taken, and what will be taken to prevent its recurrence in the future.




## OCEANIA

### United Energy and VPN – Mechanisms for Stakeholders to Report Emergencies

United Energy and VPN have a 24/7 Australian-based Contact Centre available for all external stakeholders to report on or obtain updated information on any planned or unplanned electricity outages. Their website also provides real-time interactive outage mapping to allow customers and the general community to track outages. Customers can also subscribe to their SMS service to receive individual-specific outage advice, including outage notifications, outage progress, expected restoration times, and outage completion.



 United Energy and VPN workers facilitate stakeholder engagement exercise.



## Serving Our Customers with Excellence

It is crucial for us to understand our customers' demands and needs, which enables the Group to continue improving our products and achieving or even exceeding service targets. With the emerging

customer service trends, it is essential for the Group to harvest the latest tools and technologies to adapt our customer service to deliver the best customer experience and satisfaction.

### 2022 Performance Highlights



Conducted different activities and measurements, including privacy impact assessments and customer privacy awareness training, across our business operation

### Awards & Recognitions

AGN & Multinet Gas

- Energy Networks Australia (ENA) – 2022 Energy Networks Industry Consumer Engagement Award

AGN

- South Australian Premier's Community in the Energy Sector Award

NGN

- Best Use of Customer Insight Engage Awards

UKPN

- Top Customer Service Provider in the UK Customer Service Index

### Commitments and Actions

We understand that customer information is sensitive and must be handled with care. Our employees are required to maintain the confidentiality of all proprietary information to which they may be exposed and are informed that all customer information can only be used for legitimate business purposes.

### Employee Privacy Training for Customer Data Security

The Group invests in educating our employees on the importance of respecting customer privacy and protecting customer information. We have provided customer privacy awareness training and conducted customer privacy impact assessments across our operations. We also regularly engage with our customers to understand their needs and gain insight into areas of concern.



AGN and Multinet Gas receive the Energy Networks Industry Australia Consumer Engagement Award.

## EUROPE

### United Energy and VPN – Customer Data Protection Training



United Energy and VPN undertake regular privacy training. Training for office-based employees is via an online module, while field-based staff receive a presentation pack. This training covers privacy legislation, what is personal and sensitive information, the main causes of data breaches, and what to do if you suspect a data breach has occurred. All internal

employees and external contractors are required to complete this privacy training module every two years, while high-risk employees, including IT and Strategy and Customer Group employees, are required to complete this training annually. New employees must complete the privacy training module as part of their induction.

### Regularly Communicating Health and Safety Hazards to Customers

To maintain a safe and secure environment for our customers, we take various measures to regularly update our customers on information relating to health, safety and environmental (HSE) hazards

and safety risks associated with our products and services. Emergency plans and report hotlines are in place and designed to incorporate best practices regarding safety management.

## OCEANIA

### SAPN – Rolled Out Community Media Campaign to Enhance Public Awareness of Electrical Risks and Hazards

SAPN, one of our electricity network operators in Oceania, works hard to ensure it has a safe and secure electricity network that minimises risk to the community. It has a dedicated safety section on its website which illustrates common potential community safety hazards, handy tips, and other useful information. Recently, SAPN rolled out a community media campaign under the theme "You'd be shocked by what you don't know about electricity". The campaign aims to enhance public awareness of electrical risks and hazards, and the actions that should be undertaken in various emergency situations.



## Embedding Sustainability in Our Supply Chain

The group is aware of its responsibility as a global investor who has collaborated with over 18,000 suppliers in energy and utility-related businesses. We are keenly aware of our influence, and use it to encourage our suppliers to operate more sustainably.

It is a necessary requirement for our suppliers to share the Group's commitment to human rights, working conditions, occupational health and safety (OHS), non-discrimination, business ethics, and environmental stewardship.

The long-lasting impact of the pandemic poses pressure on our supply chain. The COVID-19 policies remain unpredictable as infections soar, which tests the resilience of global supply chains. An unstable supply chain leads to product shortages and drives energy prices higher. Thus, effective collaboration with all stakeholders in the supply chain is a key factor to success, and we keep paying attention to our suppliers and remaining agile in this dynamic industry environment. In addition, with the trend of globalisation, the Group takes a stand to enhance ways of working and operating sustainably in this ever-changing environment.

### Building a Customer-first Culture

To build a long-term relationship with our customers, the Group endeavours to provide exceptional customer experience by actively engaging with them to collect feedback and further our understanding of their expectations. We also

ensure all employees are trained to acknowledge our customers' complaints and procedures are in place to guide our employees in the process of complaint handling.

### AGN and Multinet Gas – Customer Engagement

AGN Complaint and Dispute Resolution Procedure outlines the set of procedures that AGN will apply to "small customer" complaints and disputes. The inquiries, claims, and customer complaints are provided with a resolution and timeframe within two business days by AGN's call centre and customer complaints team. In addition, information regarding Ombudsman Schemes is also included in that procedure. The relevant energy ombudsman will nominate timeframes by investigation and case type. As a result, the complaint handling process is clearly defined and accessible to customers, which clarifies what to expect within its dispute resolution processes.

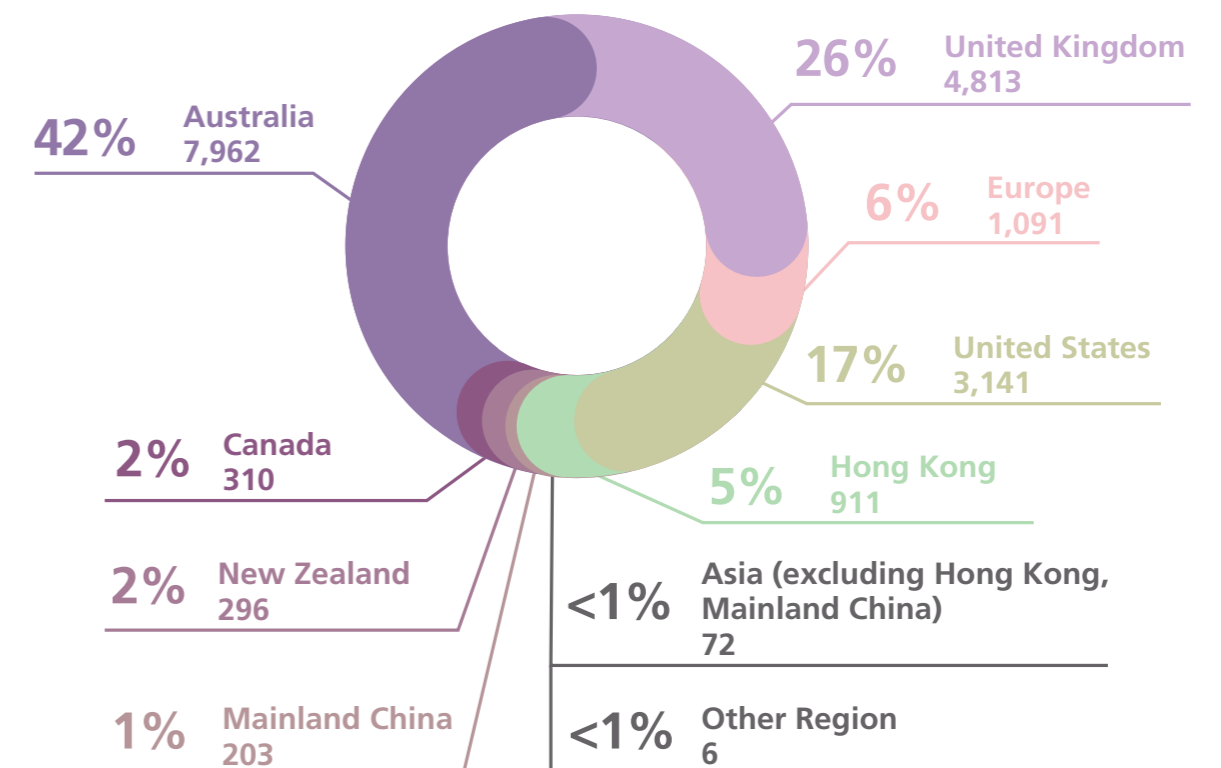
Meanwhile, AGN, together with Multinet Gas (both part of AGIG) and peer AusNet, were awarded the 2022 Energy Networks Industry Consumer Engagement Award, for their joint engagement programme in Victoria to inform and shape the Victorian Final Access Agreement proposal.

An industry first, their joint engagement approach delivered benefits in breadth, depth, and delivery of their engagement activities in Victoria. As three businesses together, they designed and delivered a single, integrated consumer and stakeholder engagement programme to deliver valued services for the long-term interests of all customers.



Contact with field representatives from AGN's engagement programme increases customer satisfaction.

#### Number of suppliers by geographical region





## Commitments and Actions

### Management-driven Policies

As a pillar of our commitment, the Group's Supplier Code of Conduct serves as a guideline for all our business partners and suppliers. We encourage compliance with the items in the Supplier Code of Conduct and the creation of sustainability practices and performance expectations for all the stakeholders and the communities the Group serves.

It applies to all our business partners and products and service providers (i.e. suppliers). We take various international charters and conventions into consideration while developing the content of this Supplier Code of Conduct, such as the United Nation's Declaration on Human Rights and the International Labour Organisation Core Conventions.

Several of our other policies also support our commitment to promoting supply chain sustainability, including:

**Human Rights Policy** – highlights the respect and promotion of human rights as a fundamental value of the Group and explains our expectations for our business partners and suppliers to uphold these principles in our Human Rights Policy and adopt similar policies within their own businesses.

**Modern Slavery and Human Trafficking Statement** – Among these obligations, it is a requirement that the Group ensures its contractors and supply chain are free from modern slavery and human trafficking practices. Transparency in business partners' and suppliers' approaches to tackling modern slavery is also expected to be maintained in all our business relationships.

**Environmental Policy** – states the Group's awareness of the direct and indirect impacts arising from its ability to influence environmental performance within its value chain and in its investments, and how it endeavours to influence suppliers by raising awareness of environmental issues, eco-friendly practices, and professional environmental considerations.

### Supply Chain Risk Management

The Group is committed to providing reliable and sustainable energy to our customers. To achieve this goal, we have taken steps to address and mitigate supply chain risks. Our controls include the establishment of emergency escalation protocols to deal with any potential shortage of materials and the development of an action plan to handle unstable supply chains in a timely manner. Additionally, we place great importance on maintaining long-term co-operation relationships with our suppliers, further enhancing the reliability of our energy supply.

The Group is aware of the environmental and social impacts that may ensue along the supply chain and is committed to minimising such risks in the collaborations with suppliers. ESG-related factors form an important part of the assessment process and have a due weighting in our consideration of potential suppliers and contractors.

We carry out regular monitoring, audits, and evaluations to assess the performance of our suppliers. Our business units have developed a number of approaches to ensure the implementation of these monitoring systems, and almost all suppliers will be involved in the assessment.

### Dialogues with Suppliers

In addition to enforcing our Supplier Code of Conduct, we actively communicate with our suppliers to help improve their sustainability performance. As they are the closest stakeholders to these Codes, the engagement of our suppliers is of great significance. The business partners under the Group hold regular meetings to hear their suppliers' voices and ideas, which can motivate sustainable development among the Group.

We also accentuate our respect for employees' human rights and are committed to fighting against modern slavery and human trafficking across our business operations.

## Adopting Comprehensive Supply Chain Management and Assessment Procedures

### ASIA

#### HK Electric – Implementing Code of Practice on Suppliers

All HK Electric suppliers and contractors are required to register under the Company's Recognised Tenderers Register before tendering for the Company's major contracts. For entry, suppliers and contractors must comply with HK Electric's Code of Practice for Suppliers and submit information in relation to ethical, integrity and governance, human and labour rights, physical and information security, Environmental, Health & Safety (EHS) policies and arrangements for the environmental management system, if any. A review of suppliers and contractors is also conducted regularly to obtain updated information from suppliers and contractors to ensure the fulfilment of HK Electric's latest requirements.

The Transmission & Distribution (T&D) Division Contractor Handbook has been compiled with detailed guidelines for contractors on the requirements of environmental protection, health and safety, quality assurance, housekeeping and security for all contractual activities and works in T&D contracts. It will be regularly reviewed by HK Electric to incorporate the latest legislative and other industry best practices for contractors to follow. HK Electric also held regular progress meetings and contractor EHS meetings and implemented the Merit and Demerit Point System to monitor contractors' performance closely.

### OCEANIA

#### AGN – Sustainable Procurement Statement

In 2021, AGN established a Sustainable Procurement Statement which formalised its commitment to responsible supply chain management in both a social and environmental context. It has also incorporated social and environmental clauses into its supplier contracts.

During 2022, further work has been undertaken to understand its supplier base, and AGN has actively sought to source locally where possible, with over 98% of its purchases in 2022 being sourced from local Australian suppliers.

To support responsible supply chains, AGN is working to include environmental, social and governance criteria as part of its procurement processes by the end of 2024.

## United Energy – Implementing Supplier Monitoring Through an Online Portal

During the year, United Energy implemented an online portal, Field Services Contractor Application (FSCA), to manage its contractors' onboarding procedures and HR data.

The FSCA produces a monthly report of compliance of United Energy contractors to their contract and conducts system monitoring to ensure the appropriate access to the system. There are currently 15 suppliers' information recordings in the system.

## EUROPE

### WWU – Evaluating Suppliers Based on Criticality

WWU has adopted an approved vendor list, in which high-risk suppliers are assessed via desktop assessment, site audits, and validation of accreditations for their health, safety, and environmental credentials on an ongoing basis to mitigate and prevent any potential risks in the workplace.



WWU vendors must pass rigorous standards evaluations to ensure credentials and minimise risk.

## Enhancing Interaction and Communication with Suppliers

## OCEANIA

### EDL – Embracing Human Rights in Our Business



EDL staff attend the "Appreciation vs Appropriation" art workshop.

EDL has introduced a global Human Rights Policy, which covers human rights as described in the UN Guiding Principles on Business and Human Rights. This policy sets out the expectations of EDL employees in how they conduct business, expects its suppliers to uphold these principles and urges them to adopt similar policies within their own businesses.

### VPN – Maximising the Economic Contributions

VPN demonstrates its value of being customer and community-minded by respecting the safety and interests of local communities, including maximising economic contributions through local procurement.



VPN respects the safety and interests of local communities.





## EUROPE

### UKPN – Driving Continuous Improvement in Supplier Performance

On 10 February 2022, the CEO and the Director of Health and Safety of UKPN held the “UK Power Networks Supply Chain Safety Conference – Delivering Zero (safety)” with 60 suppliers. This



Participants watch presentation at UKPN's supplier conference.

meeting was brought to align the supply chain through safety lessons learned and have the supply chain visibility see and understand where UKPN is and where it wants to go.

Furthermore, UKPN utilises different external events to communicate and share its requirements for the supply chain. For example, UKPN gave a keynote address at the BEAMA Networks Event – Electricity Networks Infrastructure Supply Chain, with the aim of motivating its supply chain to bring innovative solutions to UKPN and helping drive continuous improvement of delivery, safety and cost. It also outlines UKPN's expectations of the supply chain and shares what UKPN is doing to drive down its Scope 3 GHG emissions through using low-carbon technologies such as energy-efficient equipment and low-carbon concrete in construction.



## Ensuring Reliability, Asset Integrity and Cybersecurity

As cyber-attacks become more frequent, targeted, and sophisticated, and there is an increasing reliance on digital infrastructure, cybersecurity risks can pose immense challenges to companies. According to The Global Risk Report 2023 published by the World Economic Forum, alongside a rise in cybercrime, attempts to disrupt critical technology-enabled resources and services will become more common, with attacks anticipated against the

energy industry. The need to operate in agile work modes and use home networks due to the COVID-19 pandemic have also led to a further increase in security events worldwide. Organisations are becoming more vulnerable to cyber threats, which could result in financial and reputational risks without a proper cybersecurity plan.

### 2022 Performance Highlights



Worked with external parties to conduct external audits to identify the current gap and implement further actions to improve our cybersecurity management process

### Commitments and Actions

The Group is committed to adopting industry best practices to protect our critical corporate information assets and data by enhancing cybersecurity and preventing malicious attacks through various approaches:

#### Management-driven Policies

We have established an Information Security Policy to define and help communicate the fundamental principles for information confidentiality, integrity, and availability to be applied across the Group.

The Group has a dedicated Head of IT responsible for establishing and improving our information security culture. The Head of IT is also responsible for ensuring the status of information security across the Group, including the status of proper deployment and compliance with the Group's information security policies.

#### Risk Control Culture

The Group's Risk Management and Control Committee regularly reviews the cybersecurity risk to ensure that mitigation actions are effectively implemented. This includes updating the cybersecurity policy on a regular basis, enhancing cyber protection measures, conducting penetration

tests to identify and address system vulnerabilities, and conducting internal and/or external audits of application systems.

To ensure the effective enforcement of relevant policies and procedures and better protection of our corporate information assets, a number of the Group's business units have implemented the ISO 27001 standard. This is a leading cybersecurity standard globally for information security management systems that covers infrastructure support, network support, application maintenance, and system operation. Also, the Group strives to enhance cybersecurity awareness through the sharing of information and best practices within the cross-companies focus group and through the annual IT Conference.

#### Cybersecurity Audit and Training

The Group also works with external parties to enhance our management of cybersecurity risks by conducting external audits to identify the current gap and implement further actions to improve our cybersecurity management process. Cybersecurity awareness programmes are provided to all new hires as part of the orientation process, and conduct regular refresher training for current staff to strengthen information security awareness among our contractors and employees.

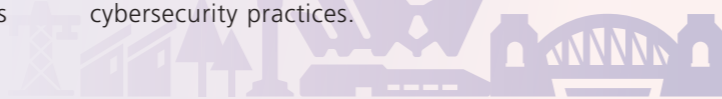
## Implementing Cybersecurity Measures

# OCEANIA

## EDL – Third-party Review of Cybersecurity Practices

EDL conducted a third-party review of its cybersecurity practices and information security management system in June and July this year. While this third-party review was not a full external audit, it reviewed EDL's current cybersecurity practices against the National Institute of Standards and Technology (NIST) framework and the

Australian Energy Sector Cybersecurity Framework (AESCSF). The review provided EDL with an overview of its cyber security controls in both the information technology and operational technology environment and suggestions for how EDL might improve its cybersecurity practices.



## Strengthening our Cybersecurity Capabilities

# ASIA

## HK Electric – Cybersecurity Management Framework

HK Electric has established a cybersecurity management framework to address the technical, regulatory, and managerial aspects of cybersecurity on an ongoing basis. Based on a defence-in-depth strategy, the framework ensures the confidentiality, integrity, and availability of all critical infrastructure

and information assets. Within this framework, multiple layers of security technologies have been deployed and integrated with different cybersecurity processes to enable its employees to identify, protect, detect, respond to, and recover from cybersecurity incidents.



# EUROPE

## UKPN – Cybersecurity Incident Management Process

UKPN established a Cybersecurity Incident Management Process to reduce the immediate and long-term business impacts of cybersecurity-related incidents. The practices outlined in the process are intended to ensure the actions of UKPN's Information Systems Directorate, its supporting partners

and all relevant business stakeholders involved in cybersecurity incidents are effectively coordinated. UKPN also proactively monitors specific systems to meet regulatory and contractual obligations, particularly to comply fully with the Smart Energy Code and ISO 27035 – Information Security Incident Management.

## WWU – Cybersecurity Assurance Exercises

WWU's cybersecurity is subject to various assurance exercises on an ongoing basis, including internal and external audits, penetration testing, vulnerability management and formal regulatory inspections. It also conforms to the ISO 27001 security standard, a leading cybersecurity standard globally for information security management systems.



WWU workers discuss measures to strengthen cybersecurity.



# OCEANIA

## United Energy and VPN – Cybersecurity Awareness Training

United Energy and VPN have provided cybersecurity awareness training for new starters in all locations. This training covers a broad range of topics. Completion of this module is required in order to allow access to their network, and all new starters must complete the training within 3 months of onboarding.



Cybersecurity awareness training is mandatory for all new United Energy and VPN employees.





## Fostering Community Involvement in the Energy Transition

We understand that access to energy is a basic necessity and we are committed to ensuring that our services are priced reasonably and within reach of everyone. As we progress towards a low-carbon energy future, we understand that the transition to low-carbon energy sources can bring potential cost increases, which is why we are striving to balance the need for environmental sustainability with affordability for all customers. Our goal is to ensure that energy transition is accessible to everyone, regardless of their financial situation.

Meanwhile, combating climate change is a global challenge that requires collective efforts from all members of society. We fully recognise the importance of integrating Just Transition and Paris Agreement objectives in our business operations. The transition must ensure that the benefits of the green economy are shared fairly and that people from different backgrounds have access to decent jobs and a healthy work environment. The Group's

suppliers and business partners are encouraged to follow the "Supplier Code of Conduct," which outlines ethical standards, human and labour rights, and health and safety standards. They are also encouraged to report their corporate social responsibility (CSR) performance regularly.

It is equally important to involve and educate our communities about the low-carbon transition, and that's why proper communication and engagement processes are established for our customers and external stakeholders to provide overviews of the Group's long-term decarbonisation strategies and commitments. Through ongoing engagement activities, their opinions are collected to review and enhance the Group's service and funding initiatives. Through effective community engagement, we can ensure that the energy transition is not only accessible, but also well understood and supported by our communities.

### Commitments and Actions

The Group strives to protect communities' rights and help to ensure their economic and social success by interacting regularly with a wide range of stakeholders. We also actively looking for ways to give back to the community and actively seek and value our stakeholders' feedback as a key component of our decision-making process.

The Group has outlined various ways to support and serve our community, exemplified by the following three actions:

#### Community Partnerships

We have organised different programmes to support community development, such as providing community funds and grants, and partnerships with not-for-profit organisations to understand the needs and improve living standards for underprivileged communities.

#### Subsidies and Concessionary Schemes

Particularly this year, in the face of macroeconomic pressures and high energy price inflation, the Group is concerned with the hardships families face and their access to affordable energy. Therefore, we have partnered with local charities and organisations across our operations to carry out a broad range of initiatives, including one-off subsidies, customer support funds, and concessionary tariff schemes to support our customers in vulnerable situations.

### Community Engagement & Employee Volunteering

We also strive to engage with the communities where we operate. Our team has always been dedicated to supporting our customers and maintaining strong ties with local communities. A number of community engagement groups are established across business units to facilitate engaging with communities, while different activities are also organised to strengthen communities' awareness of environmental protection.

The Group also strongly encourages employees to participate in volunteering activities and play a positive and active role in their communities. To facilitate this, we have provided a variety of volunteering opportunities for our employees, and some of our business units have even offered paid days each year to foster a corporate volunteering culture that allow employees to give back to the society.

### 2022 Performance Highlights



Launched more than **11** initiatives such as subsidies and concessionary schemes during the year to promote access to affordable energy

EDL

#### Awards & Recognitions

- Finalist in 2022 Australian Mining Prospect Awards – Indigenous and Community Engagement Award



Mulitnet Gas and AGIG volunteers support local charities that deliver food to the underprivileged.

## Supporting Internal and External Partnerships to Accelerate the Global Energy Transition

### ASIA

#### HK Electric – Engaging Stakeholders in Its New Direction, Aligned with HK’s Climate Action Plan

HK Electric actively informs its internal and external stakeholders of the new direction and changes that are in line with Hong Kong’s Climate Action Plan 2050. It facilitates a company-wide exchange of views regarding the developments and transitions that affect its business. Its employees are also

encouraged to raise their opinion and concerns through communication channels, such as the Joint Consultation meeting, focus group meetings, and HR hotline.



HK Electric strives to decarbonise its operations in support of Hong Kong’s goal of carbon neutrality.

### OCEANIA

#### SAPN – Implementing Vulnerable Customer Strategy

SAPN engages with its workforce, contractors, customers, communities and suppliers on various sustainability and climate-related issues and initiatives, including the energy transition. It has a Vulnerable Customer Strategy in place to deliver assistance, a responsive customer

environment, and improved customer experience to those most vulnerable in the community. It is also engaging with its customers on various possible initiatives to increase the accessibility and affordability of green energy services.

### EUROPE

#### NGN – “Gas Goes Green”

NGN is working collaboratively with the gas networks of the UK via the “Gas Goes Green” initiative to demonstrate the environmental, social and economic opportunities of converting the UK’s natural gas networks to transport 100% hydrogen. Consideration of the employment opportunities of a hydrogen future is included in the work stream with the potential to create 221,000 jobs in the UK in 2050 via the hydrogen economy identified. The immediate-term economic and employment benefits to our region from hydrogen have been assessed as 9,000 jobs in 2026.



NGN’s Hydrogen Home exemplifies how hydrogen can supply 100% of household power needs.



#### UKPN – Coordinating Energy Transition Approach through Customer Engagement

UKPN, one of our electricity distribution network operators in Europe, engaged with over 85% of its customers to understand the needs of communities on the road to decarbonisation. The engagement

enables a coordinated transition approach, ensuring customers’ circumstances are taken into account in the transition to a net-zero power grid.

#### Wellington Electricity – Providing Education Programme to the Public on Energy Transition



Wellington Electricity staff educate local community on energy savings at the Go Green Expo.

Wellington Electricity has commenced an education programme to increase public awareness of the potential impacts of government decarbonisation policies on its network and its customers’ electricity bills. The programme covers the primary drivers for increased electricity usage and what Wellington Electricity plans to help reduce or delay the impacts of increased infrastructure spending and customers’ electricity bills. These topics are covered through direct engagement channels such as community events and home shows and are supported by an online education portal (SmarterPower) accessible from Wellington Electricity’s website.



## Providing Better Access to Affordable Energy and Enhancing Home Energy Efficiency

# ASIA

## HK Electric – Smart Power Care Fund (SPCF) and Smart Meters

HK Electric has established a Smart Power Care Fund (SPCF) to fund initiatives targeting needy families and small businesses. Subsidies are provided under the SPCF to underprivileged families, NGOs, schools, and small and medium enterprises to adopt smart, low-carbon lifestyles and improve living environments while showing care to the community.

For example, eligible households may apply for a one-off subsidy of up to HK\$5,000 for replacing electrical appliances with more energy-efficient models and appliances, provision of new energy-efficient appliances, and provision of handy improvement works for safe use of electricity.

In addition, HK Electric has continued to implement concessionary tariff schemes for the most vulnerable members of society and offers a super saver discount to encourage our customers to save energy.

Meanwhile, HK Electric has been deploying smart meters for customers since 2020, which provide customers with more consumption details, facilitating them to optimise energy use so that appropriate

measures can be taken to save energy.

In addition, its customers who have smart meters installed at their premises can login to the "Account-On-Line" Service via the HK Electric's App to check their electricity consumption and project the usage for the next bill anytime. The App also provides various options for personalised settings, including an alert when the electricity consumption has reached a selected percentage of the consumption of the last billing cycle. These services could help customers better understand their consumption habits and patterns and optimise energy use by taking corresponding measures.



Supported by the SPCF, HK Electric distributes electric fan-packets to help the under-privileged cope with the extreme hot weather.

# OCEANIA

## Wellington Electricity – Empowering our Customers to Make Informed Choices: The Launch of Smart Power Portal Site



During the year, Wellington Electricity introduced a Smart Power Portal Site for its customers to seek guidance on energy efficiency. The portal also provides a suite of animations, resources, and references to other providers to enhance its customers' knowledge and increase their home energy efficiency.

Wellington Electricity staff provide information on energy savings for the local community at the Home and Garden Show.

# EUROPE

## NGN – A Fund to Support the Customers in Need

NGN has provided a Customer Support Fund to improve the financial stability of customers in need and is committed to donating £150,000 annually from 2021 to 2026. In order to provide additional support for customers with a cost-of-living crisis, NGN has doubled the fund to £300,000 this year and is aiming to raise the donation to £600,000 in 2023. The fund aims to increase support for customers in vulnerable situations by helping them to repair and replace gas appliances, assisting customers whose health is made worse by living in cold and damp homes, as well as helping customers who do not meet the eligibility criteria for an assisted gas connection.



NGN supports customers in vulnerable situations in various ways.

## UKPN – Fuel Poverty Support

UKPN's ambition is to be the most socially responsible network operator in delivering services that support diverse communities and all of its customers in vulnerable circumstances today and in the future.



UKPN presenter teaches Basildon Academy students how to mitigate fuel poverty.

As the number of customers in or entering fuel poverty grows, UKPN provides an energy advice line called UK Power Networks Energy Advice Line to provide additional help to customers living in vulnerable circumstances. The Energy Advice Line will assess customers' circumstances, provide practical advice, and help them access targeted support.

UKPN's customer service staff will identify households eligible for the service. They will then refer the customer to the Energy Advice Line, where experts will provide practical advice and tailored support on energy efficiency, utility bills, and household finances. Eligible customers will receive personalised guidance and one-to-one support to tackle financial and energy matters at the root cause of fuel poverty. Support includes fuel poverty advice, income maximisation guidance, ensuring customers are on the best energy tariff, and helping them apply for the Warm Home Discount and available grants.



## Implementing Community Development Programmes and Initiatives

### ASIA

#### HK Electric – “Happy Green Campaign” & “Breeze to Care” Programme

HK Electric has been running the “Happy Green Campaign” to promote energy efficiency, renewable energy, and a low carbon lifestyle among the public, particularly the younger generations, through different activities for many years.

In 2022, the Campaign organised various educational activities on the theme of “Decarbonisation Get Set, Go!”, including launching a decarbonisation online game and encouraging the public to visit pillar boxes decorated with decarbonisation messages.

A new activity book, “Decarbonisation ABC,” featuring a variety of games, was distributed to over 50,000 kindergarten students with aims to bring out the importance of decarbonisation and a sustainable future. HK Electric also offered interactive drama shows, focusing on the topic of low carbon and energy conservation, to over 55 Happy Green Schools.

To engage the stakeholders in diverse channels, virtual tours and remote learning are also provided via an online interactive platform for the Smart Power Gallery (SPG). Participants will be guided through a 3D SPG model to “walk-through” the gallery exhibits and learn about climate change, renewable energy, and smart cities, as well as decarbonisation means under the Smart Power Services. To nurture children’s environmental awareness and promote sustainability at an early age, a tailored version of the virtual guided tour was rolled out in 2022 to introduce climate change and renewable energy to kindergarten and nursery students in a simple way.

Furthermore, HK Electric has organised a new “Breeze to Care” programme in August 2022 to distribute 4,000 electric fan-packets to people in need to support the community to cope with the hot weather and build energy-saving habits.



The “Decarbonisation ABC” activity book aims to educate young kids on fun ways to take low-carbon actions.

### OCEANIA

#### Wellington Electricity – Bringing Joy to the Lives of the Children in Wellington

Wellington Electricity is the major sponsor of the annual Wellington Special Children Christmas Party and invites its employees to be volunteers to run the party and sponsor gifts for each of the children. The children are nominated by agencies in the region

and selected as having significant health concerns, living in poverty, or having an abusive home life. The party is a day that is about the children, and there are presents, fun activities and food.

#### AGN, DBP and Multinet Gas – Empowering Employees to Give Back: Increasing Volunteering Leave to Strengthen Communities

AGN, DBP, and Multinet Gas support community groups, projects, events and programmes that are socially and environmentally responsible as part of their Community Partnerships Programme.

To support their staff to make a difference in the community, in 2022, they increased the volunteering leave from 1 to 2 days per annum. Their total volunteering leave for 2022 accounted for 358.5 hours.

#### EDL – Ongoing Commitment to Supporting Charitable Causes and Building Stronger Communities

To encourage employees to make a difference in the community, EDL has an ongoing Charity and Community Involvement Policy in place and offers two paid days each year for volunteer work and provides matching fundraising for approved charities and donation programmes. During the year, EDL staff supported a range of worthy causes, including support to colleagues and community members affected by the February floods in Brisbane and a range of local community programmes.



An artist speaks about his original artwork at EDL’s NAIDOC Week event.



## Regulatory Compliance

During the reporting period, we were not aware of any incidents of non-compliance with laws and regulations relating to (i) employment, labour practices, child and forced labour; (ii) occupational health and safety; and (iii) products and services provided and methods of redress, advertising, labelling, and privacy, that have a significant impact on the Group.

### SAPN – Community Grants Programme

In 2022, SAPN launched its Community Grants programme, with the aim of assisting communities in empowering themselves and making a tangible difference in their local area, aligning to the corporate focus areas of:

- Keeping the community safe
- Supporting our customers and community
- Supporting a sustainable SA
- Supporting innovation for future growth

Following a competitive process, grants of up to \$5,000 each were awarded to 26 local groups across South Australia. A wide range of creative ideas were submitted, from sustainable community

gardens and lighting and solar upgrades to education programmes for young people and innovative safety projects for remote areas.



Crowd gathers at a local event to learn more about SAPN's Community Grant Programme.

## EUROPE

### NGN – Community Partnership Fund

NGN's Community Partnering Fund enables community groups to deliver schemes that tackle issues that are close to their hearts as utility companies – such as reducing fuel poverty, improving energy efficiency and safety know-how, and supporting projects that encourage more young people taking science and technology subjects in schools and colleges to help create a more diverse workforce as the utility companies work to deliver a greener energy future for the region. As well as providing a short-term funding boost, the Community Partnering Fund's aim is to find organisations who can become long-term partners, by working with groups that are embedded in their local communities, having a much bigger impact.



NGN worker discusses energy efficiency with students at Customer Energy Village school launch.

## About this Report

### Reporting Period

This Sustainability Report provides an overview of the Group's sustainability strategies, management approach, progress, and highlights during the year from 1 January 2022 to 31 December 2022, unless otherwise specified.

### Reporting Boundary

The information disclosed in this Sustainability Report covers the key businesses of the Group, including the generation of thermal and renewable power, the transmission of electricity, oil and gas, as well as the distribution of electricity and gas in Hong Kong, the United Kingdom, Australia, New Zealand, Mainland China, Thailand, the Netherlands, Canada, and the United States.

The selected in-scope entities refer to business units over which the Group holds more than a 10% effective interest.

### Reporting Framework

#### Hong Kong Stock Exchange's ESG Guide

This Report is prepared in accordance with the mandatory disclosure requirements and the "comply or explain" provisions of the Environmental, Social and Governance Reporting Guide (ESG Guide) contained in Appendix 27 to The Rules Governing the Listing of Securities on The Stock Exchange of Hong Kong Limited.

The ESG Guide Content Index set out on pages 118 to 124 contains information about the extent to which the Group has applied the ESG Guide and cross-references to the relevant section in this Report.

### TCFD

The Report also refers to recommendations from the Task Force on Climate-related Financial Disclosures (TCFD). The TCFD Content Index is made available on page 125.

### UN Global Compact

Power Assets has been a signatory to the UN Global Compact from April 2022. As a signatory, the Group is committed to aligning its operations and strategies with ten universal principles in the areas of human rights, labour, environment, and anti-corruption. The annual Communication on Progress (COP) is made available on pages 126 to 127.

This Report should be read in conjunction with the Group's Annual Report 2022, which contains a comprehensive review of its financial performance and corporate governance, and also key policies published on the Group's website. For more detailed information on its operating companies' efforts and achievements in sustainability, please refer to their separate sustainability reports or websites.

These, together with further information about our approach to sustainability, policies, ESG ratings content index, can be found online at [www.powerassets.com/en/sustainability](http://www.powerassets.com/en/sustainability).

### Reporting Principles

The content of this Report follows the ESG Guide reporting principles.

- **Materiality** – We focus on matters that impact business growth and are of importance to our stakeholders. For more information, please refer to "Materiality Assessment" on pages 18 to 21.
- **Quantitative** – Information regarding the standards, methodologies, assumptions, and/or calculation references, and sources of key conversion factors used for these key performance indicators (KPIs) is stated wherever appropriate.
- **Balance** – This Report discloses information in an objective manner, aiming to provide stakeholders with an unbiased picture of the Group's overall sustainability performance.

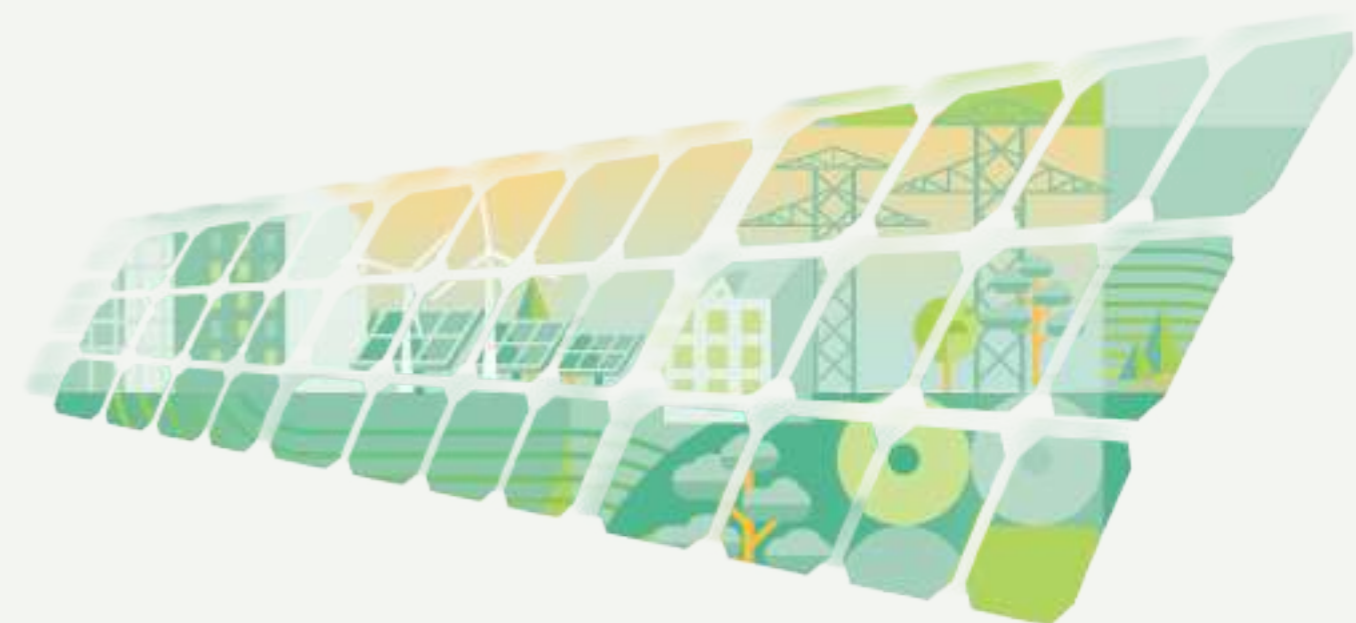
- **Consistency** – Consistent methodologies are adopted when calculating the quantitative KPIs, unless otherwise specified. Reasons would be provided for any restating of information published in the Report.

### Language

In case of inconsistency or discrepancy between the Chinese and English versions of the Report, the English version shall prevail.

### Feedback

The Group welcomes feedback on this Report, its approach to sustainability, and its performance. Please share your views and email us at [sr@powerassets.com](mailto:sr@powerassets.com).





# Environmental and Social Performance Indicators

Environmental KPIs <sup>1,2</sup>	Unit	2020	2021	2022
<b>GHG emissions<sup>3</sup></b>				
<b>Total GHG emissions</b>		<b>7,535,978</b>	<b>8,324,780</b>	<b>8,040,826</b>
Scope 1 emission <sup>4</sup>	tonnes CO <sub>2</sub> e	6,503,836	7,354,549	7,252,903
Scope 2 emission <sup>5</sup>		1,032,142	970,231	787,922
<b>Total carbon intensity</b>		<b>0.311</b>	<b>0.305</b>	<b>0.299</b>
Scope 1 carbon intensity	tonnes CO <sub>2</sub> e/ HKD \$'000 revenue	0.268	0.269	0.270
Scope 2 carbon intensity		0.043	0.036	0.029
<b>Use of energy</b>				
<b>Total energy consumption<sup>6</sup></b>		<b>15,977,916</b>	<b>18,545,282</b>	<b>17,720,670</b>
Direct energy consumption		<b>15,315,770</b>	<b>17,881,898</b>	<b>17,091,915</b>
<b>i) Non-renewable energy consumed</b>		<b>21,612,672</b>	<b>25,062,755</b>	<b>24,761,281</b>
Gasoline/Petrol		6,394	6,191	6,362
Diesel		239,740	210,980	210,476
Natural gas		9,431,057	9,770,455	9,275,648
Liquefied petroleum gas (LPG)		303	130	119
Coal and other fuels <sup>7</sup>		11,935,178	15,074,998	15,268,676
<b>ii) Renewable energy consumed</b>		<b>1,964,973</b>	<b>2,037,686</b>	<b>1,019,020</b>
Wind		3,927	4,230	4,354
Solar		549	362	728
Hydro		48	52	39
Geothermal		16	17	13
Biomass	'000 kWh	1,937,900	2,010,506	992,674
Other renewables		22,524	22,519	21,213
<b>iii) Self-generated energy</b>		<b>93,909</b>	<b>94,802</b>	<b>86,029</b>
Electricity		93,909	94,802	86,029
Heating		–	–	–
Cooling		–	–	–
Steam		–	–	–
<b>iv) Sale of energy</b>		<b>8,355,785</b>	<b>9,313,345</b>	<b>8,774,416</b>
Electricity		7,869,876	8,822,657	8,337,535
Heating		404,530	417,455	372,494
Cooling		–	–	–
Steam		81,379	73,232	64,387
Indirect energy consumption		<b>662,147</b>	<b>663,384</b>	<b>628,755</b>
Electricity		662,147	663,384	628,755
<b>Total energy intensity</b>		<b>0.659</b>	<b>0.679</b>	<b>0.660</b>
Direct energy intensity	'000 kWh/ HKD \$'000 revenue	0.631	0.654	0.636
Indirect energy intensity		0.027	0.024	0.023

Environmental KPIs <sup>1,2</sup>	Unit	2020	2021	2022
<b>Air emissions</b>				
NOx emissions		4,916	5,590	6,512
SOx emissions	tonnes	690	772	1,004
RSP emissions		156	166	168
<b>Use of water</b>				
<b>Total water consumption</b>		<b>964,691</b>	<b>1,128,408</b>	<b>1,085,874</b>
Surface water		33,638	35,009	42,555
Groundwater	'000 m <sup>3</sup>	39	42	43
Seawater		927,196	1,089,268	1,039,277
Third-party water		3,585	3,864	3,782
Other sources		234	225	217
<b>Water consumption intensity</b>	'000 m <sup>3</sup> / HKD \$'000 revenue	0.040	0.041	0.040
<b>Waste production</b>				
<b>Total hazardous waste produced</b>	tonnes	<b>12,829</b>	<b>13,668</b>	<b>13,578</b>
<b>Total non-hazardous waste produced</b>		<b>332,746</b>	<b>385,679</b>	<b>437,572</b>
<b>Packaging material</b>				
<b>Total packaging material used for finished products</b>	tonnes	<b>8.50</b>	<b>6.76</b>	<b>4.51</b>
Paper		8.50	6.76	4.51

<sup>1</sup> Environmental KPIs in this data table are calculated using the equity method. We only include data in the report that were confirmed by end of March 2023. If significant changes occur after preparation of this report, they will be updated in the following year's publication.

<sup>2</sup> In the interest of accuracy and transparency, we have reviewed and updated our environmental KPIs for the previous years. This revision process reflects our commitment to continually improve our reporting and ensure the reliability of the information we share with our stakeholders. The updated data has been recalculated based on the following factors:

- Inclusion of additional data sources: We have identified and incorporated previously unaccounted-for sources and activities, which have led to a more comprehensive and representative account of our environmental performance.
- Methodology refinement: We have refined our calculation methodologies, emissions factors and conversion factors in accordance with the latest applicable international and local guidelines.
- Error correction: During the review process, some discrepancies were identified in our previously reported data. These errors have been corrected to provide a more accurate representation of our environmental performance.

As a result of these revisions, our updated environmental KPIs in this data table may differ from the figures published in previous sustainability reports. We believe these changes provide a more accurate and transparent account of our environmental performance and better enable us to track our progress towards our sustainability commitments.

<sup>3</sup> Greenhouse gas emissions (GHG) comprise carbon dioxide, methane, nitrous oxide, hydrofluorocarbons (HFC), perfluorocarbons (PFC), and sulphur hexafluoride (SF<sub>6</sub>). The data are calculated using local/market-based methodology where applicable under regulation. Otherwise, Scope 1 emissions are calculated using the latest available emission factors in line with the Greenhouse Gas Protocol, IEA's Energy Statistics Manual, UK Government GHG Conversion Factors for Company Reporting, USEPA's Emission Factors for Greenhouse Gas Inventories, and HKEPD's Guidelines to Account for and Report on Greenhouse Gas Emissions and Removals for Buildings in Hong Kong (2010 Edition). Scope 2 emissions are calculated based on the IEA's latest available emission factors.

<sup>4</sup> Scope 1 emission includes emissions from fuels processed in sources that were owned and controlled by our businesses for its own use, and fugitive emissions resulting from intentional or unintentional releases, e.g., gas shrinkage for our gas transmission and distribution businesses, methane emissions from venting, HFC and PFC emissions from the use of refrigeration and air conditioning equipment, and SF<sub>6</sub> emissions from industrial processes. In 2022, we expanded our scope to cover additional fugitive emissions sources. The 2020 and 2021 data figures have been restated to align with the updated approach to allow for meaningful comparison of data over time.

<sup>5</sup> Scope 2 emission includes the emissions from purchased electricity of our businesses for its own use, and emissions associated with the energy losses from the distribution and electricity system transmission grid ("network losses") for our electricity transmission and distribution businesses. Network losses are calculated as the difference between the electricity entering the network, and electricity used by customers, for which the data are received from the industry taken from meter readings.

<sup>6</sup> Total energy consumption = Non-renewable energy consumed + renewable energy consumed + electricity purchased for consumption + self-generated energy that is not consumed – sales of energy. In 2022, we have refined our calculation methodologies and conversion factors in line with the latest applicable international and local guidelines. The 2020 and 2021 data figures have been restated to align with the updated approach to allow for meaningful comparison over time.

<sup>7</sup> Coal and other fuels include anthracite, residual fuel oil, jet kerosene, lubricants, municipal waste (non-biomass fraction), industrial waste, and waste oils.

Social KPIs		2020	2021	2022
<b>Number of employees</b>				
Total		17,461	17,561	17,882
By employment type	Full-time	16,614	16,777	17,080
	Part-time	847	784	802
<b>Number of full-time employees</b>				
By gender	Male	13,782	13,852	14,017
	Female	2,832	2,925	3,063
By employee category	General staff	14,651	15,491	15,720
	Manager grade or above	1,963	1,286	1,360
By age group	Below 30	2,311	2,215	2,300
	30 – 49	8,481	8,737	8,973
	50 or above	5,822	5,825	5,807
By region	Hong Kong	1,844	1,832	1,850
	Mainland China	333	327	305
	Asia (excluding Hong Kong, Mainland China)	43	42	42
	United Kingdom	8,734	8,762	8,761
	Netherlands	488	492	511
	Australia	4,948	5,077	5,359
	Canada	10	14	13
	United States	151	163	165
New Zealand	63	68	74	
<b>Turnover rate for full-time employees<sup>1</sup></b>				
Overall		4.6%	7.2%	9.1%
By gender	Male	4.5%	6.8%	8.6%
	Female	5.0%	9.2%	11.4%
By age group	Below 30	4.4%	7.7%	9.3%
	30 – 49	3.7%	5.9%	8.1%
	50 or above	6.0%	9.0%	10.6%



Social KPIs		2020	2021	2022
By region	Hong Kong	2.4%	6.0%	7.6%
	Mainland China	3.0%	4.3%	7.9%
	Asia (excluding Hong Kong, Mainland China)	0%	2.4%	2.4%
	United Kingdom	3.4%	6.2%	8.3%
	Netherlands	6.4%	8.9%	9.8%
	Australia	7.2%	8.5%	10.3%
	Canada	0%	0%	7.7%
	United States	21.2%	27.0%	24.8%
	New Zealand	3.2%	26.5%	24.3%
<b>Work-related fatalities</b>				
Number of work-related fatalities		0	0	0
Rate of work-related fatalities		0	0	0
<b>Work-related injury</b>				
Number of lost days due to work injury		1,556	1,213	875
Number of lost time injury incidents		38	29	31
Lost time injury rate <sup>2</sup>		0.27	0.21	0.19
<b>Health &amp; safety management system</b>				
% of employee covered by OHSAS 18001/ISO 45001 <sup>3</sup>		Not reported	84.4%	83.3%
<b>Percentage of full-time employees who received training<sup>4</sup></b>				
Overall		98.4%	96.8%	94.5%
By gender	Male	99.0%	98.8%	96.0%
	Female	95.4%	87.4%	87.5%
By employee category	General staff	98.0%	90.5%	88.5%
	Manager grade or above	100%	100%	100%
<b>Average hours of training per full-time employee</b>				
Overall		28.0	33.0	36.0
By gender	Male	28.8	35.7	39.1
	Female	24.0	20.1	21.9
By employee category	General staff	28.4	31.3	35.4
	Manager grade or above	24.7	52.6	43.2

Social KPIs		2020	2021	2022
<b>Number of suppliers</b>				
Total		14,623	16,332	18,805
By region	Hong Kong	969	915	911
	Mainland China	263	310	203
	Asia (excluding Hong Kong, Mainland China)	55	57	72
	United Kingdom	4,294	4,367	4,813
	Europe	1,150	960	1,091
	Australia	6,471	7,125	7,962
	Canada	98	316	310
	United States	996	1,963	3,141
	New Zealand	322	314	296
	Other region	5	5	6
<b>Number of complaints received</b>				
Products and services related		6,928	6,675	6,871
<b>Number of employees who received training on anti-corruptive/ethics and integrity</b>				
Total		2,874	3,214	7,419
By employment type	Full-time	2,808	3,128	7,341
	Part-time	66	86	78
Percentage of full-time and part-time employees who received training on anti-corruptive/ethics and integrity <sup>5</sup>		16.5%	18.3%	41.5%
<b>Number of training hours on anti-corruptive/ethics and integrity completed by employees</b>				
Total		1,839.0	4,580.0	6,710.1
By employment type	Full-time	1,803.3	4,498.5	6,678.7
	Part-time	35.7	81.5	31.4

<sup>1</sup> Turnover rate refers to full-time employees of the in-scope entities (excluding Husky Midstream) only. It is calculated as "total number of full-time employees leaving employment during the reporting year divided by total number of full-time employees as of 31 Dec of the reporting year and then multiplied by 100%".

<sup>2</sup> LTIR represents the number of injuries per 100 employees per year. It is calculated as "total number of injuries multiplied by 200,000 and then divided by total hours worked".

<sup>3</sup> It is calculated as "total number of employees covered by OHSAS 18001/ISO 45001 divided by total number of employees as of 31 Dec of the reporting period and then multiplied by 100%".

<sup>4</sup> Full-time employees including terminated employees who left the Company during the reporting period. It is calculated as "total number of full-time employees who received training divided by total number of full-time employees as of 31 Dec of the reporting period and then multiplied by 100%". The percentage of employees who received trainings may exceed 100%.

<sup>5</sup> It is calculated as "total number of employees who received training on anti-corruptive/ethics and integrity divided by total number of full-time employees as of 31 Dec of the reporting period and then multiplied by 100%".

# Hong Kong Stock Exchange ESG Guide

## Content Index

Mandatory Disclosure Requirements	Page	Remarks
<p>Governance Structure</p> <p>A statement from the board containing the following elements:</p> <p>(i) a disclosure of the board's oversight of ESG issues;</p> <p>(ii) the board's ESG management approach and strategy, including the process used to evaluate, prioritise and manage material ESG-related issues (including risks to the issuer's businesses); and</p> <p>(iii) how the board reviews progress made against ESG-related goals and targets with an explanation of how they relate to the issuer's businesses.</p>	14-15	
<p>Reporting Principles – Materiality</p> <p>The ESG report should disclosed:</p> <p>(i) the process to identify and the criteria for the selection of material ESG factors; and</p> <p>(ii) if a stakeholder engagement is conducted, a description of significant stakeholders identified, and the process and results of the issuer's stakeholder engagement.</p>	18-21	
<p>Reporting Principles – Quantitative</p> <p>Information on the standards, methodologies, assumptions and/or calculation tools used, and source of conversion factors used, for the reporting of emissions/energy consumption (where applicable).</p>	112-117	
<p>Reporting Principles – Consistency</p> <p>The issuer should disclose in the ESG report any changes to the methods or KPIs used, or any other relevant factors affecting a meaningful comparison.</p>	112-114	
<p>Reporting Boundary</p> <p>A narrative explaining the reporting boundaries of the ESG report and describing the process used to identify which entities or operations are included in the ESG report. If there is a change in the scope, the issuer should explain the difference and reason for the change.</p>	110	

Subject Areas, Aspects, General Disclosures and KPIs	Page	Remarks	
<b>A. Environmental</b>			
<b>Aspect A1: Emissions</b>			
<p>General Disclosure</p> <p>Information on:</p> <p>(a) the policies; and</p> <p>(b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to air and greenhouse gas emissions, discharges into water and land, and generation of hazardous and non-hazardous waste.</p>	36-67	<ul style="list-style-type: none"> <li>Environmental Policy</li> <li>Supplier Code of Conduct</li> </ul>	
KPI A1.1	The types of emissions and respective emissions data.	39; 113	
KPI A1.2	Direct (Scope 1) and energy indirect (Scope 2) greenhouse gas emissions (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	39-40; 112	
KPI A1.3	Total hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	64; 113	
KPI A1.4	Total non-hazardous waste produced (in tonnes) and, where appropriate, intensity (e.g. per unit of production volume, per facility).	64; 113	
KPI A1.5	Description of emission target(s) set and steps taken to achieve them.	10-11	
KPI A1.6	Description of how hazardous and non-hazardous wastes are handled, and a description of reduction target(s) set and steps taken to achieve them.	56-57; 64-66	
<b>Aspect A2: Use of Resources</b>			
<p>General Disclosure</p> <p>Policies on the efficient use of resources, including energy, water and other raw materials.</p>	36-66	<ul style="list-style-type: none"> <li>Sustainability Policy</li> <li>Environmental Policy</li> <li>Supplier Code of Conduct</li> </ul>	
KPI A2.1	Direct and/or indirect energy consumption by type (e.g. electricity, gas or oil) in total (kWh in '000s) and intensity (e.g. per unit of production volume, per facility).	39; 112	



Subject Areas, Aspects, General Disclosures and KPIs	Page	Remarks
KPI A2.2	Water consumption in total and intensity (e.g. per unit of production volume, per facility).	62; 113
KPI A2.3	Description of energy use efficiency target(s) set and steps taken to achieve them.	10-11
KPI A2.4	Description of whether there is any issue in sourcing water that is fit for purpose, water efficiency target(s) set and steps taken to achieve them.	56-57; 62-63
KPI A2.5	Total packaging material used for finished products (in tonnes) and, if applicable, with reference to per unit produced.	113
<b>Aspect A3: The Environment and Natural Resources</b>		
General Disclosure	Policies on minimising the issuer's significant impacts on the environment and natural resources.	56-66
KPI A3.1	Description of the significant impacts of activities on the environment and natural resources and the actions taken to manage them.	56-66
<b>Aspect A4: Climate Change</b>		
General Disclosure	Policies on identification and mitigation of significant climate-related issues which have impacted, and those which may impact, the issuer.	26-32
KPI A4.1	Description of the significant climate-related issues which have impacted, and those which may impact, the issuer, and the actions taken to manage them.	26-32

Subject Areas, Aspects, General Disclosures and KPIs	Page	Remarks
<b>B. Social</b>		
<b>Employment and Labour Practices</b>		
<b>Aspect B1: Employment</b>		
General Disclosure	Information on:  (a) the policies; and  (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to compensation and dismissal, recruitment and promotion, working hours, rest periods, equal opportunity, diversity, anti-discrimination, and other benefits and welfare.	71-80; 109
KPI B1.1	Total workforce by gender, employment type (for example, full – or part-time), age group and geographical region.	72; 115
KPI B1.2	Employee turnover rate by gender, age group and geographical region.	73; 115-116
<b>Aspect B2: Health and Safety</b>		
General Disclosure	Information on:  (a) the policies; and  (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to providing a safe working environment and protecting employees from occupational hazards.	81-87; 109
KPI B2.1	Number and rate of work-related fatalities occurred in each of the past three years including the reporting year.	116
KPI B2.2	Lost days due to work injury.	82; 116
KPI B2.3	Description of occupational health and safety measures adopted, and how they are implemented and monitored.	81-87

Subject Areas, Aspects, General Disclosures and KPIs	Page	Remarks
<b>Aspect B3: Development and Training</b>		
General Disclosure	Policies on improving employees' knowledge and skills for discharging duties at work. Description of training activities.	71-80
KPI B3.1	The percentage of employees trained by gender and employee category (e.g. senior management, middle management).	74; 116
KPI B3.2	The average training hours completed per employee by gender and employee category.	74; 116
<b>Aspect B4: Labour Standards</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to preventing child and forced labour.	70; 91-92; 109; 126
		<ul style="list-style-type: none"> <li>Human Rights Policy</li> <li>Modern Slavery and Human Trafficking Statement</li> <li>Supplier Code of Conduct</li> </ul>
KPI B4.1	Description of measures to review employment practices to avoid child and forced labour.	91-96; 126
KPI B4.2	Description of steps taken to eliminate such practices when discovered.	91-96; 126
<b>Operating Practices</b>		
<b>Aspect B5: Supply Chain Management</b>		
General Disclosure	Policies on managing environmental and social risks of the supply chain.	91-96
		<ul style="list-style-type: none"> <li>Human Rights Policy</li> <li>Modern Slavery and Human Trafficking Statement</li> <li>Supplier Code of Conduct</li> </ul>
KPI B5.1	Number of suppliers by geographical region.	91; 117
KPI B5.2	Description of practices relating to engaging suppliers, number of suppliers where the practices are being implemented, and how they are implemented and monitored.	91-96

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KPI B5.3	Description of practices used to identify environmental and social risks along the supply chain, and how they are implemented and monitored.	91-96
KPI B5.4	Description of practices used to promote environmentally preferable products and services when selecting suppliers, and how they are implemented and monitored.	91-96
<b>Aspect B6: Product Responsibility</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to health and safety, advertising, labelling and privacy matters relating to products and services provided and methods of redress.	81-90; 97-99; 109
		<ul style="list-style-type: none"> <li>Code of Conduct</li> <li>Personal Data Privacy Policy</li> </ul>
KPI B6.1	Percentage of total products sold or shipped subject to recalls for safety and health reasons.	–
		This indicator is not considered material to the Group hence such data are not disclosed.
KPI B6.2	Number of products and service-related complaints received and how they are dealt with.	117
KPI B6.3	Description of practices relating to observing and protecting intellectual property rights.	–
		Our Code of Conduct outlines our commitment to intellectual property rights protection.
KPI B6.4	Description of quality assurance process and recall procedures.	97-99
KPI B6.5	Description of consumer data protection and privacy policies, and how they are implemented and monitored.	88-90
		<ul style="list-style-type: none"> <li>Information Security Policy</li> <li>Personal Data Privacy Policy</li> </ul>



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Subject Areas, Aspects, General Disclosures and KPIs	Page	Remarks
<b>Aspect B7: Anti-corruption</b>		
General Disclosure	Information on: (a) the policies; and (b) compliance with relevant laws and regulations that have a significant impact on the issuer relating to bribery, extortion, fraud and money laundering.	33-35 <ul style="list-style-type: none"> <li>Code of Conduct</li> <li>Anti-Fraud and Anti-Bribery Policy</li> </ul>
KPI B7.1	Number of concluded legal cases regarding corrupt practices brought against the issuer or its employees during the reporting period and the outcomes of the cases.	– No such cases recorded during the reporting period.
KPI B7.2	Description of preventive measures and whistle-blowing procedures, and how they are implemented and monitored.	33-35 <ul style="list-style-type: none"> <li>Whistleblowing Procedure</li> </ul>
KPI B7.3	Description of anti-corruption training provided to directors and staff.	33-35; 117
<b>Community</b>		
<b>Aspect B8: Community Investment</b>		
General Disclosure	Policies on community engagement to understand the needs of the communities where the issuer operates and to ensure its activities take into consideration the communities' interests.	100-108 <ul style="list-style-type: none"> <li>Sustainability Policy</li> </ul>
KPI B8.1	Focus areas of contribution (e.g. education, environmental concerns, labour needs, health, culture, sport).	100-108
KPI B8.2	Resources contributed (e.g. money or time) to the focus area.	100-108

TCFD recommendations	Page	Remarks
<b>Governance</b>		
Disclose the organisation's governance around climate-related risks and opportunities.	Describe the board's oversight of climate-related risks and opportunities.	14-15; 27
	Describe management's role in assessing and managing climate-related risks and opportunities.	14-15; 27
<b>Strategy</b>		
Disclose the actual and potential impacts of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning where such information is material.	Describe the climate-related risks and opportunities the organisation has identified over the short, medium, and long term.	10-11; 29-30
	Describe the impact of climate-related risks and opportunities on the organisation's businesses, strategy, and financial planning.	28-31
	Describe the resilience of the organisation's strategy, taking into consideration different climate-related scenarios, including a 2°C or lower scenario.	28-31
<b>Risk Management</b>		
Disclose how the organisation identifies, assesses, and manages climate-related risks.	Describe the organisation's processes for identifying and assessing climate-related risks.	28-31
	Describe the organisation's processes for managing climate-related risks.	28-31
	Describe how processes for identifying, assessing, and managing climate-related risks are integrated into the organisation's overall risk management.	28-31
<b>Metrics and Targets</b>		
Disclose the metrics and targets used to assess and manage relevant climate-related risks and opportunities where such information is material.	Disclose the metrics used by the organisation to assess climate-related risks and opportunities in line with its strategy and risk management process.	10-11; 31
	Disclose Scope 1, Scope 2 and, if appropriate, Scope 3 GHG emissions and the related risks.	39-40; 112
	Describe the targets used by the organisation to manage climate-related risks and opportunities and performance against targets.	10-11

# UN Global Compact Content Index

PAH has strongly committed to integrating the ten principles into our overall strategy, culture and daily operations. These are reflected in the written commitments and policies below, with comprehensive information provided throughout this report. Performance metrics are tracked and are available on pages 112 to 117.

UN Global Compact Principle	PAH written commitment/policies	Sustainability report page reference & further notes
<b>Human Rights</b>		
Principle 1: Businesses should support and respect the protection of internationally proclaimed human rights	<ul style="list-style-type: none"> <li>Human Rights Policy</li> <li>Modern Slavery and Human Trafficking Statement</li> <li>Supplier Code of Conduct</li> </ul>	The Group's Human Rights Policy, Modern Slavery and Human Trafficking Statement, and Supplier Code of Conduct set out our expectations regarding respect for human rights.
Principle 2: Make sure that they are not complicit in human rights abuses		We strive to help increase the protection and enjoyment of human rights within the communities in which we operate. Information on how the Group and our business unit address human rights protection is available on pages 112 to 117.
<b>Labour</b>		
Principle 3: Businesses should uphold the freedom of association and the effective recognition of the right to collective bargaining	<ul style="list-style-type: none"> <li>Human Rights Policy</li> <li>Modern Slavery and Human Trafficking Statement</li> <li>Code of Conduct</li> </ul>	PAH strive to provide a decent place to work and committed to create a diverse and inclusive workplace by respecting the values, customs, and traditions of our employees in different operating markets.
Principle 4: The elimination of all forms of forced and compulsory labour		We believe that collective bargaining is an essential tool for ensuring our business is conducted ethically and responsibly. As of year-end 2022, we are proud to report that 87.3% of our 17,882 employees from all our business units are covered by collective bargaining rights. We will continue to work with our employees and their representatives to ensure that fair and equitable labour practices are at the heart of everything we do.
Principle 5: The effective abolition of child labour		We also prohibit the use of all forms of child labour or forced labour, including prison labour, bonded labour, any form of slavery and any form of human trafficking. The Group conducts due diligence as part of our initiative to identify and mitigate relevant risks, such as in our assessment of potential new suppliers and our handling of whistle blowing cases.
Principle 6: The elimination of discrimination in respect of employment and occupation		Please refer to pages 78 to 80 to understand how the Group promotes inclusion and diversity.

UN Global Compact Principle	PAH written commitment/policies	Sustainability report page reference & further notes
<b>Environment</b>		
Principle 7: Businesses should support a precautionary approach to environmental challenges	<ul style="list-style-type: none"> <li>Sustainability Policy</li> <li>Environmental Policy</li> <li>Supplier Code of Conduct</li> </ul>	According to our Environmental Policy, Sustainability Policy and Supplier Code of Conduct, the Group aims to provide clear and comprehensive guiding approaches to sustainability practices across our operations.
Principle 8: Undertake initiatives to promote greater environmental responsibility		PAH has made a clear public commitment to phase out our coal-fired generation by 2035 and further iterate our ambition to reduce our Scope 1 and 2 emissions. We also strive to support various government decarbonisation plans and net-zero commitment proactively. Please refer to pages 10 to 11 and 36 to 67 to further explore how we manage these environmental targets and relevant objectives.
Principle 9: Encourage the development and diffusion of environmentally friendly technologies		
<b>Anti-Corruption</b>		
Principle 10: Businesses should work against corruption in all its forms, including extortion and bribery	<ul style="list-style-type: none"> <li>Code of Conduct</li> <li>Anti-Fraud and Anti-Bribery Policy</li> <li>Supplier Code of Conduct</li> </ul>	PAH is committed to upholding the highest compliance and anti-corruption standards and always behaving with integrity. For further information, please refer to pages 33 to 35.



# Abbreviations

Abbreviation	Long form
AESCSF	Australian Energy Sector Cybersecurity Framework
BNG	Biodiversity Net Gain
CSRD	Corporate Sustainable Reporting Directive
D&I	Diversity and Inclusion
DER	Distributed Energy Resources
DNO	Distribution Network Operators
DSO	Distribution System Operators
EHS	Environmental, Health & Safety
EMS	Environmental Management System
ENA	Energy Networks Australia
ESG Guide	Environmental, Social and Governance Reporting Guide
FiT	Feed-in Tariff
FSCA	Field Services Contractor Application
FSRU	Floating Storage Regasification Unit
GMP	Global Methane Pledge
HSE	Health, Safety and Environmental
HSMSs	Health and Safety Management Systems
HV-DERMS	High Voltage Distributed Energy Resource Management System
ILO	International Labour Organisation
IPCC	Intergovernmental Panel on Climate Change
JC	Joint Consultation
KPI	Key performance indicators
LPG	Liquefied petroleum gas
LPS	Lamma Power Station
LTIFR	Lost Time Injury Frequency Rate
LTIs	Lost Time Injuries
NDCs	Nationally Determined Contributions
NIST	National Institute of Standards and Technology
NO <sub>x</sub>	Nitrogen Oxides
OHS	Occupational Health and Safety
RECs	Renewable Energy Certificates
RoSPA	Royal Society for the Prevention of Accidents
RSP	Respirable Suspended Particulates
SDGs	Sustainable Development Goals
SO <sub>x</sub>	Sulfur Oxide
SPCF	Smart Power Care Fund
SSP2	Shared Socioeconomic Pathway 2
T&D	Transmission & Distribution
TCFD	Task Force on Climate-related Financial Disclosures
TNFD	Task Force on Nature-related Financial Disclosure
TRIFR	Total Recordable Injury Frequency Rate
UNGC	UN Global Compact
VPP	Virtual Power Plant
WEF	World Economic Forum



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