Investment in
POWER ASSETS

Infrastructure Investments in
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Infrastructure Investments in
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Investment in

POWER ASSETS

The Power Assets Group is a global investor in power generation, transmission and distribution, gas transmission and distribution, as well as oil storage and transmission in nine markets spread across four continents – namely the UK, Australia, Hong Kong, Mainland China, the Netherlands, New Zealand, Thailand, Canada and the United States.

2021 saw the Power Assets Group ("Power Assets" or the "Group") deliver steady performance based on its diversified energy portfolio. This model of investing in low-risk energy infrastructure has helped to insulate the Group from the lingering macroeconomic impact of the global COVID-19 pandemic and fluctuations in fuel prices.

Power Assets' profits attributable to shareholders amounted to HK$6,140 million (2020: HK$6,132 million). Excluding the non-cash deferred tax related charges for the operating companies in the United Kingdom in 2020 and 2021 as well as the disposal gain from the sale of Portugal investment, Iberwind, in 2020, the adjusted profits attributable to shareholders would have increased by 10%.

The Group's financial position remained solid with funds received from operations in 2021 totalling HK$5,300 million (2020: HK$5,533 million).

The energy sector is seeing a dramatic transformation as all players seek to supply energy needs with minimal impact on the environment. Many of the Group's operating companies are at the vanguard of change through research and innovation in collaboration with cross-sector stakeholders.

In 2021, Power Assets' flagship company HK Electric continued to work towards its goal of building a sustainable future. In support of the Government's "Hong Kong's Climate Action Plan 2050", the company is undertaking a phased retirement of all coal-fired generating units and increasing support for renewable energy. Progress was made on its programme of capital works that will see the commissioning of two new gas-fired generating units in 2022 and 2023 respectively, together with an offshore liquefied natural gas receiving terminal scheduled for commissioning in 2022.

All of the Group's operating companies in the UK once again delivered market-leading performance in reliability, safety and customer service. Appeals to the Competition and Markets Authority to challenge the final determinations for Northern Gas Networks and Wales & West Gas Networks have been completed; thus offering stable and predictable cash flow for the five-year regulatory period of 2021-2026.

In Australia, in light of the massive growth in roof top solar and distributed battery energy systems, the Australian Energy Regulator is conducting a comprehensive process to review the regulatory regime for energy companies and the Group's operating companies have been collaborating with the regulator through this process.

The Canadian portfolio progressed with decarbonization and delivered stable performance. Canadian Power acquired two wind farms in Okanagan in June 2021, marking its entry into renewable energy generation.

In the Netherlands, Dutch Enviro Energy was successfully named preferred bidder for AEB, a waste-to-energy business in the Netherlands; the acquisition is poised to extend the company's core business.

Wellington Electricity in New Zealand completed a major three-year programme of works to enhance earthquake readiness across its network. In Thailand, Ratchaburi Power Plant delivered stable performance.

In Mainland China, the Jinwan co-generation power plant increased electricity sent out in response to strong industrial demand despite coal supply scarcities. The two wind farms in Dali and Laoting met targets and jointly offset 207,000 tonnes of carbon emissions.

Infrastructure Investments in
UNITED KINGDOM

In the United Kingdom, CKI has investments in electricity and gas distribution, water and wastewater services, electricity generation as well as railway rolling stock. These investments include UK Power Networks, the electricity distribution network operator which serves London, South East England and the East of England; Northern Gas Networks, a gas distribution business that serves the north of England; Wales & West Gas Networks, a gas distribution business that serves Wales and South West England; Seabank Power, an electricity generation plant located near Bristol; Northumbrian Water, a water supply, sewerage and wastewater company that serves the North East and provides water supply to certain areas in South East England; and UK Rails, one of the three major rolling stock companies in Great Britain.

UK POWER NETWORKS

UK Power Networks owns three of the 14 regulated electricity distribution networks in Great Britain and distributes electricity to over a quarter of the country's population. The company's network is approximately 190,000 kilometres in length, and covers an area of over 29,000 square kilometres. It serves 8.3 million homes and businesses across London, the southeast and east of England. Its reliability rating is the highest in the country. The company also has a non-regulated business – UK Power Networks Services – which designs, builds, owns and operates private networks for both public and private sector clients.

In December 2021, UK Power Networks submitted its final Business Plan to the Office of Gas and Electricity Networks ("Ofgem") in preparation for the next reset which will run from 2023 to 2028. Against a backdrop of transformative change in the energy system and the society, both of which are working towards decarbonization, the Plan not only addresses sustainability matters, but also aims to keep UK Power Networks' position as the best performing network company in Great Britain.

During the year, UK Power Networks continued to focus on advancing the net zero transition, leading the way in running a smart grid as well as facilitating the decarbonization of heating and the uptake of electric vehicles. The company has become the first UK distribution network operator to have its carbon reduction plan and targets endorsed by the Science-Based Target Initiative. UK Power Networks mapped the carbon footprint of its emissions, modelled the actions it will take to reduce emissions, and set challenging targets across all its activities.

UK Power Networks also launched the Constellation project, installing powerful computers in a series of substations, turning them into smart substations, reducing the reliance on communications to and from the central control systems. These substations will analyse millions of datapoints on how the network is running, and re-configure the network based on specific conditions. The project will free up capacity and help facilitate an increase in renewable energy generation. The plan is to release 1.4 GW of capacity and is forecast to reduce more than 17.8 million tonnes of harmful greenhouse gas emissions by 2050. Consumers will as a result save more than GBP750 million by 2050.

UK Power Networks' wide range of net zero initiatives have been viewed positively by Ofgem. In addition, in the 2020/2021 Stakeholder Engagement and Consumer Vulnerability Award, UK Power Networks was once again rated first across all sectors as the energy industry leader for its exceptional engagement with stakeholders.

One of UK Power Networks' groundbreaking projects, "Distributed Energy Resource Management", was named "Project of the Year" by the Business Green Leaders Awards. The project was recognised for its potential to catalyse the nascent smart appliances market and enable the launch of a raft of new flexible grid services that are set to reduce emissions as well as bolster the energy security of the country.

UK Power Networks was UK's leader in the global Smart Grid Index. It also achieved the sixth place in the "UK's Best Big Company to Work For" by Best Companies in 2021; it was the only electricity distribution network operator to be featured in the list. In addition, UK Power Networks was ranked second in the new "Top 10 Utilities to Work For" list. In the Inclusive Top 50 UK Employers list, the company ranked third for its promotion of an equal, diversified and inclusive work culture.

In 2021, UK Power Networks continued to focus on advancing the net zero transition, leading the way in running a smart grid as well as facilitating the decarbonisation of heating and the uptake of electric vehicles.

BUSINESS REVIEW

NORTHUMBRIAN WATER

Northumbrian Water is one of the ten regulated water and sewerage companies in England and Wales. It operates approximately 26,000 kilometres of water mains and 30,000 kilometres of sewers, providing water and wastewater services to 2.7 million people in North East England; and supplies drinking water to 1.8 million people in South East England.

In addition to regulated businesses, Northumbrian Water's operations include Kielder Reservoir, the largest man-made reservoir in northwestern Europe; as well as a portfolio of long-term water and wastewater contracts in Scotland, Ireland and Gibraltar.

Northumbrian Water received the Final Determination on price controls for 2020-2025 during the year. Further to an appeal to the Competition and Markets Authority (CMA) in 2020, there is a revenue uplift for the company.

Northumbrian Water continued to go beyond its regulatory commitment in regards to environmental sustainability. A dedicated team has been working to deliver improvements to wildlife, biodiversity and water quality. It has achieved the highest possible four stars in the Environment Agency's Environmental Performance Assessment.

Northumbrian Water was approved by the United Nations to become part of the Race to Zero campaign. As outlined in Northumbrian Water's Emission Possible plan, the company intends to achieve net zero in 2027.

During the year, Northumbrian Water rolled out its smart metering network in Essex. The programme involves connectivity to about 11,000 domestic meters. The company is targeting to have 100% coverage of smart meters by 2035.

In view of the COVID-19 pandemic, Northumbrian Water's Innovation Festival 2021 went hybrid with a half-digital and half-physical format for the first time. About 4,000 innovators from over 40 different countries participated to solve industry problems such as water poverty and leakage.

Northumbrian Water was included in the World's Most Ethical Companies List 2021, and is the only water and sewerage company in the world and one of the five UK companies on the list. This is the 10th time the company has received such world-wide recognition from the Ethisphere Institute. Northumbrian Water was also the first water company to achieve the Good Business Charter accreditation supported by the Confederation of British Industry and the Trades Union Congress. The conferment affirms ethical performance of businesses over 10 key components including employee well-being, diversity and inclusion, environmental responsibility, as well as commitment to customers. Furthermore, Northumbrian Water was named one of the UK's Best Workplaces by Great Place to Work UK in recognition of its commitment to promoting a healthy workplace.

A dedicated team of Northumbrian Water has been working to deliver improvements to wildlife, biodiversity and water quality.

NORTHERN GAS NETWORKS

Northern Gas Networks is a gas distribution company that serves the north of England. The network spans 37,000 kilometres of gas distribution pipelines and stretches from Northern Cumbria to the North East, including much of Yorkshire and covering large cities as well as rural areas. It transports approximately 13% of the nation's gas, serving a population of 6.7 million.

Northern Gas Networks started RIIO-GD2, the new regulatory period which came into effect in April 2021, in a strong position having received the highest reward in the sector in recognition of the quality of its business plan for the 5-year period from 2021 to 2026. The Business Plan Incentive was awarded by Ofgem in recognition of the significant additional benefits and value for money that Northern Gas Networks will deliver for customers as the frontier company in the sector.

In 2021, Ofgem released the Discretionary Reward Scheme scores for the period 2018-2021. The panel was particularly impressed with Northern Gas Networks' initiatives in the environmental category, and the company was ranked first across the industry. The Scheme recognises the performance of gas distribution network companies that best serve the interest of customers through social, carbon monoxide safety and environmental initiatives.

During the year, Northern Gas Networks launched a green transition bond, making it the first regulated energy distribution company to launch a green bond exclusively for members of the public.

In recognition of its commitment to excellent health and safety practices, Northern Gas Networks was awarded Gold Medal from RoSPA (The Royal Society for the Prevention of Accidents) for the fifth consecutive year.

In 2021, Northern Gas Networks continued to carry out various pioneering hydrogen projects which make contributions to the United Kingdom's progress towards decarbonization. One of the highlights is participating in the building of the country's first two homes with household gas appliances fuelled entirely by hydrogen. The project showcases the use of 100% hydrogen for domestic heating and cooking. For the first time, these hydrogen houses provide an opportunity for the public to experience a zero-emission gas-fuelled home of the future. It demonstrates that homes can be heated by clean energy and that hydrogen plays a vital role in achieving the United Kingdom's target of net zero carbon emissions by 2050.

Northern Gas Networks' HyDeploy project has commenced blending hydrogen with natural gas on a public gas network.

In addition, Northern Gas Networks built the MicroGrid which comprises approximately one kilometre of pipework of varying pressure tiers and diameters that will link to three demonstration houses featuring hydrogen boilers. This pilot is poised to demonstrate how networks can be operated and managed under 100% hydrogen conditions.

Northern Gas Networks' HyDeploy project has also commenced blending hydrogen with natural gas on a public gas network to supply low carbon heating and cooking to over 600 homes in Winlaton, Gateshead. HyDeploy will supply a 20% hydrogen blend in a 10-month long pilot. This marks the first time that a community has received hydrogen blend via a public natural gas network in the United Kingdom.

WALES & WEST GAS NETWORKS

Wales & West Gas Networks is the holding company of Wales & West Utilities, one of eight gas distribution networks in the United Kingdom. The company has 2.5 million supply points and a pipeline network of 35,000 kilometres. It serves an area of 42,000 square kilometres and a population of 7.5 million in Wales and South West England.

Despite the continuing disruption caused by COVID-19, Wales & West Gas Networks remained fully operational in all key areas. During 2021, the company announced a GBP81 million investment programme to continue to upgrade the gas network, replacing the pipes which serve over 30,000 homes and businesses. The programme prepares the gas network for the transportation of green gases such as hydrogen and biomethane in the future. The investment will help communities in the United Kingdom to transition towards a greener future to achieve the country's 2050 net zero target.

During 2021, Wales & West Gas Networks announced a GBP81 million investment programme to upgrade the gas network, replacing the pipes which serve over 30,000 homes and businesses.

Wales & West Gas Networks also received the green light from the Health & Safety Executive (HSE) to start injecting gas with up to 1% hydrogen into its existing network in Swindon. This represents the first time that the United Kingdom government agency permitted natural gas with an elevated hydrogen level to be used in the national network. This initiative will reduce carbon emissions by up to 5,000 tonnes for almost 2,500 homes in Swindon immediately.

In addition, Wales & West Gas Networks teamed up with UK Power Networks to carry out the HyCompact project, a low carbon hybrid heating trial. The new hybrid units contain a gas boiler and an electric air source heat pump alongside smart control software. Installed on the wall in place of an existing conventional gas boiler in customers' homes, the system can flexibly switch between renewable electricity and green gas, enabling the full decarbonisation of heat.

For the eighth consecutive year, Wales & West Gas Networks received the Gold Award from the Royal Society for the Prevention of Accidents (RoSPA) in recognition of its ongoing outstanding health and safety record. It also won the coveted "Safety Award" in the Institution of Gas Engineers & Managers (IGEM) and Energy and Utilities Alliance's Gas Industry Awards for its health and safety culture, as well as its industry-leading safety performance. It also retained its Investors in People (IiP) "Silver" level accreditation for the excellent people practices.

As part of its commitment to helping the United Kingdom work towards net zero carbon emissions, Wales & West Gas Networks has joined the nation's three other gas network companies and the gas transmission network to set out detailed plans to deliver the first hydrogen village by 2025.

SEABANK POWER

Seabank Power is the owner and operator of a combined cycle gas turbine power plant located near Bristol in the South West of England. The power plant has a total generating capacity of approximately 1,140 MW from its two generation units. Apart from routine maintenance periods, the plant was available at full capacity during the year.

UK Rails completed the conversion of the innovative new Swift Express Freight train, providing a cost-effective and low carbon solution for transporting parcels around the United Kingdom.

UK RAILS

UK Rails is one of the three major rolling stock owning companies in the United Kingdom. The company leases regional, commuter and high-speed passenger trains on long-term contracts to train operating companies, as well as freight locomotives to freight operating companies. UK Rails' rolling stock portfolio includes 23 different fleets of passenger trains comprising about 3,250 passenger vehicles and 83 freight locomotives. It also has two depots.

Sustainability is embedded in how UK Rails manages its assets and business. In support of the UK's net zero transport networks by 2050 ambition, UK Rails is driving decarbonisation efforts for its existing assets and looking for opportunities to grow a greener portfolio. This forms the strong foundations of its sustainability framework, as well as delivery of its strategy.

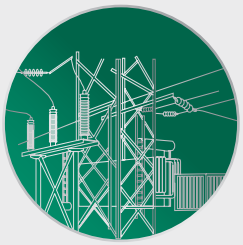
In 2021, UK Rails completed the conversion of the innovative new Swift Express Freight train, providing a cost-effective and low carbon solution for transporting parcels around the United Kingdom. The trains will provide cost-effective, efficient transportation of time-sensitive goods. Encouraging modal shift from road to rail, the Swift Express Freight will contribute towards the meeting of the net zero emission target by 2050. Conversion work of four further trains has commenced.

Through the Revolution VLR Consortium, UK Rails and another six companies worked in partnership to design and build the Revolution VLR ("RVLR") Demonstrator vehicle. This is a first-of-a-kind Demonstrator vehicle designed to support improved services on branch lines, the reopening of disused railway lines, as well as network extensions. The RVLR Demonstrator can run at speeds of up to 65 mph and is equipped with hybrid diesel-electric powerpacks, which provide zero-emissions operations, and low noise when running in stations and built-up areas at speeds up to 20mph.

UK Rails also collaborated with Alstom Transport to develop the first ever brand-new hydrogen train fleet in the United Kingdom. The venture aims to provide an initial fleet of 10 new hydrogen trains for the United Kingdom, supporting the Government's decarbonisation ambitions. In addition, UK Rails has begun the development of the Class 802 inter-city battery hybrid train with Hitachi. The introduction of the battery will cut fuel usage and reduce carbon emissions by at least 20%. By using battery power to travel in and out of stations and urban areas, the train will improve air quality and dramatically reduce noise levels, creating a more pleasant environment for passengers and people living nearby.

In 2021, UK Rails entered into an agreement with H2 Green, a hydrogen network operator, to develop hydrogen supply solutions. Together, the two companies will determine the production and refuelling infrastructure required to support wide-scale deployment of hydrogen-powered rolling stock fleets. The focus will be on providing low-cost and reliable green hydrogen produced by electrolysis of water using renewable energy sources.

During the year, the train fleets of UK Rails won a number of accolades at the country-wide awards for train performance, the 'Golden Spanners'. The company's Class 222 and Class 185 were recognised with Gold Spanners for being the most reliable train fleets in their category. The Class 331 was presented with a Silver Spanner for being the most improved train fleet in its category; while five other Classes respectively received Bronze Spanners for the fastest incident recovery in their categories.



Infrastructure Investments in
AUSTRALIA

In Australia, CKI has investments in electricity and gas transmission and distribution, as well as renewable and remote energy solutions. It owns SA Power Networks, the primary electricity distributor in the state of South Australia; Victoria Power Networks, of which its member companies – Powercor and CitiPower – distribute electricity to approximately 65% of the population in the state of Victoria; United Energy, an electricity distribution business in Victoria serving approximately 688,000 customers across east and southeast Melbourne and the Mornington Peninsula; Australian Gas Networks and Multinet Gas, natural gas distribution businesses in the country; Dampier Bunbury Pipeline, Western Australia's principal gas transmission pipeline; as well as Energy Developments, a renewable and remote energy solution producer with operations globally. The Group's portfolio also includes Australian Energy Operations, a renewable energy power transmission business in Victoria.

SA POWER NETWORKS

SA Power Networks is an electricity distributor which serves approximately 900,000 customers in South Australia. Its network covers an area of about 178,000 square kilometres; and its route length is approximately 88,000 kilometres.

In the Benchmarking Report for 2021 released by Australian Energy Regulator ("AER"), SA Power Networks continued to be rated the most efficient distribution network in Australia. The report compared performance across 13 electricity distribution businesses in the National Electricity Market for 2020.

During the year, SA Power Networks continued to adopt innovative technology to enhance operation efficiency. The company developed robotic drone technology to improve the quality of raw asset data collection as well as safety in the field. A robotic dog named "Spot" is equipped with artificial intelligence-driven robotics software developed in-house, a first for SA Power Networks. "Spot" uses ground-breaking technology such as autonomous navigation, computer vision and smart robotics to navigate between assets when carrying out inspection.

SA Power Networks' Enhanced Voltage Management (EVM) solution won the Premier's Awards: Energy and Mining in the Innovation and Collaboration in Energy category. The solution allows the company to better manage solar feeds into the electricity distribution network. Working with the South Australian Government and Australian Energy Market Operator, SA Power Networks developed this innovative voltage management solution which not only provides a solution to manage system security emergencies, but also significantly improves network capacity to host solar. This solar feed-in management capability is one of the most advanced in the world.

In September, SA Power Networks launched a trial of its smart "Flexible Exports" system in Adelaide's southern suburbs. It is a world-leading technology which enables new solar customers to export up to 10kW per phase from their panels, doubling the current standard export limit. Flexible export limits offered under the trial will enable more customers to connect solar and provide greater solar export opportunities throughout the year.

In the Benchmarking Report for 2021 released by Australian Energy Regulator, SA Power Networks continued to be rated the most efficient distribution network in Australia.

BUSINESS REVIEW

Victoria Power Networks' Beon completed the construction of the 62 MW Jemalong Solar Farm, 106 MW Yatpool Solar Farm and the 12 MW Melbourne Airport Solar Farm, the latter being one of the largest behind-the-meter solar installations in Australia.

VICTORIA POWER NETWORKS

Victoria Power Networks comprises electricity distribution networks which include CitiPower and Powercor, as well as energy infrastructure developer Beon Energy Solutions ("Beon"). CitiPower owns and operates a network that serves 332,000 customers in the central business district and inner suburbs of Melbourne; while Powercor covers a service area that includes regional and rural areas in central and western Victoria, as well as Melbourne's outer western suburbs, supplying electricity to around 844,000 customers. Beon is a leader in the design, construction and maintenance of large-scale renewable energy and infrastructure projects in Australia.

In April 2021, the Australian Energy Regulator ("AER") released its final determinations on CitiPower and Powercor's proposed plan for the 2021-2026 period. The Future Networks programme is one of the most critical initiatives approved by the determination. It will enable Victoria Power Networks to facilitate, integrate and connect the increasing volume of green, renewable energy resources, such as solar power, electric vehicle charging stations and batteries to the network.

During the year, CitiPower and Powercor continued to invest in efforts that keep the network safe and reliable. The two companies used helicopters fitted with advanced Light Detection and Ranging (LiDAR) technology to scan for vegetation which has been growing too close to powerlines. The Bell 505 helicopters have begun flying over parts of south west Victoria at an altitude of approximately 300 metres to capture data to create an accurate digital model of the electricity network and its surroundings.

Powercor also conducted a large scale drone trial across western Victoria in 2021. The trial is a significant expansion of the previous trials which have tested the capability of using drones to inspect pole tops and powerlines, including in areas located in remote terrain with difficult access. The drones capture high resolution images and thermographic information, helping to locate hot spots on the network which may lead to faults in the future.

In addition, Powercor successfully completed the second tranche of a major bushfire mitigation technology rollout and has now installed Rapid Earth Fault Current Limiters ("REFCL") in 18 zone substations, providing additional protection for 15,500 kilometres of the network. Acting like a

giant safety switch, the REFCL provides additional protection to the community by reducing voltage levels within milliseconds to mitigate fire risk if a tree strikes powerlines or if lines hit the ground. In recognition of Powercor's successful delivery of the REFCL programme (Tranche Two) across the distribution network in Ballarat, greater Bendigo, Ararat and Terang, the company won the Australia Institute of Project Management (AIPM) Project Management Achievement Award in the regional project category.

As part of the Victorian Government's Neighbourhood Battery Initiative, Powercor has received funding to install a community battery to support the growth of rooftop solar in Melbourne's west. Under the plan, Powercor will install a 150 kW/388 kWh battery in Tarneit that will allow customers to share their rooftop solar with others, reduce emissions and make the most of the strong local rooftop solar penetration in the area. CitiPower and Powercor are also exploring opportunities to locate community batteries across parts of Geelong, Bendigo and the Macedon Ranges as well as Melbourne's CBD as part of an extensive study which is also funded by the Neighbourhood Battery Initiative. It will examine the best locations for batteries, considering factors such as community benefits, local power demand and network constraints.

Furthermore, works supporting rooftop solar installations have been carried out by CitiPower and Powercor to allow more customers to export excess solar power. More than 25,000 new solar systems were connected to the networks in 2021. The major works programme involved balancing voltage across all powerlines and changing the settings on major transformers to reduce overall voltage levels.

CitiPower's Urban Projects team collaborated with Yarra Trams to deliver the Route 96 Nicholson Street Asset Relocation project which is Melbourne's first fully accessible tram route. This project led to CitiPower receiving a Gold Award in the 2021 International Project Management Association (IPMA) Awards for small / medium-sized projects in the category of Construction, Engineering and Infrastructure projects.

Beon completed a 12 MW(DC) solar farm at Melbourne Airport. It is one of the largest behind-the-meter solar installations in Australia. During the year, Beon also completed the construction of the 62 MW Jemalong Solar Farm and the 106 MW Yatpool Solar Farm.

UNITED ENERGY

United Energy distributes electricity to more than 700,000 customers across east and southeast Melbourne and the Mornington Peninsula and is an industry leader in network technology and innovation. The electricity distribution network covers an area of approximately 1,500 square kilometers. In 2021, it achieved 99.99% supply reliability.

United Energy distributes electricity to more than 700,000 customers across east and southeast Melbourne and the Mornington Peninsula. It achieved 99.99% supply reliability in 2021.

The Australian Energy Regulator ("AER") announced its final determinations on United Energy's proposed plan for the 2021-2026 period in April 2021. The result supported major investments in the network to sustain reliable, safe and affordable electricity supplies while also building the capability to offer quality services in the rapidly developing energy market featuring greater customer deployment of rooftop solar, batteries and electric vehicles. The determination also led to a reduction in network charges on the electricity bills for customers.

In August 2021, United Energy announced the "Electric Avenue" program which features Australia's largest rollout of community-based batteries. Over the course of 18 months, the company will install forty 30kW batteries on power poles, each with the capacity to service an average of 125 homes. When complete, the fleet of batteries will help to deliver highly reliable electricity and store power to 5,000 homes as part of an A$11 million investment in new energy technology. Work to prepare for the first battery installation began in November last year.

United Energy also continued to adopt advanced technology to improve power reliability and safety by identifying potential network faults. The company installed 22 Early Fault Detection devices on high voltage feeders in Rosebud and Dromana last year to protect some of the most fire-prone parts of the Mornington Peninsula. Arranged in pairs 5 kilometres apart, the devices measure signals travelling across powerlines to identify patterns that indicate the likelihood of a fault. The devices then transmit the data back to network controllers at United Energy, who would dispatch fault crews to investigate and make repairs if required.

In addition, United Energy invested in aerial inspection by employing helicopters fitted with advanced Light Detection and Ranging (LiDAR) technology to accurately measure the distance between tree branches/vegetation and the electricity network. By using lasers to capture data, 3D images of the entire network have been developed. Analysis of this data facilitated United Energy's annual vegetation management program which has cut trees and branches that were close to 41,200 powerline spans in 2021.

AUSTRALIAN GAS INFRASTRUCTURE GROUP

The Australian Gas Infrastructure Group consists of Australian Gas Networks, Multinet Gas and Dampier Bunbury Pipeline.

Australian Gas Networks

Australian Gas Networks owns over 25,000 kilometres of natural gas distribution networks and 1,000 kilometres of transmission pipelines, serving over 1.3 million customers in South Australia, Victoria, Queensland, New South Wales and the Northern Territory.

In 2021, Australian Gas Networks successfully completed its mains replacement programme for the 2016-2021 regulatory period, which resulted in 1,050 kilometres of aged mains removed and replaced with modern polyethylene and steel mains in its South Australian network. The programme included mains replacement within Adelaide's Central Business District. The CBD project consisted of replacing over 53 kilometres of pipe and took five years to complete.

In May 2021, Australian Gas Networks launched its first hydrogen production facility, Hydrogen Park South Australia, and commenced blending renewable hydrogen into part of its natural gas distribution network in Adelaide.

Western Australia's Economic Regulation Authority released its final decision for the regulatory control period 2021 to 2025. Dampier Bunbury Pipeline's income stream is secured for the next five years.

The Australian Energy Regulator ("AER") released its Final Decision for Australian Gas Networks' South Australian Access Agreement for the 2021-2026 period. The final decision recognises Australian Gas Networks' continued effort in connecting customers to the network, investing in mains replacement and seeking to innovate with customer engagement and support. The AER has approved two key strategic initiatives as part of the company's customer and stakeholder engagement process – (i) the starting of the process of blending renewable gas into the network, and (ii) the launch of an assistance programme for customers experiencing vulnerability. Preparations are underway for Australian Gas Networks' upcoming Victorian rate reset.

In May 2021, Australian Gas Networks launched its first hydrogen production facility, Hydrogen Park South Australia (HyP SA), and commenced blending renewable hydrogen into part of its natural gas distribution network in Adelaide. It is Australia's first, and one of a few projects in the world to deliver a renewable gas blend to homes connected to an existing gas network.

Multinet Gas

Multinet Gas operates a regulated natural gas network which covers approximately 1,860 square kilometres in the eastern and southeastern suburbs of Melbourne, the Yarra Ranges and South Gippsland. It serves approximately 720,000 customers. During the year, Multinet Gas completed 144 kilometres of low pressure and medium pressure mains replacement ahead of schedule. Preparations are being made for the upcoming rate reset with emphasis being placed on customer feedback and engagement.

Dampier Bunbury Pipeline

Dampier Bunbury Pipeline is the principal gas transmission pipeline in Western Australia. It stretches approximately 1,600 kilometres, linking the gas fields in the Carnarvon Basin off the Pilbara coast to mining, industrial, and commercial customers, as well as via other distribution networks to residential customers. The total length of the pipeline including looping and lateral pipelines is approximately 3,300 kilometres.

During the year, Western Australia's Economic Regulation Authority released its final decision on Dampier Bunbury Pipeline's Access Arrangement for the regulatory control period 2021 to 2025. The company's income stream is secured for the next five years.

Dampier Bunbury Pipeline's development arm (AGID) completed the Pluto Northwest Shelf interconnector (PNI) pipeline that connects Pluto's LNG plant to the Karratha Gas Plant (KGP) in Western Australia. Commissioning is expected in early 2022. AGID will receive the treated raw gas from the Pluto LNG plant and transport it via the PNI to the KGP.

ENERGY DEVELOPMENTS

Energy Developments Pty Limited ("EDL") specialises in (i) producing clean electricity from low greenhouse gas emissions sources like wind and solar, and waste gases from landfills and underground coal mines; (ii) producing renewable natural gas (RNG) from landfill, as well as (iii) providing innovative and reliable, low carbon energy solutions in remote, off-grid regions. EDL owns and operates a portfolio of over 1,100 MW of power generation facilities in Australia, North America and the United Kingdom.

In November 2021, EDL commenced operations at its newest RNG facility. The Wood Road RNG Facility in Michigan, USA converts waste gases from landfill into approximately 870,000 mmBtu of pipeline-quality RNG each year, an amount which displaces about 10.2 million gallons of diesel when used in transport. EDL is also commissioning its Tessman RNG Facility in Texas, USA, which will commence operations in early 2022.

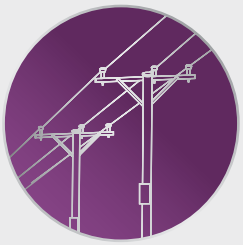
EDL's Agnew Hybrid Renewable Microgrid commenced operations in May 2020, and was officially opened in November 2021. Constructed, owned and operated by EDL, the 56 MW microgrid powers the Agnew Gold Mine with an average of 50–60% renewable energy; this percentage can increase up to 85% in favourable weather conditions. It is currently Australia's largest hybrid renewable microgrid, and is the first in the country to power a mine predominantly with wind-generated electricity. The microgrid integrates five energy technologies to deliver the renewable energy with 99.99% reliability – these technologies include (i) five wind turbines, (ii) a solar farm, (iii) a battery energy storage system, (iv) an off-grid gas/diesel engine power plant, as well as (v) an advanced microgrid control system. In recognition of the project's success, EDL has won numerous awards, including the Australian Engineering Excellence Awards 2020 – WA Division; 2020 Global Energy Awards – Engineering Solution of the Year; and 2020 Asian Power Awards – Innovative Power Technology of the Year – Australia. EDL was also recently named the third Most Innovative Company in the Agriculture, Mining and Utility category by the Australian Financial Review newspaper.

In June 2021, EDL commenced the Jabiru Hybrid Renewable Project, which includes the construction of a new power station and a solar farm. Funded by the Northern Territory Government in Australia, the project integrates solar and diesel generation with a battery to provide the town of Jabiru with reliable energy that is at least 50% generated from renewable sources. The facility will begin operation in early 2022. This sustainable energy solution will make a meaningful contribution to the Territory's target of using 50% renewable energy by 2030.

The Northern Territory Government commissioned EDL to construct, own and operate a new hybrid renewable power station which includes solar power and battery to provide the town of Jabiru with reliable energy.

EDL is also building (and will own and operate) a new solar farm and battery storage system to supplement its existing solar farm at Weipa in Queensland, Australia. The project will increase the supply of clean energy for Rio Tinto's bauxite mine operations and the local community. The project will integrate an extra 4 MW of solar generation and an additional 4 MW/4 MWh battery with the existing 1.6 MW solar farm as well as Rio Tinto's diesel-fired power station to balance sustainability with reliability. It is scheduled to be completed in late 2022.

EDL was awarded A$9 million by the Australian Department of Industry, Science, Energy and Resources for its study on capturing CO_2 from biomethane production waste streams for injection into concrete. Further studies will be carried out to investigate how the highly concentrated CO_2 stream can be purified, compressed, liquefied and stored for transportation to customers or use in carbonation curing.



Infrastructure Investments in
NEW ZEALAND

In New Zealand, CKI has investments in electricity distribution and waste management. The Group's Wellington Electricity is the electricity distributor which serves New Zealand's capital city and its surrounding areas, while EnviroNZ provides waste collection, management and disposal services nationwide.

WELLINGTON ELECTRICITY

Wellington Electricity owns and operates the electricity distribution network in the cities of Wellington, Upper Hutt, Lower Hutt and Porirua in New Zealand. Its network extends about 4,700 kilometres, supplying electricity to approximately 171,000 connections across domestic, commercial and industrial sectors.

The three-year Earthquake Readiness Programme, approved by the Commerce Commission of New Zealand, was completed in the first quarter of 2021. The Programme aims to strengthen the network's readiness and reduce outage time following major earthquakes. Five core workstreams were successfully conducted, namely seismically strengthening of 91 buildings, construction of two portable stations, construction of three data centres, upgrading of radio and phone systems, as well as an increase of spare stocks.

A large-scale cable upgrade project which involves the replacement of major underground cables that transport electricity from National Grid, the nationwide power transmission network, to Wellington Electricity's network has commenced in 2021 and is scheduled for completion before the end of 2022. The cables run from the Central Park substation to Frederick Street substation, the main power hub for the area, supplying electricity to approximately 6,300 residential and 1,800 commercial properties. The new cables were designed to better withstand earthquakes, and the control and protection systems were upgraded at the same time. These upgrades will increase the reliability of the area's power supply and reduce the impact of power outages.

Wellington Electricity's three-year Earthquake Readiness Programme was completed in the first quarter of 2021.

BUSINESS REVIEW

ENVIRO (NZ)

EnviroNZ is one of New Zealand's leading national waste and recycling resource management companies. It provides waste and recycling collection, resource recovery, reuse and disposal services to more than half a million commercial and residential customers. It also owns and manages Hampton Power and Resource Recovery Centre ("Hampton PARRC"), the largest resource recovery site in New Zealand. Covering an area of 360 hectares, Hampton PARRC receives approximately 40% of Greater Auckland's annual landfill volumes. The operation utilises state-of-the-art technology to capture and convert methane gas to electricity, processes landfill leachate to clean water, and turns garden and food waste into compost at its organic facility.

Despite the COVID-19 pandemic causing a nationwide lockdown in New Zealand in mid-August and the prolonged lockdown of Auckland throughout September and October in 2021, EnviroNZ's performance was not materially impacted.

In July, Hamilton City Council's new rubbish and recycling service carried out by EnviroNZ was recognised for environmental excellence in the 2021 Local Government New Zealand Awards. This service commenced in August 2020. It involved upgrading the residential kerbside rubbish and recycling service. In its first 12 months of operation, more than 5.7 tonnes of food waste was transported to EnviroNZ's composting plant in Hampton Downs instead of being disposed into landfill.

Five long term council contracts started in 2021, adding new stable income streams for EnviroNZ.

Coming up, EnviroNZ will unveil a construction and demolition waste sorting facility at its Bombay Resource Recovery facility in South Auckland. Council consent for the recovery has been obtained. The Bombay site will process timber, concrete and other construction materials, diverting them from landfill. This new processing facility will not only generate a new revenue stream for EnviroNZ but will also promote environmental sustainability.

Five long term council contracts started in 2021, adding new stable income streams for EnviroNZ.

Infrastructure Investments in

CONTINENTAL EUROPE

In Continental Europe, CKI has investments in energy-from-waste and household infrastructure businesses. Dutch Enviro Energy owns AVR, the Netherlands' largest energy-from-waste company. In the household infrastructure portfolio, ista is a leading sub-metering player in Europe, with key markets covering Germany, France, the Netherlands and Denmark.

BUSINESS REVIEW

DUTCH ENVIRO ENERGY

Dutch Enviro Energy owns AVR, which operates five waste treatment plants in Duiven, near the German border, as well as Rozenburg in the Port of Rotterdam area. Together, these plants have an energy-from-waste capacity of 2,300 kilotonnes per year. Long-term contracts are in place for both gate fees for processing waste, as well as offtake for energy produced. In addition to serving the domestic market, all AVR's waste treatment plants are accredited with "R1" status, enabling the treatment of waste imported from European Union countries. The waste products that AVR treats include biomass, industrial waste water, municipal solid waste, commercial waste, and hazardous waste, all of which are treated and converted into energy – namely electricity, steam and heat. AVR is also one of the largest sustainable district heating producers in the Netherlands.

Dutch Enviro Energy achieved aspiring status on the Social Entrepreneurship Performance Ladder ("PSO") in 2021. The PSO is a certification scheme that measures the extent that a company is engaged in social entrepreneurship. The aim of the PSO is to help those people in vulnerable positions within the labour market to find good jobs. Dutch Enviro Energy not only matches disadvantageous candidates to job positions within its organisation, but also encourages its suppliers and contractors to engage in social entrepreneurship.

In December 2021, Dutch Enviro Energy signed an agreement with the municipality of Amsterdam to purchase its 100% shares in AEB, a waste processing and energy company. The sale is awaiting approval by the Netherlands Authority for Consumer & Markets, and the transaction is expected to be completed in 2022. AEB consists of a waste incineration plant, a biomass plant and a recycling installation. It generates electricity during the process of incineration and sells the electricity on the market. AEB also sells heat to a separate heating company, which supplies heat to about 40,000 home equivalents in Amsterdam.

ISTA

ista is a leading international provider of sub-metering and related services with over 100 years of experience. Headquartered in Essen, Germany, ista's operations range from hardware development, manufacturing, installation and maintenance to meter reading, individual billing, data collection and processing, as well as energy

In 2021, ista completed the acquisition of Comptage Immobilier Duran SAS, a regional sub-metering company in Southeast France.

data management. In addition, ista offers other services for buildings, including the provision of smoke alarms, humidity sensors, drinking water analysis, leakage detection and energy performance certificates. With a presence in over 20 countries, ista services more than 13 million households with over 60 million installed measuring devices. The company's major markets are Germany, France, the Netherlands and Denmark.

ista launched its digital power tool MinuteView in Germany for efficient energy management in commercial properties. Previous experience has demonstrated that MinuteView can reduce energy consumption by up to 15%. MinuteView can track and compare energy consumption among individual sensors, buildings, locations and countries. It can also record and balance CO_2 emissions in accordance with DIN EN ISO 14064. Given that industrial and commercial sectors are responsible for more than a quarter of the CO_2-equivalent emissions in Germany, this solution offers tremendous potential for greater energy efficiency and climate protection.

During the year, ista completed the acquisition of Comptage Immobilier Duran SAS, a regional sub-metering company in Southeast France that serves approximately 68,000 dwellings with around 73,000 water meters.

ista is currently operating carbon-neutral and intends to become carbon-free by 2030. Following this timeline, the company will switch over its fleet of vehicles to electric cars and its entire electricity requirements will be covered by renewable energies. A digital climate protection programme for the building sector was also announced with the aim of reducing greenhouse gas emissions. ista intends to equip 10 million apartments with digital metering devices and wireless infrastructure by 2025.

In 2021, ista continued to diversify its financing structure and, for the first time, issued an ESG-linked Schuldschein in the amount of EUR450 million. The interest rates are linked to ista's CO_2 emission targets and further expansion of its digital service infrastructure. A group of international and local investors supported ista's long-term sustainability strategy and the Schuldschein was successfully placed.

Infrastructure Investments in

CANADA

In Canada, CKI has investments in Canadian Power, which holds a portfolio comprising stakes in Okanagan Wind in British Columbia and five electricity generation plants in Ontario, Alberta and Saskatchewan; Park'N Fly, the largest off-airport car park provider in the country; Canadian Midstream Assets, which holds oil and gas midstream assets in Alberta and Saskatchewan; and Reliance Home Comfort, a residential services company under the Household Infrastructure portfolio of the Group.

In 2021, Canadian Power completed the acquisition of two wind farms in the Okanagan Region of British Columbia.

CANADIAN POWER

Canadian Power owns (i) 100% of Okanagan Wind, which comprises two wind farms in British Columbia with a combined generating capacity of 30 MW; (ii) 100% of the Meridian cogeneration plant, a 220 MW natural gas-fired plant in Saskatchewan; and (iii) 49.99% of TransAlta Cogeneration, L.P. ("TransAlta"), which operates three natural gas-fired cogeneration plants in Alberta and Ontario, as well as a gas-fired plant in Alberta.

In 2021, Canadian Power completed the acquisition of two wind farms in the Okanagan Region of British Columbia. The two wind farms have a combined capacity of 30 MW and are operated under a 40-year power purchase agreement with BC Hydro.

TransAlta's Sheerness power station in Alberta completed its second stage of conversion from coal to gas, and became 100% gas fired from July 2021. The plant has benefitted from the strong rebound in power prices in Alberta.

PARK'N FLY

Park'N Fly is the leading off-airport car park company in Canada, providing parking solutions to both business and leisure travellers coast-to-coast. Headquartered in Mississauga, Ontario, the company has operations in seven Canadian cities – Vancouver, Edmonton, Winnipeg, Ottawa, Toronto, Montreal and Halifax. The company offers self-park and valet parking options, as well as a host of other vehicle related services, such as detailing and oil changes in selected cities.

During the course of 2021, travel restrictions arising from the COVID-19 pandemic continued to adversely impact the company's business. In compensation for the drop in revenue, Park'N Fly leased out some of its properties on a short-term basis. Subsidies from Government were also obtained.

Subsequent to the introduction of the Park Safe programme in 2021, Park'N Fly continued to invest in its processes and contactless technology resulting in improved efficiencies and a safer environment for customers and employees.

Park'N Fly continued to invest in its processes and contactless technology resulting in improved efficiencies and a safer environment for customers and employees.

CANADIAN MIDSTREAM ASSETS

Canadian Midstream Assets comprises approximately 2,200 kilometres of crude oil pipelines, approximately six million barrels of oil storage capacity, as well as natural gas infrastructure assets in Alberta and Saskatchewan, Canada. Characterised by long-term contracts, Canadian Midstream Assets generates secure and predictable returns for CKI. The company has diversified its operations beyond crude oil transportation and storage, and has expanded into the natural gas transportation and processing sector.

The construction of the Onion Lake lateral commenced in the third quarter of 2021. The project comprises a 32-kilometre, 8-inch blended crude and 4-inch condensate pipeline which provide access to the Hardisty Terminal. The new pipeline connects to the thermal production facilities of the operator of Onion Lake Thermal. A 15-year take-or-pay contract has been signed for the project.

Canadian Midstream Assets commenced the construction of the Onion Lake lateral in the third quarter of 2021. The project provides access to the Hardisty Terminal.

Reliance Home Comfort continued to expand the scope of its business through new acquisitions.

RELIANCE HOME COMFORT

Reliance Home Comfort is principally engaged in the home and commercial services sector providing the sale and rental of water heaters, HVAC (heating, ventilation and air conditioning) equipment, water purification, plumbing, electrical, comfort protection plans and other related services primarily in Ontario, Canada. Reliance Home Comfort serves over 1.9 million customers and has one of the largest networks of licensed technicians in Canada.

In the second half of 2021, the company kickstarted the second phase of its SAP implementation, which is expected to be completed in the first half of 2022. This infrastructure upgrade will facilitate the sustainment of future growth.

Reliance Home Comfort continued to expand the scope of its business through new acquisitions. Two transactions were completed during the year whereby the Company acquired certain assets from a regional installer and servicer of rental products in the Province of Ontario. Through these acquisitions, new revenue streams have been secured for the coming years.

Infrastructure Investments in

HONG KONG AND MAINLAND CHINA

CKI's Hong Kong and Mainland China portfolio comprises infrastructure materials manufacturing business and Mainland infrastructure investments.

In Mainland China, CKI's infrastructure investments include toll roads and bridges in Guangdong province.

In Mainland China, the Group's infrastructure investments include toll roads and bridges in Guangdong province, namely the Shen-Shan Highway (Eastern Section), Shantou Bay Bridge and Panyu Beidou Bridge. Operations of these projects were smooth in 2021. As for the infrastructure materials manufacturing business, CKI's industry leading position in Hong Kong encompasses the production of cement, concrete and aggregates.

Green Island Cement ("GIC")'s new slag-grinding plant at Tap Shek Kok was commissioned in late 2020. The plant grinds slag – a by-product from the steel industry – to produce ground granulated blast-furnace slag ("GGBS"), a highly sustainable cement substitute. Given its low carbon footprint, GGBS is acknowledged as a Green Product. The plant has the capacity to produce about 350,000 tonnes of GGBS each year. When added to concrete, GGBS improves long-term strength and extends the durability against chemical attack.

In recognition of Green Island Cement's exceptional performance in green management and sustainable procurement, the company was presented the Gold Award in the category of Green Management Award – Corporation (Large Corporation) at the Hong Kong Green Awards 2021.

Alliance Construction Materials Limited ("Alliance"), which operates CKI's concrete and aggregates businesses, represents a joint venture between CKI and Heidelberg Cement AG.

In 2021, Alliance continued to effect its sustainability strategies in practice. The company is building a mega-scale, low carbon and digitalised concrete plant at Sai Tso Wan, Tsing Yi.

Alliance also kick-started developing the Euro VI 5-axle concrete mixer trucks, features of which include higher fuel efficiency, lower carbon emissions and improved lifting capacity.

In Guangdong, China, GIC obtained the first phase of hazardous waste treatment licence at the end of 2020. The cement kiln co-combustion facility which processes hazardous waste started operation in the beginning of 2021.

Green Island Cement's new slag-grinding plant grinds slag to produce ground granulated blast-furnace slag, a highly sustainable cement substitute.