

Annual Report

2017-18



Contents

Profile	2	Community	32
Horizon Power's service area	3	Shooting Stars	32
Fast facts	4	Kidsafe WA	33
Executive summary	5	Spare Parts Puppet Theatre Company	33
Chairman's report	8	Energy efficiency campaign – <i>Easy Ways to Save</i>	33
Chief Executive Officer's report	12	People and culture	33
Horizon Power's strategy and structure	14	Leadership	33
Strategy	14	Training and development	34
Vision and corporate objectives	16	Employment statistics	34
Organisational structure	16	Aboriginal employment	34
Performance overview	18	Environment and heritage	35
Operational performance	20	Greenhouse gas and carbon intensity	35
Safety	23	Air emissions	36
Pole management strategy	23	Noise	36
Pole management program	23	Management of contaminated sites	36
Conductor management	23	Environmentally sensitive areas program	37
Safety advertising campaigns	24	Regulatory instruments	37
Safety within Horizon Power	24	Environmental incidents	37
Advanced microgrid design and development	26	Native title and heritage compliance	37
System blueprints	26	Directors' report	38
Carnarvon Energy Storage trial	27	Corporate governance	38
Carnarvon Distributed Energy Resources trial	27	Managing business risk	38
Onslow: a distributed energy resources microgrid	27	Board of directors	38
Square Kilometre Array and Murchison		Chief Executive Officer and Company Secretary	42
Radio-astronomy Observatory Power		Attendance at Board meetings	42
Supply projects	28	Audit and Risk Management Committee	43
Smart Sun pilot	28	Corporate Affairs and Communications Committee	44
Giving customers more control	29	Governance and corporate compliance disclosures	45
Intelligent use of data	29	Operations during the 2017/18 financial year	50
Horizon Power mobile app	29	Financial performance	50
Pricing plan innovation - MyPower	29	Glossary of terms	51
Horizon Power Solar	30		
Remote communities	30		
Remote Community Utilities Worker program	31		
Utility off-grid systems	31		
Significant projects	32		

Profile

Horizon Power is a commercially-focused, State Government-owned energy utility that generates, procures, distributes, and sells electricity to residents and businesses in remote and regional Western Australia. Its role is to provide safe and reliable power to its customers in regional Western Australia at the lowest possible cost.

Horizon Power services one of the largest areas with the fewest customers in the world - a service area of approximately 2.3 million square kilometres and an average of one customer for every 50 square kilometres of terrain.

Horizon Power's customers range from inhabitants of remote, isolated

communities with fewer than 100 people to residents and small businesses in busy regional towns, as well as major businesses in the resource-rich Pilbara region. As at 30 June 2018, Horizon Power serviced 48,022 customer connections across the Pilbara, Kimberley, Gascoyne-Mid West, and Goldfields-Esperance regions.

Horizon Power manages a total of 38 systems: the North West Interconnected System (NWIS) in the Pilbara; the connected network covering three microgrids including Kununurra, Wyndham and Lake Argyle; two rural microgrids in Esperance and Hopetoun; and 32 microgrids in regional towns and remote communities. These systems operate across extremely diverse landscapes and climates, and are exposed to intense heat and cyclonic conditions in the north and severe storms in the south.

Being a regional utility, Horizon Power has three regional divisions, one that manages the NWIS network, or Pilbara

Grid, one that manages the generation contracts and retail book (Generation and Retail), and one that manages its microgrids or non-interconnected systems (Microgrid Operations). A support centre in Bentley assists the three regional divisions.

In 2017, Horizon Power achieved its strategic review target of reducing its operating subsidy by \$100 million a year by 2017/18. Horizon Power's strategy is now focused on building capabilities in the design and operation of advanced microgrid technology, enabling access to distributed energy solutions, and creating enterprise value. Enterprise value provides a measure of the value of ongoing operations, and provides Horizon Power and government with a clear indicator of the impact strategic projects, economic drivers, and policy changes have on the overall value of Horizon Power.

Horizon Power operates under the *Electricity Corporations Act 2005* and is led by a Board of directors accountable to the Minister for Energy, representing all Western Australians.



Stand-alone Power System in Exmouth

Horizon Power's service area

- Office
- Current Supply Areas



Fast facts

48,022

customer connections supplying more than 100,000 residents and 10,000 businesses

20,890

customers moved premises

79,805

customer calls

381

new customer connections

1.1

power interruptions experienced on average by customers

83

minutes average length of time of a power outage

7,606,852

kilowatt hours of renewable energy purchased from customers

\$1.8B

in assets

\$660M

in revenue

2.3Mkm²

service area, spanning the Kimberley, Pilbara, Gascoyne, Mid West, and Goldfields-Esperance regions of Western Australia

8,256km

of overhead and underground transmission and distribution lines

59,535

poles and towers in service consisting of 57,686 distribution poles, 979 transmission poles, and 870 transmission towers

38

systems consisting of 32 microgrids, including:

- 3 interconnected microgrids (Kununurra, Wyndham and Lake Argyle) in the East Kimberley
- 2 rural microgrids in Esperance and Hopetoun,
- North West Interconnected System in the Pilbara

36 of 38

systems met reliability performance targets

Executive summary

Horizon Power's primary objectives are to reduce its costs and improve reliability of electricity to its customers. The business also remains committed to ensuring the ongoing safety of its assets, customers and broader communities by taking deliberate and considered actions to minimise the risk of harm that may result from sub-optimal business processes and asset failure.

At the core of Horizon Power's strategy is a vision focused on customers and achieving value. Through its system blueprints and economic modelling program, Horizon Power prioritised several projects throughout the year to achieve these objectives. These projects included exploring streams of work focused on reforming pricing

structures, reducing operating costs, embedding renewable systems, developing intelligent systems and network control, and giving customers more control over their energy use. Detailed descriptions of these projects are provided throughout this report.

During the year, Horizon Power refined its strategy and consolidated its major projects under three strategic pillars:

- Leader in advanced microgrid design and operations
- Enabling access to distributed energy solutions
- Creating enterprise value

These pillars, and the ongoing focus on cost efficiency and improved service delivery, will serve as a platform for Horizon Power to continue to reduce costs and potentially extend its core business, while delivering safe and reliable electricity. Its goal, to create enterprise value for the benefit of the State, is also underpinned by its commitment to continue to improve the quality of its service and maintain its high levels of customer satisfaction into the future.

Safety and reliability

Horizon Power remains committed to improving reliability, reducing costs, and improving safety on its network. For the first time, Horizon Power has achieved the highest level of reliability performance with 36 of its 38 systems meeting performance targets (an increase from 32 systems in 2016/17), which are key performance measures for service and reliability.

On average, customers experienced 1.1* power interruptions for the year, well below Horizon Power's key performance target of 6.6 interruptions (System Average Interruption Frequency Index – SAIFI). The average length of time of an interruption was 83* minutes, (System Average Interruption Duration Index – SAIDI), which is three hours and 27 minutes less than Horizon Power's target of 290 minutes.

This year Horizon Power introduced several new safety and health key performance indicators as part of its commitment to improve its safety performance and create an interdependent safety and health culture.



*Based on Horizon Power's normalised data set, which includes events under Horizon Power's control.

Average Outage Performance SAIDI (using normalised data) over a four year period

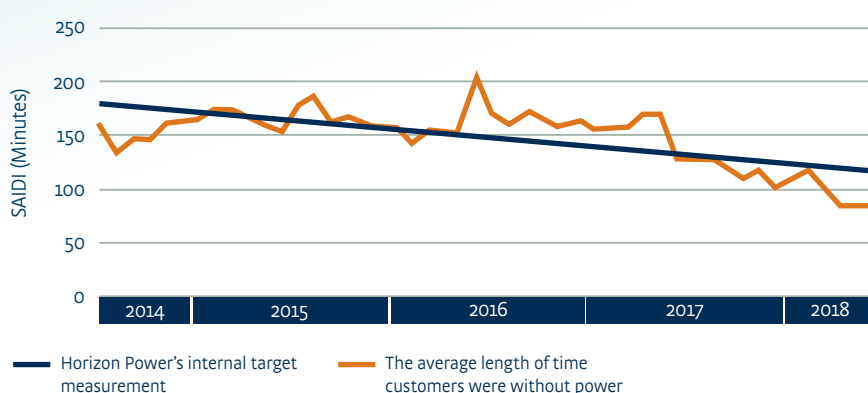


Figure 1: Horizon Power's SAIDI figures for years 2014/15 - 2017/18

In compliance with new Electricity (Network Safety) Regulations introduced by EnergySafety, Horizon Power successfully implemented its Electricity Network Safety Management System before the regulatory deadline of 6 August 2017, enabling it to report on the safety of its network assets and the impact on employees and the public.

Serving customers

Horizon Power's role is to support, develop, and deliver value to its customers and stakeholders. Horizon Power once again exceeded its target of 70 per cent for customer satisfaction, with a result of 80 per cent (an increase from 77 per cent last year). This year's improvement is also reflected in measures for Horizon Power's corporate reputation, with favourable ratings increasing

from 75 per cent to 79 per cent. A lack of issues, prompt and good customer service, and the introduction of the Horizon Power mobile app, which allows customers to track their electricity consumption in real-time usage, contributed to the positive ratings.

A total of 142 complaints were received from customers, a decrease of 114 from the previous year. Of these, 73 per cent were resolved within 15 days, an improvement from 49 per cent last year and well above the target of 60 per cent. Horizon Power considers a complaint active until the customer is satisfied it has been investigated and resolved, and all appropriate actions have been completed. The reduction in complaints was largely attributed to improved accuracy in meter readings and billing as a result of the installation of advanced meters in 2016/17.

Financial performance

Horizon Power recorded a net profit after tax in 2017/18 of \$111.9 million (\$35.4 million in 2016/17). The increase in profitability was mainly driven by revenues related to the completion of the South Hedland and Onslow power stations, which accounted for \$87 million of the net profit after tax. Total revenue was substantially higher than last year (\$660 million compared to \$492.5 million) resulting from higher developer and customer contributions (+\$104.7 million), higher sales of electricity (+\$36.8 million), gains on sales of assets and other revenues related to the South Hedland Power Station (\$37 million) and higher Tariff Equalisation Fund (+\$17 million), being offset by lower contributions from Community Service Obligations (-\$29.1 million). Operating expenses increased by 5.6 per cent driven by liquidated damages (offset by liquidated damages received in revenue) and higher maintenance costs, including higher vegetation maintenance due to higher rainfall. Finance costs reduced by \$3.7 million due to a net repayment of debt of \$83.3 million. Depreciation increased by \$1.2 million (\$89.6 million compared to \$88.4 million) in line with the higher level of capital assets recorded in the year.

During the year, Horizon Power paid dividends of \$43.8 million to the State Government, representing dividends on profits from 2016/17 of \$17.2 million and an interim dividend of \$26.6 million for 2017/18.



Chairman's report

I am delighted to have been given the opportunity by the Minister for Energy, Hon. Ben Wyatt MLA, to chair the Board of Horizon Power from 30 April 2018.

While I have been at the helm only a short time, I am impressed by the achievements of the business to deliver safe and reliable electricity for its customers in remote and regional Western Australia.

The business has achieved its highest ever reliability standard in its 12-year history – the result of very considered asset management planning. Of its 38 systems, 36 met benchmark reliability standards, which is up from 32 systems in 2016/17. Horizon Power will continue to work on ways to achieve benchmark reliability standards for systems in Esperance rural and Hopetoun.

Horizon Power customers experienced an average of 1.1 supply interruptions during the year which is well below Horizon Power's performance indicator of 6.6 interruptions a year.

The average duration of those outages reduced this year from 126 minutes to 83 minutes which is a 35 per cent improvement. Importantly, the unassisted pole failure rate decreased to below the target of 1 for the first time since it was set in 2012, reflecting the good work undertaken in the testing and replacement of assets as they near the end of their lives.

The business continues to focus on providing electricity in the most efficient way possible to reduce the impost on taxpayers, bearing in mind that on average each customer in Horizon Power's service area is subsidised for their electricity by \$3,900 a year.

The advanced meters installed two years ago are the platform from which Horizon Power can improve customer experience. Horizon Power is the only vertically integrated utility in the country with advanced meters throughout its service area, which puts it in a unique position. The billions of data points received through these meters provide the business with the data it needs to help customers reduce their bills. The development of the Horizon Power mobile app, which provides near real-time data to customers, is the first step on this journey to give customers a choice over how they control and manage their electricity demand.

Horizon Power has also developed system blueprints, a framework for financial decision-making that identifies the most economically efficient method of supplying electricity to each of its microgrid systems. This work will guide future investment decision-making and inform the development of new products and services. This includes assessing alternatives to conventional electricity supply, such as distributed energy and batteries and utility grade stand-alone power systems – called micro power systems (MPS) - which combine renewables, battery, and

traditional generation sources to allow for the removal of more costly poles and wires in certain circumstances.

The system blueprint work has identified that, for most areas, a supply model embracing high-penetration distributed renewables presents the most economically efficient operating model into the future. Nevertheless, poles and wires will remain a part of core business and Horizon Power very effectively maintains and manages these assets.

As this report went to print, I joined the Minister for Energy in the Pilbara town of Onslow for the official opening of stage one of the Onslow Power Infrastructure Project comprising a new eight-megawatt hybrid gas-diesel power station connected to a new zone substation close to town.

Work will soon begin on stage two of the project which will involve the integration of high levels of distributed energy resources (DER), including distribution of solar photovoltaic (PV) and battery systems within the Onslow community, in line with the system blueprint work.

The Onslow project showcases the transformation of the energy sector to incorporate much higher levels of DER. The aim is to have up to 50 per cent of the energy supplied to the town of Onslow coming from renewables. Residences and businesses in the town will be offered solar PV systems and battery energy storage at more affordable prices to be part of this project.

The learnings from the Carnarvon Distributed Energy Resources trials will feed into the Onslow project – those trials have been tackling one of the biggest challenges facing utilities around the world – managing the incorporation of DER into power systems which were not designed for the two-way flow of power.

The trials in Carnarvon, where Horizon Power has partnered with Murdoch University, are testing technologies which will enable the business to collect a broad range of

data. This data will be used to explore the most economically efficient way to design and manage a microgrid with very high levels of DER and reduce dependence on centralised fossil-fuelled generation. The trials have received \$1.9 million of funding from the Australian Renewable Energy Agency (ARENA), and are about to enter their second stage, with batteries being installed at some customers' homes.

Another alternative to the traditional delivery of power is the move away from the replacement of ageing

expensive poles and wires to the development of MPS, which are totally off-grid vertically integrated power systems comprising solar PV, batteries, and back-up diesel. MPS are stand-alone power systems which are being designed as a utility-grade product to connect remote customers where a traditional poles and wires connection or replacing ageing network infrastructure is not cost effective.

Horizon Power has successfully installed seven stand-alone systems (SPS) as part of its earlier trial work

Stand-alone Power System at Fitzgerald National Park.



across the State. These installations, including in the iconic Fitzgerald National Park, where unsightly lines that needed replacing have now been removed, and at the Exmouth Golf Club where this solution was cheaper than replacing the existing poles and wires.

A lot of good work is also being done in remote and town-based Aboriginal communities with the affordability of electricity being at the centre of this work. The recent master meter project implemented in the Kimberley has removed the 'chuck-in' system of power payment which was responsible for high levels of debt and inequity for the residents of those communities. The installation of pre-payment meters in five communities has improved affordability for those residents and was accompanied by critical safety checks to ensure the ongoing safety of community infrastructure.

The installation of solar is also a focus in these high cost to service towns. Horizon Power is working closely with remote communities to install solar to reduce the cost of electricity.

I would like to recognise the ongoing commitment of all employees, those based in the regions and in Perth, to deliver such important milestones as those outlined above and the key performance indicators set for the business. Horizon Power has a vast service area covering rugged terrain and with varying climatic conditions but its people, who are part of the regional

communities they live and work in, meet these challenges head-on.

In particular, I would like to acknowledge the commitment and dedication of the outgoing Chief Executive Officer, Frank Tudor, who has led the business for almost eight years and recently announced his decision to move to the eastern states to lead the Australian operations of energy company Jemena. Frank was instrumental in leading the strategic review process which reduced the business' costs by over \$100 million a year, thereby reducing the State Government subsidy by the same amount. Frank has also positioned Horizon Power to pursue a strategy of developing microgrids into 'advanced microgrids', and incorporating higher levels of DER and MPS across its service areas to reduce generation and distribution costs into the future.

I would also like to acknowledge outgoing Board members, in particular former Chairman Ian Mickel who is also a customer of Horizon Power based in the Esperance region. Ian was Chairman of the Board for four years and a Board member before that. Ian has been a huge supporter of the business and has had a strong commitment to the people of regional Western Australia for his whole career, including as the former Shire President of Esperance. I would also like to thank former Board member Jeanette Hackett who provided a valuable commercial and governance insight during her time with the Board.

I welcome Kylie Chamberlain to the Horizon Power Board and look forward to working with her and existing board members to ensure the best business outcomes for the benefit of Horizon Power's customers and the State.

Going forward, I will be championing an unambiguous strategy - safe and reliable power supply at the lowest possible cost. Horizon Power will develop new renewable technologies to achieve this wherever possible.



Stephen Edwell
Chairman



Chief Executive Officer's report

It is with a mixture of emotions that I write my final entry for Horizon Power's annual report. After an extremely fulfilling eight years as CEO, and 12 years of service with Horizon Power, I will now be embracing a new challenge outside the business.

The past year provides a perfect indication of the numerous achievements and successes, as well as challenges that the business has been confronting. I depart with great pride in the ongoing efforts of the entire business, and believe Horizon Power's commitment to the customers and communities it serves is one of the key reasons for its success.

Throughout the year, Horizon Power has prioritised and progressed numerous projects, with the following highlights in particular, coming to mind:

- **Price reform**

In an Australian first, Horizon Power delivered new pricing plans to customers in Port Hedland and Broome. The MyPower plans are similar to mobile phone payment plans charging a monthly fee based on how much electricity customers consume at peak times, with a low variable energy charge. This kind of pricing model ensures customers are charged relative to those costs for which they are responsible, and provides an incentive for them to change their behaviour in order

to reduce their costs, whilst also providing a platform for reducing Government subsidy payments by realigning tariff structure to be based on underlying system costs.

- **Pilbara Underground Power Project**

In what has been a significant infrastructure project for the region, Horizon Power delivered the Pilbara Underground Power Project and, whilst challenging, I am proud of how the business met these challenges to ensure we are delivering safer and more reliable power for the Pilbara. Horizon Power welcomed the findings of the Special Inquiry into Government Programs and Projects, acknowledging that initial forecasts of project costs and early management had been inadequately handled.

- **New technology integration**

The use of a 3D sky camera for the trials in Carnarvon, continued development of the flagship Onslow DER microgrid project, demand-side management trials in Broome, and a free customer mobile phone app that provides data in real-time, are all examples of the innovative digital technologies Horizon Power is harnessing. These technologies play a key role in improving operations and will likely place Horizon Power at the leading edge of yet another aspect of the electricity industry.

- **Customer focus**

Horizon Power's vision ensures customers are at the centre of everything it does. The business has continued to focus on innovations

for all customer groups, from remote communities in the Kimberley securing new retail pre-payment solutions, through to exploring how all customers can unlock the benefits of distributed renewable resources through new financing and delivery models.

- **Roy Hill Connection Project**

Horizon Power worked closely with industry to invest strategically in key infrastructure projects in the Pilbara region, including supplying electricity to the Roy Hill port in Port Hedland. This project is part of the business' commitment to building a more coordinated energy system. The project involved the construction of a transmission line to support the long-term electricity supply to the Roy Hill port operations, successfully delivering up to 25 megawatts of electricity to the port facility, and incorporating power supply from the new 150 megawatt South Hedland Power Station.

- **Economics and Industry Standing Committee**

Horizon Power was also given the opportunity to present to a bi-partisan Economics and Industry Standing Committee on the innovative and industry-leading work it is undertaking in the areas of microgrids. The State Parliamentary committee members travelled to Carnarvon to learn more about the trials being conducted in the area, as part of the investigation and report on the emergence and impact of electricity microgrids and associated technologies in the State. As part of

the Committee's inquiry, Horizon Power was invited to provide a written report outlining the body of work it has been undertaking in this space.

These projects would not have been possible without Horizon Power's team of dedicated people who passionately believe in providing exemplary service for customers and who think outside the box to improve every process, product and service the business undertakes.

I am immensely proud to have led such a committed team of individuals whose work contributed to Horizon Power's efforts being recognised at both a national and local level. During the year, the business received a number of accolades including: an award from the Clean Energy Council for its Power Ahead trial; named Digital Utility of the Year by *Utility Magazine*; the Pinnacle Award for outstanding human resource management for the Remote Community Utilities Workers program; was named one of the three most innovative electricity companies in the nation, in Deloitte's *Innovation in Electricity Networks* report; was awarded 'gold status' for its Safety and Health Management System at the Industry Foundation for Accident Prevention Safe Way Awards; and acknowledged by the *Australian Financial Review* as one of the most innovative companies in Australia.

I am confident in the foundation that Horizon Power has built, and with support from the Minister for Energy, the Hon. Ben Wyatt MLA, the Board and senior executive

team, the business has put in place a strategic direction that will enable it to continue to meet the challenges of the revolution that is transforming the energy industry. However, with challenge, also comes opportunity. As Australia's only vertically integrated utility with an advanced metering platform, not to mention its culture and commitment to service, it is unsurprising that Horizon Power has increasingly found itself at the centre of the transformation occurring across the sector. It is uniquely placed to leverage new and emerging technologies to service its regional and remote areas and drive true value for its customers – improving reliability, maintaining our commitment to system security and safety, and ensuring fair and equitable pricing for all.

Given my affection for my colleagues and my passionate belief that Horizon Power is leading the world in many aspects of the new energy revolution, it has not been easy to make the decision to leave. I will miss my colleagues and the opportunity to serve the people of regional Western Australia. However, this decision has been made somewhat easier knowing that Horizon Power is well placed to embrace the challenges and opportunities of the future with a skilled, experienced and committed workforce, and a vibrant, diverse and highly supportive customer base.

Along with my fellow executives, I would like to acknowledge the leadership of our past Chairman Ian Mickel, who provided exemplary support and guidance over the past

12 months, as well as the many years before, and should be proud of the organisation he helped to shape.

I welcome our new Chairman Stephen Edwell, whom I have known personally for a number of years. I have an enormous amount of respect for Steve, having worked with him on projects including the Pilbara Power Project. I look forward to hearing of Horizon Power's continued successes under his watch. Steve has a strong background in developing and implementing electricity market reforms and I am confident that under his guidance, Horizon Power will continue to be innovative while working towards achieving its vision.

Finally, I would like to acknowledge the ongoing efforts of all Horizon Power employees and contractors, without whom we could not provide exceptional service to customers, stakeholders and communities. Having spent the past 12 years working as part of the broader Horizon Power team, I have the utmost respect for the skills, experience and dedication of the people who every day serve the business' customers – whether that be from a regional town or from Perth.



Frank Tudor
Chief Executive Officer

Horizon Power's strategy and structure

Strategy

With a remote service area and low customer density, Horizon Power has a high cost to serve, resulting in a State Government subsidy of \$183 million for the 2017/18 financial year. Following an extensive and effective strategic review process that has successfully realised over \$100 million a year in subsidy reductions from across the business, Horizon Power recognises it must continue to confront the emerging challenges being presented in the electricity sector.

Australia's energy industry is now confronting the most transformational period of change since its inception.

Historically, high retail electricity prices, the widespread adoption of DER, such as solar panels and energy storage, energy-efficiency efforts, and declining asset utilisation rates are simultaneously driving profound change. These changes place unparalleled stress on regulatory frameworks, pricing structures, and business models that were all designed for an entirely different time.

Horizon Power is also facing a changing business environment in the Pilbara – an environment significantly different to its isolated microgrids, and where customers range from small residential and business consumers through to some of the State's largest

mining companies, heavily reliant on safe, secure and reliable power supplies. Horizon Power is committed to expediting the market evolution and future requirements of the North West Interconnected System by ensuring it is positioned to drive the most economically beneficial outcomes for Government and its customers as the Pilbara market is opened to competition and a regulatory framework is introduced.

To address what might otherwise be a future of declining revenues and increasing subsidy, Horizon Power's strategy is now focused towards advanced microgrids, recognising that falling costs for solar PV and



battery storage systems, coupled with advances in control and software systems, provide a significant opportunity to offer many customers a cheaper, cleaner solution than the traditional poles and wires model. Horizon Power defines advanced microgrids as grids that are powered by integrating centralised power generation with very significant levels of DER located on customer sites and connected to the distribution network. Advanced microgrids will be a key building block of high-DER electricity systems, as they maximise reliance on intermittent renewable generation, better balance supply and demand, reduce extreme peak demand, and

increase energy efficiency and service reliability. In a novel step for the electricity supply model, advanced microgrids can also provide customers significant control over their electricity bill, with greater transparency, enabling technologies, and additional incentives to help customers manage their usage more efficiently.

Supported by a light-handed regulatory model, Horizon Power has a unique ability to utilise its portfolio of remote microgrids and leverage new and emerging technologies to service remote areas and customers where it will help reduce network costs and remove cross-subsidies between

customer groups. As the only vertically integrated utility in the country with an advanced metering platform, Horizon Power is leading trials and analysis on how best to manage reverse power flows created by higher levels of DER, which can destabilise electricity networks and impact reliability and system security. Trials are also exploring the management of renewable energy during weather events to prevent impacts on the power station and supply, as well as centralised solar, hybrid systems, and the integration of wind generation.

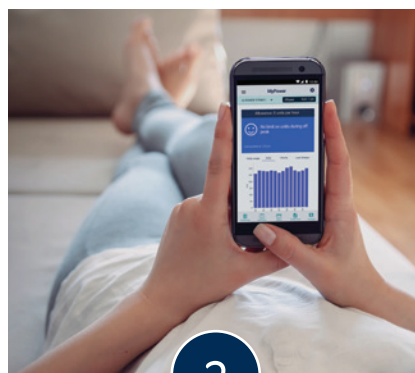
Horizon Power has refined its strategy into three strategic pillars, as illustrated below:



1

Leader in advanced microgrid design and operations

Design and deliver microgrid solutions across our customer area to reduce cost to serve and improve reliability



2

Enabling access to distributed energy solutions

Lift the technical and commercial hurdles for a high distributed energy future with our partners and communities



3

Creating Enterprise Value

Lead the microgrid revolution in Australia and create value for the State

Figure 2: Strategic pillars and focus areas for 2018/19

Vision and corporate objectives

Horizon Power’s corporate objectives are to provide safe and reliable electricity to its customers at the lowest possible cost. Since 2013, Horizon Power’s primary key performance indicator (KPI) has been to pursue initiatives that would reduce its operating subsidy by \$100 million a year (against business as usual) by 2018/19. Horizon Power achieved this in March 2017 by completing the

remaining initiatives under its strategic review. Horizon Power will continue to focus on cost reduction and reliable and safe power supply. Horizon Power now has an additional KPI – creating enterprise value – that supports its vision of creating customer choice by leading-edge deployment of microgrid systems.

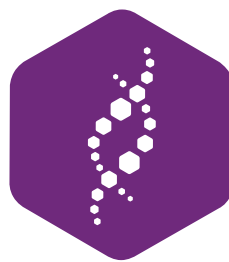
Our Horizon Way, incorporated into the Code of Conduct, sets out Horizon Power’s values that guide its decisions and behaviours, and is foundational to driving a high-performance culture aligned to its strategy:

Figure 3: Employee values



Safety

We look after each other and our communities.



Integrity

We do the right thing and build trusted relationships.



Team

We openly collaborate on solutions and achieve shared goals.



Customer

We partner with customers to deliver improved and sustainable choices.

Organisational structure

Horizon Power is structured into eight divisions, each with a focus on delivering aspects of its operations, customer services and ongoing business developments.

Consumer Energy

Consumer Energy is focused on accelerating new energy solutions behind the meter to serve Horizon Power customers. The division focuses on developing innovations that empower customers to participate in the low carbon electricity future. Drawing upon global thought leadership, a range of solutions are being commercialised for diverse residential and small to medium enterprise customers across regional Western Australia. Customer-focused technologies including solar generation and energy storage packages, advanced demand management and utility off-grid systems are designed and deployed to achieve win-win outcomes for individual customers and to help support the efficiency of the electricity system as a whole.

Advanced Microgrid Developments

Advanced Microgrid Developments is focused on resolving economic, technical and transition barriers to a DER future through the development of new technologies, capabilities and operating practices. The division develops energy delivery blueprints,

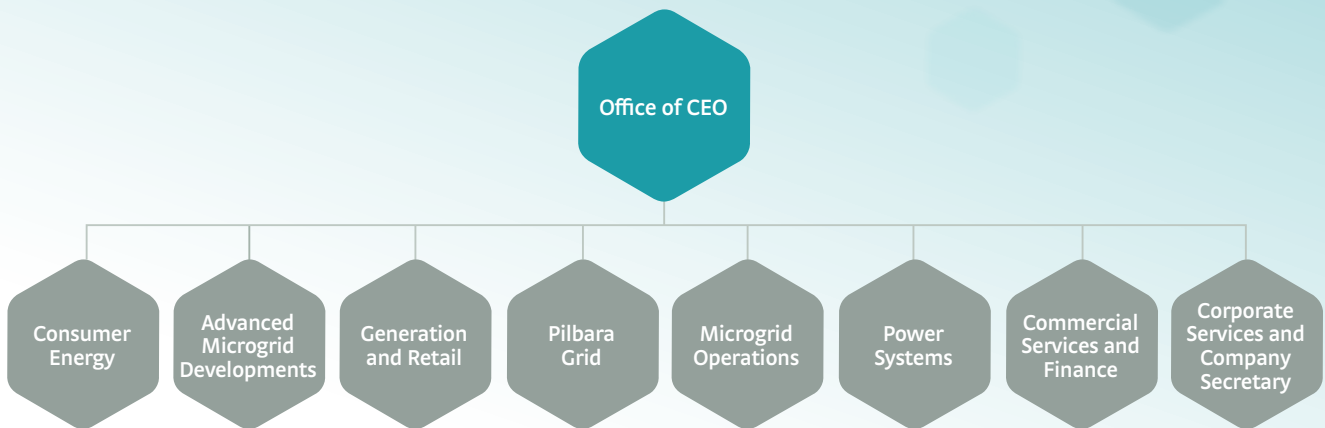


Figure 4: Organisational structure, as at 30 June 2018

which include disruptive technologies (distributed energy/storage and digital initiatives).

Generation and Retail

Generation and Retail leads the development of product, pricing and contracting strategies for all customers – residential through to medium and large enterprise customers and independent power producers (IPP). The division also manages all facets of customer service, retail strategy, and the delivery of major generation developments, including large-scale customer connections and large-scale IPP projects.

The division is responsible for medium and large enterprise customers, and for key sourcing contracts, gas commodity and transport.

Pilbara Grid

The Pilbara Grid division was formed in 2016 when soft ring-fencing principles were applied to the North West Interconnected System (NWIS) business division as a result of the State Government's Network Electricity Reform. This resulted in the NWIS business being split into two divisions:

- Pilbara Grid
- Retail

Pilbara Grid was established as a stand-alone network business operating in preparedness for potential competition and open access in the Pilbara.

Pilbara Grid is responsible for the asset management of distribution and transmission networks, work delivery, open access for the NWIS network, stakeholder management and customer services for network customers, and system operations including the Horizon Power Control Centre and System Control And Data Acquisition (SCADA) for microgrids and the NWIS.

Microgrid Operations

Microgrid Operations is responsible for safe, reliable and efficient generation and distribution of electricity in Horizon Power's microgrids. There are three microgrid regional centres: Kimberley (based in Kununurra and Broome), Gascoyne-Mid West (based in Carnarvon) and Esperance-Goldfields (based in Esperance). The division works closely with Generation and Retail to manage stakeholder relationships and enhance customer experience.

Power Systems

Power Systems supports Horizon Power's regional businesses through the provision of engineering and project delivery, capacity and network planning, land, heritage, native title and environmental advisory services, asset management frameworks, policies, guidelines and engineering and design standards, and Economic Regulation Authority and EnergySafety reporting.

This division also manages the outsourcing arrangement for engineering and project services, as well as projects and initiatives for remote communities.

Commercial Services and Finance

Commercial Services and Finance provides technology, analytics, digital, finance and strategy services. It drives the decentralisation of decision-making and accountability and ensures business objectives are achieved.

Corporate Services and Company Secretary

The Corporate Services and Company Secretary division provides support services within Horizon Power. It develops frameworks and sets service offerings, standards and policies that promote business accountability and capability, and provides human resources, communications, risk, legal, health and safety, procurement, facilities, and fleet management services.

The Company Secretary provides advice and administrative services to the board of directors and assists in its effective operation, as well as being the interface between the board and the executive team.

Performance overview

Horizon Power's performance against targets published in its Statement of Corporate Intent (SCI) is outlined in the table below.

Table 1: 2017/18 performance overview: critical business outcomes, targets and actuals for years 2016/17 and 2017/18

Critical business outcomes	Target performance result for 2017/18	Actual performance result in 2017/18	Target achieved	Actual performance result in 2016/17	Notes to the table	For more information see page
Employee safety Lost-time injury frequency rating	0.0	1.8	✘	3.8	1	25
Public safety Total number of Notifiable Public Safety Incidents	<8	8	✓	6	2	N/A
Net profit after tax (\$M) Profit for the year after income tax (Target represents latest budget as approved by State Treasury)	92.9	111.9	✓	36.7	3	50
Cost management Unit cost to supply – Unit Cost (cents/kWh)	36.1	37.0	✘	27.9	4	N/A
Unassisted pole failure rate Number of unassisted pole failures divided by 10,000 over a 12 month rolling average	<1	0.81	✓	1.11	5	23
Customer satisfaction Survey rating (%)	>70	80	✓	77	6	6
Reliability Number of systems that meet reliability performance standards	33/38	36/38	✓	32/38	7	20
System reliability and electricity delivery System Average Interruption Duration Index (SAIDI) – average total length of outages in minutes over 12 months	290	83	✓	126	7	5
System Average Interruption Frequency Index (SAIFI) – average number of interruptions over 12 months	6.6	1.1	✓	2.13	7	5
Return on assets (%) Earnings before interest and tax divided by average total assets	10.5	12.4	✓	7.6	8	N/A
Project management Major project completion within ±5% of approved budget (%)	100	100	✓	100	9	N/A

Notes to the Performance overview table

1. Horizon Power recorded a 1.8 lost-time injury frequency rate this financial year. The reported performance indicates, for every one million hours worked, Horizon Power can expect to sustain 1.8 lost time injuries, which have resulted in a work-related injury or illness and the loss of one full shift of work or greater. This is an improvement on last year's frequency rate of 3.8, although it remains higher than the target of zero. The lost time injury frequency rate of 1.8, is a result of Horizon Power sustaining only one lost time injury this year. Only one working day was lost as a result of the incident.
 2. There were eight notifiable public safety incidents this year. Horizon Power did not exceed its performance threshold for notifiable public safety incidents. The notifiable incident criteria within the *Electricity (Network Safety) Regulations 2015 (WA)* was redefined and expanded and accounts for the increase in notifiable incident reporting for this financial year. The proportion of notifiable incidents resulted from minor fires caused by birdlife interacting with the network (three events); and minor electrical shocks caused by conditions of failure on the network and workmanship (two events).
 3. Net profit after tax compared favourably to the target, mainly driven by higher revenue than budgeted.
 4. Unfavourable cost to supply driven by higher operating expenditure than budget, resulting mainly from one-off items such as liquidation damages and higher maintenance costs.
 5. The unassisted pole failure rate decreased below the target of one for the first time since it was set in 2012. This was mainly due to nine poles in Carnarvon identified as unassisted failures during Tropical Cyclone Olwyn being removed from the three year rolling statistics. However, during the year, there were five additional pole failures in Esperance (one), Meekatharra (two), and Port Hedland (two).
 6. Horizon Power exceeded its target for customer satisfaction and improved on last year's performance. Although price still remains a concern for customers, it has had less influence than compared to last year.
 7. Horizon Power's performing systems count is 36, up from 32 last year. This is the highest number ever recorded by Horizon Power. In September 2017, the target of 33 was exceeded when Kalumburu and Kununurra achieved performing status.
- This trend increased due to Leonora, Carnarvon and Onslow achieving reliability targets. Norseman became a non-performing system in October 2017 due to a series of feeder trips caused by storms and house fires. Esperance rural continues to be a non-performing system because of severe storms and inclement weather including lightning and strong winds.
8. Return on assets compares favourably to the target, with higher profits resulting from higher revenue than budgeted.
 9. The Roy Hill Connection Project and Phase One of the Onslow DER Project were completed in this financial year.

Operational performance

Horizon Power continually strives to deliver a safe and reliable electrical network. Throughout 2017/18, Horizon Power exceeded its reliability targets for the first time since separation from Western Power in 2006. Out of its 38 systems, 36 met performance reliability standards, up from 32 last year. Horizon Power's target is 33 performing systems. The improvement can be attributed to a combination of maintenance and project works sustained over the 12 month reporting period.

Highlights

- Phase one of the Onslow Distributed Energy Resource (DER) project which includes a new gas-fired power station, zone substation and new distribution network was completed at the end of June.

This will enable all of Onslow's energy needs to be met by the new power station.

- Kununurra's system performance has continued to improve since the commissioning of the back-up power station in November 2016. This has resulted in the system maintaining its classification as a performing system for 2017/18.

Challenges

- To develop a cost-effective solution to improve the reliability of the Norseman and Esperance rural systems.

In the five years since our strategic review, Horizon Power's asset management process has been continuously improving and evolving to meet customers' expectations,

as demonstrated by the increased reliability of its systems.

An independent audit was undertaken for the Economic Regulation Authority during the year, which also concluded that Horizon Power has an effective Asset Management System.

The outcomes of the reviews conducted in 2017 were positive, resulting in an extension from a two year to a three year reporting period.

The next Asset Management System Review is for the period 1 July 2017 to 30 June 2020, and the next performance audit report is for the period of 1 April 2017 to 31 March 2020.

All projects relating to the improvement of Horizon Power's network are strategically reviewed to ensure risks associated to the business are identified, and safety is not compromised.

Onslow Power Station



Table 2: Transmission and distribution network lines through Horizon Power's service area

Network type	Carrier	Kilometres
Transmission	220 kV	202.7
	132 kV Overhead	111.9
	132 kV Underground	1.8
	66 kV Overhead	152.6
	66 kV Underground	2.9
Distribution	HV 3-Phase Overhead	2,028.7
	HV 3-Phase Underground	873.5
	HV Single Phase Overhead	2,794.1
	HV Single Phase Underground	13.3
	LV Overhead	583.3
	LV Underground	1,491.6
Total		8,256.3

Table 3: Other transmission and distribution assets

Total transformer capacity	809 MVA
Number of transformers	4,373
Number of distribution poles	57,686
Number of transmission wood poles	235
Number of transmission steel poles	744
Number of transmission towers	870

Table 4: Asset Management Plan drivers

AMP driver	Budget (\$) FY 17/18	Actual (\$) FY 17/18
Asset service	\$14,043,000	\$6,429,000
Safety	\$5,639,000	\$11,545,000
Reliability	\$1,624,000	\$4,378,000
Capacity	\$2,820,000	\$727,000
Knowledge and technology investment	\$4,821,000	\$5,624,000
Mobile plant and operational fleet	\$3,136,000	\$2,381,000
Property management	\$3,645,000	\$3,345,000
Total	\$35,728,000	\$34,429,000

In 2017/18 Horizon Power's overall actual expenditure on the asset management works program was within budget. Variance on individual driver of the asset management plan is largely due to re-classification between drivers.

Table 5: 2017/18 electricity capacity, generation and sales by town

Town	Generated power (kWh)	Purchases (kWh)	Total power purchased / generated (kWh)	Used in works (kWh)	Sent out (kWh)	Renewable Energy buyback imported into HP network (kWh)
Ardyaloon	-	1,899,418	1,899,418	-	1,899,418	28,848
Beagle Bay	-	1,701,411	1,701,411	-	1,701,411	-
Bidyadanga	-	2,842,566	2,842,566	-	2,842,566	2,902
Broome	-	134,486,513	134,486,513	-	134,486,513	1,282,058
Looma	-	2,451,795	2,451,795	-	2,451,795	3
Carnarvon	43,107,945	-	43,107,945	1,023,477	42,084,468	980,995
Coral Bay	-	3,450,033	3,450,033	-	3,450,033	2,822
Cue	-	2,928,284	2,928,284	-	2,928,284	65,121
Denham	3,984,815	1,380,759	5,365,574	176,200	5,189,374	235,826
Derby	-	33,102,452	33,102,452	-	33,102,452	130,602
Djarindjin / Lombadina	-	1,881,956	1,881,956	-	1,881,956	1
Esperance	-	64,626,795	64,626,795	-	64,626,795	1,460,198
Exmouth	-	24,054,934	24,054,934	-	24,054,934	610,458
Fitzroy Crossing	-	14,638,067	14,638,067	-	14,638,067	73
Gascoyne Junction	-	707,290	707,290	-	707,290	22,299
Halls Creek	-	11,233,376	11,233,376	-	11,233,376	4,700
Hopetoun	-	4,542,600	4,542,600	-	4,542,600	227,272
Kalumburu	2,152,620	-	2,152,620	90,425	2,062,195	-
Kununurra	96,592	58,608,344	58,704,936	96,592	58,608,344	298,604
Lake Argyle	-	740,305	740,305	-	740,305	217
Laverton	-	3,929,993	3,929,993	-	3,929,993	43,136
Leonora	-	7,938,332	7,938,332	-	7,938,332	42,074
Marble Bar	2,175,794	-	2,175,794	238,232	1,937,562	71,338
Meekatharra	-	6,575,026	6,575,026	-	6,575,026	155,237
Menzies	-	629,813	629,813	-	629,813	61,200
Mount Magnet	-	3,690,349	3,690,349	-	3,690,349	148,726
Murchison Radio-astronomy Observatory	1,841,297	-	1,841,297	81,316	1,759,981	-
Norseman	-	3,344,198	3,344,198	-	3,344,198	121,917
Nullagine	1,018,448	-	1,018,448	75,856	942,592	37,127
Onslow	6,386,244	3,719,199	10,421,971	316,528	10,105,443	124,852
Sandstone	-	646,877	646,877	-	646,877	47,479
Warmun	-	2,531,254	2,531,254	-	2,531,254	1,201
Wiluna	-	2,343,392	2,343,392	-	2,343,392	15,421
Wyndham	136,105	7,362,081	7,498,186	136,105	7,362,081	25,112
Yalgoo	-	991,393	991,393	-	991,393	23,856
Yungngora	1,633,674	-	1,633,674	39,954	1,593,720	-
NWIS	-	517,240,717	517,240,717	-	517,240,717	1,335,176
TOTAL	62,533,534	926,219,521	989,069,583	2,274,685	986,794,898	7,606,852

Safety

Horizon Power endeavours to minimise the risk of harm to its employees, customers, community members and assets, by taking deliberate and considered actions to manage and prevent safety and adverse health issues that may result from sub-optimal business process and asset failure. Horizon Power strives for safety and health excellence through programs such as its Corporate Safety and Health Strategy, public awareness campaigns, and Asset Management Plan. The Safety and Health Management System (SHMS) implemented in 2015/16 is the foundation of Horizon Power's overall safety and health strategy.

Pole management strategy

Horizon Power continually strives to improve its asset management processes. This year an independent consultant was engaged to review its pole management strategy. Developed in October 2012, the original pole management strategy has resulted in a great improvement to the unassisted pole failure rate.

The review will:

- determine if the current strategy aligns with leading and industry best practices, and
- evaluate any other new or modern testing methodology that can predict premature failure.

Pole management program

Horizon Power continues to reinforce or replace its poles in line with the current condition-based pole management strategy. This strategy has shown a vast improvement to the unassisted pole failure rate over the past three years, resulting in an annual position of 0.81 unassisted failures per 10,000 poles. This result represents the best performance recorded over the same period.

Figure five shows the improving trend in Horizon Power's unassisted pole failure rate. This three-year rolling average rate has declined below the 1.0 in 10,000 target during the last quarter of 2017/18, the first time since 2012, and sits at a value of 0.81 for the month of June 2018. This performance has been achieved through ongoing improvements delivered through the implementation of the Pole Management Strategy, which includes a disciplined approach associated with Horizon Power's pole inspection, reinforcement and replacement programs.

Conductor management

National safety regulators have identified conductor (powerline) management as a major risk to electricity network businesses across Australia.

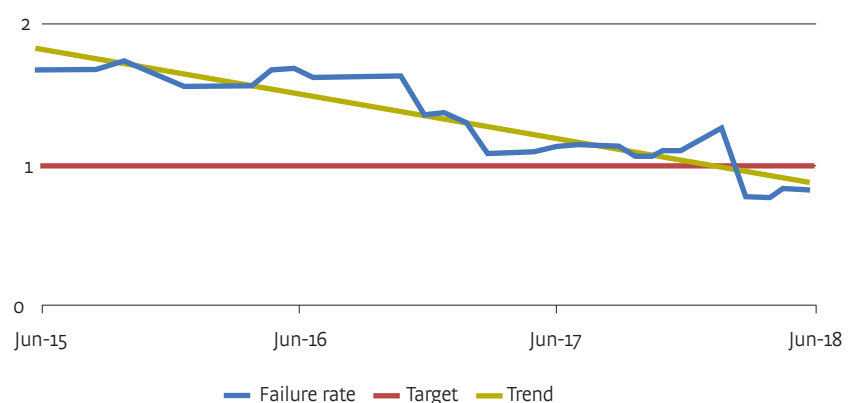
Acknowledging this risk, Horizon Power:

- commenced a program in 2011 to replace small copper conductors, with full visibility by *EnergySafety*. This program is scheduled for completion by 2021, and
- developed a conductor assessment strategy in conjunction with industry experts to manage the risk of its conductors across the network.

A detailed review of all conductor types in the Esperance system recommended the replacement of various conductor segments. This work has been budgeted for over the next 10 years. Another review is scheduled to take place in the next three years.

Figure 5: Unassisted pole failure rate for years 2015/16 – 2017/18

Unassisted pole failure rate
(rate per 10,000 poles on a three year rolling average)



A conductor failure in Denham resulted in a detailed review of the conductor and associated equipment as per Horizon Power's Conductor Management Strategy. This was completed and options to upgrade the town's network are being investigated. As a result of the failure, and the review of the town, the asset strategy was enhanced to include an updated visual inspection guide and technical maintenance guideline. The updated process strategy and inspection guide has been rolled out to all regions.

This revised inspection material is being used to review the Carnarvon and Exmouth conductor systems. This review is due for completion by July 2018.

The new strategy and inspection approach resulted in the identification of 86 defects of sufficiently high risk that required immediate rectification. The report identifies the condition of the network and actions required to manage other risks. A 10-year program has been established to manage the Carnarvon and Exmouth conductor systems.

A tender process is under way for conductor inspection services seeking to:

- streamline the conductor management inspection process
- formalise the process, and
- identify market efficiencies in delivering the process.

Safety advertising campaigns

Recognising that safety is a value and a part of its enduring culture, Horizon Power plays a role in educating the public on potential hazards associated with the use of, and interaction with, electricity and seasonal issues such as cyclone and storm awareness. Horizon Power uses its website, advertising, social media, partnerships and customer service channels to inform customers and community members about electrical safety.

Be Aware of Electricity is the overarching public safety campaign, which primarily promotes safety messages:

Be Aware of Electricity - stay safe at home, work and play

The aim of the campaign is to help educate the public on safety around electricity and associated assets. Protection of assets is also an important part of the messaging equation, but not to the detriment of genuine care for the wellbeing of people in the communities Horizon Power services. Safety messages focus on:

- avoiding electricity infrastructure and reporting any damage
- home maintenance safety
- safety at work, including transport and agricultural industries, and
- appliance safety.

Be Aware of Electricity - underground power

More and more of Horizon Power's electricity network supply is distributed through an underground network. Mini-pillars, or green domes, connect homes to this network and are located just inside the boundary of a property. A newspaper and digital advertising campaign provided safety messaging to inform customers that green domes contain live wires, they should never be tampered with and to immediately report any damaged domes to Horizon Power.

Be Aware of Electricity - cyclone and storm safety

Horizon Power has actively promoted cyclone and storm safety since 2007. This campaign promotes safety strategies in preparation for and during cyclones and storms.

The current campaign focuses on vegetation management and the dangers of fallen powerlines. The risk of injury or death increases exponentially the closer a person is to a fallen powerline. The campaign promotes a simple, two-part message – stay well clear of fallen powerlines, and call Horizon Power immediately.

Safety within Horizon Power

In 2017/18, the final year of Horizon Power's current safety and health strategy was implemented. This year's strategic milestones focused on the continuing implementation of the fit-for-purpose Safety and Health Management System (SHMS) into Horizon Power's regional businesses.

The regionally-based divisions have responded to the SHMS by creating specific, risk-based safety and health systems utilising the SHMS as the minimum standard. In achieving this milestone, safety and health-specific roles have supported the local adoption and refinement of approved safety and health practices across the business. Other strategic safety and health programs for the year included:

- a health and wellbeing program. The program consisted of health and wellbeing expos across areas of operations to support employees with health information and advice. Influenza vaccinations were also offered to employees
- development and implementation of Horizon Power-specific safety and health training relating to the SHMS, including:
 - regional-specific safety and health online safety and health induction training, and
 - a supervisor training course to educate those in leadership roles on the safety and health requirements and obligations embedded in the SHMS
 - continuing with an alcohol and other drug random testing program which is designed to mitigate workplace risk and improve employees' decision-making processes.

The positive engagement of employees with incident reporting processes has continued to increase business performance in risk mitigation and provide information to management teams to empower them to resolve incidents.

Horizon Power recorded a lost-time injury frequency rate of 1.8 per million hours, and only one lost time injury occurred within the financial year, which resulted in one working day lost as a result of the incident.

The Pilbara Grid division continues to maintain an effective safety and health performance and recorded zero lost time injuries for the second consecutive year.



Advanced microgrid design and development

Horizon Power's strategy is focused towards advanced microgrids to drive down the cost of generation and explore alternatives to conventional electricity delivery. This work is focused on reducing operating costs, driving embedded renewable systems and increasing the capacity to host more renewables, developing intelligent systems and network control, and providing customers with more choice and the tools to understand their energy use.

To facilitate the delivery of this new energy future, Horizon Power is delivering, or has delivered the following key projects:

System blueprints

Recognising the disruption to the traditional utility business model and the increasing involvement of customers in decisions about energy demand and use, Horizon Power has embraced several practices designed to mitigate the risks and maximise the involvement of a more customer-focused energy system. Chief among these are system blueprints.

A system blueprint is a framework for financial decision-making that investigates the most economical and sustainable electricity supply future for each of Horizon Power's microgrid systems.

Each blueprint explores a system's profile – cost to supply, maximum demand and customer energy use – to help determine the best time to switch that system to one of three

business futures with the majority of energy supplied by either centralised generation, distributed energy resources, or off-grid micro power systems.

Each town's system blueprint provides its optimum renewable energy penetration level, along with guidance on investment decisions such as capital and network expenditure and technology price curves.

In 2017 a customer analytical tool was developed, using advanced metering infrastructure data and advanced analytics, which assists in the understanding of how customers' energy usage patterns impact on the system costs. This information can also assist in optimising future investment in Horizon Power's generation and networks, and will improve its understanding of what products and services will benefit customers.



Carnarvon Energy Storage trial

Horizon Power is undertaking a trial of large-scale energy storage in Carnarvon to:

- investigate the benefits of a large-scale battery system installed on a remote islanded microgrid
- inform the development of a high-penetration DER and microgrid operation strategy, and
- provide ongoing benefits to the Carnarvon power system.

Two large battery units capable of delivering up to two megawatts of power for one hour have been commissioned and are undergoing a 12 month trial.

The trial commenced in September 2017 and is focused on testing the units' capability to provide:

- spinning reserve support, reducing conventional generation running hours and improving generator utilisation
- peak load shifting support, reducing pressure on installed generation capacity, and
- virtual generator operation acting as a conventional generator for short bursts to help reliability.

The trial will enable Horizon Power to access the latest large-scale battery technology at a competitive cost, and determine how to optimise the use of battery technology to further its microgrid capabilities.

Carnarvon Distributed Energy Resources trials

Horizon Power is conducting several different trials on the Carnarvon network to test distributed energy systems in a variety of behind-the-meter distributed energy situations, with the aim of increasing PV system penetration through its remote networks.

The trials, consisting of data acquisition and PV and Energy Storage Monitor and Control trials, aim to overcome the technical and commercial constraints associated with a high-penetration DER future.

Horizon Power has received funding support from ARENA on behalf of the Federal Government to trial a variety of DER technologies including rooftop solar, battery storage systems and inverters with remote monitoring and control devices.

Close to 60 customers in Carnarvon with PV are participating in the data acquisition phase of the trial. Over the next three years, Horizon Power will measure the renewable energy generated by their solar panels through a Solar Smart monitor and how this impacts the network.

Horizon Power is upgrading inverters, and installing new solar PV/battery systems for customers on a select segment of its network which can be monitored and managed, to act as a test-bed for the PV control trial.

Onslow: a distributed energy resources microgrid

By 2019, Onslow is set to be the home of Australia's largest DER microgrid, with an unprecedented proportion of the town's electricity needs being serviced from renewable energy sources.

Faced with an increased demand for energy in Onslow, Horizon Power is working with the Department of Jobs, Tourism, Science and Innovation and Chevron Australia to deliver a contemporary energy solution for the town that brings forward the high-penetration renewable energy future in a manner that is safe, secure and reliable.

The Onslow DER microgrid will include a mix of distributed renewables, gas-fired modular power and battery storage, which will meet the ongoing needs of the community, while ensuring customers can take advantage of renewable and battery storage technology.

Residences and businesses in the town will be offered solar PV systems and battery energy storage, at more affordable prices, to be part of this project.

The ability to economically and safely accommodate a high penetration of distributed renewable energy is an enabling feature of the microgrid, leveraging off the investment in advanced metering infrastructure in the town.

Square Kilometre Array and Murchison Radio-astronomy Observatory Power Supply projects

In November 2015 Horizon Power reached final agreement with the CSIRO to build, own and operate a 1.2 megawatt solar diesel power station on Boolardy Station, which hosts the Australian Square Kilometre Array Pathfinder Project (ASKAP) site at the Murchison Radio-astronomy Observatory (MRO), approximately 400 kilometres north-east of Geraldton.

The ASKAP is a pilot project for what will be the largest telescope on the planet: the Square Kilometre Array (SKA). Co-hosted with South Africa, the SKA will involve the installation of radio telescopes over vast areas of both countries.

The new MRO power station began exporting power onto CSIRO's MRO distribution network in August 2016, and the power station was fully completed and operational in September 2016.

In parallel, CSIRO commenced building a Commonwealth-funded 1.6 megawatt solar farm and 2.5 megawatt per hour battery system. Work to integrate these facilities was completed in February 2018.

Horizon Power retained control over the power supply system, and was responsible for developing the functional description and control system for the integration of the CSIRO assets with the existing power supply.

The control system and supporting protection design cater for all of the possible operating scenarios, including diesel-off operation. This project has involved working beyond the experience of known power system design, and as a result, steps into the new world of a microgrid with multiple sources of electrical energy.

Smart Sun pilot

Horizon Power and LandCorp have joined forces to deliver the Smart Sun pilot project; a solar-powered microgrid package providing renewable energy to several homes in LandCorp's Waranyjarri Estate in Broome North. Currently, 12 customers in six established homes and six new-build homes are participating in the pilot by purchasing a Smart Sun package at a discounted rate.

The pilot is helping Horizon Power to understand:

- how to integrate higher levels of solar energy generation into the electricity network while also potentially reducing the amount of traditional electricity infrastructure required in new housing developments, and
- how to safely and reliably integrate higher levels of intermittent solar generation.

These insights will inform a number of other development opportunities across the Horizon Power service area and enable new products that support

customer adoption of new pricing models such as MyPower, which is a pricing plan similar to a mobile phone payment plan, charging a monthly fee based on how much electricity customers consume at peak times, with a low variable energy charge.

The Smart Sun package includes:

- solar panels and inverter to generate and convert energy from the sun into electricity for use in the home
- a battery to store excess electricity generated by the solar panels for later use, and
- an energy management system which maximises the use of solar-generated electricity and minimises the use of purchased electricity from the grid. The system also manages high usage appliances, such as air conditioners and pool pumps, to minimise energy consumption while maintaining performance.

The package components work in conjunction with the Horizon Power mobile app to help customers track their electricity usage and reduce their consumption, particularly during peak usage times.

Installation of pilot packages for the six established homes was completed mid-2018, with installations on new-build homes expected to commence mid-2019.

Giving customers more control

Horizon Power has worked with the State Government on options for pricing reform that will give pricing signals to its customers that are more reflective of their impact on the cost of supply, along with tools for managing their consumption.

Intelligent use of data

The successful implementation of advanced metering infrastructure (AMI) across Horizon Power's entire service area in 2015/16 means it now receives more than 17 million data points every day about customers' energy usage. Horizon Power is using AMI to improve customer service, billing accuracy and timeliness, and safety.

Access to consumption data gives customers information about how they are using energy and what changes they can make to reduce costs. A customer portal, *My Account*, was developed, enabling customers to request services and check and pay bills online, providing immediate access to information for the customer and providing a lower-cost information channel for Horizon Power.

As at the end of June 2018, 11,576 customers had signed up for *My Account* and 16,619 customers had registered for paperless billing.

Horizon Power mobile app

One of the first products to be developed, due to the data received from advanced meters, is a new mobile app which gives customers close to real-time information about their energy use. The mobile app is Horizon Power's customer portal where all customers' billing and information is stored to one convenient place, allowing them to track their electricity usage 24 hours a day, seven days a week. This is the first step to giving customers more control over their energy bills.

The Horizon Power mobile app offers many convenient, self-service options to help customers manage their account and keep track of how much electricity they are using at any time, from anywhere.

Through the mobile app, customers can perform a range of tasks including:

- tracking recent usage with hourly and daily interactive graphs
- viewing current spend and estimating how much their next bill is likely to be, based on average daily usage
- paying bills
- viewing account balances and payment receipts
- emailing and sending SMS copies of bills and receipts, and
- viewing billing and payment information.

As at the end of June 2018, 6,961 customers had downloaded the Horizon Power mobile app.

Pricing plan innovation - MyPower

Horizon Power has begun the task of tackling price reform to reduce the investment in peak generation – up to 20 per cent of generation investment goes into assets to meet peak demand about two per cent of the time – which is only a few days of the year. This pricing work is aimed at addressing the disparity between what customers pay for electricity and its actual cost to produce, encouraging changes in consumption, the incorporation of renewable technologies and reducing the need for investment in generation plant to meet these brief periods of the year.

MyPower is a key part of Horizon Power's strategy to provide fair and equitable access to electricity, create customer choice and increase the sustainable uptake of renewables.

Horizon Power introduced the MyPower pricing product in the towns of Broome and Port Hedland in December 2017. Preliminary results from customers have been positive.

Compared with the existing tariff structure, the fixed cost is higher on a MyPower plan, but the variable cost per unit is much lower. The objective is to educate customers to manage their peak energy usage and shift high-usage appliances to off-peak times.

Customers who modify their behaviour when they use electricity or those who adopt renewable energy can potentially drop to a lower plan to save money.

Customers can also use the free Horizon Power mobile app to track their electricity use in near real time during peak periods. If it appears that a customer will go over their allowance, they are alerted via SMS or with a notification through the mobile app.

MyPower takes into account Horizon Power's cost of generating and distributing electricity, and helps the business to manage the additional cost of maintaining generation for the peak.

The vast majority of customers on MyPower plans have shown they are able to stay within their plan's peak allowance, enabling them to enjoy greater predictability and smoothing of their power bills throughout the year.

Horizon Power Solar

Horizon Power has entered the retail solar market with the pilot of a new product for Karratha residents and small business owners called Horizon Power Solar. Customers are being offered solar panels, inverters and batteries, which can be combined to create a tailored solar energy system to suit a customer's lifestyle and budget. The product is being delivered through a strategic partnership with Energy Matters and a local Karratha installer.

Horizon Power Solar was launched as a pilot project in Karratha in

March 2018, with an evaluation to be completed at the conclusion of the pilot in December 2018.

Remote communities

This year, Horizon Power established the Remote Communities team to build on its long history in remote service delivery.

This team is working with remote communities to reduce debt and improve affordability and reliability of electricity services, with a focus on:

- lowering the cost of supply via distributed energy
- improving and maintaining safety and reliability of supplies, and
- developing new business models which provide community ownership of assets.

Key initiatives being introduced for these remote communities include:

- lowering costs via distributed energy through the installation of customer-owned solar with potential for solar incentives and solar benefit sharing
- maintaining long-term business viability with installation of pre-payment meters, further regularisation of the existing electricity network and assigning the correct liability for electricity accounts on water services, and
- developing new business models by establishing partnerships to potentially co-fund community solar and exploring opportunities for local training and solar installation partners.

Pre-payment meters

In 2018, the Remote Communities team completed installation of pre-payment meters in five Aboriginal communities in the Kimberley to improve electricity affordability for residents.

Installation of the pre-payment meters means the communities will move away from the 'chuck-in' system of payment for electricity, which often results in large levels of debt being accumulated by communities. For the first time, residents will now also have access to energy rebates.

The upgrades were undertaken in Emu Creek, Munthanmar, Bell Springs and Mud Springs, all near Kununurra in the east Kimberley, and the community of Loanbun, near Fitzroy Crossing, in the west Kimberley.

The project also includes important safety upgrades for the communities, with Horizon Power undertaking network condition reports to ensure the safety of the existing electrical infrastructure. The pre-payment meters are also designed to detect potential faults in the house and the network they are connected to.

Remote Community Utilities Worker program

Horizon Power has created a unique apprenticeship program aimed at improving outcomes in remote communities. The Remote Community Utilities Worker (RCUW) apprenticeship is designed to improve the reliability of power supplies in remote Aboriginal communities and reduce the duration of outages, as well as to create jobs

and boost the economic development and sustainability of these regional communities.

The National Certificate III RCUW trade qualification was registered as a Class A Apprenticeship in September 2016 by the State Training Board on behalf of the State Government. In July 2017, four Horizon Power employees from some of the most remote Aboriginal communities in the State – Kalumburu, Yungngora and Bidjyadanga – successfully completed the apprenticeship. They received their statements of attainment in the Certificate III Electricity Supply Industry

(ESI) Remote Community Utilities Worker (RCUW) qualification. The trade qualification has been certified at a State and National level and is the first of its kind. As funding is received to upgrade more communities, Horizon Power would like to expand the program by employing more RCUW apprentices in communities.

The program was recognised at the Australian Institute of Management WA WestBusiness Pinnacle Awards, for demonstrating leadership and commitment to excellence in human resource management.

Utility off-grid systems

Horizon Power has successfully delivered a technology step-change by introducing Utility off-grid systems as a new asset class for serving very remote electricity customers more cost-effectively. While a traditional poles and wires connection will remain the most suitable way to serve more dense population centres, Utility off-grid solutions are now becoming a suitable alternative for customers located at the remote outer fringes of the electricity system.

The solution being advanced by Horizon Power combines high quality solar PV energy storage, back-up diesel generation and advanced control and communications systems. Designed for a significantly longer lifespan than traditional retail stand-alone power systems (SPS), this will enable a full electric utility service but without the need for poles and wires. To be considered 'utility-grade' each system is remotely fleet-managed by Horizon Power and integrated with utility back office systems to ensure a seamless customer experience. To clearly distinguish this holistic utility solution from retail SPS units typically supplied to individual private owners, Horizon Power uses the term Micro Power Systems (MPS).

Transitioning remote customers to MPS is more feasible for Horizon Power than any other Australian utility, due to its vertically integrated market structure and light-handed regulatory framework. Over the last two years, eight systems have been installed across its service area: six are in the



*Remote Community Utilities Workers
Clinton Sahanna, Robert Hassett and Brendan Walters*

Esperance region, one at the Fitzgerald River National Park in Hopetoun and another at the Exmouth Golf Club.

Looking forward beyond technology trials, Horizon Power has now positioned MPS as an integrated utility asset class in its own right. A large number of sites have been shortlisted as suitable for MPS deployment over the coming years, with the majority currently served by the extensive Esperance and Hopetoun rural networks where ageing poles and conductors are due for replacement.

Significant projects

Horizon Power continues to focus on maximising long-term value while in the short term improving efficiencies, managing external challenges, and embracing opportunities by driving down the cost of generation and exploring alternatives to conventional electricity systems.

Delivery of these streams of work is expected to reduce the long-run cost to supply, which is central to Horizon Power's goal of reducing the subsidy it receives from government.

Roy Hill Connection Project

The completion of the Roy Hill Connection Project has seen Roy Hill's port facility in Port Hedland successfully transitioned to, and receiving electricity from, the NWIS.

The project required the underground installation of two five kilometre, 33 kilovolt feeder lines between

Horizon Power's South West Creek Substation and Roy Hill's main switchboard at the port in Port Hedland.

Horizon Power's 15 year Power Purchase Agreement officially commenced in April 2018, and has the potential for two extensions of five years each reaching 2043.

This project is part of Horizon Power's commitment to build a well-coordinated and efficient network in the Pilbara, and supply all customers with a reliable source of power for the long term.

Pilbara Underground Power Project

The Pilbara Underground Power Project (PUPP) was completed in June 2018, providing the towns of South Hedland, Wedgefield, Karratha, Roebourne and Onslow with a safer, more reliable power supply.

The project was a partnership between State Government, local government and Horizon Power.

By replacing ageing overhead electricity infrastructure with underground networks, the project has dramatically improved the provision of an essential service to Pilbara communities during, and immediately following, severe weather events.

Underground power is delivering several benefits for residents and businesses, including a reduced chance of power outages, a reduction in required maintenance, and improved street lighting and streetscapes.

Community

Horizon Power is committed to serving the people and communities of regional Western Australia. Recognising that Horizon Power's people live and work in the communities it serves, the business provides sponsorship and support for causes close to the hearts of its communities, including:

Shooting Stars

Shooting Stars is an initiative delivered by Netball WA and Glass Jar Australia that uses netball as the vehicle to encourage greater engagement and school attendance of young Aboriginal girls living in Western Australia's remote communities and regional towns. Horizon Power supports the delivery of educational, sporting and wellbeing programs through the Shooting Stars program in Halls Creek, Derby, Wiluna, Carnarvon and Meekatharra.

More than 330 girls, aged between eight and 17 years, across regional Western Australia participate in this program and on average school retention has improved by 18 per cent (equivalent to one day of school a week).

Horizon Power's funding directly supports the implementation of yarning circles, a research tool which is used to gauge the girls' attitudes towards their education, health and wellbeing, and their future. Since starting the yarning circles over the past 18 months, it has proven to be

a valuable tool for the participants, providing a platform for the students' voice and a place where their feedback is honoured and acted upon. The tool itself has attracted international attention, with the Shooting Stars team presenting it at the World Indigenous People's Conference on Education last year.

Kidsafe WA

Kidsafe WA is a not-for-profit organisation dedicated to promoting safety and preventing childhood injuries and accidents. Kidsafe WA works in the community to educate and inform parents and children on staying safe at home, at play and on the road. Horizon Power assists Kidsafe WA to expand the reach of the program to include the delivery of electrical safety to communities in Horizon Power's service area.

Spare Parts Puppet Theatre Company

Spare Parts Puppet Theatre Company believes all students should have the opportunity to engage with the arts to help them learn, grow, and become positive forces in their communities. They seek to achieve this vision by providing students from low socio-economic areas of Western Australia access to their work through free or subsidised ticket prices. Horizon Power has supported the Spare Parts Puppet Theatre Company to expand the reach of their regional school tour to schools in the Gascoyne, Mid West, Pilbara and Kimberley.

Energy efficiency campaign – Easy Ways to Save

Horizon Power believes it is important to provide customers energy efficiency advice to help them save money and energy, and help strengthen its community standing as the 'local energy partner'.

Through its energy efficiency campaign, *Easy Ways to Save*, Horizon Power aims to provide customers with simple energy efficiency messages to help them reduce their energy use and save money, to answer their queries and reduce complaints. Horizon Power wants to break the culture of habitual energy-wasting within the home and position itself as a responsible, approachable utility.

People and culture

Horizon Power is recognised for its delivery and provides its people with opportunities, challenges and rewards. The business recruits, develops and retains talented, high-performing employees who are motivated and share its vision and values. Through its annual performance appraisal and development plan process, Horizon Power evaluate outcomes and demonstrated behaviours.

Our Horizon Way and Code of Conduct outline the behaviours expected of Horizon Power employees.

These behaviours are embedded and reinforced throughout all people processes and solutions. Horizon Power continues to focus on maturing its organisational culture to improve the way it does things and to drive high performance.

To acknowledge outstanding contribution and performance on a daily basis, Horizon Power continues to improve and promote its recognition and reward program, SHINE, a points-based system through which employees accrue points and redeem rewards.

Leadership

Horizon Power acknowledges the importance of developing engaging leaders to build and sustain a high-performance culture, and as such, has a mentoring program that pairs members of its Executive with managers in its regional locations, which is designed to provide ongoing support and development for regionally-based leaders.

A new leadership development program will be deployed to mid-level leadership teams in the next financial year. This program is designed to share information, build skills and create actionable plans for leaders to broaden their range of leadership styles and tactical skills, allowing them to create an engaging and enabling climate for their teams.

Employment statistics

Table 6: Training program statistics

Training program	Number of employees	Number of Aboriginal employees
Remote Community Utilities Workers	4	4

Table 7: Employment statistics for 2017/18

	Active full-time equivalents (FTE)				Total
	Permanent full-time	Permanent part-time	Fixed-term full-time	Fixed-term part-time	
Overall					
Horizon Power	2875	4.4	62.0	1.7	375.6
Female employees					103
Male employees					253
Aboriginal employees					18

Note: Figures as at 30 June 2018. The figures apply to both employees and Contractor A's filling an approved position.



Training and development

Horizon Power recognises that having capable employees with an innovative mindset is key to its long-term success, and is committed to investing in the continuous development of capability of its people. Horizon Power offers a range of internal and external learning linked to the development objectives of its annual performance and development planning process.

Other development opportunities include strategic projects and secondments throughout the business.

When positions become available, Horizon Power develops apprentices and administration trainees in the following training programs: Certificate II, III and IV Business Administration; Apprentice Certificate III ESI Remote Utility Community Workers; and Apprentice Certificate III ESI Distribution Linespersons.

Aboriginal employment

Horizon Power serves regions of the State where significant proportions of the population are Aboriginal. Horizon Power employs 18 Aboriginal employees (5.3 per cent of the workforce) and seeks to offer direct employment opportunities where possible, while focusing on indirect opportunities through supporting Aboriginal businesses, contractors and suppliers, and by allocating sponsorships such as those listed on page 32 of this report. As mentioned in the previous section, four employees from remote Aboriginal communities who help maintain assets have completed their Certificate III in ESI Remote Community Utilities Worker.

Environment and heritage

Horizon Power is committed to developing a sustainable energy future by providing innovative energy choices for its customers.

Horizon Power operates under an Environmental Management System (EMS) to proactively manage environmental issues, to provide the business with the necessary tools to identify the environmental issues associated with operations, exceed legislative compliance and strive for continual improvement in environmental performance.

Greenhouse gas and carbon intensity

Horizon Power reports total annual greenhouse gas emissions as carbon dioxide-equivalent (CO₂-e) (shown in Table 8), in accordance with the *National Greenhouse and Energy Reporting Act 2007* (NGER).

CO₂-e emissions attributed to Horizon Power have significantly decreased from last year. This is primarily because of the decommissioning of the temporary generators at South Hedland, as Transalta's new South Hedland Power Station was commissioned, providing power supply to the NWIS. Emissions from the generators at South Hedland typically contributed to half of Horizon Power's Scope 1 emissions.

The Clean Energy Regulator will make Horizon Power's 2017/18 NGER publicly available in the first quarter of 2019. An estimate is made for Scope 1

emissions (direct)¹ based on available information as at 6 July 2018. Because Scope 2 (indirect)² emissions are more complicated to establish in accordance with the NGER Act, they can't be accurately estimated at the time of publishing.

Carbon intensity of Horizon Power's total operations, measured as kilograms of CO₂-e per kWh of electricity sent-out, provides the KPI for greenhouse gas emissions.

Carbon intensity is primarily influenced by Independent Power Producers (IPPs), with relatively low influence from Horizon Power-operated power stations. The carbon intensity improved slightly between 2016/17 and 2017/18, mainly with the decommissioning of the temporary generators at South Hedland. Carbon intensity remained within the internal target of 0.65 kg CO₂-e /kWh sent-out, as shown in Table 9.

Table 8: Greenhouse gas emissions (tonnes CO₂-e)

Reporting year	Greenhouse gas emissions (tonnes CO ₂ -e)		
	Direct emissions (Scope 1)	Direct emissions (Scope 2)	Total energy consumption (GJ)
2014/15	82,670	38,543	1,842,181
2015/16	99,200	38,357	2,182,657
2016/17	79,623	31,939	1,305,159
2017/18	337,872 ³	Final figures are reported to CER by 31 October 2017 and published Q1 2019	

1. Direct emissions of greenhouse gas into the atmosphere from sources that are owned or controlled by the company, such as emissions from combustion in owned or controlled engines or equipment.
2. Indirect emissions of greenhouse gas from the generation of purchased electricity consumed by the company. This includes purchased electricity consumed in depots/offices, as well as line losses in networks operated by Horizon Power.
3. Estimated figure based on available information as at 6 July 2018.

Table 9: Carbon intensity of Horizon Power's sent-out electricity, actuals and targets for years 2014/15 - 2017/18

Reporting year	Carbon intensity kg CO ₂ -e/kWh sent out	Target kg CO ₂ -e/kWh sent out
2014/15	0.58	0.65
2015/16	0.57	0.65
2016/17	0.56	0.65
2017/18	0.55	0.65

Air emissions

Horizon Power reported annual air emissions for the 2017/18 period to the National Pollutant Inventory (NPI) for sites exceeding the NPI reporting thresholds. These reports and information on reporting requirements are publicly available on the NPI website (www.npi.gov.au). An estimate of combined air emission data from all Horizon Power generation facilities is provided in Table 10.

Total sulphur dioxide (SO₂) decreased consistent with decommissioning of the temporary generators at South Hedland and Karratha.

Normalised SO₂ emissions, shown as kg/MWh (generated), remain consistent with previous reporting years.

A decrease in total emissions of oxides of nitrogen (NO_x) can be attributed to the inactive temporary generators at South Hedland and Karratha. Normalised NO_x emissions increased in comparison to previous years. This can be attributed to the decrease in energy production, which provided a lower energy amount to distribute NO_x emissions. Normalised NO_x emissions are shown as kg/MWh (generated) in Table 10.

Final data supplied to the NPI may differ slightly from the estimated emissions and shall also include additional statutory reporting parameters.

Noise

No noise complaints were received during the year.

Table 10: Summary of air emissions for years 2015/16 - 2017/18

		2017/18	2016/17	2015/16
Sulphur Dioxide (SO₂)	Total (Tonnes)	0.2	0.4	0.5
	kg/MWh (generated)	0.004	0.004	0.004
Oxides of Nitrogen (NO_x)	Total (Tonnes)	441	461	616
	kg/MWh (generated)	6.77	3.91	4.27

Table 11: Investigation and activities undertaken at contaminated former power station sites during 2017/18

Groundwater monitoring events (GME)			
Carnarvon	Cue	Exmouth	Fitzroy Crossing (2)
Other investigations			
Cue – soil vapour monitoring event			
Exmouth – soil sampling and analysis			
Fitzroy Crossing – completion of the Phase 1 soil bioremediation project			
Remedial Action Plans were prepared for Carnarvon and Exmouth.			

Management of contaminated sites

Horizon Power's contaminated sites portfolio includes 31 sites reported and managed under the State's *Contaminated Sites Act 2003* (CS Act). The sites are typically former power stations where historical spills and/or leaks of hydrocarbons have affected soil and/or groundwater. The portfolio is managed in accordance with a risk-based strategy, where key objectives are to achieve remediation targets and end-point classifications under the CS Act. This is achieved when no ongoing assessment and/or remediation is required on the basis the land use

remains unchanged. However, opportunistic remediation may still be undertaken at a site should site use or infrastructure change, such as during decommissioning. During the year, Halls Creek achieved end-point classification, reducing the number of sites requiring ongoing active management to 16.

Horizon Power has appointed accredited contaminated sites auditors to independently oversee investigations on sites where groundwater contamination has migrated offsite. Table 11 provides a summary of key site works completed during the year.

Horizon Power is continuing the program of works to fully decommission and demolish obsolete infrastructure from former power station sites, in addition to the contamination assessment and site clean-up. All remaining redundant infrastructure was removed from the former power station sites in Menzies, Cue, and Mt Magnet, with materials recycled or gifted to the local Shires for community use, where possible.

Environmentally sensitive areas program

The environmentally sensitive areas program continued this year. The program subjects all ground-disturbing activities to a desktop assessment before undertaking the works. It provides employees and contractors with processes and procedures to follow when working within these areas and ensures licences or permits are obtained as applicable.

Regulatory instruments

Horizon Power maintained its environmental licence for the Karratha Temporary Generation Project⁴ this year and met all reporting obligations required under the licence. Mungullah Power Station remains as a registered premises⁵ with no associated reporting requirements. None of Horizon Power's other operating sites exceeds the threshold for an environmental licence or registration.

Horizon Power holds 14 native vegetation clearing permits issued by the Department of Water and Environmental Regulation. In 2017/18, Horizon Power also held two Permits

to Take granted by the Department of Biodiversity, Conservation and Attractions for Declared Rare Flora species in Esperance. Compliance reports have been submitted to the respective departments in accordance with the applicable permit reporting conditions.

Environmental incidents

In June 2018, Horizon Power became aware of a contractor clearing native vegetation as part of the Onslow transmission line construction beyond the permissible area granted by the native vegetation clearing permit. The incident was promptly reported to the Department of Water and Environmental Regulation and is subject to an internal incident investigation at the time of reporting.

Native title and heritage compliance

Horizon Power operates in accordance with its heritage management system. The system's success is reflected in the consistent number of native title and heritage clearance requests from across the business, for both low and high impact projects, ensuring Horizon Power continues to improve native title and heritage approval processes. No potential or actual breaches of the *Aboriginal Heritage Act 1972* were recorded for this period.

Aboriginal heritage monitors were engaged to assist in protecting Aboriginal cultural values during ground-disturbing works for operational and project-related activities.

-
4. Licence L8745/2013/1 granted under Part 5 of the *Environmental Protection Act 1986* (EP Act) for a category 52-prescribed premises as defined by Schedule 1 Part 1 of the *Environmental Protection Regulations 1987*.
 5. Registration R2385/2014/1 granted under Part 5 of the (EP Act) for a category 84-prescribed premises as defined by Schedule 1 Part 2 of the *Environmental Protection Regulations 1987*.

Directors' report

Corporate governance

Corporate governance is the system by which Horizon Power is directed and managed. It influences how:

- business objectives are set and achieved
- risk is assessed and managed
- corporate fairness, transparency and accountability are promoted, and
- performance of the business is optimised.

To best reflect the expectations of its people, stakeholders and customers, Horizon Power has sought to adopt recognised best practice for corporate governance by implementing a Corporate Governance Framework. In practical terms, the Framework:

- provides structure and consistency to the way Horizon Power does business with its customers and stakeholders
- allows employees to respond to situations as they arise with confidence to ensure they understand the requirements of the business
- promotes Horizon Power's performance drivers and corporate governance principles, systems and practices, including the roles, responsibilities and authorities of the board and executive
- is aligned with its strategic and business plans
- provides accountability and control systems commensurate with the risks involved, and
- is an essential component to the overall success of the business.

The Framework is underpinned by governance principles driven by the importance placed upon providing employees with the necessary knowledge (supported by structure, systems and processes) to enable them to appropriately respond to circumstances, issues and opportunities with a clear understanding of Horizon Power's context.

This means that employees are able to perform their activities in a responsible, thoughtful, knowledgeable and consistently professional manner, contributing to the overall direction and success of the business.

Horizon Power's Risk Management Framework is designed to encourage and support the development of an appropriately risk-aware culture within the organisation and assist the business to realise the benefits that accrue from a conscious, structured and dynamic approach to the management of risk.

Managing business risk

Horizon Power's Corporate Risk Management Framework is aligned to the ISO 31000:2009 standard and includes processes to identify, assess, monitor, report and escalate risk exposures to management.

The Framework:

- applies to everyone at Horizon Power including the board of directors, the executive team and all other employees and contractors
- is applied at all levels of the business (including, but not limited

to, corporate, divisional and group functions, programs/projects)

- is applied to all operational risk management processes and practices at Horizon Power, and
- is integrated with other corporate frameworks, in particular the strategic planning and corporate budgeting processes. This assists with prioritising important projects and promotes a risk-based approach to investment decisions.

The Corporate Risk Profile is reviewed and updated on a bi-annual basis by the executive team. The Corporate Risk Profile is an aggregation of risks identified by the various divisions and reported bi-annually to the Audit and Risk Management Committee.

Board of Directors

In accordance with the *Electricity Corporations Act 2005 (WA)*, Horizon Power must be governed by a board of between four and eight directors appointed by the Governor on the nomination of the Minister for Energy. The board is responsible to the Minister for Energy for the performance of the business.

The primary role of the board is to set the strategic direction of the organisation, approve major expenditure and provide advice to the Minister for Energy on regional power issues.

The board formally delegates the day-to-day management of Horizon Power to the Chief Executive Officer and Executive management team.

Horizon Power's Board consists of the following people:

- Mr Stephen Edwell, Chairman (term commenced 30 April 2018)
- Mr Ian Mickel AM, Chairman (term concluded 29 April 2018)
- Ms Rosemary Wheatley, Deputy Chair
- Mr Peter Oates, Director
- Professor Ray Wills, Director
- Mr Neil Thompson, Director
- Emeritus Professor Jeanette Hackett AM, Director (term concluded 29 April 2018)
- Ms Kylie Chamberlain, Director (term commenced 30 April 2018).



Stephen Edwell (Chairman)

Appointed 30 April 2018.

Stephen is an economist specialising in energy-market regulation, design and utility reform.

His experience in the Australian energy sector is wide-ranging. Stephen led the team that project managed Queensland's entry to the National Electricity Market. He also project managed the design and implementation of the Wholesale Electricity Market in Western Australia.

Stephen has been a senior member of energy regulatory boards since 2005. He was appointed by the

Federal Government as inaugural full-time Chair of the Australian Energy Regulator and Associate Commissioner of the Australian Competition and Consumer Commission (2005-2010). Most recently, Stephen completed an 11-year term as a part-time Governing Body Member of the Western Australian Economic Regulation Authority.

He has undertaken various energy-related projects for the (former) Western Australian Department of State Development, Public Utilities Office, Department of Finance and WA Treasury.

Stephen holds a Bachelor of Commerce (Economics) and a Masters of Business Administration.



Ian Mickel AM (Chairman)

Term concluded 29 April 2018.

Appointed as Director in May 2011.

Appointed Deputy Chair in July 2012.

Appointed acting Chairman from 1 June 2014.

Appointed Chairman from 10 November 2014.

Ian's term concluded on 29 April 2018. Ian has been a farmer and grazier in the Esperance region for more than 30 years. He has a strong focus on local government, especially in the areas of finance and economic development.

Ian was elected to the Esperance Shire Council in 1989 and served as Vice President from 1991 to 1993 and as President from 1994 to 2001 and again from 2003 until October 2011, when he retired from local government.

He has served as President of the Country Shire Councils' Association and President of the WA Local Government Association. He was awarded a Member of the Order of Australia Medal in 2007 for his service to local government. Ian was made a Freeman of the Shire of Esperance in 2012 in recognition of his significant contribution to the Shire.

Ian is a Fellow of the Australian Institute of Company Directors and of the Royal Association of Justices of Western Australia (Inc.).



Rosemary Wheatley (Deputy Chair)

Appointed in November 2012.

Appointed Deputy Chair on 26 October 2016.

Rosemary has been a commercial lawyer for more than 35 years. During her legal career, she acted for many years on behalf of a major bank, a major insurance company, several of the larger charities in Australia, and numerous smaller businesses and individual clients all over Western Australia. She developed specialist expertise in the areas of company

law, banking securities, property law, trusts, estate planning and superannuation law.

Rosemary is the Government-appointed independent director of Guumbarr Limited, a trustee company set up under the Browse LNG Precinct Project Agreement. She was a Metropolitan Cemeteries Board member for seven years.

Rosemary holds a Bachelor of Laws (Honours) and a Master of Laws.



Peter Oates (Director)

Appointed in November 2014.

Peter has more than 38 years' experience in the Western Australian electricity industry. Most of this experience was in the financial area, including periods where he was the General Manager Finance and Administration followed by a period where he was the General Manager Emerging Business, which included the development of renewable projects for Western Power prior to its disaggregation in 2006.

He was a director of Eneabba Gas Ltd from 2006 to 2010. Peter has been involved in a number of reviews into the structure of the electricity industry in Western Australia, commencing with his appointment as Executive Officer to the Energy Board of Review in 1992

which resulted in the disaggregation of SECWA. Peter was Chairman of the Merger Implementation Group which provided the oversight into the merger of Verve and Synergy.

Peter holds a Bachelor of Economics, Master of Business Administration from the University of Western Australia, and is a Fellow of the Certified Practising Accountants.

Peter was appointed Chair of the Audit and Risk Management Committee upon his appointment to the Horizon Power Board in November 2014.



Professor Ray Wills (Director)

Appointed in November 2014.

Professor Wills is a respected commentator and adviser on sustainability and technology across the built environment, clean tech, energy infrastructure, industrials, manufacturing, resources, transport, and water sectors. His research includes adoption rates of and disruption in technology, including automation, robotics and additive manufacturing, and the impact of social media on markets.

Professor Wills is owner and managing director of advisory firm Future Smart Strategies and of sustainable design group Blue by Design (Singapore) and its Australian subsidiary; owner and

managing director of the agricultural enterprise Sun Brilliance Solar One Pty Ltd; partner and Chair of the clean tech business Sun Brilliance Power and Non-executive director of its Indian subsidiary Sun Brilliance Energy; Non-executive director of renewable energy developer PowerMinder, and Non-executive director of bioenergy business BioTek Fuels.

He is also Adjunct Professor at the University of Western Australia, where he contributes to the academic program and supervises postgraduate students, is an active peer reviewer for science publications, and is a spokesperson on climate change, sustainability and new technology.

He was recognised by Singapore-based ABC Carbon as one of the Top 100 Global Leaders in Sustainability in 2011, an honour renewed each year since, and from 2014 has been listed by UK-based SustMeme Magazine as one of the top 100 Global Influencers in Social Media on Climate Change and Energy. In 2016, analytics firm Onalytica listed him in its Top 100 Influencers and Brands for Renewable Energy in the world, and in 2017 he was similarly recognised for Climate Action.

Professor Wills holds a Bachelor of Science (Honours) (Mycology) and a Doctorate of Philosophy (Ecology).

He is a member of the Australian Institute of Company Directors and the Ecological Society of Australia, and is a Fellow of the Australian Institute of Energy.



Emeritus Professor Jeanette Hackett AM (Director)

Term concluded 29 April 2018.

Jeanette has been a university leader and legal academic for more than 30 years after initially working as a legal practitioner. Jeanette served as President and Vice-Chancellor of Curtin University from 2006 to 2013, after having filled the roles of Deputy Vice-Chancellor from 2004-2006 and Pro Vice-Chancellor International and Enterprise from 2002-2004. She has a strong interest in the development of community partnerships in education and research, as well as international education.

Jeanette has served on a broad range of community boards including as a council member of the Western Australian Chamber of Commerce and Industry, Director of Open Universities Australia, board member of the Australian Universities Quality Agency, member of the Australian Business Arts Foundation, Chair of Council of Penrhos College, and Commissioner of the Western Australian Football Commission.

She has served as Chair of the Australian Technology Network group of universities and Chair of the Australian Higher Education Industrial Association. She was awarded a Member of the Order of

Australia Medal in 2012 for her service to education. She was awarded an Honorary Doctorate of Technology by Curtin University in 2013 for her service to the university.

Jeanette has been a member of the Law Society of Western Australia, the Australian Institute of Company Directors and a fellow of the Australian Institute of Management. She holds undergraduate and master's degrees in law and a doctorate in management.



Neil Thompson FAICD (Director)

Appointed in October 2016.

Neil has extensive experience in customer and corporate strategy as well as business development. He has held numerous commercial roles in the aviation, travel and tourism sector in Australia, Asia, Europe and North America over the last 25 years. Neil also led two of Australia's largest, most profitable customer loyalty businesses, Qantas Frequent Flyer and Virgin Australia's Velocity program.

Neil is a Fellow of the Australian Institute of Company Directors, an advisory board member of the Australian National University's (ANU) Australian Centre on China in the World and a director of Smiling Mind Inc. He is also advisor to a number of Australian start-up ventures, and is fluent in Mandarin.



Kylie Chamberlain (Director)

Appointed 30 April 2018.

Kylie is an accomplished and experienced banking and finance executive with over 20 years' experience within the industry. Across various senior roles with prominent Australian banking and financial institutions, she has garnered broad market exposure to a variety of industry and brings acumen in the key areas of finance, strategy, culture, governance and risk.

Kylie holds a Bachelor of Commerce from the University of Western Australia and post graduate qualifications from both the Securities Institute of Australia and the Governance Institute of Australia.

Kylie is currently a Non-executive Director of West Coast Fever Netball Club Limited and holds a senior relationship role at Bankwest.

John Le Cras (Adviser)

John was appointed Chair of the Corporate Affairs and Communications Committee by the Board on 11 December 2014.

John has more than 35 years' experience as a journalist, news editor, marketing executive and strategic communications consultant. He spent 14 years in senior roles with the Seven Network, including as Director of News and Current Affairs. John held senior management and marketing roles at HBF and Murdoch University before launching his strategic communications business in 2011.

He provides strategic communications and marketing services across banking, education, healthcare, mining, utilities, energy, manufacturing, and local government sectors.

John is a member of the Public Relations Institute of Australia.

Bob Cronin AM (Adviser)

Bob was group editor in chief of West Australian Newspapers from 2008 until his retirement in October 2016. In 2014, he won a Walkley Award for leadership in journalism.

He has worked for seven newspapers in Australia and was editor of four, including Australia's biggest-selling daily, *The Melbourne Sun* (now the *Herald Sun*), and *The West Australian*.

Bob was a director of SBS for 10 years and has served on the boards of numerous not-for-profit organisations.

Chief Executive Officer and Company Secretary

Frank Tudor (Chief Executive Officer)

Frank Tudor joined Horizon Power on 30 January 2006, before being appointed Chief Executive Officer on 17 December 2010. Frank resigned on 12 June 2018 to succeed Managing Director, Paul Adams, at Jemena - a gas and energy distribution and transmission company based on the east coast of Australia.

Frank has held various senior executive leadership roles over the past 30 years across Europe (BP) and Asia (Woodside).

He currently serves on the Advisory Board of the ANU China in World Centre, CCI General Council, and Expert Advisory Panel with the Australian Energy Market Operator (AEMO), as well as a board member of Energy Networks Australia and Chair of its Asset Management Committee.

He is a life member and past Chairman/President (2008-2013) of the China Business Council, past board member of the Federal Government's Australian China Council, and past Chair of the CCI Energy and Resources Forum.

Frank holds first class degrees in engineering, economics and business administration from Curtin University (WA), London School of Economics (UK) and AGSM (University of NSW). He completed the Advanced Management Program at Harvard Business School, and lectured in oil and gas economics, and legal frameworks at the University of Western Australia (2005-2015).

David Tovey (Company Secretary)

David was appointed Company Secretary in May 2011 and is also General Manager Corporate Services.

David has extensive electricity industry experience in strategic, business development, operational and corporate governance roles. He is a member of CPA Australia, the Australian Institute of Company Directors and an Associate of the Governance Institute of Australia.

The Company Secretary provides administrative services to the Board and oversees the corporate governance systems.

Attendance at Board meetings

The Board meets bi-monthly, but during the year there were a number of circular resolutions, which are recognised as duly constituted board meetings.

Table 5: Board of Directors meetings and attendance for 2017/18

	Number of meetings attended	Number of meetings eligible to attend during the time the Director held office during the year
Stephen Edwell	3	3
Ian Mickel AM	14	14
Rosemary Wheatley	17	17
Peter Oates	17	17
Professor Ray Wills	17	17
Emeritus Professor Jeanette Hackett AM	14	14
Neil Thompson	16	17
Kylie Chamberlain	3	3

Table 6: Board of Directors' terms of appointment

Director	Appointed	Expires
Stephen Edwell	30 April 2018	29 April 2021
Ian Mickel AM	1 May 2011	30 April 2013
<i>Second term</i>	11 November 2014	10 November 2017
<i>Remained in the position until</i>		29 April 2018
Rosemary Wheatley	13 November 2012	30 July 2015
<i>Second term</i>	26 October 2016	25 October 2018
Peter Oates	11 November 2014	10 November 2017
<i>Second term</i>	26 October 2016	25 October 2019
Professor Ray Wills	11 November 2014	10 November 2016
<i>Second term</i>	26 October 2016	25 October 2019
Emeritus Professor Jeanette Hackett AM	26 October 2016	25 October 2017
<i>Remained in the position until</i>		29 April 2018
Neil Thompson	26 October 2016	25 October 2018
Kylie Chamberlain	30 April 2018	29 April 2020

Audit and Risk Management Committee

The Audit and Risk Management Committee (ARMC) is a sub-committee of Horizon Power's Board of Directors. Its role is to help the Board discharge its responsibility to provide oversight of, and corporate governance for, the company. The ARMC is accountable, and reports, to the Board.

A key role of the ARMC is to provide assurance to the Board that Horizon Power's core business goals and objectives are being achieved in an efficient and cost-effective manner within an appropriate framework of internal control and risk management.

Financial reporting

The ARMC performs an overview in relation to financial reporting by:

- considering whether Horizon Power's accounting policies and principles are appropriate
- assessing significant estimates and judgements in the financial reports
- reviewing management's process for ensuring compliance with laws, regulations and other requirements relating to the external reporting obligations of Horizon Power
- assessing information from the internal and external auditors regarding the quality of financial reports, and
- reviewing the management of Department of Treasury operations.

Internal control and risk management

The ARMC provides oversight of the identification of risks and threats to Horizon Power, as well as the processes by which those risks and threats are managed. The ARMC also assesses and adds value to Horizon Power's corporate governance, internal control and internal audit functions.

Compliance with laws and regulations

The ARMC seeks assurance from management that a framework has been established for compliance with laws, regulations and standards.

Relations with external auditors

The ARMC meets with the external auditors to discuss the scope and results of their audits and resolve any disagreements about matters raised with management.

Composition of the ARMC

The ARMC comprises:

- Peter Oates, Chair
- Rosemary Wheatley, Director
- Emeritus Professor Jeanette Hackett AM, Director (term concluded 29 April 2018).

ARMC meetings in 2017/18 were attended by:

- Frank Tudor, Chief Executive Officer
- David Tovey, Company Secretary and General Manager Corporate Services
- Mike Houlahan, General Manager Commercial Services and Finance
- Frank van der Kooy, General Counsel
- Liang Tay, Risk and Audit Manager
- Lance Roberts, Manager Safety and Health.

Corporate Affairs and Communications Committee

The Corporate Affairs and Communications Committee (the CAC Committee) is a sub-committee of the Board of Directors of Horizon Power. The CAC Committee's role is to assist the Board in discharging their responsibility of oversight of the corporate affairs, customer and stakeholder communications functions as well as oversight of marketing and customer engagement activity and change-management. In doing so, the CAC Committee is accountable to the Board.

A key role of the CAC Committee is to provide reasonable assurance to the Board that Horizon Power's communications and corporate affairs objectives are being discharged in an efficient and effective manner, within appropriate frameworks.

Composition of the CAC Committee

The CAC Committee comprises:

- John Le Cras, Chair
- Professor Ray Wills, Director
- Neil Thompson, Director
- Bob Cronin AM, Adviser.

CAC Committee meetings in 2017/18 were attended by:

- Frank Tudor, Chief Executive Officer
- David Tovey, Company Secretary and General Manager Corporate Services
- Tracy Armson, Manager Communications
- Brendan Bourke, Manager Stakeholder Relations
- Wendy Pryer, Government Relations Specialist
- Andrew Riches, Brand and Digital Communications Manager
- Rebekah Spencer, Communications Consultant.

Governance and corporate compliance disclosures

In compliance with the accountability provisions of the *Electricity Corporations Act 2005* (the Act), Horizon Power provided the Minister for Energy with a quarterly report for the first three quarters of the 2017/18 financial year and this annual report for the entire financial year.

Each of the quarterly performance reports were submitted to the Minister for Energy one month after the end of the quarter. Each report included an overview of performance and highlights of important achievements. This annual report will be provided to the Minister

for Energy within the time specified by the Act and includes:

- consolidated financial statements and other statutory information required of Horizon Power under the Act
- a comparison of performance with Statement of Corporate Intent targets, and
- other information required by the Act to be included.

In addition to quarterly and annual reports, the Act requires the Minister for Energy be provided with:

- a five-year Strategic Development Plan and a one-year Statement of Corporate Intent

- a separate report on employee compliance with any issued codes of conduct, and
- any specific information in Horizon Power's possession requested by the Minister for Energy.

A copy of the Annual Report will also be provided to the Public Sector Commissioner, as required by the Act

Ministerial directions

No Ministerial directions were received by Horizon Power during the year.

Likely developments in operations in future years

On 4 August 2017, the Minister for Energy received an application from Alinta Energy to have the portion of the North West Interconnected System (NWIS) owned and operated by Horizon Power covered under the *Electricity Networks Access Code 2004*. The NWIS is a regional electricity network in the Pilbara region. On 2 February 2018, the Minister published a Final Coverage Decision in respect to Alinta Energy's application. The Minister determined that Horizon Power's electricity transmission and distribution network in the NWIS will be covered under the Code, effective 1 January 2020.

The decision to cover Horizon Power's NWIS network raises a number of important policy implications for Government and Horizon Power, principally in respect of the introduction of competition into a currently existing monopoly market.

Table 7: ARMC meetings and attendance for 2017/18

Director	Number of meetings attended	Number of meetings eligible to attend during the time the Director held office during the year
Peter Oates	6	6
Rosemary Wheatley	6	6
Emeritus Professor Jeanette Hackett AM	5	5

Table 8: CAC Committee meetings and attendance for 2017/18

Director	Number of meetings attended	Number of meetings eligible to attend during the time the Director held office during the year
John Le Cras (Chair)	6	6
Professor Ray Wills	6	6
Neil Thompson	5	6
Bob Cronin AM	6	6

Shares in statutory authorities

N/A

Shares in subsidiary bodies

N/A

Declarations of interest

Horizon Power's Code of Conduct and Conflicts of Interest Policy are endorsed by the Board and Executive and provide all employees with information on what constitutes a conflict of interest and how such should be managed. A conflict of interest may arise in a number of situations involving a disparity between the interests of Horizon Power and the interests of the relevant individual.

Members of the Board are required to declare any interests at all Board meetings.

Stephen Edwell

- None declared

Ian Mickel AM

- Director of Telac Pty Ltd

Rosemary Wheatley

- Director, Guumbarr Ltd
- Chairperson, Karratha Central Serviced Apartments

Peter Oates

- None declared

Professor Ray Wills

- Owner and Managing Director, FDRW Pty Ltd trading as Future Smart Strategies
- Partner and Chair, Sun Brilliance Power Pty Ltd, and Non-executive director of Indian subsidiary, Sun Brilliance Energy (India) Pty Ltd

- Owner and Managing Director, Sun Brilliance Solar One Pty Ltd
- Owner and Managing Director, Blue by Design Pte Ltd (Singapore) and its Australian subsidiary Blue by Design Pty Ltd
- Non-executive director, PowerMinder
- Non-executive director, BioTek Fuel
- Adjunct Professor at The University of Western Australia and UWA spokesperson on climate change, sustainability and new technology.

Emeritus Professor

Jeanette Hackett AM

- Director, Ivywest Pty Ltd, trustee for the Ivywest Super
- Director, Random Valley Vineyard Estate
- Member, governing board of Christ Church Grammar School.

Neil Thompson

- Non-executive director, Smiling Mind Inc.
- Advisory board member, ANU Australian Centre on China in the World
- Adviser to Sendle
- Industry adviser panel member to TFE Hotels Ltd
- Advisory Council member of OnPointLoyalty LLC

Kylie Chamberlain

- Director, West Coast Fever Netball Club Limited
- Director, Herman Property Pty Ltd

Frank Tudor

- Board member, ANU China in the World Advisory Committee
- Member, WA Museum Taskforce
- Board member, Energy Networks Australia
- Chair, Energy Networks Australia, Asset Management Committee
- Member, General Council, Chamber of Commerce and Industry of Western Australia
- Expert panel member, Australian Energy Market Operator

Indemnification of Directors

The Directors' and Officers' Liability Insurance Policy insures (amongst others) Horizon Power's directors and officers, shadow directors, and employees, and it covers all loss resulting from a claim made against an insured person during the policy period, subject to any exclusions set out in the policy.

Horizon Power does not indemnify any director or auditor.

At the date of this report no claims have been made against the directors' and officers' component of the policy.

Emoluments paid to Board members and senior executives

Board members are appointed by the State Government under the *Electricity Corporations Act 2005* following State Government approval processes that also outline the compensation payable for their services.

The Chief Executive Officer's remuneration is determined by the Salaries and Allowances Tribunal, and

performance is assessed by the Board annually against KPIs listed in the Strategic Development Plan.

Senior executive salaries have previously been reviewed annually, determined, and paid in accordance with market evaluations and Horizon Power's human resource policies.

Remuneration settings have been changed to align with State Government policy, specifically by implementing a remuneration freeze for all comparable positions to those covered by the Salaries and Allowances Tribunal, which includes Horizon Power's senior executives.

Principles used to determine the nature and amount of compensation

Compensation approval protocols are as follows:

- provide market-competitive remuneration to employees, having regard to both the level of work assigned and the effectiveness of performance
- allocate remuneration to employees on the basis of merit and performance, and
- adopt performance measures that align the interests of employees with the interests of key stakeholders.

Non-executive directors

Payment to Non-executive directors consists of base remuneration and superannuation.

Chief Executive Officer and Executives

The Chief Executive Officer and Executives' compensation framework is based on a total package that includes total fixed remuneration structures with:

- cash
- selection of prescribed non-financial benefits
- superannuation
- remote location and housing benefits where applicable, and
- cost of fringe-benefit tax.

Total fixed remuneration

The compensation framework is market-competitive and performance-based, with flexibility for the package to be structured at the Executive's discretion upon a combination of cash, a selection of prescribed non-financial benefits, superannuation and cost of fringe-benefits tax. External remuneration consultants provide analysis and advice to ensure remuneration is set to reflect the market for a comparable role. Remuneration for executives is reviewed annually to ensure the level is market-competitive. There are no guaranteed remuneration increases included in any executive contracts.

Non-financial benefits

Selection available: cost of novation of selected motor vehicle and the cost of fringe-benefits tax. As stated above, housing benefits are also provided to executives who reside in remote locations.

Superannuation

Paid in accordance with the amount required under the *Superannuation Guarantee (Administration) Act 1992* (Cth) on the executive's behalf to a superannuation fund that is a complying superannuation fund within the meaning of that Act.

Legislation

The *Electricity Corporations Act 2005 (WA)* establishes Horizon Power as a corporation with responsibility of the provision of electricity outside the South West Interconnected System and sets out the powers and duties of the corporation.

Electricity licences

The *Electricity Industry Act 2004 (WA)* requires participants who generate, transmit, distribute or retail electricity in Western Australia to obtain a licence to operate. Licences are issued by the Economic Regulation Authority (ERA or the Authority). Horizon Power was issued with an Integrated Regional Licence on 30 March 2006.

The Integrated Regional Licence requires Horizon Power to comply with a number of codes, including:

- *Code of Conduct for the Supply of Electricity to Small Use Customers 2018*
- *Electricity Industry (Network Reliability and Quality of Supply) Code 2005*
- *Electricity Industry (Metering) Code 2005*.

Table 9: Board of Directors' and Executive remuneration for 2017/18

Remuneration 2017/18	Cash salary and fees \$	Super annuation \$	Termination benefits \$	Others \$	Total \$
Non-executive directors					
I Mickel AM (Chairman) ¹	80,384	7,636			88,020
S Edwell (Chairman)	14,615	1,388			16,003
R Wheatley (Director)	60,000	5,700			65,700
R Wills (Director)	45,000	4,275			49,275
P Oates (Director)	45,000	4,275			49,275
N Thompson (Director)	45,000	4,275			49,275
J Hacket AM (Director) ²	38,077	3,617			41,694
K Chamberlain	6,923	658			7,581
Disclosure for the five Executives with the highest emoluments					
Z Wilk (General Manager Pilbara Grid) ³	392,101	23,947	652,505	52,793	1,121,346
B Hamilton (Executive Manager)	221,461	21,899	369,051		612,411
F Tudor (Chief Executive Officer) ⁴	476,839	45,300		84,667	606,806
H Grover (General Manager Microgrid Operations) ⁵	-	-		429,000	429,000
M Paterson (General Manager Consumer Energy)	390,938	37,139			428,077

1 Ceased as Chairman on 29 April 2018.

2 Ceased as director on 29 April 2018.

3 Other remuneration paid to Z Wilk includes a regional travel allowance of \$18,297 (2017: \$18,291), and non-monetary benefits such as housing and air conditioning subsidies of \$34,496 (2017: \$50,831). These benefits are common to a wide range of industries operating in regional locations. The termination benefits to Z Wilk were paid in July 2018.

4 Other remuneration paid to F Tudor includes a regional travel allowance of \$48,000 (2017: \$47,123) and non-monetary benefits of \$36,667 (2017: \$17,041).

5 Amount paid to H Grover's contracting company for his services as general manager of Microgrid Operations.

Compliance with other legislation

Horizon Power has a number of controls and systems in place that support the business in complying with all legislation and regulations affecting its activities. They include an online compliance register, as well as compliance-mapping and monitoring software.

Restriction on the area within which Horizon Power may operate

Within Western Australia, the performance of Horizon Power's functions is limited to those parts of the State that are not serviced by the South West Interconnected System.

Observance of the Code of Conduct

Section 33 of the *Electricity Corporations Act 2005 (WA)* (the Act) requires the Board of Horizon Power to provide to the Minister for Energy, at the same time as delivering its annual report, a separate report on the observance of its Code of Conduct by employees.

The Board confirms, consistent with section 31 of the Act that Horizon Power's Code of Conduct was updated after consultation with the Public Sector Commissioner and was adopted by the Board at its meeting in December 2016.

The updated Code of Conduct has been circulated to all Horizon Power employees and is available on its intranet. The Board and the Chief Executive Officer, under delegated authority, assign accountability to managers in the organisation to ensure observance of the standards of conduct and integrity by employees.

During the year there were three minor misconduct matters. One of the matters was reported during the year while two other matters are in the process of being reported to the appropriate authority.

State Records Act 2000

Horizon Power maintains and supports high-quality record-keeping practices in its day-to-day business activities. The function of managing records resides within individual business divisions.

All records are managed according to the requirements of the *State Records Act 2000* and Horizon Power's approved record-keeping plan. Horizon Power's record-keeping plan is reviewed annually to ensure currency, and updates are submitted to the Minister for Energy for approval.

Regular reviews of record-keeping systems and practices are conducted as required to ensure efficiency and effectiveness. Training programs for core systems, supplemented by the provision of relevant information on the business' intranet, are provided and reviewed to ensure they reflect new business requirements.

Horizon Power's online employee induction includes the business' Code of Conduct, which explains an employee's responsibilities with respect to information and knowledge management. Horizon Power regularly reviews its induction process to ensure it includes all relevant information for employees and will continue to refine this process. Additional information about this is easily accessible to all employees on Horizon Power's intranet.

Western Australian Electoral Act 1907

In accordance with the requirements of Section 175ZE of the *Western Australian Electoral Act 1907*, the following information is presented in respect of expenditures (excluding GST) incurred by Horizon Power during 2017/18. This expenditure includes costs associated with public safety advertising campaigns, planned outage notifications, self-read meter mail outs, research and recruitment.

- **Advertising agencies:** \$433,255.88: Capture Branding, Equilibrium, Rare Creative, Split Screen Productions
 - **Market research organisations:** \$87,612: Metrix Consulting
 - **Polling organisations:** N/A
 - **Direct Mail organisations:** \$988.75
 - **Media advertising organisations:** \$238,878.62 Adcorp, Media 365, Market Creations Pty Ltd, Carat
- Total expenditure was \$760,735.25**

Environmental regulations

The primary environmental legislation in WA is the *Environmental Protection Act 1986*, which gives rise to many regulations. The main regulations relevant to Horizon Power include, but are not limited to:

- *Environmental Protection Regulations 1987* provide generally for the prevention and control of pollution and ensure that appropriate processes are established to manage pollution, noise and other environmental impacts generated by construction and operations.

- *Environmental Protection (Controlled Waste) Regulations 2004* provide for the licensing of carriers, drivers and vehicles involved in the transportation of controlled waste on public roads.
- *Environmental Protection (Native Vegetation Clearing) Regulations 2004* protect all native vegetation in Western Australia. Clearing native vegetation is prohibited, unless a clearing permit is granted by the Department of Water and Environmental Regulation or the clearing is for an exempt purpose.
- *Environmental Protection (Unauthorised Discharges) Regulations 2004* provide for the prevention of unauthorised discharge of potentially environmentally harmful materials.
- *Environmental Protection (Noise) Regulations 1997* provide for noise emitted on a premises or public place and received on another premises.

Horizon Power operates in accordance with other relevant environmental obligations, which include, but are not limited to:

- *Environmental Protection and Biodiversity Conservation Act 1999 (Commonwealth)*
- *Contaminated Sites Act 2003*
- *Dangerous Goods Safety Act 2004*
- *National Greenhouse and Energy Reporting Act 2007*
- *National Environment Protection (National Pollutant Inventory) Measure 1998*
- *Biodiversity Conservation Act 2016*
- *Wildlife Conservation Act 1950*

The performance of Horizon Power in relation to environmental obligations is discussed further in the Environment and Heritage section.

Operations during the 2017/18 financial year

The *Electricity Corporations Act 2005* stipulates the specific and general information that is to be reported within the Directors' Report for the current financial year.

To avoid duplication of content, please refer to the Operational Performance Report section for a review of Horizon Power's operations during the financial year and the results of those operations.

Financial performance

Horizon Power ended the year with a net profit after tax of \$111.9 million (2016/17: \$35.4 million).

Total income for the year recorded an increase of 34 per cent (\$660 million compared to \$492.5 million) mainly driven by revenues related to the Onslow DER and South Hedland power stations, higher electricity sales (+\$36.8 million), higher tariff equalisation fund (+\$17 million), offset by lower contributions from community service obligations (-\$29.1 million).

Overall, operating expenses recorded an increase of \$6.6 million (5.6 per cent) compared to last year due to liquidated damages of \$2.4 million and higher maintenance costs, including vegetation control due to high rainfalls.

Depreciation and Amortisation increased by \$1.2 million compared

to last year (\$89.6 million compared to \$88.4 million) mainly as a result of higher property, plant and equipment capitalised in the year. Financing costs decreased by \$3.7 million following a net repayment of debt of \$83.3 million during the year.

Balance sheet

Horizon Power's net assets increased by \$111 million, which was financed by a mix of equity contributions of \$42.9 million, and by retained earnings.

Total asset base increased by \$66.7 million to \$1,829 million, mainly made up of property, plant and equipment at \$1.58 billion. Major projects undertaken during the year are listed in the capital expenditure program below.

As at 30 June 2018, cash at bank was \$128 million, mainly through short-term liquidity debt.

Capital expenditure

Horizon Power delivered a \$138.2 million capital expenditure program in 2017/18. Significant expenditures for the year were \$34.4 million on the Asset Management Plan; \$39.6 million on the Onslow Distributed Energy Resources project, \$21.4 million on the Roy Hill Power Supply, \$13.9 million on the Pilbara Underground Power Project and \$11.1 million on customer funded works.

Dividends

During the year, Horizon Power paid dividends of \$43.8 million to the State Government, representing dividends on profits of 2016/17 of \$17.2 million and an interim dividend of \$26.6 million for 2017/18.

Glossary of terms

Advanced meter	or smart meter, is a device that measures the amount of electricity used in real time and sends this information back to Horizon Power. Advanced meters collect large amounts of data that can be interpreted to provide customers with tailored energy efficiency advice and alternative ways of paying for electricity, enable energy trading, and improve network security and safety. Advanced meters can be read remotely and allow electricity supply to be remotely switched on or off.
Advanced microgrids	are powered by integrating centralised power generation with very significant levels of distributed energy resources (DER) located on customer sites and connected to the distribution network. They enable customers' DER to provide services to the network in exchange for a financial benefit and support the trading of power between customers. Advanced microgrids will be a key building block of high-DER electricity systems as they maximise reliance on intermittent renewable generation, better balance supply and demand, reduce extreme peak demand, and increase energy efficiency and service reliability.
Centralised / traditional generation	large-scale electricity generation produced at centralised facilities and typically fuelled by gas or diesel.
Demand management	an automated process that enables customer loads to rapidly decrease or increase their electricity use in response to changes in the condition of the grid and/or changes in energy price or other information. Demand management is most suitable for significant customer loads such as air conditioning, electric water heating, water pumping, and the charging of energy storage or electric vehicles. In a high-DER environment it can be used to both reduce the intensity of peak demand periods and better match appliance runtimes with times where there is an oversupply of renewable energy.
Distributed energy resources (DER)	dispersed power generation, energy storage, and demand management located at customer premises or connected directly to the distribution network. While DER is often used to refer to renewable generation sources, it also includes dispersed non-renewable generation sources.
Energy storage	a means of storing energy within an electricity system, either directly or indirectly. Storage may be either centralised or distributed throughout a network. Examples include batteries, power capacitors, flywheels, and pumped hydro systems.
Feed-in-management (FIM)	a type of generation management in which participating customers allow Horizon Power to manage the output of their solar generation to better match supply with demand and help prevent system instability.
Fringe of grid (FoG)	network infrastructure at the remote edge of the grid.
Government trading enterprise (GTE)	a government body that derives its prime source of revenue from the sale of goods and services in a commercial environment.

Generation management (GM)	used to monitor, control, and optimise the performance of generation, particularly rooftop solar. Generation management controls the output of rooftop solar, and allows more renewable energy to be hosted across Horizon Power's electricity systems.
Grid / off-grid	the electrical grid is the interconnected network delivering electricity from producers to consumers, consisting of generation, transmission, and distribution assets. Off-grid power systems are not connected to the main electricity network and can be stand-alone power systems that provide a smaller community with electricity.
Lost-time injury frequency rate (LTIFR)	a formula to provide the number of lost time injuries to be sustained, per one million hours worked, over a given 12 month period.
Master meter	the main meter which measures the total electricity supplied to a building or a remote community.
Microgrid	a geographically confined collection of electrical resources that act together, with centralised generation typically playing a key role. Microgrids can be remote, embedded, or interconnected and may begin their life either detached or attached to a larger grid.
Micro power system (MPS)	a new utility asset class designed to provide remote customers with a full electric utility service, without requiring a traditional poles and wires network connection. Distinct from privately-owned stand-alone power systems (SPS), they are fully integrated across all utility back-office systems, designed for multi-decade life cycle efficiencies and capable of being fleet-managed in the thousands.
Notifiable public safety incidents	an incident or event that is caused, or significantly contributed to, by electricity and that results in serious injury; or serious damage.
Photovoltaic (PV)	the conversion of light into electricity using solar panels.
Pre-payment meter	billing system where customers pay for electricity before it can be consumed.
Stand-alone power system (SPS)	most commonly used to describe privately owned off-grid power systems that provide electricity to a single customer through a combination of energy storage and both renewable and fossil-fuel generation.
System blueprints	the system Horizon Power uses to determine the optimal supply models for each of its microgrids over the long term.
Unassisted pole failure	an unassisted failure of a pole, as defined by Regulation 28 of the Electricity (Network Safety) Regulations 2015, is summarised as a network pole breaking or collapsing due to a force greater than its design specification.
Uniform tariff policy	all retail electricity customers in Western Australia are charged the same rate, even though the true cost to supply differs by system and region.

