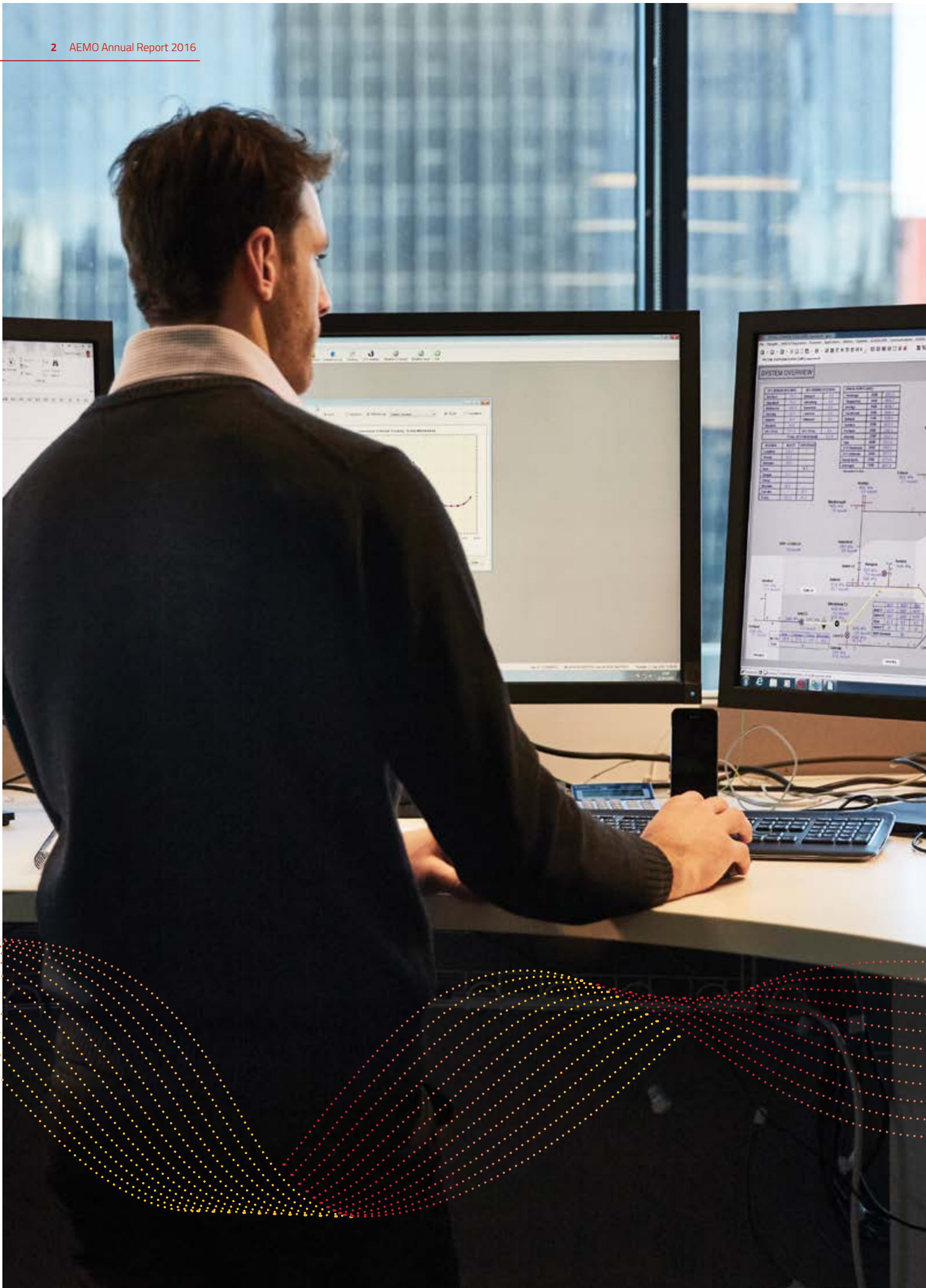


Transitioning to a new energy world

Australian Energy
Market Operator
2016 Annual Report



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Message from the AEMO Chair

Australia's changing energy landscape has now become a regular subject of discussion in national media, as well as continuing to be a focus throughout industry and government jurisdictions, as the power generation mix continues to shift towards a higher percentage of renewable, lower emission sources. AEMO has a vital responsibility to provide independent reliable guidance to participants, governments and all stakeholders on how Australia can make this transition while safeguarding the reliability and security of energy supply to all Australian consumers.

AEMO faces a number of new challenges, and we are not alone. The transformation of the energy sector presents system operators around the world with the same challenges: the reinforcement of networks to accommodate changing energy supply/demand patterns and the integration of distributed energy sources; the variability of renewable power generation such as wind and solar; changing energy consumption patterns in response to end-use efficiency improvements and local demand-side management programs; and the integration of electric vehicles and other emerging technologies such as battery storage.

We are constantly evaluating and refining our work and focus to respond to these factors, their potential effects on energy security, and the opportunities they present. Internationally, AEMO is committed to continuing to work closely with GO15 – the group of the world's largest energy system operators – to share experiences and learn from our counterparts around the world. Locally, we have created a new national Power System Issues Technical Advisory Group to study these same challenges and eventually assess possible solutions to suit Australia.

Change is our reality as an independent market and system operator. Perhaps no change has greater potential to deliver immediate, tangible benefits to consumers than the NEM Power of Choice program, with policy and procedural changes in how networks operate expected to start making a real difference to consumers' experience in the year ahead.



In the past year, AEMO was proud to respond to the Western Australia government's request to take responsibility for the wholesale and retail electricity market there. The WEM is different to the NEM, but is experiencing a similar transformation, with one in five households now generating energy from rooftop solar. AEMO supports Western Australia's electricity market reform process, and is committed to providing independent strategic advice and guidance based on our experience in operating energy markets across Australia.

The east coast gas market has also been challenged, with the ramp up of export liquefied natural gas (LNG) in Queensland testing domestic gas supply capacity. Although there is supply to meet domestic gas demand in the short term, AEMO has indicated to the market that timely development of additional gas reserves is required to ensure adequate domestic gas supply for the next decade.

AEMO provided a detailed submission to the Australian Energy Market Commission's East Coast Gas Review. We remain committed to working with all stakeholders to evolve efficient and secure domestic gas markets.

The COAG Energy Council has agreed to a major new program of work to ensure the energy system remains affordable and reliable as we transition to a lower emissions future. The Council will form a new Gas Market Reform Group, which will oversee the most significant reforms to the domestic gas market in two decades. These reforms will improve competition, encourage more supply and put downward pressure on prices. They will require AEMO to deliver a number of strategic development projects over coming years.

It is vital that AEMO continues to provide independent strategic advice and insights to market participants and policy-makers through the information we publish in our major reports, and the information we continually make available to market participants and governments, whether online, through stakeholder forums, or in day-to-day discussions. The Board of Directors welcomes the leadership shown by AEMO in identifying and exploring solutions to the current and future challenges of operating secure energy systems and markets.

One very difficult change faced by AEMO and the wider industry this year was the very sad, sudden loss of our founding Managing Director and Chief Executive Officer Matt Zema in July 2016. Matt was not just AEMO's leader, but the heart and soul of the organisation for eight years and an invaluable asset to the Australian and international energy communities. He was a great leader, a passionate reformer and a good friend to me and many colleagues. His loss

"AEMO has a vital responsibility to provide independent reliable guidance to participants, governments and all stakeholders on how Australia can make this transition while safeguarding the reliability and security of energy supply to all Australian consumers."

was a severe shock. Perhaps his best tribute is the strength demonstrated by the whole AEMO team in maintaining strong continuous service delivery performance to all our stakeholders through this very difficult period.

AEMO is in the business of looking forward, and we know the coming 12 months and the years ahead will continue to be challenging. Together with other board members, I am confident that AEMO's strategic plan, and the talent and commitment of our team will continue to deliver outstanding support and guidance to market participants, consumers, and all our stakeholders.



Dr. Anthony Marxsen
AEMO Chair

Message from the Acting Chief Executive Officer

It is with conflicting emotions that I write this introduction to AEMO's 2016 Annual Report. I am immensely proud of the many achievements made by our dedicated, talented workforce throughout this reporting period, however I author this note as Acting Chief Executive Officer following the sudden passing of Matt Zema in July 2016.

Matt was AEMO's founding Managing Director and Chief Executive Officer, and on behalf of the Leadership team, I would like to extend my sincere thank you for the condolences and heartfelt support which we have received from our broad range of stakeholders.

AEMO expanded its functions in November 2015, when we were asked to take on the responsibility as electricity wholesale and retail market operator in Western Australia, and on 1 July 2016, AEMO was established as the independent system operator for Western Australia. This transition represents the opportunity to establish the right model to achieve the market objectives of reliability and efficiency in investment and operation, in the long-term interests of consumers.

There has been a lot of discussion on the rapid transformation of the energy industry. In Australia and around the world, changes in generation, demand, and storage are raising the complexities of power systems and grids to new levels, and there is no slowing down in sight as consumers are able to take greater control over their usage and costs, and governments commit to reducing carbon emissions.

The industry continues to evolve, with growth in renewables, emerging technologies, battery storage, and withdrawals of traditional generation. This rapid transformation requires agility and innovative solutions from independent system operators, market participants, policy-makers, governments, and consumers and communities alike.

For AEMO, as Australia's independent energy market and system operator, the challenges are complex, technical and wide-ranging. We are responding by delivering quality data and insights to the markets, government and other stakeholders, and by working with stakeholders to identify opportunities and challenges to power system security and stability that could arise in both the immediate and long-term future, and promoting workable, effective, and efficient solutions.

Changes to generation, the role of the transmission system, and consumer choices have been the context for our key forecasting and planning publications this year. We have improved modelling approaches, and modelled a range of new sensitivities in recognition of technical, economic, political and other uncertainties that could affect our projections.

Our major reports have provided the market with appropriate signals for change. Looking at electricity, the projected future consumption from the grid is not forecast to grow with population and economic growth, but be flat, offset mainly by increasing energy efficiency and by electricity sourced by consumers themselves from rooftop photovoltaic (PV) systems.

This demand trend impacts supply projections, and emphasises a shift in the type of supply that is required to maintain power system security. Our August 2015 Electricity Statement of Opportunities outlined the growing importance of network and non-network developments to securely manage an evolving, lower carbon electricity generation future.

Our national gas forecasts suggest consumption will remain relatively flat following an initial large spike in demand due to liquefied natural gas (LNG) export facilities ramping up in Queensland over the next five years.

“We are responding by delivering quality data and insights to the markets, government and other stakeholders, and by working with stakeholders to identify opportunities and challenges to power system security and stability that could arise in both the immediate and long-term future, and promoting workable, effective, and efficient solutions.”



In March 2016, AEMO’s Gas Statement of Opportunities (GSOO) projected that development would be needed in the short term to maintain longer-term security of supply, and that timely development of undeveloped gas reserves and resources will be crucial to ensuring there is sufficient gas supply to meet forecast domestic demand to 2035.

AEMO also specifically addressed challenges to power system security in a report looking at integrating renewable generation in South Australia. This update report noted the increasing importance of the Heywood Interconnector in the secure and reliable operation of the South Australian power system.

More broadly, we initiated the Future Power System Security (FPSS) program in December 2015 to formalise and accelerate the work we have been progressing over the last few years to address operational challenges that may arise from the changing generation mix and could test the efficiency and adequacy of current operational and market processes. The FPSS program’s objective is to adapt AEMO’s capability so power system security can be maintained through the generation mix changes. With a technical advisory group representing the energy industry and regulators, we have begun

work on identifying and prioritising challenges that are affecting or may affect power system security over the next decade, so solutions (including any recommended changes to rules, guidelines and procedures) can be promoted as soon as practicable.

Our system and network has changed a lot in the past year, as it has in the last five years, and we are ready for even greater change in the years ahead. By working closely with stakeholders, by sharing our planning and analysis, data and insights, and by constantly improving the quality of these services, we support informed decision-making so the market can respond to the changing world in ways that deliver security and efficiency benefits.

Reflecting on the past year, we have continued to evolve our role, our processes, and our publications so we can continue to deliver our vision – energy security for all Australians. We welcome both the opportunities and challenges that lie ahead and look forward to working with all stakeholders in pursuit of efficient outcomes for all.

K Olesnicky

Karen Olesnicky
Acting CEO AEMO

Who we are

AEMO's vision – energy security for all Australians

Established in 2009, the Australian Energy Market Operator (AEMO) is the independent operator of energy markets in eastern, south-eastern, and Western Australia.

AEMO is responsible for operating Australia's largest gas and electricity markets and power systems, including the:

- National Electricity Market (NEM), the interconnected power system in Australia's eastern and south-eastern seaboard.
- Wholesale Electricity Market (WEM) in Western Australia.
- Victorian Declared Wholesale Gas Market (DWGM) and the Victorian gas transmission system.
- Wholesale gas Short Term Trading Market hubs in Adelaide, Sydney, and Brisbane.
- Gas Supply Hub - including Wallumbilla and Moomba supply hubs.
- Natural Gas Services Bulletin Board.
- Western Australia Gas Bulletin Board.

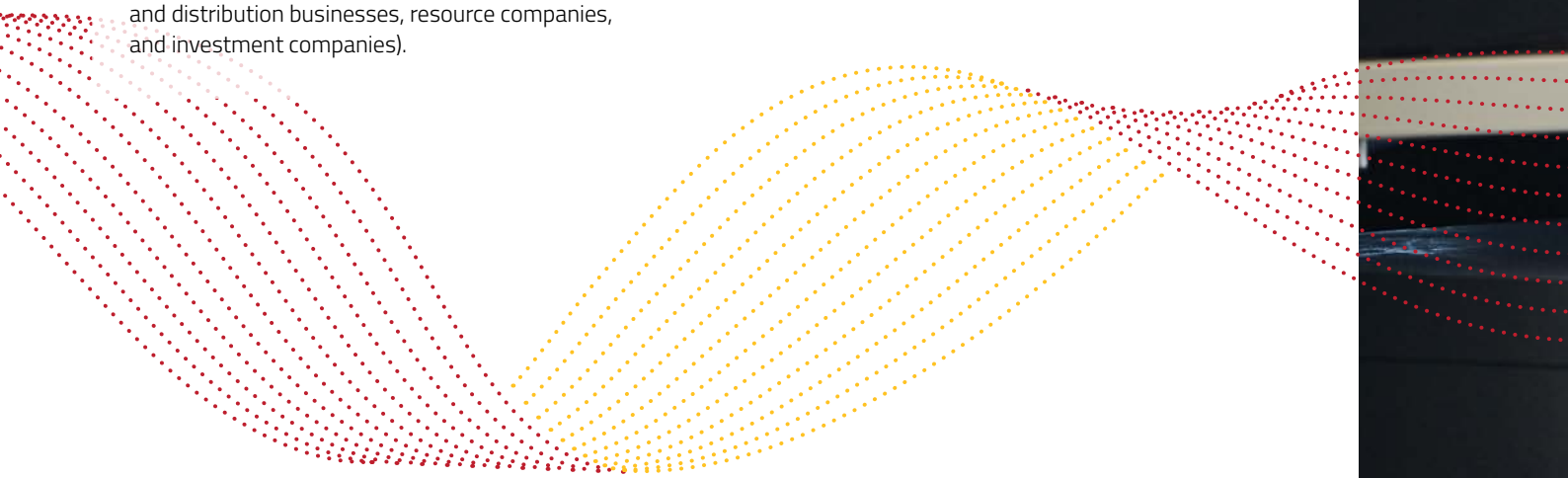
As the national energy market operator and planner, AEMO plays an important role in supporting the industry to deliver a more integrated, secure, and national energy supply, for the long-term benefit of Australian consumers.

AEMO's ownership structure comprises 60% government members and 40% industry members (including generators, transmission companies, retail and distribution businesses, resource companies, and investment companies).

AEMO operates on a cost recovery basis as a company limited by guarantee under the *Corporations Act (2001)*. AEMO fully recovers its operating costs through fees paid by participants.

As Australia's independent energy markets and power systems operator, AEMO provides critical planning, forecasting and power system information, security advice, and services to our stakeholders.

AEMO's vision, mission, and values reflect continuing transformational change in the energy sector. They also refine what our stakeholders expect from AEMO and how we can keep contributing most effectively to meeting Australia's energy security needs.





AEMO's vision, mission, and values focus on the best interests of our stakeholders and communities, now and into the future.



OUR VALUES

Accountable | Stakeholder-focused | One team | Pride and passion

Strategic Initiatives 2016–18

AEMO's 2016–18 Strategic Initiatives outlined below are an extension of what was set at the beginning of the 2015–16 financial year.



Forecasting and Planning

- Publish relevant forecasts and planning information to a frequency that meets stakeholder needs:
 - Publish quarterly gas insights from December 2016.
 - Publish quarterly electricity insights from July 2016.
- Medium and long term system adequacy assessments to reflect the changing environment:
 - Stakeholders consulted on changing needs to MT PASA tool by November 2016.
 - Redevelop MT PASA reliability assessment in 2017.



Markets

- Facilitate the effective trade of gas across the eastern coast of Australia:
 - Enhancement of and access to system information on the National Gas Market Bulletin Board by October 2016.
 - Implement Operational Hub Services at the Wallumbilla Gas Supply Hub by March 2017.
 - Input to the Australian Energy Market Commission (AEMC) East Coast Gas Market and Pipeline Review.
- Facilitate electricity retail competition and consumer choice through:
 - Implementing the new B2B electricity framework by December 2017.
 - Implementing Metering Competition and Embedded Networks by December 2017.
 - Successfully establishing the Information Exchange Committee in accordance with the rules.
- Successfully manage the transition into AEMO of the functions of the Retail Energy Market Company Limited (REMCO), the gas retail market operator for Western Australia.



Data and Information

- Deliver data and information services that stakeholders require to facilitate competition:
 - Develop and publish an initial data and information plan by September 2016.
 - Establish data-sharing arrangements with stakeholders and key organisations from September 2016.
 - Participate in the Energy Use Data Model project under the National Energy Productivity Plan from June 2016 to completion in 2018.
 - Enhance data and analytical capability to increase the value of insights and information to meet stakeholders' needs.



Stakeholder Engagement

- AEMO is impartial, open and transparent by:
 - Publishing 'AEMO's Stakeholder Commitment' by December 2016 and engaging stakeholders on potential issues and solutions.
 - Working with stakeholders to support delivery of effective market reform.
 - Reviewing the Consumer, National Electricity Market, and Gas forums and recommending improvements by December 2016.
 - Enhancing our relationships with the three other key institutions – the Australian Energy Regulator (AER), the AEMC, and Energy Consumers Australia (ECA).



AEMO Fees

- Structure our fees to reflect the changing environment:
 - Review structure of all gas fees by mid 2018.
 - Submit Allowable Revenue submission to the Economic Regulation Authority for all Western Australian functions by September 2016.
 - Determine whether the recovery of costs related to the Power of Choice program requires a change to the electricity fee structure by June 2017.



Power System Security

- Adapt AEMO's capability to manage the security of Australia's power system in a changing market environment:
 - Identify potential technical solutions to the priority operational challenges identified with stakeholders by December 2016.
 - Develop potential amendments to the regulatory framework to maintain security in the future. In 2016–17 this includes:
 - A revised framework for emergency frequency control.
 - A range of measures to enhance the development of the power system and to maintain security under credible contingencies.
 - Establishing processes so AEMO has access to necessary information from distributed energy resources.
 - Ensure operational mechanisms are in place to manage system security at all times.



Western Australian Electricity Market Review

- Through proactive engagement with stakeholders, lead the implementation of the Electricity Market Review:
 - Effectively manage the transition of System Management functions to AEMO.
 - Implement initial changes to the Reserve Capacity Mechanism by July 2016, with final changes implemented by July 2018.
 - Take accountability for Retail Market Operations in July 2018.
 - Develop and implement Wholesale Electricity Market improvements, including constrained market dispatch by July 2018.



AEMO's new role in Western Australia

AEMO is honoured to undertake the role of independent energy market operator and independent power system operator in Western Australia.

November 2015 saw the transfer of the operation of the wholesale electricity market in Western Australia (WA) to AEMO. The Wholesale Electricity Market (WEM) operates in the South West interconnected system (SWIS) and serves over one million customers.

The Western Australian government asked AEMO to assume responsibility of the WEM, with the objective of reducing the cost of production and supply of electricity in Western Australia.

AEMO's System Management function, which transitioned from Western Power to AEMO on 1 July 2016, plays an important and special role in the WEM.

AEMO welcomed 46 new employees as part of this new role, and Cameron Parrotte joined AEMO's Executive Leadership Team as Executive General Manager (WA).

Other functions transferred to AEMO included the administration of the

Western Australian Gas Bulletin Board (WA GBB) and development of the Western Australian Gas Statement of Opportunities (WA GSOO).

As part of the broader reforms being implemented via the Western Australian Government's Electricity Market Review, this represents a significant step forward to creating a national energy market environment and delivering energy security for all Australians.



WEM fast facts

The WEM aims to facilitate competition and private investment, and allow generators and wholesale purchasers of electricity (such as retailers) greater flexibility as to how they sell or procure electricity, and who they transact with.

**SEPTEMBER
2006**

WEM commenced operation

**18.7
TERAWATT HOURS**

What the WEM supplies p/a

**\$408
MILLION**

Total transacted in the WEM 2015–16

7,802^{KM}

OF TRANSMISSION LINES

What the South West interconnected system (SWIS) incorporates

**5,788
MEGAWATTS**

Total registered generation capacity, including 513 MW of non-scheduled generation

Customers in the WEM:

**ONE
MILLION+**

To see how this compares to the NEM, please visit our website.

Functions for the WEM

AEMO operates and settles the Reserve Capacity Mechanism (RCM), the Short Term Energy Market (STEM), the Load Following Ancillary Services (LFAS) market and the Balancing Market.

AEMO is also responsible for system management in the WEM, dispatching the power system and operating the SWIS in a secure and reliable manner.

AEMO operates the WEM in accordance with the electricity market objectives, which are to:

- Promote the economically efficient, safe and reliable production and supply of electricity and electricity-related services in the SWIS.
- Encourage competition among generators and retailers in the SWIS, including by facilitating efficient entry of new competitors.
- Avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions.
- Minimise the long-term cost of electricity supplied to customers from the SWIS.
- Encourage the taking of measures to manage the amount of electricity used and when it is used.

Gas Services Information

The Gas Services Information (GSI) function aims to improve the transparency of information and security, and facilitate competition in the WA natural gas market promoting the long-term interests of consumers in the state.

Functions for the Gas Services Information

- AEMO develops and publishes the WA GSOO; and
- Operates the WA GBB.

AEMO develops the WA GSOO and the WA GBB in accordance with the GSI objectives.

The GSI objectives are:

- Security, reliability, and availability of the supply of natural gas in the state.
- Efficient operation and use of natural gas services in the state.
- Efficient investment in natural gas services in the state.
- Facilitation of competition in the use of natural gas services in the state.



WESTERN AUSTRALIA GAS INDUSTRY DEVELOPMENT AWARD

On Monday 14 December 2015, AEMO was presented with the prestigious Western Australia Gas Industry Development award for our contribution to the domestic gas market via our work on the WA GBB, WA GSOO, and related data visualisations on our website. The award recognised the importance of these initiatives, which aim to improve market efficiency, transparency, and competition.

Forecasting and planning

AEMO delivers strategic gas and electricity planning and forecasting information to guide long-term investment in network infrastructure and resource management, by developing and regularly publishing independent energy forecasting and planning reports.

Australia is experiencing the continued evolution of its energy sector, with the rise and uptake of renewable and emerging technologies, advances in battery storage, increasingly active consumer behaviour, the ramp-up of the export liquefied natural gas sector, and demand patterns continuing to shift, challenging the technical characteristics of the 'traditional' power system.

The predominant theme throughout all major reports published during 2015–16 was the need to maintain power system security and reliability during a time of considerable change for the sector.

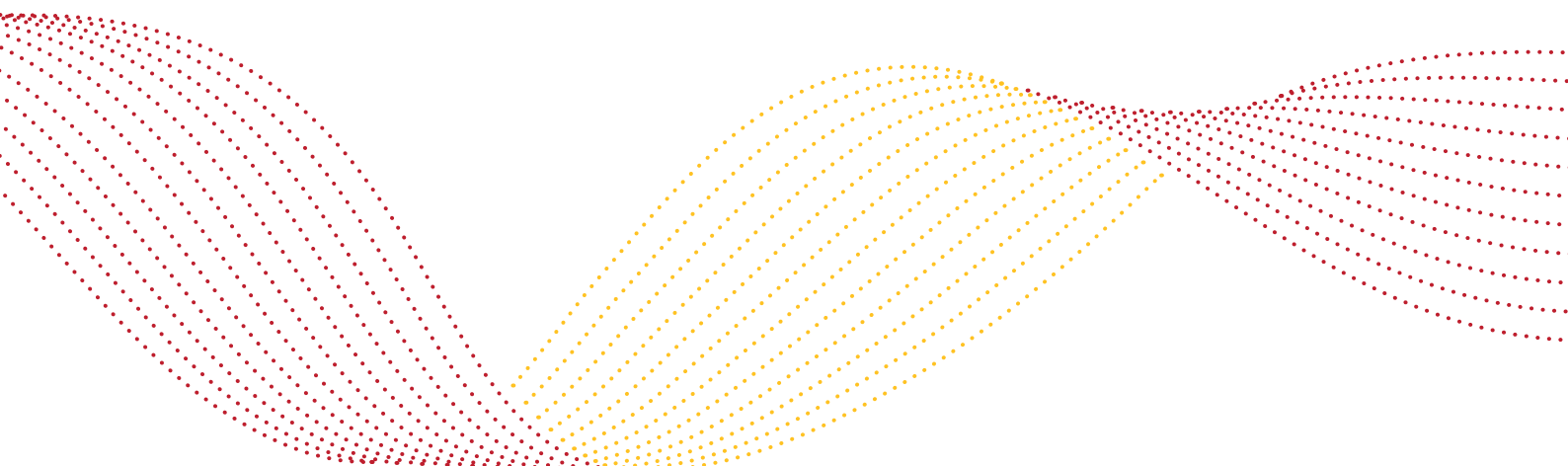
AUGUST, 2015

National Electricity Market Electricity Statement of Opportunities (NEM ES00)

The annual NEM ES00 models information provided by industry to report on the adequacy of existing and committed electricity supply in the NEM to meet the maximum demand and annual consumption forecasts over the next 10 years.

Key findings:

- The 2015 ES00 noted that the previous 12 months had seen the industry announce intentions to withdraw approximately 4,550 megawatts (MW) of generation capacity across the NEM by 2025.
- The report highlighted the need for clearer classification of generating capacity marked for withdrawal in the NEM. Having only a single category of withdrawal, which makes no distinction about whether there are plans for a unit to ever return to service, makes it difficult to accurately project available capacity and assess supply reliability.



NOVEMBER, 2015**National Transmission Network Development Plan (NTNDP)**

The annual NTNDP provides an independent, strategic view of the efficient development of the National Electricity Market (NEM) transmission grid over a 20-year planning horizon.

Key findings:

- The 2015 NTNDP focused on the evolving role of the grid in maintaining secure and reliable electricity across the NEM as the energy sector transforms.
- Reflecting on network investment trends, the 2015 NTNDP reported that expenditure to replace ageing transmission network infrastructure outweighed investment in new capacity, and this trend was expected to continue over the next 20 years.
- The report identified the potential risk of congestion if a large amount of new generation is built and connected to the transmission network within a small area, resulting in local network limitations.
- The 2015 NTNDP also examined the thermal capability of transmission flow paths that connect supply sources to population and industrial centres in the NEM, and outlined factors impacting power system security, such as levels of inertia and the proportion of total generation managed through the dispatch process.

DECEMBER, 2015**National Gas Forecasting Report (NGFR)**

The NGFR provides forecasts of annual gas consumption and maximum gas demand across eastern and south-eastern Australia's interconnected gas markets over a 20-year outlook period.

Key findings:

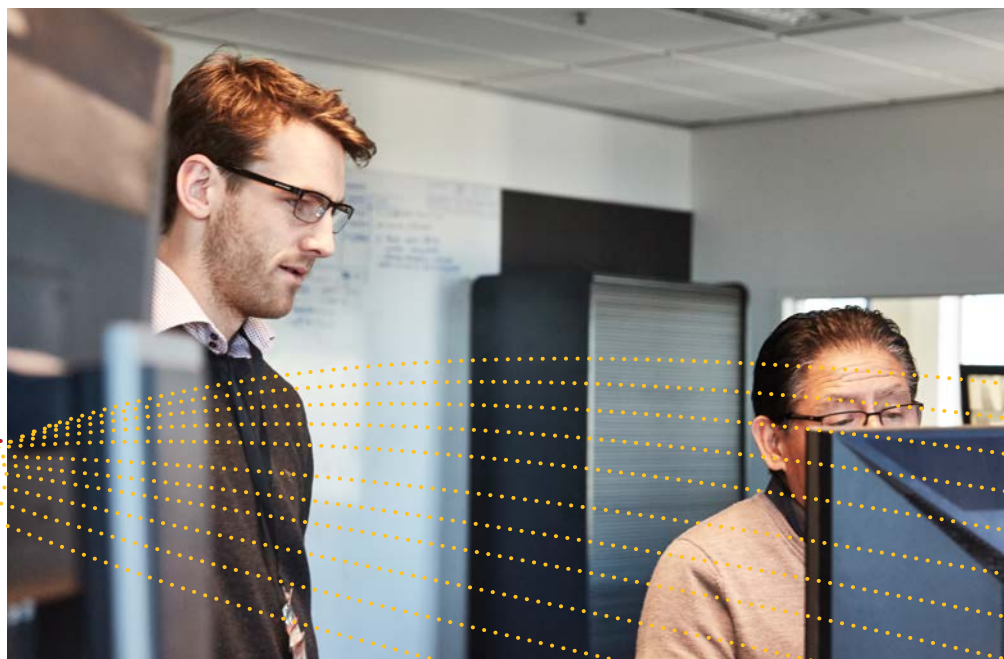
- The 2015 NGFR highlighted a transformation of eastern and south-eastern Australia's interconnected gas markets over the next five years to 2020, following the ramp-up of gas consumption to supply liquefied natural gas (LNG) exports.
- The report projected annual gas consumption to then remain relatively flat for all sectors over the rest of the outlook period to 2035.

MARCH, 2016**Gas Statement of Opportunities (GSOO)**

The annual GSOO uses the demand forecast scenarios from the NGFR to assess adequacy of gas infrastructure and resources to meet demand in eastern and south-eastern Australia over a 20-year outlook period.

Key findings:

- The 2016 GSOO identified that gas reserve development would be required by 2019 to maintain long-term gas supply adequacy in eastern and south-eastern Australia.
- The report also projected that gas transmission and processing infrastructure would be adequate to meet forecast total domestic gas and export liquefied natural gas (LNG) demand until 2029, prior to anticipated shortfalls in Gladstone and Townsville.



JUNE, 2016

Deferred 2015 Wholesale Electricity Market Electricity Statement of Opportunities (WEM ES00) for the 2017–18 Capacity Year (WA)

The WEM ES00 is a key aspect of the Reserve Capacity Mechanism in Western Australia, which is valued at approximately \$600 million in capacity payments. The Deferred 2015 WEM ES00 for the 2017–18 Capacity Year sets the Reserve Capacity Target (RCT), the quantity of generation capacity required in Western Australia's South West interconnected system (SWIS) to ensure forecast peak demand is met between 1 October 2017 and 1 October 2018.

It is important to note, due to a Ministerial Direction in March 2015 to defer aspects of the 2015 Reserve Capacity Cycle, the Deferred 2015 WEM ES00 was being published

in June 2016. The WEM ES00 for the 2016 Reserve Capacity Cycle (for the 2018–19 Capacity Year) is expected to be published in June 2017.

Key findings:

- The RCT for the 2017–18 Capacity Year is 4,552 megawatts (MW).
- The report presented longer term electricity peak and operational consumption forecasts for the SWIS over a 10-year forecast period from 2016–17 to 2025–26, and provided information on generation (including rooftop solar) and demand side management capacity in the SWIS.
- The forecasts showed consumer take-up of improved energy management technology, more energy efficient devices, and distributed generation options such as rooftop photovoltaic (PV), is changing the way households and businesses consume energy, impacting traditional consumption patterns and peak demand profiles in the SWIS.

JUNE, 2016

National Electricity Forecasting Report (NEFR) 2016

The NEFR provides trends in forecasts of overall electricity usage by electricity consumers, as well as forecasts of operational consumption and maximum and minimum demand from the grid in the NEM.

Key findings:

- For the first time, AEMO explored trends in household electricity usage, with findings suggesting that while households today use more lighting, have larger televisions, more web-connected devices, larger capacity whitegoods, and more heating and cooling capacity, the growth in these services has not resulted in more electricity being consumed from the grid. This is due to newer appliances being far more energy efficient.
- The 2016 NEFR forecast that consumption of grid-supplied electricity would remain flat in the NEM for the next 20 years, despite projected population and economic growth, and despite also reporting that Australian households are using more electric appliances than ever, which is forecast to continue.
- The report outlined these drivers for increased consumption would increasingly be offset by greater energy efficiency and forecast growth in rooftop photovoltaic (PV) electricity.
- The 2016 NEFR also forecast that summer maximum demand for electricity would occur later in the day and not grow over the next 20 years, while winter maximum demand would grow faster and become comparable to summer maximum demand from around 2030.
- Minimum demand for electricity was forecast to remain flat for five years, with the potential for increases in rooftop PV in the remaining forecast period to shift the timing of minimum demand from overnight to midday.



Settlements and prudentials

As well as efficiently delivering these market services and achieving required prudential standards, AEMO also delivered a number of settlement and prudential related improvement initiatives during 2015–16.

AEMO is responsible for settlement, prudential monitoring, and clearing of trades in the:



**NATIONAL
ELECTRICITY
MARKET**



**WHOLESALE
ELECTRICITY
MARKET**



**VICTORIAN
DECLARED WHOLESALE
GAS MARKET**



**GAS SHORT
TERM TRADING
MARKET**



**GAS
SUPPLY
HUB**

- AEMO developed a rule change submission aimed at levelling the playing field for market participants and reducing the barriers to entry in the NEM by reducing collateral requirements for NEM participants. AEMO's Prudential Margin Offsets Rule change request to the AEMC was developed to improve collateral efficiency in the NEM by allowing the offset of load with reallocations when assessing the prudential margin component of the participant's Maximum Credit Limit. The AEMC published the draft determination on 30 June 2016. AEMO plans to start consultation on the Credit Limit Procedures later this year, with changes taking effect by late 2017.
- AEMO implemented the Clearing and Settlement Facility Licence Exemption that was granted by the Australian Securities and Investments Commission (ASIC) in March 2016. AEMO has started the implementation plan to facilitate Enhanced (Swap and Option) Offset Reallocations for NEM participants, which will allow participants to offset their electricity spot market liabilities and reduce credit support requirements with an enhanced range of reallocations, including swaps and caps. Go live is expected in early 2017.
- AEMO managed two suspension events, one of which involved the transfer of customers from a defaulting participant to the relevant Retailers of Last Resort (RoLR) in NEM and STTM markets with no financial impact to market participants.
- AEMO supported the COAG rule change proposal relating to the Market Participant Suspension Framework, published for consultation by the AEMC in June 2016. These changes are intended to provide AEMO with greater flexibility in dealing with businesses that are subject to external administration, and, where it would be beneficial, to allow the generation assets of the business to continue operating to support power system security.
- AEMO released the second review report on the effectiveness of the Credit Limit Procedure for the NEM. The report showed that the 2% Prudential Standard continued to be met for all regions except Tasmania (2.24%) in 2015, with an overall reduction in market participants' collateral requirements.

Security and reliability

Power system security is a key objective for AEMO.

Electricity

AEMO employs a number of mechanisms to maintain power system security. These include (but are not limited to) procuring frequency control ancillary services, forecasting demand and intermittent generation, dispatching controllable generation in five minute intervals, utilising real system analysis to predict system responses to disturbances, and planning to minimise the impact of these disturbances.

AEMO is operating in a rapidly transforming electricity landscape as synchronous generation is progressively being displaced by non-synchronous generation – either permanently, as thermal conventional generation (coal and gas) is withdrawn, or from dispatch at times when the wind and solar output is high. Consumers are also becoming more active about how their electricity demand is met and managed, resulting in increasing amounts of distributed energy resources (DER), such as rooftop photovoltaic (PV), generating to the power system.

The changing mix of synchronous and non-synchronous generation means that the operational characteristics of the power system are changing, and AEMO is focused on the impact that these changed dynamics have on future power system security. AEMO is fuel and technology neutral in performing its functions, and adapts our capability to manage technology developments within the legislated policy and market frameworks of the day.

Future Power System Security program

The Future Power System Security program aims to adapt AEMO's processes, allowing sufficient operational flexibility so AEMO can continue to maintain security in Australia's power system into the future. This involves adapting current processes to address immediate risks, while promoting long-term solutions to maintain power system security over the next 10 years.

AEMO has established the Future Power System Security (FPSS) program to build on our understanding of the potential opportunities and challenges in operating a stable and secure power system with less synchronous generation. In analysing the potential challenges and solutions of the power system of the future, the program has identified and assessed challenges in terms of their technical attributes, and will look at framing technical solutions around the technical needs of the power system. AEMO has been, and will continue to work closely with the relevant bodies such as AEMC and COAG Energy Council in promoting implementation frameworks for the technical solutions.

Efficient solutions to some challenges may take a long lead time to implement, if changes to legislation or Rules are required. This raises the need for early identification and action, and the potential need for AEMO to implement interim measures under existing regulations. AEMO established a Technical Advisory Group in December 2015 representing conventional generators, retailers, transmission and distribution businesses, consumers, the Clean Energy Council, COAG Energy Council's Standing Committee of Officials (SCO), the Australian Energy Regulator (AER), the AEMC and AEMO. The group assisted in the qualitative identification of technical challenges. This process was completed in May 2016 and four broad areas were prioritised: frequency control, managing extreme power system conditions, visibility of the power system, and system strength.

AEMO will now focus on undertaking quantitative analysis of the challenges and potential technical solutions within these areas.

AEMO reports related to this program published in 2015–16 financial year

UPDATE TO RENEWABLE ENERGY INTEGRATION IN SOUTH AUSTRALIA – JOINT AEMO AND ELECTRANET REPORT – FEBRUARY 2016

This technical report was an update on the initial report, published in October 2014, investigating power system security in South Australia given the state's high contribution from renewable generation, relative to its total load.

The update report found that under normal operating conditions (that is, with no equipment failure) the South Australian power system can continue to operate securely and reliably. It reported that the State's stable electricity supply does, however, rely heavily on the transmission network connecting South Australia to Victoria remaining in service and uninterrupted.

RESPONSE OF EXISTING PV INVERTERS TO FREQUENCY DISTURBANCES – APRIL 2016

This report, on the response of small-scale photovoltaic (PV) inverters to power system frequency disturbances, indicated a low probability of frequency disturbances resulting in inverters tripping in unison. It also highlighted the potential impact that large volumes of small, distributed energy resources can have on the power system, and the need for AEMO to have access to information about these resources and how they perform.

SUBMISSION TO QUEENSLAND RENEWABLE ENERGY EXPERT PANEL – JUNE 2016

AEMO submitted a response to the Issues Paper released by the Queensland Renewable Energy Expert Panel's consultation on achieving 50% renewables by 2030. AEMO discussed the FPSS program, and indicated that although this 50% target will create operational challenges, it also is an opportunity to encourage the solutions required to adapt to a changing energy market.

FEBRUARY, 2016

New National Electricity Market control room

In February 2016, AEMO's Queensland operations moved location. This included moving the National Electricity Market control room. The project team used the latest advancements in control room design to deliver a centre with improved ergonomics, 'personal wallboards' to replace a traditional floor to ceiling wallboard, and paperless documentation systems.

The new layout uses desks with fully adjustable desk heights and monitor positions, allowing shift employees to switch between sitting and standing. Lighting on each control desk is also fully adjustable to minimise eye fatigue. With each control desk having its own displays, employees create a 'personal wallboard' and customise their display 'real estate' based on their area of responsibility. In addition to the control desks, a wall mounted touch screen allows collaborative viewing and discussion of electronic operational documents.

NEM tested during market events



HEYWOOD INTERCONNECTOR OUTAGE

At 10.51pm on 1 November 2015, an incident at transmission network service provider ElectraNet's South East substation in South Australia impacted electricity supply from Victoria to South Australia via the Heywood Interconnector, and separated South Australia from the National Electricity Market.

The outage resulted in a loss of 160MW of customer load, causing electricity supply disruptions across regions of South Australia. AEMO worked closely with ElectraNet and SA Power Networks to restore load to the interconnector by 11.26pm.



BASSLINK INTERCONNECTOR OUTAGE

On 20 December 2015, a fault occurred on the Basslink Interconnector running between Victoria and Tasmania, separating Tasmania from the National Electricity Market.

AEMO undertook short-term modelling throughout the outage to confirm there were no generation supply shortfalls in Victoria or Tasmania as a result of the outage. AEMO worked closely with Basslink, TasNetworks, Hydro Tasmania, and the Victorian and Tasmanian state governments to ensure the appropriate arrangements were in place while the fault was being resolved.

The Basslink Interconnector was returned to service on 13 June 2016.

"The changing mix of synchronous and nonsynchronous generation means that the operational characteristics of the power system are changing, and AEMO is focused on the impact that these changed dynamics have on future power system security."

Gas

AEMO Gas Real Time Operations schedules the Victorian Declared Wholesale Gas Market (DWGM) and operates the Victorian gas Declared Transmission System (DTS), which is owned and maintained by the APA Group. AEMO's scheduling of the DWGM is subject to the National Gas Rules, under the oversight of the Australian Energy Regulator.

AEMO Gas Real Time Operations is also responsible for scheduling the Short Term Trading Markets (STTM). This includes managing the Contingency Gas process, which is a process that is triggered as a market response ahead of possible curtailment.

Gas Safety Case

For AEMO's operation of the DTS, the Gas Safety (Safety Case) Regulations 2008 require AEMO to have a Gas Safety Case. The Gas Safety Case details AEMO's method for safe operation of the DTS, and identifies specific hazards and the mitigation strategies to address those hazards.

The Gas Safety Case must be updated and submitted to Energy Safe Victoria (ESV) every five years. AEMO's updated Gas Safety Case was formally approved by ESV on 8 December 2015.

Victorian Gas Planning Report

AEMO published a Victorian Gas Planning Report (VGPR) Update on 29 February 2016 as part of its operation of the Victorian gas DTS. The VGPR is published biennially and was last published in 2015. The report contains a review of gas supply and demand balance and adequacy, and any DTS capacity issues that may lead to congestion.

The need for a VGPR Update was triggered by the following changes and issues in the DTS that have occurred or materialised:

- A further increase in the Victorian Northern Interconnect transportation capacity to New South Wales that will increase capacity by 25%, to 148 terajoules per day from winter 2016.

- A limitation in the South West Pipeline (SWP) transport capacity from Melbourne to Port Campbell that will limit flows to South Australia via SEA Gas Pipeline, and may impact refilling of the Iona Underground Gas Storage (UGS) reservoirs.
- The Iona UGS Facility Operator has developed expansion plans that may require a further increase to SWP capacity from Port Campbell to Melbourne to unlock the future supply capacity at Port Campbell.
- Increased demand at the Warragul Custody Transfer Meter which may require augmentation of the DTS to maintain contractual pressure at this connection point.

Brooklyn Compressor Station outages

There were two separate events impacting the capacity of the Brooklyn Compressor Station, which is a key facility in the DTS. These were:

- Gas flows for refilling of the Iona underground gas storage were restricted following the unplanned outage of two large compressors at the Brooklyn Compressor Station.
- A planned 15 day outage of the entire Brooklyn Compressor Station that resulted in AEMO scheduling a total of 223 TJ of out-of-merit-order injections to support demand in south-west Victoria. AEMO published an Intervention Report for this outage as required under the National Gas Rules.



WINTER 2016 VICTORIAN GAS OPERATIONS OUTLOOK FORUM

In May 2016, over 150 delegates from across the gas industry attended the Winter 2016 Victorian Gas Operations Outlook forum.

The forum, which is hosted annually by AEMO Gas Real Time Operations, provided industry stakeholders with key insights on:

- AEMO's roles and responsibilities in providing safe, secure and reliable gas operations.
- 2015 winter review including maintenance outages.
- 2016 weather outlook.
- Declared Transmission System augmentations, and APA's concerns regarding urban encroachment around pipeline corridors.
- AEMO's operation of the Victorian Gas Declared Transmission System.
- Victorian Declared Wholesale Gas Market operations.
- Interaction between the Victorian Gas Market and other markets.
- Gas emergency management arrangements.

Contingency Gas Events

The STTM Contingency Gas process was triggered twice for the Sydney STTM Hub in response to projected supply shortfalls. These events were:

- 22 July 2015 when a valve closed at a remote station on the Moomba to Sydney Pipeline.
- 13 January 2016 when compressor issues on the Eastern Gas Pipeline resulted in projected delivery shortfalls.

In both cases the Contingency Gas process was activated and the issues were able to be resolved through the renomination of pipeline flows without Contingency Gas needing to be scheduled. AEMO published reports for both of these events.

Markets

AEMO continues to work closely with stakeholders to identify issues and opportunities for strengthening energy markets now and into the future.

Gas

New South Wales and Australian Capital Territory Retail Gas Project (NARGP)

During 2015–16, AEMO worked with industry to successfully deliver the NARGP which went live as planned on 2 May 2016.

The NARGP delivered the harmonisation of the NSW and ACT retail gas market arrangements with those operating in Victoria, Queensland, and South Australia. These changes will result in efficiency gains for market participants.

The project deliverables included:

- A series of market trials covering over 30 'real world' scenarios.
- Close consultation and collaboration with industry through a specially formed NARGP Consultative Forum.
- Updated Retail Market Procedures and Gas Interface Protocols (NSW/ACT) which came into effect on 2 May 2016.
- Hub certification of all participants by AEMO (required) before participants are allowed to participate in the market using the AEMO gateway.
- Upgrading and development of AEMO systems in preparation for the harmonisation.
- Successful planning and implementation of transitional procedures and cut-over activities to ensure the seamless transition of the NSW and ACT retail market to the new arrangements.

Moomba Gas Supply Hub

On 1 June 2016, AEMO launched the Moomba Gas Supply Hub with the establishment of new trading locations at Moomba on the Moomba to Adelaide pipeline and the Moomba to Sydney pipeline.

The Moomba Gas Supply Hub follows the successful introduction of the Wallumbilla Gas Supply Hub (GSH), established in 2014 to enhance the transparency and efficiency of trading outcomes by creating a voluntary market that offers a low-cost, flexible method to buy and sell gas at interconnecting transmission pipelines.

The GSH is an exchange for the wholesale trading of natural gas. The exchange allows participants to place anonymous bids or offers for physical gas products. The exchange automatically matches bids and offers to form transactions.

The trading locations at Moomba will support innovation and development of gas services at Moomba.

Natural Gas Service Bulletin Board (NGSBB)

The Curtis Island Demand Zone was introduced on 26 October 2015 to capture gas being delivered to the LNG processing facilities on Curtis Island near Gladstone. The zone resulted in the Wallumbilla to Gladstone Pipeline, GLNG Gas Transmission Pipeline, and APLNG Pipeline all being defined as BB facilities and reporting to the NGSBB.

The Wallumbilla Demand Zone was later introduced on 1 June 2016 to capture net flows in to and out of the South West Queensland Pipeline compound located at Wallumbilla. The zone resulted in Spring Gully Pipeline, Berwyndale to Wallumbilla Pipeline, Darling Downs Pipeline and the Comet Ridge to Wallumbilla Pipeline all being defined as BB facilities and reporting to the NGSBB.

AEMO worked with the Department of Environment and Energy (formally known as the Department of Industry) and industry to drive improvements to the NGSBB. These improvements included the introduction of the Market Prices page and the Planning Reports page.

“The energy market is rapidly evolving and consumers are demanding greater control and choice, while technologies and consumer behaviour are driving changes in generation, metering, storage, products, and services.”

Electricity

Power of Choice for electricity consumers

The Power of Choice program was launched in 2012 to give households and businesses the information, technology, and pricing options to choose how they use electricity and manage their own costs. This year, AEMO commenced implementation of three new Power of Choice rule changes following the release of the associated AEMC rule changes. The rule changes are:

- Competition in Metering, which aims to enhance competition in metering services, providing customers with greater opportunities to access a wider range of services.
- Embedded Networks, which aims to reduce barriers to embedded network customers accessing retail market offers.
- Meter Replacement Processes, which clarifies rights and obligations on certain parties at a connection point in respect of replacing a meter during the retail transfer process.

In the 2015–16 financial year, AEMO also prepared for the upcoming implementation of the Updating the B2B Framework, which was released on 30 June 2016. This rule change aims to update the B2B arrangements in the Rules to provide for parties using advanced metering services. B2B procedures are developed by AEMO on the recommendation of the Information Exchange Committee (IEC).

AEMO is drafting procedure changes, in consultation with the IEC and interested parties, to implement the above rule changes and associated system changes. The Power of Choice changes will come into effect on 1 December 2017.



Our stakeholders

One of AEMO's strategic goals and core values is being impartial, balanced and thorough in our engagement with stakeholders on challenges and solutions. Our aim is to build stakeholder relationships that are collaborative and proactive.

To help meet this commitment to our stakeholders, our key initiatives included:

- **Development of our stakeholder commitment:** A planned commitment and approach by AEMO to build a stakeholder-focused team that understands why stakeholder relationships are important, what stakeholder relations deliver, the tools required to build such relationships, and how these relationships will be delivered.
- **The engagers program:** An energetic group of AEMO employees available across all sites that specialise in stakeholder engagement. Engagers advise employees across the business looking to develop skills and practices in stakeholder engagement.
- **Seven steps to a successful engagement approach:** A clear guide for the AEMO team was developed in 2015 that provides seven core steps required to engage stakeholders on projects, programs and policy initiatives.
- **Appointment of engagement managers:** Senior AEMO representatives were tasked with building on their strong relationships with stakeholders, acting as their key strategic point of contact within our organisation.
- **Building a better support hub initiative:** A focused approach to improving the quality of engagement and services provided to internal and external stakeholders through AEMO's First Point of Contact assistance desk.



Renewable roadshow

Supported by the Stakeholder Relations team, AEMO delivered six two-hour industry information sessions during August 2015 across Australia. The sessions focused on:

- **PV in the National Electricity Market (NEM):**
 - Forecasts for PV – growth and saturation levels.
 - Technical performance of inverters.
- **Operational impacts of energy storage:**
 - Challenges and opportunities.
 - AEMO's work.
 - Further work and time frames.
- **Update of South Australian renewable integration studies:**
 - Background.
 - AEMO obligations.
 - Update on AEMO work program.

A total of 177 participants contributed to the sessions, representing electricity, gas, government, and other user groups. The team aimed to facilitate an authentic engagement opportunity to exchange ideas and views.

At the conclusion of each session, formal feedback was sought as part of business improvement, and a full report was compiled and circulated within AEMO. The feedback received was overwhelmingly positive.

AEMO stakeholder forums 2015–16 summary

AEMO's stakeholder consultative forums gave industry participants and consumers regular opportunities to share information and ideas, and reach decisions with others who have similar issues and interests. A total of 67 facilitated stakeholder forums were held in 2015–16.

Forum/ working group	Met	Key topics discussed
Gas Retail Consultative Forum (GRCF)	9	Life Support was discussed as well as testing the Queensland Retailer of Last Resort (RoLR). Enumerations featured heavily throughout GRCF meetings, as did unaccounted for gas (UAFG) treatment for South Australia and Queensland. The merger of Ellengrove Gate Stations was also discussed.
Business-to-Business and Market Settlement and Transfer Solutions Reference Group (BMRG)	11	Topics discussed at the BMRG forums included duplicate address attributes, life support, consumer access to data and service order disconnections. Extreme weather events were also tabled.
Retail Market Consultative Forum (RMCF)	11	Updates on a range of topics were provided to the RMCF. These topics included Power of Choice, the New South Wales/Australian Capital Territory Retail Gas Project, NEM fee methodology, and the implementation of a new working group structure.
Information Exchange Committee (IEC)	11	A range of initiatives relating to business-to-business refinements and procedures were covered. A new IEC was established as a result of the AEMC updating the electricity B2B framework rule change. The focus has been on the transition from the old to the new committee.
Gas Wholesale Consultative Forum (GWCF)	6	Items covered included, changes to authorised maximum daily quantity, rules and uplift payment procedures, gas quality standards and monitoring guide updates, Declared Wholesale Gas Market (DWGM) gas quality, south west pipeline pigging, and Declared Transmission System (DTS) constraints.
NEM Wholesale Consultative Forum (NEMW-CF)	6	Items covered included the 2015–16 summer review, Energy Adequacy Assessment Projection (EAAP), AEMO-ASX alternative clearing and settlement, 2016–17 marginal loss factors, the NEFR, web billing possibilities for NEM, and the connection process was reviewed.
Consumer Forum	2	A range of topics were discussed throughout the Consumer Forum, including emerging technologies, the NEFR and Power of Choice. Information sessions were also conducted on the NEM overview as well as on AEMO forecasting.
Gas Supply Hub Reference Group (GSHRG)	9	The Moomba project as well as the hub service product were discussed during 2015–16.
NEM Operations Committee (NEMOC)	2	The future direction for NEMOC and associated working groups was discussed. Updates from the Plant Modelling Working Group were provided, as well as information relating to emergency exercises and communication.
NEM Emergency Management Forum (NEMEMF)	2	Considered the effectiveness of national and jurisdictional emergency plans/arrangements following a series of high profile emergency incidents, including the outage of the Basslink interconnector, and separation of South Australia from the rest of the NEM in November 2015. Forum members also discussed the objectives and desired outcome of the 2016 NEMEMF Exercise, which will be held in September 2016.

Our people

In 2015–16, AEMO continued to make progress against its People Roadmap 2015–17. The overarching objective of the Roadmap is to deliver a highly capable, agile and engaged workforce.

In the first year of the People Roadmap that spans 2015–17, the focus centred on improving People and Culture's (P&C) service delivery to the business, enhancing learning and development services and strengthening recruitment practices. AEMO will now focus on developing a framework to enable a better understanding of its future workforce capability needs, identify and fill current and future skills and knowledge gaps across AEMO and put succession plans in place.

Highlights for 2015–16 included:

- Rolling out a new P&C service model with a greater focus on business partnering and shifting the focus from lower value transaction activities, to higher level advisory and support services to the business.
- Successfully integrating 46 permanent and contractor employees from IMO into AEMO's Western Australia office on 30 November 2015.
- Further embedding AEMO's Human Resources Information System, allowing for a more efficient and improved reporting capability.
- Expanding the Aspirall leadership development program to the wider group manager leadership team, and allowing development opportunities through internal and external secondments.
- Launching the Management Essentials program in December 2015, aiding the development of key management skills for current and future AEMO managers, as well as the delivery of targeted 'in house' training designed to build increased capability among employees.
- Implementing a collaborative initiative across departments to develop and roll out an enhanced corporate induction program with a focus on AEMO's vision, mission, and values.
- Developing and implementing an online tool to centrally manage and support learning and development queries, and to better track demand, attendance, and spend on learning and development activities across the business.

AEMO'S PRIORITIES FOR THE FUTURE AIM TO:

- Target and deepen AEMO's workforce agility and capability in order to fill current and future skills and knowledge gaps.
- Increase employee engagement.
- Continue to improve on HR services delivered to the business.
- Onboard WA System Management employees from November 2016.



Workplace Health, Safety and Environment (WHSE)

AEMO maintained its focus on the Healthy Minds and Bodies, Safe Workplaces, and Sustainable Workplaces programs. The highlights for the financial year were:

- An 11% utilisation of counselling in the Employee Assistance Program, comparative to the 3.7% industry standard.
- Successfully launching the AEMO Step Challenge, with 39 employee teams walking a total distance of 64,209 kilometres over the course of four weeks.
- A 61% participation rate of employees in the free health checks initiative, with 61 employees moving their health check risk rating from high risk to medium or low risk over the course of a year.
- The ergonomic assessment and adjustment of 59% of employee desks across the organisation.
- The inclusion of the Perth office into the broader WHSE program.
- Continued improvement of contractor management.
- Successfully launching the annual online WHSE induction and face-to-face Officer Liability Training.
- Continued improvement to procurement practices with sustainability listed as a key consideration.



Sustainability at AEMO

In September 2015, we proudly launched our Sustainability Program alongside our Sustainability Commitment, which was developed through consultation with employees across the organisation.

Sustainability commitment

AEMO's sustainability Commitment aims to meet three objectives:

- Foster a collaborative and inclusive culture.
- Strengthen engagement with the community.
- Reduce environmental impact and seek out greater resource efficiency.

We will meet our sustainability aims by developing business practices that benefit our workforce, community, and environment.

Sustainability program

AEMO's Sustainability Program outlines the action we will take to deliver on our commitment. As part of this program, AEMO aims to:

- Reduce the environmental impact of corporate operations, and achieve greater resource and economic efficiencies.
- Introduce sustainability considerations into AEMO's procurement processes to make sure the products and services we use are consistent with our sustainability commitment.
- Increase employee participation in volunteering activities to improve health and wellbeing among employees and the community.

Community partnerships

AEMO recognises the value of stakeholder engagement and aims to increase the level and quality of our engagement with the wider community. Working in partnership with community organisations, we can contribute to the community in which we operate, by donating skills and time.

In 2016 more than 20 employees volunteered with our official community partner organisations, Vision Australia and the Power of Engineering.

A platform established to improve on in the future

Since implementing our Sustainability Program and Sustainability Commitment, AEMO is proud to see some notable areas of improvement:

- Paper use per person – down from an average of 3,566 to 2,819 pages in 2015–16 (excluding WA).
- Energy use per person – down from 10,747 kWh in 2014–15 to 8,077 kWh in 2015–16.
- Volunteering hours – up from 126 hours total in 2014–15 to 285 hours in 2015–16.

Graduate Development Program

Past graduates



"One of the perks of the program is day-to-day doesn't exist. You are always exposed to new tasks, new people, and new challenges."

Tim joined AEMO's graduate development program in 2014, and has since continued on in his role as a gas transmission engineer.

Tim Abernathy
Gas Transmission Engineer



"I've had so much support from everyone I've worked with. It's a great balance of doing your own work, but also having people there to support you."

Rachael completed AEMO's graduate development program in 2012, before continuing on in her role as a Senior Engineer in Supply Planning.

Rachael Saw
Senior Engineer,
Supply Planning



"The graduate development program exposed me to a range of roles within AEMO. There were always new opportunities offering a variety of experience."

Beginning in 2008, Harmohan spent three years in AEMO's graduate development program before commencing his role as an electrical engineer in Operations.

Harmohan Singh
Electrical Engineer,
Operations Planning

Each year we recruit outstanding graduates to inject new ideas and energy into AEMO.

AEMO's hugely successful three-year Graduate Development Program empowers employees to actively shape their future and build a rewarding career in the energy industry.

Our graduates benefit from a program which offers real projects, with real responsibilities, and exposure to mentoring from some of the top energy experts in the country. Through a structured rotation, graduates are exposed to multiple facets of our business and are provided with a comprehensive development program supported by a mentor, a manager, and a buddy.



 **470**
applications received

 **8**
candidates were offered formal graduate positions

Introducing AEMO's Executive Leadership Team

AEMO is made up of eight departments,
each led by an executive.



Karen Olesnicky,
Acting Chief Executive Officer

Following the sudden passing of AEMO's founding Chief Executive Officer, Matt Zema, Karen was appointed to the role of Acting CEO. Karen has held a number of roles at AEMO since its inception, including most recently as the Executive General Manager of the Stakeholders and Information department. Before joining AEMO, Karen worked at VENCORP as the General Manager of Corporate, where she was responsible for Finance, Corporate Governance, Compliance, Human Resources, Communications, Risk Management, Legal, and Administrative Services.



Mike Cleary,
Operations

Mike is the Chief Operating Officer (COO) of AEMO. Originally from Ireland, Mike has spent the past decade consulting and working in-house for market participants and operators such as the US-based PJM Interconnection and the Electric Reliability Council of Texas (ERCOT), as well as AEMO, which he joined in March 2012. Mike specialises in energy market restructure and reform, with a particular focus on system and market operators, and is skilled at managing a large number of employees across multiple locations.



Jack Fitcher,
Corporate Services

Jack is the Chief Financial Officer (CFO) of AEMO and leads the Corporate Services department, which incorporates commercial services and the program management office. Recently, Jack has also been Executive General Manager WA Integration, overseeing the integration of the Western Australian system operations and system management into AEMO. Before being appointed to the position of CFO, Jack was AEMO's Group Manager of Commercial Services, with responsibility for AEMO's finance, property, and insurance functions. Before joining AEMO, Jack was the Finance and Risk Manager at VENCORP. Jack has also held finance roles in the tourism and retail industries.



**Peter Geers,
Markets**

Peter is the Executive General Manager (EGM) of Markets, a department that looks at the financial operation of, and transactions across, Australia's gas and electricity markets. Peter joined the ELT following his work as Group Manager of AEMO's Markets and Business Strategy divisions, and has a wealth of experience in the energy industry. Peter is passionate about ensuring AEMO adapts to changes in the energy industry, and is keen to use his experience in people management to progress work that helps AEMO remain agile and responsive.



**Brett Hausler,
Governance**

Brett is AEMO's Company Secretary and General Counsel, and heads up the Governance department, which manages corporate governance, legal, risk, audit, compliance, procurement and cyber security across AEMO. Brett has worked in the energy industry since 1994 and, before joining AEMO, was the General Manager, Corporate Services, at the National Electricity Market Management Company (NEMMCO). Before this, he worked in various corporate roles and in private practice.



**Joe Adamo,
Stakeholders and Information**

Joe is currently Acting Executive General Manager Stakeholders and Information, and brings to the role more than 15 years of communication and corporate affairs experience across many industry sectors. The Stakeholders and Information department incorporates Stakeholder Relations, Communication and Corporate Affairs, and Information and Architecture. This department drives how, as an organisation, AEMO approaches, engages, consults and communicates with its stakeholders.

AEMO's Executive Leadership Team continued...



**David Swift,
Corporate Development**

David is the EGM of the Corporate Development department, which incorporates regulatory policy, retail market strategy, and market policy development. David has accrued a wealth of energy industry experience from having worked in the sector for the past 30 years. In his most recent position before joining AEMO, David provided expert electricity advice to the South Australian government as the Chief Executive of the Electricity Supply Industry Planning Council of South Australia (ESIPC). David believes that working closely with our stakeholders is key to AEMO's success.



**Jo Witters,
People and Culture**

Jo Witters is currently acting in the role of Executive General Manager, People and Culture. The role leads teams that are focused on: workplace health, safety and the environment; learning and development; and recruitment.



**Cameron Parrotte, Executive General
Manager – Western Australia**

Cameron is the Executive General Manager - Western Australia. The role is responsible for operating and developing the Wholesale Electricity Market (WEM) and the Gas Services Information (GSI) functions.

Corporate governance

Corporate governance principles

Good corporate governance arrangements encourage the Board and management to pursue objectives that are in the interests of the company and its members and stakeholders. AEMO believes there is a clear correlation between a culture focused on achieving and maintaining high standards of corporate governance, and creating value for our members and the broader community.

AEMO has used a range of sources to develop our approach to corporate governance, including the ASX Corporate Governance Principles and Recommendations and overseas examples, where consistent with our corporate structure and Constitution. As part of our corporate governance framework, the Board has established corporate governance related policies and charters, which are published on AEMO's website. Key points are outlined within this section.

Composition of the Board

The Board, with the assistance of Board Committees, oversees AEMO's business affairs to meet the company's objectives and responsibilities under relevant law and regulatory regimes. It also monitors the performance and cost-effectiveness of AEMO's operations and systems. As at 30 June 2016, AEMO had nine Board members: an independent Chairman, the Managing Director (who is also the Chief Executive Officer), and seven non-executive directors. Collectively the Board possesses the core skills and experience prescribed in the AEMO Constitution.

The selection process for new directors is overseen by the Nomination Committee with the interview process and recommendations for appointment being made by the independent COAG Energy Council Appointments Selection Panel. In addition to the required core skills and experience, other factors such as independence, diversity, and succession planning are considered as part of the selection process.

AEMO's members (government and industry) approve the Appointment Selection Panel's recommendations before they are submitted for approval by the COAG Energy Council. The Chairman reviews all directors whose term of appointment is due to expire and then compiles a list of those directors eligible for reappointment and whom the Chairman recommends for reappointment.

AEMO's members approve the submission of the list to the COAG Energy Council for decision. Following the modifications to the constitution in June 2016, directors are eligible under the Constitution to one further term of up to four years after their initial term.

Director induction and continuing education

Prior to appointment, each director receives a letter of appointment and corporate governance documentation including the AEMO Constitution, Board Charter, Board Committee Charters, key corporate policies, and an overview of AEMO's strategic objectives and operations. An induction program is conducted including briefing sessions with executives and managers on key aspects of AEMO's operations.

Directors are encouraged to continue their education by attending training and education relevant to their role. Briefings and workshops are also regularly held in conjunction with Board meetings.

Review of the Board, Chief Executive Officer, and Executive Leadership Team

The Board has delegated day-to-day management of the company to the Chief Executive Officer, assisted by the Executive Leadership Team. Each executive has a formal position description and their performance is monitored and measured in accordance with the performance management process. The Board, assisted by the People and Remuneration Committee, assesses the performance of the Chief Executive Officer and the Executive Leadership Team.

The Board is committed to the ongoing development of individual directors and the Board as a whole. The Board regularly undertakes an assessment of its performance. This assessment can be:

- Qualitative, quantitative or both.
- Informal or formal.
- A whole of Board review, or individual directors.
- Self-administered, administered by the Chairman, or administered by an independent expert.
- Focused internally on the directors or involving the wider body of corporate stakeholders including, but not limited to, AEMO members.

Director independence

The Constitution requires a majority of directors, including the Chair, to be independent, and includes a definition of independence. A director is considered independent if he or she is not a member of management and is free of any business or other relationship that could materially interfere with exercising unfettered and independent judgement, or could reasonably be perceived to do so.

The independent directors during 2015–16 were Dr. Parry AM, Mr Hubbard, Ms Krieger, Dr. Marxsen and Ms Tongs.

Responsibilities

The Board acts in the best interests of the company and is accountable to the members for the overall direction, management, and corporate governance of the company.

The Board's responsibilities include:

- Overseeing the company's activities to achieve the objectives set out in the Constitution.
- Ensuring that induction procedures are in place to allow new senior executives to participate fully and actively in management decision-making at the earliest opportunity.
- Setting the company's goals and strategy.
- Determining the financial, operational, human, technological, and administrative resources required by AEMO to meet our objectives and goals.
- Establishing and maintaining adequate and effective reporting lines and procedures that enable all material matters and information to be identified and reported to the Board.
- Approving company budgets and monitoring compliance with financial reporting obligations.
- Appointing the Chief Executive Officer.
- Reviewing and assessing the performance of AEMO's management.
- Establishing and approving the charters of the Board committees.
- Establishing effective controls and procedures to enable risks to AEMO to be identified, assessed, and managed.
- Monitoring compliance with ethical, legislative, and regulatory requirements including occupational health and safety, equal opportunity, environmental, corporate governance, and reporting obligations.
- Reporting to company stakeholders.
- Regularly reviewing the performance of senior executives against measurable and qualitative indicators as decided by the Board.

These responsibilities are set out in the Board Charter.

Directors' access to information and advice

The directors have unrestricted access to all company records needed to fulfil their responsibilities. They also have access to the Company Secretary with regard to any matter related to their role as director. Executives and other managers are called on, from time to time,

The Board acts in the best interests of the company and is accountable to the members for the overall direction, management, and corporate governance of the company.

to present results and findings to the Board, and the Board, at its discretion, can seek information, advice, and opinion from any employee. The directors also have the right to seek independent professional advice at AEMO's expense to help them carry out their duties.

Conflicts of interest

Directors are required to avoid conflicts of interest and breaches of duty. Specifically, they must act in good faith in the best interests of the company. Directors must not use their positions for personal benefit or the advantage of another person or organisation at AEMO's expense or use AEMO property inappropriately or place themselves in positions where they owe a duty to a third party that conflicts with their duty to AEMO.

Directors are required to immediately declare any interest or duty that conflicts with their duties to AEMO, or that might lead to or be perceived as a conflict of interest. Conflicts of interest are managed in accordance with the Directors' Interests Protocol.

No director has received or become entitled to receive a benefit because of contractual arrangements between AEMO and the director other than as declared in the Annual Report or through their contract of employment or engagement with AEMO.

Board committees

The Board seeks assistance and support from a number of Board committees to discharge its duties effectively. Each Board committee has a formal charter that outlines its responsibilities. Board committees have access to internal and external resources, including access to advice from consultants and specialists, as required. The Chair of each Board committee briefs the Board on the outcomes of each committee meeting.

Board committee membership for 2015–16

	Risk and Audit	People and Remuneration	Technical and Regulatory
Dr Thomas Parry*		Member	Member
Mr Frank Calabria	Member		Member
Dr Peter Davis		Member	Member
Mr Jon Hubbard	Chair		Member
Ms Sibylle Krieger	Member	Chair	
Mr John Pittard*		Member	Member
Dr Anthony Marxsen		Member	Chair
Mr Stephen Orr	Member		Member
Ms Jane Tongs	Member	Member	

* Dr Thomas Parry retired from the Board on 5 November 2015. *Mr John Pittard was appointed to the Board on 5 November 2015.

Mr John Pittard has also been appointed by the Board as the independent Chair of the new Information Exchange Committee, which is established under the National Electricity Rules.



Dr Anthony Marxsen



Dr Peter Davis



Mr Frank Calabria



Ms Jane Tongs



Mr Jon Hubbard



Mr John Pittard*



Ms Sibylle Krieger



Mr Stephen Orr



Dr Thomas Parry*

Board committee focus areas

The purpose of each Board committee and some of their respective focus areas during 2015–16 are described below.

Risk and Audit Committee

This committee assists the Board to fulfil its responsibilities for oversight and governance of financial, risk, audit, corporate governance, and compliance matters.

The Committee met four times during 2015–16. Its activities included:

- Review of the Annual Financial Report and the appropriateness of AEMO's material accounting policies and procedures, significant estimates, judgements, and notes to the financial statements.
- Review of the management of cybersecurity.
- Approval of the audit plan for the internal auditor, considering the findings of the internal auditor and the effectiveness of the internal audit function.
- The approach for the market audits, findings of the market auditors for gas and electricity, and the effectiveness of the market audit functions.
- Risk management strategy and reporting, including reviewing the system of identifying, assessing, monitoring, and managing material risk throughout the company.
- Compliance reporting and analysis, including the development and ongoing review of appropriate regulatory compliance programs.
- Consideration of reports on capital expenditure and projects undertaken by the organisation.

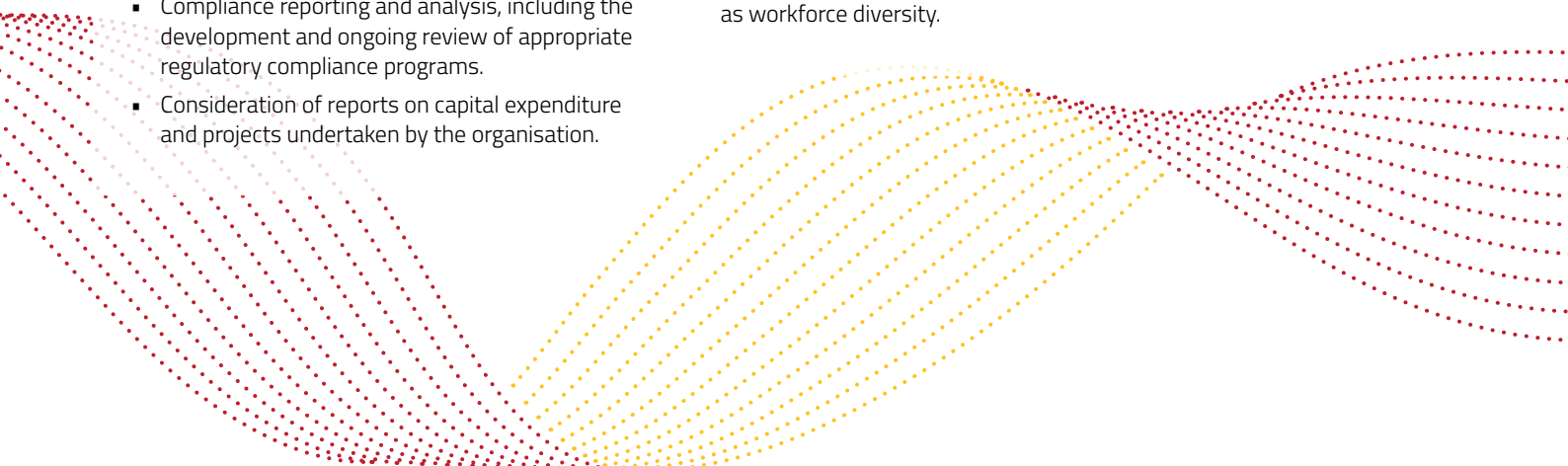
People and Remuneration Committee

This committee assists the Board to fulfil its responsibilities in the management of its people and their remuneration.

This Committee met three times during the year. Its activities included:

- Review of strategies for resourcing, the recruitment and retention of people, including their health, safety and wellbeing.
- Consideration of succession planning.
- Review of remuneration strategies, including performance payments and other monetary and non-monetary benefits, and the Enterprise Agreement.
- Monitoring people-related performance targets.
- Monitoring AEMO's compliance with workplace health and safety obligations.
- Evaluating the performance of AEMO's people, including that of the Chief Executive Officer and the Executive Leadership Team, as well as company performance.

Consideration of people-related matters such as workforce diversity.



Technical and Regulatory Committee

This committee assists the Board to fulfil its responsibilities for the oversight and governance of technical matters, including information technology, technical publications, emergency preparedness, and regulatory matters.

This committee met four times during the year. Its activities included:

- Review of information technology strategy and system performance.
- Considering implications of major regulatory reviews.
- Oversight of the strategic direction and high level structure and content of key AEMO forecasting and planning publications.
- Implications for future power system operations.
- Improvements to technical functions such as forecasting.

Nomination committee

This committee assists the Board in relation to the process for appointing a new chairman or directors to the Board. This involves identifying the skills to be targeted through a search, the appointment of a search firm to undertake the search, and assessing the suitability of potential candidates.

Risk management

AEMO faces a variety of risks given the nature of its operations. These include market, IT security, regulatory, compliance, financial, prudential, reputational, and operational risks. At AEMO, risk management includes the culture, processes, and structures that are directed to taking advantage of potential opportunities and managing potential threats or adverse consequences.

AEMO is committed to a comprehensive and integrated risk management framework that has the effect of embedding risk identification, treatment, and review into every business activity, function, and process. This enables AEMO to identify and manage risks that may have a material adverse impact, including strategic and emerging risks. AEMO's objective is to achieve a high performing, continually improving risk management function, aligned to the International Risk Management Standard ISO 31000:2009.

During 2015–16, improvements were made to the processes and systems that support risk management, including risk identification, assessment, reporting to the Risk and Audit Committee and the Executive Leadership Team, and various initiatives to improve risk culture across AEMO.

In addition to its overarching risk management policy, supported by internal procedures and control systems, AEMO has several other policies and procedures that directly or indirectly serve to reduce, manage, or mitigate risk. These cover matters including:

- IT security.
- Site security.
- Regulatory compliance.
- Financial compliance.
- Financial information management.
- Privacy.
- Competition and Consumer Law.
- Workplace Health Safety and Environment Policy.
- Fraud and corruption prevention.
- Whistleblower Protection.
- Respect for policy, law, and government.
- Diversity.

Ethical standards and Code of Conduct

AEMO is committed to sound and ethical corporate practices and decision-making. This entails not only complying with legal obligations, but also considering the reasonable expectations of stakeholders including members, market participants, employees, energy market governance bodies, consumers, and the broader community.

AEMO has a Code of Conduct which sets out the required standards of behaviour and legal, ethical and other obligations applicable to employees and contractors. Each employee and contractor is given a copy of the Code of Conduct when joining AEMO. The Code of Conduct provides guidance on the following:

- Honesty and integrity.
- Respect for people.
- Responsibility and accountability.
- Efficiency and economy.

Employees are encouraged to report known or suspected inappropriate conduct either to management or an independent whistleblower hotline service that reports directly to the Company Secretary and the Chair of the Risk and Audit Committee.

Financial reporting

The Risk and Audit Committee, which includes non-executive directors with finance experience, oversees accounting and reporting practices and reviews AEMO's financial statements. The committee is responsible for the performance and objectivity of the internal auditor and the performance and independence of the market auditors.

The external auditor is not permitted to provide any services to AEMO that might compromise its independence or give rise to an actual or perceived conflict with assurance and compliance roles.

Timely and balanced disclosure

AEMO endeavours to ensure that all company announcements are factual and balanced, and that timely access to material is given to stakeholders and to the market where possible. All non-confidential reports are published in PDF format and available on the company's website. AEMO is committed to maintaining transparency on matters related to the operation and administration of its markets.

Respect the rights of members and stakeholders

Efficient and effective outcomes are the result of teamwork and contributions from a range of different sources, including all of AEMO's varied stakeholders. AEMO's corporate governance framework recognises that its interests and those of its stakeholders are served by fostering co-operation and interaction.

AEMO's industry and government members have rights and obligations under the AEMO Constitution. Annual General Meetings are held in accordance with the *Corporations Act*. At these meetings all members are able to participate in the decision-making process in accordance with their voting rights under the Constitution.

AEMO's Strategic Initiatives sets out the company's policy and strategic direction on stakeholder communications and engagement at all levels of AEMO. AEMO aims to give all relevant stakeholders a fair and full opportunity to participate in the ongoing operation, development, and planning of Australian energy markets. AEMO strives to be a constructive facilitator, bringing stakeholders together so that all viewpoints are heard and considered, building consensus on the right way forward where possible.

AEMO fulfils this role by providing and disseminating information and market data and by facilitating processes, programs, committees, and other consultative forums for stakeholders to provide input on emerging energy market issues and opportunities, and to provide feedback on AEMO's proposals and operational performance.

These consultation processes are vital to maintaining effective day-to-day operations, developing and refining effective new market mechanisms, and the integrity of AEMO's long-term planning.

Remunerate fairly and responsibly

Non-executive directors were remunerated for fulfilling both their Board and Board committee duties in accordance with relevant industry benchmarks. At AEMO's Annual General Meeting on 6 November 2014, the members approved an annual remuneration pool to be applied for three years. The remuneration pool was determined on the advice of an independent Board remuneration adviser.



AEMO members

Government members

As at 30 June 2016, AEMO's government members are:

- Commonwealth of Australia
- Australian Capital Territory
- New South Wales
- South Australia
- Tasmania
- Queensland
- Victoria
- Western Australia

Industry members

As at 30 June 2016, AEMO's industry members are:

- AETV Pty Ltd
- AGL Energy Ltd
- AGL Loy Yang Marketing Pty Ltd
- AGL Macquarie
- APA EE Holdings Pty Ltd
- APA GasNet Australia (Operations) Pty Ltd
- Allgas Energy Pty Ltd
- APT Petroleum Pipelines Pty Ltd
- APT Pipelines (NSW) Pty Ltd
- Ararat Wind Farm Pty Ltd
- Attunga Capital Pty Ltd
- Aurora Energy Pty Ltd
- Australian Gas Networks Limited
- Ausgrid
- Central Ranges Pipeline Pty Ltd

- CitiPower Pty Ltd
- Click Energy Pty Ltd
- Covau Pty Ltd
- Delta Electricity
- Diamond Energy Pty Ltd
- Directlink Joint Venture (ABN 16 779 340 889 (Directlink (No. 1) Pty Limited ABN 85 085 123 468, Directlink (No. 2) Pty Limited ABN 87 095 439 222, and Directlink (No. 3) Pty Limited ABN 86 095 449 817 trading as Directlink Joint Venture)
- Dodo Power & Gas Pty Ltd
- East Australian Pipeline Pty Ltd
- EDL Group Operations Pty Ltd
- ElectraNet Pty Ltd
- Endeavour Energy
- Energex Limited
- EnergyAustralia Gas Storage Pty Ltd
- EnergyAustralia Pty Ltd
- EnergyAustralia Yallourn Pty Ltd
- Energy Pacific (Vic) Pty Ltd
- EnerNOC Pty Ltd
- Epic Energy South Australia Pty Ltd
- ERM Power Ltd
- ERM Power Retail Pty Ltd
- Essential Energy
- Flinders Operating Services Pty Ltd
- FPC 30 Ltd
- GSP Energy Pty Ltd
- Hydro-Electric Corporation
- Hydro Power Pty Ltd
- Infigen Energy Markets Pty Ltd
- Infratil Energy Australia Pty Ltd
- Jemena Ltd
- LMS Energy Pty Ltd
- Marubeni Australia Power Services Pty Ltd
- Millmerran Energy Trader Pty Ltd
- Murraylink Transmission Company Pty Ltd
- New Gullen Range Wind Farm Pty Ltd
- N. P. Power Pty Ltd
- OneSteel Manufacturing Pty Ltd
- Onsite Energy Solutions Pty Ltd
- Origin Energy Electricity Ltd
- Origin Energy Eraring
- Pacific Hydro Challicum Hills Pty Ltd
- Pacific Hydro Clements Gap Pty Ltd
- Pacific Hydro Portland Wind Farm Pty Ltd
- Pacific Hydro Retail Pty Ltd
- Pooled Energy Pty Ltd
- Powercor Australia Pty Ltd
- Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland)
- RE Oakey Pty Ltd
- Santos Ltd
- South East Australia Gas Pty Ltd
- Snowtown Wind Farm Pty Ltd
- Snowtown Wind Farm Stage 2 Pty Ltd
- Snowy Hydro Pty Ltd
- SPI Electricity Pty Ltd
- Tasmanian Gas Pipeline Pty Ltd
- TasNetworks Pty Ltd
- TransGrid
- Vicpower Trading (State Electricity Commission of Victoria trading as Vicpower Trading)
- Westpac Banking Corporation
- WINconnect Pty Ltd

Financial Statements

For the year ended 30 June 2016

Australian Energy Market Operator Limited
ABN 94 072 010 327

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Directors' report

Your directors present their report on the Australian Energy Market Operator Limited (AEMO) for the year ended 30 June 2016.

Directors

The following persons were directors for the full financial year and up to the date of this report, with the exception of Mr Matt Zema, who sadly passed away on 23 July 2016, Dr Thomas Parry AM who retired effective 6 November 2015, and Mr John Pittard who was appointed to the board effective 6 November 2015

Dr. A.L. Marxsen
 Dr. T.G. Parry AM
 F.G. Calabria
 Dr. P.L. Davis
 J.G. Hubbard
 S. Krieger
 S.C. Orr
 J. Pittard
 J.A. Tongs
 M. Zema

Principal activities

AEMO's principal activities over the 2015–16 year comprised the following:

- Market operation of the National Electricity Market (NEM) and Victorian Declared Wholesale Gas Market (DWGM).
- System operation and security of the NEM interconnected grid and the Victorian Gas Declared Transmission System (DTS).
- Victorian electricity Transmission Network Service Provider (TNSP) responsibilities (including transmission network connections and procurement services).
- Facilitation of Full Retail Contestability (FRC) for electricity and gas in eastern and south-eastern Australia.
- Operation of the Short Term Trading Market (STTM) for gas at the Adelaide, Sydney and Brisbane hubs
- Operation of the Wallumbilla and Moomba Gas Supply Hubs.
- Management of the National Gas Bulletin Board (NGBB).
- National transmission planning.
- Independent electricity and gas demand forecasting.
- Emergency management responsibilities for electricity and gas and the National Gas Emergency Response Advisory Committee (NGERAC).

On 30 November 2015 AEMO assumed responsibility for the Western Australian Wholesale Electricity Market (WEM) and Gas Service Information (GSI) functions previously performed by the Independent Market Operator (IMO).

Corporate Strategy

As the national energy market operator and planner, AEMO plays an important role in supporting the industry to deliver a more integrated, secure, and cost effective national energy supply.

Along with carrying out its core functions AEMO also committed to deliver strategic initiatives in 2015–16. These were:

Forecasting and planning

AEMO's publications have shifted to a focus on providing 'insights' to support major reports and to produce high quality forecasts and planning information to a frequency and quality that meets stakeholder needs.

In June 2016 'electricity insights' on consumer electricity behaviour featured as part of the National Electricity Forecasting Report (NEFR).

Gas markets

The Council of Australian Governments (COAG) Energy Council raised a Rule change request with the Australian Energy Market Commission (AEMC) in July 2015 in regard to Enhanced Information for Gas Transmission Pipeline Capacity Trading on which the AEMC have consulted widely on. The AEMC published its final Rule determination on 17 December 2015, and the new Rule comes into effect on 6 October 2016, giving time for AEMO and market participants to undertake changes to their data collection and reporting processes.

AEMO is exploring enhanced information requirements in the AEMC east coast gas review. The AEMC published a 'stage 2' draft report on 4 December 2015, and AEMO submitted a response on 12 February 2016. The final AEMC report was tabled at the August 2016 COAG meeting.

The NSW/ACT Retail Gas Project (NARGP) successfully went live on 2 May 2016. The NARGP involves the harmonisation of the NSW and ACT retail gas market systems with those operating in Victoria, Queensland and South Australia.

Information

AEMO's website redevelopment project commenced in August 2015, with collaboration both across the organisation and with AEMO's key external stakeholders. The project worked to a principle of providing simple, intuitive, clear, easy-to-use and easy-to-access information. AEMO's new website launched in late July 2016.

Emerging technologies and developments

To ensure AEMO is able to maintain its obligations for system security and reliability into the future, an AEMO work program was developed to identify and manage risks and opportunities associated with the rapidly changing generation and technology mix. The work is divided into two broad areas:

- Short-term: 3-year outlook
- Long-term: 10-year outlook

The program has a strong focus on South Australia due to the advanced nature of generation mix changes there, but covers the entire NEM. Western Australia will be progressively incorporated.

With input from a stakeholder technical advisory group, AEMO finalised an initial list of technical challenges including identifying those that are of a high priority for consideration now.

The work program has now moved to the analysis stage to identify the risk posed by the challenges and the inter-linkages of these challenges.

Some of the actions AEMO is progressing include:

- A revised framework for emergency frequency control with clear roles, responsibilities and processes for designing and implementing these schemes.
- A framework so that AEMO has access to necessary information from distributed energy resources.

Review of operations

AEMO is a not-for-profit public company limited by guarantee incorporated under the *Corporations Act 2001*. The Company membership comprises government and industry members with government owning 60% and industry 40%. Government members are the Commonwealth, New South Wales, Victoria, Queensland, South Australia, Western Australia, Tasmania and the Australian Capital Territory.

Registered market participants are eligible to become members of AEMO.

AEMO has statutory powers to recover all costs including under- and over-recoveries in any of its functions in the next or subsequent financial years. This is achieved by including surpluses or deficits in future budgets for specific AEMO functions.

AEMO's 2015-16 total comprehensive deficit of \$2.0 million is higher than budget mainly due to the re-measurement of the defined benefit superannuation plan.

Directors' qualifications and experience

Name, qualifications and responsibilities	Age	Current Board appointments
Dr. Anthony L. Marxsen <i>PhD, BEng</i> Chairman Independent Director	70	Director, Marxsen Consulting Pty Ltd; Director, Jancomax Pty Ltd.
Mr Frank G. Calabria <i>BEC, GradDip AppFin, MBA, FCA, FFin</i> Non-executive Director	48	Chair, Australian Energy Council (formerly Energy Supply Association of Australia)
Dr. Peter L. Davis <i>BSc (Hons), BEd, MBA, PhD, FAICD, FIEAust</i> Non-executive Director	56	Director, University of Tasmania; Board Member, Clean Energy Regulator
Mr Jon G. Hubbard <i>BCom, CA, GAICD</i> Non-executive Director Independent Director	52	Non-executive Director, Infocus Wealth Management Ltd (and related companies); Non-executive Director, Power Generation Corporation (trading as Territory Generation).
Ms Sibylle Krieger <i>LLB (Hons), LLM, MBA, FAICD</i> Non-executive Director Independent Director	59	Non-executive Director, Tasmanian Water and Sewerage Corporation Pty Ltd (Trading as TasWater); Non-executive Director, Sydney Grammar School Foundation Ltd; Trustee, Sydney Grammar School; Chair, Xenith IP Group Ltd (ASX: XIP).
Mr Stephen C. Orr <i>BEng (Mech)</i> Non-executive Director	64	Nil
Mr. John Pittard <i>BSc</i> Non-executive Director Independent Director	63	Chair, RXP Services Ltd (ASX: RXP); Director, Barnardos Australia.
Ms Jane A. Tongs <i>EMBA, B.Bus (Acc), FACA, FCPA, MAICD</i> Non-executive Director Independent Director	56	Non-executive Director, Catholic Church Insurances Ltd (and related companies); Chair, Netwealth Holdings Ltd (and related companies); Non-executive Director, Warakirri Holdings Pty Ltd (and related companies); Non-executive Director, Brighton Grammar School; Non-executive Director, Cromwell Property Group; Chair, Australian Prime Property Fund Investor Committee.
Mr Matt Zema <i>BE, FIEAust, MAICD</i> Managing Director and Chief Executive Officer	56	Nil

A majority of Directors, including the Chair, must be independent Directors.
 The AEMO Constitution defines the independence requirements for Directors.
 Information pertaining to directors' benefits is detailed in Note 17 – Key Management Personnel Disclosures.

Company secretary

The company secretary is Mr Brett Hausler. Mr Hausler has previously been a company secretary for a number of energy companies and prior to this worked as a lawyer in private and corporate practice.

Meetings of directors

The number of meetings of the Company's Board of Directors and of each Board committee held during the year ended 30 June 2016, and the number of meetings attended by each director, were:

	Full meetings of directors		People and Remuneration		Risk and Audit		Technical and Regulatory		Nomination	
	A	B	A	B	A	B	A	B	A	B
Dr. A.L. Marxsen	10	11	2	3	-	-	4	4	1	1
Dr. T.G. Parry	2	2	1	1	-	-	-	-	-	-
F.G. Calabria	8	8	-	-	2	4	3	4	1	1
Dr. P.L. Davis	8	8	3	3	-	-	3	4	1	1
J.G. Hubbard	10	11	-	-	4	4	4	4	-	-
S. Krieger	11	11	3	3	4	4	-	-	1	1
S.C. Orr	8	8	-	-	4	4	3	4	-	-
J. Pittard	8	9	2	2	-	-	4	4	-	-
J. A. Tongs	11	11	2	3	4	4	-	-	-	-
M. Zema	11	11	-	-	-	-	-	-	-	-

A = Number of meetings attended

B = Number of meetings held during the time the director held office or was a member of the committee during the year which they were eligible to attend.

The Managing Director attends all committee meetings. All directors are eligible to attend committee meetings. Where a director is not a committee member, their attendance at meetings is not reflected in the table above. When a director is unable to attend a meeting they have endeavoured to provide written comments prior to the meeting.

Contributions on winding up

The Company is incorporated under the *Corporations Act 2001* and is a company limited by guarantee. The Constitution states that each Member undertakes to contribute to the Company's property if the Company is wound up during, or within one year after the cessation of, the Member's membership on account of:

- Payment of the Company's debts and liabilities contracted before they ceased to be a Member;
- The costs of winding up; and
- Adjustment of the rights of the contributories among themselves, an amount not to exceed \$1.00.

At 30 June 2016, the total maximum amount that members of the Company are liable to contribute under the Constitution if the Company is wound up is \$93 (2015: \$81).

Rounding

The amounts contained in the financial report have been rounded to the nearest \$1,000 (where rounding is applicable and where noted (\$'000)) under the option available to the Company under ASIC Corporations (Rounding in Financial/Directors' Reports) Instrument 2016/191. The Company is an entity to which the Instrument applies.

Auditor's independence declaration

A copy of the auditor's independence declaration as required under Section 307C of the *Corporations Act 2001* is set out on page 45.

Auditor

Grant Thornton continues in office in accordance with Section 327 of the *Corporations Act 2001*.

Resolution

This report is made in accordance with a resolution of directors.



Dr. A. L. Marxsen

Chairman, Melbourne

1 September 2016



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**Auditor's Independence Declaration
To the Directors of Australian Energy Market Operator Limited**

In accordance with the requirements of section 307C of the Corporations Act 2001, as lead auditor for the audit of Australian Energy Market Operator Limited for the year ended 30 June 2016, I declare that, to the best of my knowledge and belief, there have been:

- a no contraventions of the auditor independence requirements of the Corporations Act 2001 in relation to the audit; and
- b no contraventions of any applicable code of professional conduct in relation to the audit.

Grant Thornton

GRANT THORNTON AUDIT PTY LTD
Chartered Accountants

Michael Climpson
Partner - Audit & Assurance

Melbourne, 1 September 2016

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Statement of profit or loss and other comprehensive income for the year ended 30 June 2016

	Notes	2016 \$'000	2015 \$'000
Revenue			
Transmission income	5	535,529	523,151
Settlement residue	5	27,269	27,767
Electricity market income	5	88,657	82,582
Gas market income	5	43,711	41,668
Other revenue	5	7,645	6,347
	5	702,811	681,515
Expenses			
Network charges		(550,241)	(543,607)
Employee benefits	6	(89,767)	(83,023)
Depreciation	9	(4,698)	(5,037)
Amortisation	10	(12,118)	(9,984)
Consulting, contracting and outsourcing		(8,647)	(8,182)
Information technology		(17,045)	(14,109)
Insurance		(2,423)	(2,495)
Finance costs	6	(1,576)	(2,087)
Travel and accommodation		(1,820)	(2,117)
Asset write-off		(1,220)	-
Other expenses		(11,311)	(9,888)
		(700,866)	(680,529)
Surplus/ (Deficit) before income tax		1,945	986
Income tax expense	2(d)	-	-
Surplus/ (Deficit)		1,945	986
Other comprehensive income			
Items that will not be reclassified subsequently to profit and loss:			
Gain on Acquisition of Western Australian functions	22	206	-
Re-measurement of net defined benefit superannuation liability	15	(4,136)	6,764
Total comprehensive surplus/ (deficit)		(1,985)	7,750

The Statement of Profit or Loss and Other Comprehensive Income should be read in conjunction with the accompanying notes.

On 30 November 2015 AEMO assumed responsibility for the WEM and GSI functions previously performed by the IMO. These functions have contributed \$11.9M in revenue and \$9.8M in expenditure during the 2015-16 year.

Statement of financial position as at 30 June 2016

	Notes	2016 \$'000	2015 \$'000
Assets			
Current assets			
Cash and cash equivalents	7	119,187	40,677
Trade and other receivables	8	85,335	71,909
Total current assets		204,522	112,586
Non-current assets			
Property, plant and equipment	9	28,024	26,419
Intangible assets	10	31,775	28,735
Total non-current assets		59,799	55,154
Total assets		264,321	167,740
Liabilities			
Current liabilities			
Trade and other payables	11	155,092	74,016
Borrowings	12	31,100	5,357
Provisions	13	19,480	18,713
Other current liabilities	14	10,449	4,795
Defined benefit superannuation	15	5,515	1,187
Total current liabilities		221,636	104,068
Non-current liabilities			
Trade and other payables	11	5,324	2,032
Borrowings	12	-	22,629
Provisions	13	1,692	1,357
Total non-current liabilities		7,016	26,018
Total liabilities		228,652	130,086
Net assets		35,669	37,654
Equity			
Capital contribution of members		7,093	7,093
Participant Compensation Fund reserve	16	10,557	10,270
Australian Wind Energy Forecasting System reserve (AWEFS)	16	-	-
Land reserve	16	2,266	2,039
Accumulated surplus	21	15,753	18,252
Total equity		35,669	37,654

The Statement of Financial Position should be read in conjunction with the accompanying notes.

Statement of changes in equity for the year ended 30 June 2016

	Capital contribution of members	PCF reserve	AWEFS reserve	Land reserve	Accumulated surplus/ (deficit)	Total equity
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
At 1 July 2014	7,093	9,813	222	1,813	10,963	29,904
Surplus for the year	-	-	-	-	986	986
Other Comprehensive Income	-	-	-	-	6,764	6,764
Total Comprehensive Income	7,093	9,813	222	1,813	18,713	37,654
Transfer to/(from) reserves						
- PCF reserve	-	457	-	-	(457)	-
- AWEFS reserve	-	-	(222)	-	222	-
- Land reserve	-	-	-	226	(226)	-
As at 30 June 2015	7,093	10,270	-	2,039	18,252	37,654
At 1 July 2015	7,093	10,270	-	2,039	18,252	37,654
Surplus for the year	-	-	-	-	1,945	1,945
Other Comprehensive Income	-	-	-	-	(3,930)	(3,930)
Total Comprehensive Income	7,093	10,270	-	2,039	16,267	35,669
Transfer to/(from) reserves						
- PCF reserve	-	287	-	-	(287)	-
- AWEFS reserve	-	-	-	-	-	-
- Land reserve	-	-	-	227	(227)	-
As at 30 June 2016	7,093	10,557	-	2,266	15,753	35,669

The Statement of Changes in Equity should be read in conjunction with the accompanying notes.

Statement of cash flows for the year ended 30 June 2016

	Notes	2016 \$'000	2015 \$'000
Cash flows from operating activities			
Receipts from customers		766,353	745,679
Payments to suppliers and employees		(729,402)	(726,768)
Payment of claims from the PCF		-	-
		36,951	18,911
Interest received		1,544	1,241
Interest and other finance costs paid		(1,925)	(2,071)
Net cash inflow from operating activities before movements in security deposits		36,570	18,081
Receipts of participant security deposits		557,541	415,940
Repayment of participant security deposits		(495,881)	(406,892)
Net cash inflow from operating activities	24	98,230	27,129
Cash flows from investing activities			
Payment for acquisition of WA functions, net of cash acquired	22	(427)	-
Payments for plant and equipment and intangible assets		(11,543)	(11,774)
Net cash outflow from investing activities		(11,970)	(11,774)
Cash flows from financing activities			
Proceeds from borrowings		10,992	5,000
Repayment of borrowings		(18,742)	(10,357)
Net cash outflow from financing activities		(7,750)	(5,357)
Net increase in cash and cash equivalents		78,510	9,998
Cash and cash equivalents at the beginning of the financial year		40,677	30,679
Cash and cash equivalents at end of the financial year	7	119,187	40,677

The Statement of Cash Flows should be read in conjunction with the accompanying Notes.

Notes to the financial statements

For the year ended 30 June 2016

1 Introduction

This financial report covers the Australian Energy Market Operator Limited (AEMO). AEMO is a not-for-profit public company limited by guarantee, incorporated and domiciled in Australia. Its registered office and principal place of business is:

Level 22, 530 Collins Street Melbourne, Victoria, 3000

The financial report was authorised for issue by the directors on the date of the directors' declaration.

2 Summary of significant accounting policies

The principal accounting policies adopted in the preparation of the financial statements are set out below. These policies have been consistently applied to all the years presented, unless otherwise stated.

a) Basis of preparation

The financial statements are general purpose financial statements which have been prepared in accordance with Australian Accounting Standards, other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001.

The company complies with International Financial Reporting Standards (IFRS), except that it applies accounting for government grants and other non-reciprocal transfers received in accordance with the applicable Australian Accounting Standard, which differs from IFRS.

The financial statements are presented in Australian Dollars and all values are rounded to the nearest thousand dollars ('000) unless otherwise stated.

Historical cost convention

These financial statements have been prepared under the historical cost convention, as modified by the revaluation of financial assets and liabilities (including derivative instruments) at fair value through profit or loss.

Net asset position

At reporting date, AEMO has a net working capital deficiency of \$17,114k (net current liability), and net total assets of \$35,669k.

To provide ongoing liquidity AEMO has a debt facility which ensures project funding and support for variation in the timing of cash flows. As this facility expires within 12 months, AEMO is required to classify all of the borrowings as a current liability, which results in the net working capital deficiency position as at 30 June 2016.

In August 2016, AEMO executed a new debt facility for a period of 5 years and therefore all borrowings not due for repayment within the next 12 months will be classified as non-current which is expected to result in a net working capital surplus in 2016-17.

AEMO is required to operate on a break even funding basis that does not enable the accumulation of significant working capital. AEMO has statutory powers to recover all costs as well as under and over recoveries in any of the specific functions in the next financial year or subsequent financial years.

AEMO's accumulated surplus is \$15,753k at 30 June 2016. AEMO considers any surplus/deficits for each of its functions when setting fees for the next financial year or subsequent financial years.

Critical accounting estimates

Preparation of financial statements that conform with the Australian equivalents to International Financial Reporting Standards (AIFRS) requires the use of certain critical accounting estimates. It also requires management to exercise judgement in the process of applying the company's accounting policies. Areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are disclosed in Note 4.

b) Currency

Functional and presentation currency

The financial statements are presented in Australian dollars, which is AEMO's functional and presentation currency.

Foreign currency translation

Foreign currency transactions are entered into with some suppliers. Each liability and expense item arising from a foreign currency transaction is measured and recognised in the functional currency (Australian dollars) at the exchange rates prevailing at the date of the transaction.

Each foreign currency denomination liability at balance date is translated into Australian dollars at the rate of exchange at the balance date. Foreign currency gains and losses from the settlement of such transactions are recognised in profit and loss.

c) Revenue

Income primarily comprises fees charged for the recovery of expenditure incurred in relation to providing the following services:

- Victorian Electricity Transmission Network Service Provider (TNSP) responsibilities.
- National Electricity Market (NEM).
- Electricity Full Retail Contestability (FRC).
- Victorian Declared Wholesale Gas Market (DWGM).
- Gas FRC in Victoria, South Australia, New South Wales and Queensland.
- Short Term Trading Market (STTM).
- National Transmission Planning.
- South Australian Planning Function.
- Western Australia Wholesale Electricity Market (WEM).
- Western Australia Gas Services Information (GSI).

Revenue is recognised as the services are provided to registered participants.

Revenue is also collected to recover costs in relation to the Gas Supply Hub, Gas Statement of Opportunities (SOO), Gas Business to Business (B2B), Gas Bulletin Board, Settlement Residue Auctions, and Energy Consumers Australia (ECA) functions, and the National Gas Emergency Response Advisory Committee.

The National Electricity Rules and National Gas Rules each require AEMO to establish and maintain a Participant Compensation Fund. Note 16 provides further details of AEMO's participant compensation funds. Contributions to the funds and interest earned on fund investments are recognised as revenue and transferred to the Participant Compensation Fund Reserve.

Interest revenue is recognised as earned at the effective interest rate.

AEMO will, on occasions receive government grants to assist in funding specific projects, such as the project to develop the Australian Solar Energy Forecasting System completed in the 2014-15 year. In accordance with AASB1004, such grants are recognised as revenue once AEMO gains control of the funds and has achieved all criteria relating to the milestones set out in the funding agreement.

d) Income tax

AEMO is exempt from income tax on the basis that it qualifies as a public authority constituted under an Australian law as described in item 5.2 of section 50-52 of the Income Tax Assessment Act 1997. This exemption applies until 30 June 2018 at which time it is due for review. Taxes for which AEMO is liable under federal and state legislation include Fringe Benefits Tax, Goods and Services Tax (GST) and Payroll Tax.

e) Leases

Operating lease payments are charged on a basis which is representative of the pattern of benefits derived from the leased property.

Incentives received under non-cancellable operating leases in the form of rent free periods and contributions to fit-out costs are recognised as a liability. The liability is reduced by allocating lease rental payments between rental expense and reduction of the liability on a straight-line basis over the remaining term of the lease.

f) Acquisition of assets

The purchase cost method of accounting is used for all acquisitions. Cost is determined as the fair value of the assets given up at the date of acquisition plus costs directly attributable to the acquisition. Subsequent costs are included in the asset's carrying amount or are recognised as a separate asset, as appropriate, only when it is probable that future economic benefits associated with the item will flow to AEMO and the cost can be reliably measured. All other repairs and maintenance are charged as expenses during the financial period in which they are incurred.

An asset is capitalised if AEMO has control over the asset and will gain future economic benefit. Expenditure directly incurred in making the asset operational is also capitalised. All other expenditure is treated as operating expenditure.

g) Impairment of assets

Intangible assets that have an indefinite useful life are not subject to amortisation and are tested annually for impairment, or more frequently if events or changes in circumstances indicate that they might be impaired. Other assets are reviewed for impairment whenever events or changes in circumstances indicate that the carrying amount may not be recoverable. An impairment loss is recognised for the amount by which the asset's carrying amount exceeds its recoverable amount. The recoverable amount is the higher of an asset's fair value less costs to sell and value in use.

For the purpose of assessing impairment, assets are grouped at the lowest levels for which there are separately identifiable cash inflows that are largely independent of the cash inflows from other assets or groups of assets (cash generating units). Non-financial assets that suffer impairment are reviewed for possible reversal of the impairment at each reporting date.

h) Cash and cash equivalents

For Statement of Cash Flows presentation purposes, cash and cash equivalents include cash on hand, and deposits held at call with financial institutions that are readily convertible to cash on hand and are subject to an insignificant risk of a change in value.

i) Fair value estimation

The fair value of financial assets and financial liabilities must be estimated for recognition and measurement or for disclosure purposes. The fair value of financial instruments traded in active markets is based on quoted market prices at the balance sheet date. The quoted market price used for financial assets held by AEMO is the current bid price, and the appropriate quoted market price for financial liabilities is the current ask price. The fair value of financial instruments that are not traded in an active market is determined using valuation techniques. AEMO makes assumptions that are based on market conditions existing at each balance date.

j) Property, plant and equipment

AEMO initially recognises items of property, plant and equipment that qualify for recognition as an asset at cost.

After initial recognition as an asset, an item of property, plant and equipment is carried at its cost less any accumulated depreciation and any accumulated impairment losses. This methodology is applied to each class of property, plant and equipment.

Depreciation of assets is calculated on a straight-line basis to write off the net cost of each item of property, plant and equipment (excluding land) over its expected useful life. Estimates of remaining useful life are made on a regular basis for all assets, with annual reassessments for major items. Land is not depreciated.

Depreciation is charged from the month the asset commences service. Expected useful life periods are as follows:

IT systems hardware	3–5 years
Furniture and equipment	3–5 years
Office and technology infrastructure	7–10 years
Building fitout	10–15 years
Buildings – Norwest	30 years

k) Financial assets and derivative financial instruments

At the reporting date the Company only holds financial assets and liabilities

classified as loans and receivables.

AEMO assesses at each balance date whether there is objective evidence that a financial asset or group of financial assets is impaired.

l) Intangible assets

AEMO's intangible assets have finite useful lives, are amortised on a straight-line basis over their useful life, and are carried at cost less accumulated amortisation and impairment losses.

i. NEM establishment costs

NEM establishment costs represent the expenditure incurred to establish the NEM. These costs were recovered from registered participants over a 10-year period commencing 13 December 1998 and ending 31 December 2008. The straight-line method of amortisation was used and the asset is now fully amortised.

ii. Electricity FRC costs

Electricity FRC costs represent the expenditure incurred during the period January 2002 to June 2003 to develop and implement the electricity FRC market. These costs were recovered from FRC market participants over a 10-year period commencing 1 July 2003 and ending 30 June 2013. The straight-line method of amortisation was used and the asset is now fully amortised.

iii. STTM establishment costs

The STTM establishment costs represent the expenditure incurred to develop and implement the gas short term trading market during the period September 2008 to September 2010 for the Sydney and Adelaide market and to December 2011 for the Brisbane market. Costs are recovered over a 7-year period from September 2010 to September 2017.

iv. Software**Acquired software**

Acquired computer software licences are capitalised on the basis of the costs incurred to acquire and install the specific software.

Internally developed software

Expenditure on the research phase of the projects to develop new customised software for IT and telecommunication systems is recognised as an expense as incurred.

Costs that are directly attributable to a project's development phase are recognised as intangible assets, provided they meet the recognition requirements of AASB138.

Development costs not meeting these criteria for capitalisation are expensed as incurred.

Directly attributable costs include costs incurred on software development along with an appropriate portion of relevant overheads.

Subsequent expenditure on computer software maintenance is expensed as incurred. Software asset useful lives vary according to the type of asset.

Assets are amortised over their estimated useful lives as follows:

- NEM and FRC market management systems software: 5 years.
- NEM Energy management systems software: 5 years.
- DWGM and FRC Gas IT system software: 5 years.
- STTM system software: 7 years.
- IT systems software: 3 years.
- Business applications software: 5 years.
- WEM software: 5 years.
- GSI software: 5 years.

m) Trade and other payables

These amounts represent liabilities for goods and services provided to the company prior to the end of the financial year that remain unpaid. The amounts are unsecured and are usually paid within 30 days of recognition.

n) Borrowing costs

Borrowing costs are recognised as expenses in the period in which they are incurred, except where they are included in the costs of qualifying assets.

o) Provisions

Provisions for legal claims are recognised when AEMO has a present legal or constructive obligation as a result of past events; it is probable that an outflow of resources will be required to settle the obligation; and the amount has been reliably estimated.

p) Employee benefits**i. Short-term employee benefits**

Short-term employee benefits are current liabilities included in employee benefits, measured at the undiscounted amount that the Company expects to pay as a result of the unused entitlement.

ii. Long term employee benefits and annual leave

The liability for long service leave payable within 12 months of the reporting date is recognised as a current liability in the provision for employee benefits and is measured in accordance with Note 2(p)(i) above. The liability for long service leave expected to be settled more than 12 months from the reporting date is recognised in the provision for employee benefits and measured at the present value of expected future payments to be made in respect of services provided by employees up to the reporting date. Consideration is given to expected future wage and salary levels, experience of employee departures, and periods of service.

Expected future payments are discounted using market yields at the reporting date on corporate bonds with terms to maturity and currency that match, as closely as possible, the estimated future cash outflows. Annual leave expected to be settled more than 12 months from the reporting date remains classified as a current liability as the company is contractually obliged to settle the liability in the event an employee departs.

q) Superannuation**i. Defined contribution plans**

AEMO's default employee superannuation fund is an accumulation benefit fund. Employees have the choice of joining the AEMO-nominated fund or another superannuation fund of their choice. Superannuation contributions are included within expenses for the year.

ii. Defined benefit plans

Through the business combination that occurred on 1 July 2009 AEMO acquired responsibility for the defined benefit superannuation plan from VENCORP. No new members are permitted to join the plan; however, it is continuing for the benefit of existing members. The defined benefit plan comprises 14 employees and 6 pension members.

The liability recognised in the statement of financial position for defined benefit plan is the present value of the Defined Benefit Obligation ('DBO') at the reporting date less the fair value of plan assets.

The Company calculates the DBO annually with the assistance of an independent actuary. This is based on assumptions and estimates as disclosed in note 15.

Re-measurement gains and losses arising from experience adjustments and changes in actuarial assumptions are recognised directly in other comprehensive income.

Service cost on the net defined benefit liability is included in employee benefits expense.

r) Goods and Services Tax (GST)

Revenues, expenses and assets are recognised net of the amount of associated GST, unless the GST incurred is not recoverable from the taxation authority. In this case it is recognised as part of the cost of acquisition of the asset or as part of the expense. Receivables and payables are stated inclusive of the amount of GST receivable or payable. The net amount of GST recoverable from, or payable to, the taxation authority is included within other receivables or payables in the Statement of Financial Position. Cash flows are presented on a gross basis. The GST components of cash flows arising from investing or financing activities that are recoverable from, or payable to, the taxation authority, are presented as an operating cash flow.

s) New accounting standards and interpretations**Accounting standards and interpretations issued but not yet effective**

Australian Accounting Standards and Interpretations that have recently been issued or amended but are not yet effective and have not been adopted by the company for the annual reporting period ending 30 June 2016 are outlined in the table below:

Details of new standard/amendment/interpretation**AASB 9 – Financial Instruments (Effective date: 1 July 2018)**

AASB 9 introduces new requirements for the classification and measurement of financial assets and liabilities.

These requirements improve and simplify the approach for classification and measurement of financial assets compared with the requirements of AASB 139. The main changes are:

- (a) Financial assets that are debt instruments will be classified based on:
 - 1) the objective of the entity's business model for managing the financial assets; and
 - 2) the characteristics of the contractual cash flows.
- (b) Allows an irrevocable election on initial recognition to present gains and losses on investments in equity instruments that are not held for trading in other comprehensive income (instead of in profit or loss). Dividends in respect of these investments that are a return on investment can be recognised in profit or loss and there is no impairment or recycling on disposal of the instrument.
- (c) Financial assets can be designated and measured at fair value through profit or loss at initial recognition if doing so eliminates or significantly reduces a measurement or recognition inconsistency that would arise from measuring assets or liabilities, or recognising the gains and losses on them, on different bases.
- (d) Where the fair value option is used for financial liabilities the change in fair value is to be accounted for as follows:
 - 1) The change attributable to changes in credit risk are presented in other comprehensive income (OCI); and
 - 2) The remaining change is presented in profit or loss.

If this approach creates or enlarges an accounting mismatch in the profit or loss, the effect of the changes in credit risk are also presented in profit or loss.

Otherwise, the following requirements have generally been carried forward unchanged from AASB 139 into AASB 9:

- 1) Classification and measurement of financial liabilities; and
- 2) Derecognition requirements for financial assets and liabilities.

AASB 9 requirements regarding hedge accounting represent a substantial overhaul to hedge accounting that will enable entities to better reflect their risk management activities in the financial statements.

Consequential amendments arising from AASB 9 are also contained in various other accounting standards.

AASB 15 Revenue from Contracts with Customers (Effective Date: 1 January 2018)

Replaces AASB 118 Revenue, AASB 111 Construction Contracts and some revenue-related Interpretations:

- establishes a new revenue recognition model
- changes the basis for deciding whether revenue is to be recognised over time or at a point in time
- provides new and more detailed guidance on specific topics (e.g., multiple element arrangements, variable pricing, rights of return, warranties and licensing)
- expands and improves disclosures about revenue

AASB 16 Leases (Effective Date: 1 January 2019)

Replaces AASB 117 Leases and some revenue-related Interpretations:

- requires all leases to be accounted for 'on-balance sheet' by lessees, other than short-term and low value asset leases
- provides new guidance on the application of the definition of lease and on sale and lease back accounting

- largely retains the existing lessor accounting requirements in AASB 117
- requires new and different disclosures about leases

The company has not yet determined the potential effect of these standards.

3 Financial risk management

AEMO is exposed to a variety of financial risks: market risk (interest rate risk), credit risk, and liquidity risk. The Board has established a Risk and Audit Committee and provides written principles for overall risk management, as well as written policies covering specific areas. The company's overall risk management program seeks to minimise potential adverse effects on the financial performance of the company.

AEMO is required to operate efficiently on a self-funding break-even basis with fees to fund operations levied upon participants. AEMO has statutory powers to recover all costs as well as under and over recoveries in any of the specific functions in the next financial year or subsequent financial years. Cash flow is relevant as an extension of the efficiency concept materialising in interest rate expense, and therefore risk. In relation to financial instruments, AEMO does not have exposure to foreign currency fluctuations or changes in market prices.

Financial assets and liabilities

	2016 \$'000	2015 \$'000
Financial assets		
Cash and cash equivalents	119,187	40,677
Participant fees receivable	71,836	63,243
Other receivables	9,300	4,724
Prepayments	4,199	3,942
	204,522	112,586
Financial liabilities		
Accounts payable	3,847	47,398
Other creditors and accruals	69,460	7,153
Financial costs - accrued interest	304	298
Electricity market participant security deposits	72,593	12,797
Gas market participant prepayments	9,227	3,117
Borrowings	31,100	27,986
	186,531	98,749

a) Market risk

Market risk is the risk that the fair value or future cash flows of a financial instrument will fluctuate because of changes in market prices. It comprises three types of risk: interest rate risk, currency risk, and other price risk. In AEMO's case only interest rate risk and currency risk are relevant.

Interest rate risk arises from long-term borrowings issued at variable rates. AEMO manages its cash flow interest rate risk by using floating and fixed interest rate loans.

AEMO has considered the current financial market information and on that basis believes the use of 75 basis points to indicate the impact of potential interest rate variations is reasonable.

On occasion AEMO enters into contracts denominated in foreign currency. AEMO will enter into a hedging arrangement if deemed appropriate.

Interest rate risk	30 June 2016		-75bps		+75bps	
	Notional amount \$'000	Carrying amount \$'000	Surplus \$'000	Equity \$'000	Surplus \$'000	Equity \$'000
Financial assets						
Cash and cash equivalents	119,187	119,187	(894)	(894)	894	894

Interest rate risk	30 June 2015		-75bps		+75bps	
	Notional amount \$'000	Carrying amount \$'000	Surplus \$'000	Equity \$'000	Surplus \$'000	Equity \$'000
Financial assets						
Cash and cash equivalents	40,677	40,677	(305)	(305)	305	305

b) Credit risk

Credit risk arises where one party to a financial instrument will cause financial loss for the other party by failing to discharge an obligation. AEMO has exposure to credit risk on cash and cash equivalents, prepaid expenses, and receivables.

Exposure to credit risk is mitigated by a rigorous market prudential regime that requires credit support from either a bank guarantee or deposit equivalent to the level required by the National Electricity Rules and National Gas Rules.

Guarantees will only be accepted from banks that have a credit rating which is either:

- 1) A rating of A-1 or higher for short-term unsecured counterparty obligations of the entity, as rated by Standard and Poor's (Australia) Pty Ltd, or
- 1) A rating of P-1 or higher for short-term unsecured counterparty obligations of the entity, as rated by Moody's Investor Service Pty Ltd.

If there is to be a change to the credit support (expiry or termination) then at least 10 business days prior to the time at which the existing credit support is due to expire or terminate, the market participant must procure a replacement.

Receivables mainly consist of participant fees and Transmission Use of System (TUOS) settlement. Aged debtors are continually reviewed for collectability and where appropriate an allowance for doubtful debts is raised.

Prepaid expenses represent payments made for services to be provided or consumed over future months. Insurance agreements represent a large proportion of these, with the remainder comprised mostly of IT support. These prepayments are supported by underlying service agreements which would be legally enforceable in the event of default of service. In many instances the services are the result of a competitive process where the financial viability of the vendor has been examined.

c) Liquidity risk

Liquidity risk arises where there is a possibility that AEMO will encounter difficulty in meeting obligations relating to financial liabilities and will not have sufficient funds to settle a transaction on the due date.

To manage this risk AEMO continually forecasts and monitors cash flow and invests surplus funds in highly liquid markets. To mitigate this risk AEMO has a \$75,000k revolving cash advance facility provided by the National Australia Bank (Note 12).

Undrawn borrowing facilities

NAB revolving cash advance facility at 30 June 2016 at carrying amount

	Limit	Balance	Undrawn
	\$ '000	\$ '000	\$ '000
Limit: \$75,000,000			
Total facility available	75,000	31,100	43,900

NAB revolving cash advance facility at 30 June 2015 at carrying amount

	Limit	Balance	Undrawn
	\$ '000	\$ '000	\$ '000
Limit: \$75,000,000			
Total facility available	75,000	27,986	47,014

Loan repayment commitments

Total loan repayment (combining both principal and interest components) commitments are as follows:

30 June 2016

Institution	Loan name	< 1 year	1–5 years	> 5 years	Total
		\$ '000	\$ '000	\$ '000	\$ '000
NAB	Norwest	18,381	-	-	18,381
	STTM	5,061	-	-	5,061
	Western Australia functions	8,632	-	-	8,632
Total commitments		32,074	-	-	32,074

30 June 2015

Institution	Loan name	< 1 year	1–5 years	> 5 years	Total
		\$ '000	\$ '000	\$ '000	\$ '000
NAB	Norwest	2,154	23,748	-	25,902
	STTM	4,479	4,914	-	9,393
Total commitments		6,633	28,662	-	35,295

At 30 June 2016, total commitments are due to be repaid within 1 year on the existing debt facility expiring within 12 months. In August 2016, AEMO executed a new debt facility with a five year facility term. For further details, refer to Note 2(a).

4 Critical accounting estimates and judgements

Estimates and judgements are continually evaluated and are based on historical experience and other factors, including expectations of future events that may have a financial impact on the company and that are believed to be reasonable under the circumstances.

AEMO makes estimates and assumptions concerning the future. The resulting accounting estimates will, by definition, seldom equal the related actual results. The estimates and assumptions that have a significant risk of causing a material adjustment to the carrying amounts of assets and liabilities within the next financial year are outlined below.

a) Defined benefit superannuation

Actuarial assumptions are used in determining the defined benefit obligations and the related carrying amounts are discussed in Note 15.

b) Depreciation and amortisation

The estimation of the useful lives of assets has been based on historical experience as well as manufacturers' warranties (for plant and equipment) and lease terms. In addition, the condition of the assets is assessed at least once per year and considered against the remaining useful life. Adjustments to useful lives are made when considered necessary.

c) Use of assets for network services

AEMO has ongoing Transmission Network Service Provider Agreements under which AusNet Services and Murraylink provide network services to AEMO in relation to the Victorian electricity transmission network. The charges levied on AEMO by AusNet Services and Murraylink for the provision of transmission services under the agreements are regulated by the Australian Energy Regulator (AER). AEMO incorporates these charges into its fees to network users.

AEMO has determined that these arrangements are not, and do not contain, a lease in accordance with AASB Interpretation 4 *Determining whether an Arrangement contains a Lease*.

5 Revenue

	2016 \$'000	2015 \$'000
From continuing operations		
Electricity transmission income	535,529	523,151
Settlement residue – intra-regional (TNSP)	27,074	22,033
Settlement residue auctions (TNSP)	195	5,734
Settlement residue	27,269	27,767
NEM fees	67,453	69,062
FRC electricity fees	6,703	9,708
Registration fees	491	293
National transmission planner	3,713	3,519
WEM fees	10,297	-
Electricity market income	88,657	82,582
DWGM fees	21,480	18,692
FRC gas fees	7,049	7,122
STTM fees	11,087	12,861
Gas SOO fees	1,392	1,362
Registration fees	336	767
GSI fees	1,212	-
Other gas revenues	1,155	864
Gas market income	43,711	41,668
PCF interest	287	332
PCF contributions received	-	122
Bank interest revenue	994	1,115
Other	6,364	4,778
Other revenue	7,645	6,347
	702,811	681,515

6 Expenses

	2016	2015
	\$'000	\$'000
Surplus/(deficit) before income tax includes:		
Amortisation expense	12,118	9,984
Depreciation expense	4,698	5,037
Wages and salaries	68,962	63,593
Defined contribution superannuation expense	7,090	6,350
Defined benefits superannuation expense	491	782
Other employee benefits expense	13,224	12,298
Employee benefits	89,767	83,023
Employee benefits above exclude capitalised employee costs of:	1,797	2,616
Bank fees	191	121
Interest expense	1,385	1,966
Finance costs	1,576	2,087
Foreign exchange loss	65	-
Rental expenses related to operating leases	4,521	3,916

7 Cash and cash equivalents

	2016	2015
	\$'000	\$'000
Cash at bank and on hand	40,881	17,859
Security deposits and early settlement proceeds not available for use	67,809	12,762
Participant Compensation Fund (PCF)	10,497	10,056
	119,187	40,677

8 Trade and other receivables

	2016	2015
Current	\$'000	\$'000
Participant fees receivable	17,785	13,801
TUOS revenue receivable	54,051	49,442
Other receivables	9,300	4,724
Prepayments	4,199	3,942
	85,335	71,909

9 Property, plant and equipment

	Electricity Systems (NEM, FRC and WEM)	Gas Systems (DWGM, GSH and FRC)	Short-term Trading Market	PCF STTM Adelaide hub	PCF STTM Brisbane hub	Total
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
At 30 June 2015						
Cost	16,226	3,292	525	20,140	35,827	76,010
Accumulated depreciation	(15,334)	(3,050)	(444)	(16,170)	(14,593)	(49,591)
Net book value at 30 June 2015	892	242	81	3,970	21,234	26,419

Reconciliation of carrying amount:

Year ended 30 June 2015

Carrying amount at 1 July 2014	1,701	196	42	3,240	23,480	28,659
Additions	-	12	105	2,515	165	2,797
Transfers	-	163	-	(163)	-	-
Depreciation	(809)	(129)	(66)	(1,622)	(2,411)	(5,037)
Carrying amount at 30 June 2015	892	242	81	3,970	21,234	26,419

Reconciliation of cost:

Cost amount at 1 July 2014	17,605	3,159	420	18,250	35,662	75,096
Additions	-	12	105	2,515	165	2,797
Transfers	-	163	-	(163)	-	-
Disposals	(1,379)	(42)	-	(462)	-	(1,883)
Cost amount at 30 June 2015	16,226	3,292	525	20,140	35,827	76,010

At 30 June 2016

Cost	16,332	3,309	525	21,147	38,862	80,175
Accumulated depreciation	(15,500)	(3,128)	(501)	(17,528)	(15,494)	(52,151)
Net book value at 30 June 2016	832	181	24	3,619	23,368	28,024

Reconciliation of carrying amount:

Year ended 30 June 2016

Carrying amount at 1 July 2015	892	242	81	3,970	21,234	26,419
Additions	194	17	-	1,400	3,815	5,426
Acquisition through business combination	372	-	-	-	514	886
Disposals	-	-	-	(9)	-	(9)
Depreciation	(626)	(78)	(57)	(1,742)	(2,195)	(4,698)
Carrying amount at 30 June 2016	832	181	24	3,619	23,368	28,024

Reconciliation of cost:

Cost amount at 1 July 2015	16,226	3,292	525	20,140	35,827	76,010
Additions	194	17	-	1,400	3,815	5,426
Acquisition through business combination	372	-	-	-	514	886
Disposals	(460)	-	-	(393)	(1,294)	(2,147)
Cost amount at 30 June 2016	16,332	3,309	525	21,147	38,862	80,175

10 Intangible assets

	NEM Establishment costs \$'000	FRC Establishment costs \$'000	Software - Electricity (NEM, FRC and WEM) \$'000	Software - Gas (DWGM, GSH and FRC) \$'000	Software - Short-term Trading Market \$'000	Other \$'000	Total \$'000
At 30 June 2015							
Cost	44,473	27,330	87,770	14,010	21,375	6,435	201,393
Accumulated depreciation	(44,473)	(27,330)	(76,075)	(6,042)	(13,729)	(5,009)	(172,658)
Net book value at 30 June 2015	-	-	11,695	7,968	7,646	1,426	28,735
Reconciliation of carrying amount:							
Year ended 30 June 2015							
Carrying amount at 1 July 2014	-	-	12,584	4,261	10,726	2,171	29,742
Additions	-	-	3,541	4,936	59	441	8,977
Transfers	-	-	(29)	-	-	29	-
Amortisation	-	-	(4,401)	(1,229)	(3,139)	(1,215)	(9,984)
Carrying amount at 30 June 2015	-	-	11,695	7,968	7,646	1,426	28,735
Reconciliation of cost:							
Cost amount at 1 July 2014	44,473	27,330	84,268	9,074	21,316	6,027	192,489
Additions	-	-	3,541	4,936	59	441	8,977
Transfers	-	-	(29)	-	-	29	-
Disposals	-	-	(10)	-	-	(62)	(72)
Cost amount at 30 June 2015	44,473	27,330	87,770	14,010	21,375	6,435	201,393
At 30 June 2016							
Cost	44,473	27,330	97,155	18,156	21,377	8,013	216,504
Accumulated depreciation	(44,473)	(27,330)	(82,124)	(8,192)	(16,861)	(5,749)	(184,729)
Net book value at 30 June 2016	-	-	15,031	9,964	4,516	2,264	31,775
Reconciliation of carrying amount:							
Year ended 30 June 2016							
Carrying amount at 1 July 2015	-	-	11,695	7,968	7,646	1,426	28,735
Additions	-	-	2,019	2,470	2	1,625	6,116
Asset write-off	-	-	(1,220)	-	-	-	(1,220)
Acquisition through business combination	-	-	8,586	1,676	-	-	10,262
Transfers	-	-	-	-	-	-	-
Amortisation	-	-	(6,049)	(2,150)	(3,132)	(787)	(12,118)
Carrying amount at 30 June 2016	-	-	15,031	9,964	4,516	2,264	31,775
Reconciliation of cost:							
Cost amount at 1 July 2015	44,473	27,330	87,770	14,010	21,375	6,435	201,393
Additions	-	-	2,019	2,470	2	1,625	6,116
Asset write-off	-	-	(1,220)	-	-	-	(1,220)
Acquisition through business combination	-	-	8,586	1,676	-	-	10,262
Transfers	-	-	-	-	-	-	-
Disposals	-	-	-	-	-	(47)	(47)
Cost amount at 30 June 2016	44,473	27,330	97,155	18,156	21,377	8,013	216,504

11 Trade and other payables

	2016 \$'000	2015 \$'000
Current		
Accounts payable and accrued network charges	54,910	48,427
Employee incentives payable	8,662	6,991
Finance costs payable	304	298
Participant security deposits	72,592	12,797
Electricity settlement prepayments	15,173	-
Other creditors and accruals	3,451	5,503
	155,092	74,016
Non-current		
Lease incentive	5,324	2,032
	5,324	2,032

12 Borrowings

	2016 \$'000	2015 \$'000
Current		
Bank loans		
Norwest	17,886	1,243
STTM	4,743	4,114
Western Australia	8,471	-
	31,100	5,357
Non-current		
Bank loans		
Norwest	-	17,886
STTM	-	4,743
Western Australia	-	-
	-	22,629
Total	31,100	27,986

The above borrowings are unsecured, for details of the borrowings refer to Note 3(c).

12 Borrowings (continued)

Financing arrangements

Unrestricted access was available at balance date to the following line of credit:

	2016 \$'000	2015 \$'000
Bank loan facilities		
Total facility	75,000	75,000
Used at balance date	(31,100)	(27,986)
Unused at balance date	43,900	47,014

Loan contracts

At 30 June 2016, the total drawdown is \$31,100k (\$43,900k undrawn).

The drawdown loan details at year end are:

- Norwest loan drawdown at 30 June 2016 is \$17,886k.
- STTM loan drawdown at 30 June 2016 is \$4,743k.
- Western Australia functions capital expenditure loan drawdown at 30 June 2016 is \$8,471k.

13 Provisions

	2016 \$'000	2015 \$'000
Current		
Provision for employee entitlements	19,480	18,713
	19,480	18,713
Non-current		
Provision for employee entitlements	1,692	1,357
	1,692	1,357
Total	21,172	20,070

14 Other current liabilities

	2016 \$'000	2015 \$'000
Prepaid revenue	9,287	4,108
Other liabilities	1,162	687
	10,449	4,795

15 Defined benefit superannuation plan

Defined benefit members receive lump sum benefits on retirement, death, disablement and withdrawal. Some defined benefit members are also eligible for pension benefits. The defined benefit section of the plan is closed to new members.

The defined benefit superannuation liability was transferred to AEMO as part of the business combination with VENCORP on 1 July 2009.

Reconciliation of the assets and liabilities recognised in the statement of financial position

	2016	2015
	\$'000	\$'000
Defined Benefit Obligation	27,795	23,853
Fair value of plan assets	(22,280)	(22,666)
Net defined benefit superannuation liability	5,515	1,187

Reconciliation of the Net Defined Benefit Liability

	2016	2015
Financial year	\$'000	\$'000
Net defined benefit liability at start of the year	1,187	7,544
Current service cost	455	562
Net Interest	36	220
Actual return on plan assets less Interest income	226	(1,362)
Actuarial losses/(gains) arising from changes in financial assumptions	2,988	(4,042)
Actuarial losses/(gains) arising from liability experience	922	(1,360)
Net actuarial losses/(gains) on re-measurement of net defined benefit superannuation liability	4,136	(6,764)
Employer contributions	(299)	(375)
Net defined benefit liability at end of the year	5,515	1,187

15 Defined benefit superannuation plan (continued)

Reconciliation of the present value of the defined benefit obligation

Financial year	2016 \$'000	2015 \$'000
Present value of defined benefit obligations at beginning of the year	23,853	28,854
Current service cost	455	562
Interest cost	947	925
Contributions by plan participants	121	133
Actuarial losses/(gains) arising from changes in financial assumptions	2,988	(4,042)
Actuarial losses/(gains) arising from liability experience	922	(1,360)
Benefits paid	(1,349)	(1,060)
Taxes, premiums and expenses paid	(142)	(159)
Present value of defined benefit obligations at end of the year	27,795	23,853

Reconciliation of the fair value of plan assets

Financial year	2016 \$'000	2015 \$'000
Fair value of plan assets at beginning of the year	22,666	21,310
Interest income	911	705
Actual return on plan assets less Interest income	(226)	1,362
Employer contributions	299	375
Contributions by plan participants	121	133
Benefits paid	(1,349)	(1,060)
Taxes, premiums and expenses paid	(142)	(159)
Fair value of plan assets at end of the year	22,280	22,666

Fair value of plan assets

Financial year ended 30 June 2016	Total \$'000	Quoted prices in active markets for identical assets – Level 1		Significant observable inputs – Level 2		Unobservable inputs – Level 3	
		\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
Investment funds	22,280	-	-	22,280	-	-	-
Total	22,280	-	-	22,280	-	-	-

As at 30 June	2016 %	2015 %
Australian equity	30	29
International equity	21	25
Fixed income	13	11
Property	9	9
Growth alternatives	9	9
Defensive alternatives	11	9
Cash	7	8

Fair value of plan assets

The fair value of plan assets does not include any amounts relating to:

- Any of the company's own financial instruments.
- Any property occupied by, or other assets used by, the Company.

Principal actuarial assumptions at the balance sheet date

	2016	2015
	% p.a.	% p.a.
Assumptions to determine defined benefit superannuation expense		
Discount rate (active members)	4.2	3.5
Discount rate (pensioners)	4.2	3.5
Expected salary increase rate	2.9	3.7
Expected pension increase rate	2.9	3.0

These rates are used to calculate the expected defined benefit cost for the year.

	2016	2015
	% p.a.	% p.a.
Assumptions to determine defined benefit obligation		
Discount rate* (active members)	3.2	4.2
Discount rate (pensioners)	3.2	4.2
Expected salary increase rate	2.9	2.9
Expected pension increase rate	2.5	2.5

* The discount rate used is based on a Corporate bond yield.

These rates are used to calculate the defined benefit obligation (future obligation) at year end.

Sensitivity Analysis

The defined benefit obligation as at 30 June 2016 under several scenarios is presented below.

Scenario A and B relate to discount rate sensitivity. Scenario C and D relate to salary increase rate sensitivity. Scenario E and F relate to pension indexation rate sensitivity.

	Base Case	Scenario A	Scenario B	Scenario C	Scenario D	Scenario E	Scenario F
		-0.5% pa discount rate	+0.5% pa discount rate	-0.5% pa Salary increase rate	+0.5% pa Salary increase rate	-0.5% pa Pension indexation	+0.5% pa Pension indexation
Discount rate	3.2% pa	2.7% pa	3.7% pa	3.2% pa	3.2% pa	3.2% pa	3.2% pa
Salary increase rate	2.9% pa	2.9% pa	2.9% pa	2.4% pa	3.4% pa	2.9% pa	2.9% pa
Pension increase rate	2.5% pa	2.5% pa	2.5% pa	2.5% pa	2.5% pa	2.0% pa	3.0% pa
Defined benefit obligation (\$'000)	27,795	29,504	26,235	27,240	28,371	26,815	28,868

The defined benefit obligation has been recalculated by changing the assumptions as outlined above, whilst retaining all other assumptions.

15 Defined benefit superannuation plan (continued)

Asset-Liability matching strategies

We are not aware of any asset and liability matching strategies adopted by the plan.

Funding arrangements

The Equisuper Contribution and Funding Policy provides for a review of the financial position of the Plan each six months, as at 30 June and 31 December, with the Company contribution rate comprising a long term contribution rate and an adjustment to meet the financing objective of a Funding Ratio of 105%.

The Funding Ratio is the ratio of assets to accrued liabilities, being the greater of the vested benefits and the present value of past membership benefits.

Where the Funding Ratio is greater than 100% the financing objective is to achieve a Funding Ratio of 105% over five years. Where the Funding Ratio is less than 100% the primary financing objective is to achieve 100% over three years and 105% over five years.

In the most recent review of the financial position as at 31 December 2015 the actuary recommended a Company contribution rate of 12.6% of salaries.

The Company continues to contribute salary sacrifice contributions and at the required rates for accumulation members.

Expected contributions

Financial year	2017 \$'000
Expected employer contributions	367

Maturity profile of defined benefit obligation

The weighted average duration of the defined benefit obligation as at 30 June 2016 is 8 years.

Expected benefit payments for the financial year ending on	\$'000
30 June 2017	3,127
30 June 2018	2,599
30 June 2019	2,963
30 June 2020	3,074
30 June 2021	3,282
Following 5 years	10,710

16 Reserves

Nature and purpose of reserves

Participant Compensation Fund Reserve

AEMO maintains the following participant compensation funds:

National Electricity Market

Established under the National Electricity Rules, the purpose of this fund is to pay compensation to certain types of participants for scheduling errors as determined by the Dispute Resolution Panel. The funding requirement for each financial year is the lesser of \$1,000k and \$5,000k minus the amount which AEMO reasonably estimates will be the balance of the PCF at the end of the relevant financial year. At 30 June 2016 the balance of the fund is \$5,330k (2015: \$5,183k).

Victorian Declared Wholesale Gas Market

Established under the National Gas Rules, the purpose of this fund is to pay compensation to market participants for unintended scheduling results as determined by the dispute resolution process. The funding requirement for each financial year is the lesser of \$500k and \$1,000k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year. At 30 June 2016 the balance of the fund is \$3,579k (2015:\$3,480k).

Short Term Trading Market

Established under the National Gas Rules, the purpose of these funds is to pay compensation to market participants for unintended scheduling results as determined by the dispute resolution process. The funding requirement for each financial year is:

- I. **Sydney hub:** The lesser of \$335k and \$670k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year. At 30 June 2016 the balance of the fund is \$791k (2015:\$769k).
- II. **Adelaide hub:** The lesser of \$115k and \$330k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year. At 30 June 2016 the balance of the fund is \$396k (2015:\$386k).
- III. **Brisbane hub:** The lesser of \$225k and \$450k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year. At 30 June 2016 the balance of the fund is \$460k (2015:\$452k).

The balances for all PCFs have reached the funding requirements under the Rules. No further PCF fees will be charged for these markets unless there is a claim against the funds, however interest will continue to be earned on these funds.

	PCF NEM \$'000	PCF Vic Wholesale Gas \$'000	PCF STTM Sydney hub \$'000	PCF STTM Adelaide hub \$'000	PCF STTM Brisbane hub \$'000	Total \$'000
2015						
Balance 1 July 2014	5,013	3,368	744	373	315	9,813
Contributions during the year	-	-	-	-	125	125
Interest earned during the year	170	112	25	13	12	332
Claim payments made from the PCF during the year	-	-	-	-	-	-
Balance 30 June 2015	5,183	3,480	769	386	452	10,270
2016						
Balance 1 July 2015	5,183	3,480	769	386	452	10,270
Contributions during the year	-	-	-	-	-	-
Interest earned during the year	147	99	22	11	8	287
Claim payments made from the PCF during the year	-	-	-	-	-	-
Balance 30 June 2016	5,330	3,579	791	397	460	10,557

Land Reserve

AEMO has established the Land Reserve to recover the cost of the purchase of land at Norwest from participants.

17 Key management personnel disclosures

Directors

The following persons were directors of AEMO during the financial year:

Chairman – non-executive

Dr. A. L. Marxsen

Chief Executive Officer and Managing Director

M. Zema

Non-executive directors

F.G. Calabria

Dr. P.L. Davis

J.G. Hubbard

S. Krieger

S.C. Orr

J. Pittard

J. A. Tongs

All of the above persons were directors for the full financial year and up to the date of this report, with the exception of Mr Matt Zema, who sadly passed away on 23 July 2016. On 5 November 2015 Dr Thomas Parry AM retired as Chairman and Anthony Marxsen was appointed Chairman. Mr John Pittard was appointed to the board effective 5 November 2015.

Key management personnel compensation

	2016	2015
	\$'000	\$'000
Directors' compensation		
Short-term employee benefits	1,971	1,780
Post-employee benefits	204	188
Other long-term benefits	36	29
	2,211	1,997
Other key management personnel		
Short-term employee benefits	2,792	2,489
Post-employee benefits	195	206
Other long-term benefits	76	41
Termination benefits	44	-
	3,107	2,736
	5,318	4,733

Directors' compensation

Chairman and the Board members:

The remuneration of the Chairman and Board members for the Board and Board committees was initially determined by the Ministerial Council on Energy based on advice received from an external consultant. At the Annual General Meeting on 6 November 2014, the AEMO members considered a report from AON Hewitt on the review of non-executive director remuneration against market and approved an annual remuneration pool of up to \$1.2 million for the next three years. In considering the matter, the members noted that the Board would have discretion to determine the annual increases in remuneration and that this would be disclosed as part of the budget process.

Managing Director and Chief Executive Officer:

The position of the Managing Director and Chief Executive Officer is evaluated based on advice received from a number of remuneration and benefits specialists. The Board approves the Total Employment Cost based on this advice. The Board approves any increase to be applied based on both market movement and individual performance.

The remuneration includes a performance reward component of up to 25% based on company performance against agreed criteria.

Other key management personnel

All positions have a job profile that is evaluated using the Hay Group evaluation methodology. This determines their Total Employment Cost. Each year AEMO seeks remuneration advice from Hay Group regarding market movements for this group. Any movements are approved by the Board.

The remuneration includes a performance reward component of up to 25% based on company performance against agreed criteria.

18 Remuneration of auditors

During the year the following fees were paid or payable for services provided by the auditor of the entity, its related practices and non-related audit firms:

	2016 \$'000	2015 \$'000
Statutory financial audit services		
Services provided by the financial auditor Grant Thornton		
Statutory audit of the financial statements of the company	131	111
Other services		
Other audit services not provided by AEMO's financial auditor *	1,737	1,607

* Other audit activities include gas and electricity market audit services, which include the review of AEMO's control procedures and its compliance with the Rules. A significant portion of these services are on behalf of registered participants and the review reports are distributed to them. This balance also includes internal audits of the company, review and accreditations, and other advisory services. None of these services were performed by the external auditor during the year.

19 Contingencies

From time to time AEMO may be involved in disputes with registered participants. As referred to in Note 16 Reserves, AEMO maintains PCFs for payment of compensation to market participants for unintended scheduling results and scheduling errors as determined under various dispute resolution processes. Where the probable outcome against the company can be measured, an appropriate liability is recognised in the financial statements. Where the outcome is unknown and the company is defending the action, or it is unlikely that any significant liability will arise, an amount is not recognised in the financial statements. Disclosure of details of claims are not provided where the directors consider that this would be prejudicial to AEMO in resolving the disputes. Payment of claims are capped to the extent of the funds available in the applicable PCF.

20 Commitments

Capital commitments

Capital commitments relate to contracted acquisition of assets.

	2016	2015
	\$'000	\$'000
Not later than one year	522	1,886
Later than one year but not later than five years	-	50
Later than five years	-	-
	522	1,936

Operating lease commitments

Operating leases in respect of rental properties contracted for at balance date but not recognised as liabilities, are:

	2016	2015
	\$'000	\$'000
Not later than one year	5,936	4,671
Later than one year but not later than five years	15,176	18,800
Later than five years	5,781	7,171
	26,893	30,642

Lease commitments payable are based on AEMO's current lease rates and include agreed future increments. The leases relate to the following:

- Melbourne CBD premises – lease agreement to 31 October 2018.
- Sydney CBD premises – lease agreement to 28 February 2021.
- Brisbane CBD premises – lease agreement to 31 January 2026.
- Adelaide CBD premises – lease agreement to 15 July 2019.
- Perth CBD premises – lease agreement to 30 September 2022. This lease has a termination clause that can be exercised with effect from 30 September 2017.

21 Accumulated surplus/(deficit)

The accumulated surplus or deficit attributable to each of AEMO's functions is detailed below:

	2016	2015
	\$'000	\$'000
NEM	2,363	6,595
Electricity FRC	354	2,783
Victorian TNSP	(814)	(4,904)
DWGM – capital contribution	8,704	8,704
DWGM	1,273	626
Gas FRC	3,761	3,896
STTM	(1,162)	(1,492)
NTP	1,485	1,669
WEM	2,469	-
GSI	(86)	-
Other functions	(2,594)	375
	15,753	18,252

AEMO has statutory powers to recover all costs as well as under and over recoveries in any of the specific functions in the next financial year or subsequent financial years. It does this by including surpluses or deficits in future budgets and applying these to future fee recoveries for specific AEMO functions. Accordingly, the accumulated surplus / deficit attributable to each of AEMO's functions is reconciled and managed on an ongoing basis. The DWGM – capital contribution amount relates to VENCORP contributed capital that was required to be treated as an accumulated surplus at the commencement of AEMO.

22 Business combination – Western Australia functions

a) Summary of acquisition

On 30 November 2015 AEMO assumed responsibility for the Western Australian Wholesale Electricity Market (WEM) and Gas Service Information (GSI) functions previously performed by the Independent Market Operator.

The details of the business combination are as follows:

	2016 \$'000
Fair value of consideration transferred	
Amount settled in cash	1,172
Total	1,172
Fair value assets and liabilities acquired	
Cash and cash equivalents	745
Trade and other receivables	3,334
Other current assets	91
Total Current Assets	4,170
Property, plant and equipment	886
Intangible assets	10,262
Total Non-current Assets	11,148
Total assets	15,318
Trade and other payables	982
Borrowings	4,818
Other liabilities	558
Provisions	557
Current Liabilities	6,915
Borrowings	6,046
Other liabilities	497
Provisions	482
Non-current Liabilities	7,025
Total liabilities	13,940
Identifiable Net Assets	1,378
Gain on Acquisition*	206

* The gain on acquisition represents the net brought forward operating surplus for the WEM and GSI functions. Refer to Note 21 for the closing accumulated surplus / (deficit) attributable to the respective functions at balance date.

b) Purchase consideration – cash outflow

	2016
	\$'000
Outflow of cash to acquire, net of cash acquired	
Cash consideration	1,172
Less: balance cash acquired	(745)
Net outflow of cash – investing activities	427

23 Events occurring after balance sheet date

From 1 July 2016, AEMO assumed responsibility for systems management functions in Western Australia, previously performed by Western Power. Systems Management manages the electricity system of the South West Interconnected System (SWIS) in Western Australia.

AEMO has in place an operating agreement with Western Power relating to the management of the SWIS, that delegates most practical functions back to Western Power until 30 November 2016.

In August 2016, AEMO executed a new \$75 million debt facility agreement with Commonwealth Bank of Australia for a five year facility term to 2021. This provides long term capital projects funding and working capital certainty to the company. For further details, refer to Note 2(a).

24 Reconciliation of surplus/ (deficit) to net cash inflow/ (outflow) from operating activities

	2016	2015
	\$'000	\$'000
Surplus/ (Deficit)	1,945	986
Depreciation and amortisation	16,816	15,021
Non-cash defined benefit expense	192	407
Write-off intangible assets	1,220	-
Unrealised foreign exchange gain	(17)	(24)
Profit on sale of investments	9	(2)
Change in operating assets and liabilities		
(Increase)/ decrease in trade and other receivables	(18,604)	(2,564)
Increase/ (decrease) in creditors and accruals	33,907	4,616
Increase in participant security deposits	61,660	9,048
(Decrease)/ increase in provisions	1,102	(359)
Net cash inflow/ (outflow) provided by operating activities	98,230	27,129

25 Related party transactions

All directors comply with the Directors Interests Protocol adopted by the Board, which abides by the Corporations Act 2001 provisions and sets out the policy for each director's responsibility to disclose conflicts of interest, declaration of interests, and management of conflicts.

There is one director that occupies a role in another energy company which pays fees to AEMO. All related party transactions for the year ended 30 June 2016 were transacted at arms-length.

These transactions are not considered related-party transactions as defined by accounting standards and are therefore not disclosed in this note, as the relevant director of AEMO is not considered to have significant control over any of the entities with which AEMO transacts.

Directors' Declaration

The directors of Australian Energy Market Operator Limited declare that:

1. The financial statements, comprising the statement of profit or loss and other comprehensive income, statement of financial position, statement of changes in equity, statement of cash flows, and accompanying notes, are in accordance with the *Corporations Act 2001* and:
 - (a) comply with Accounting Standards as described in Note 2 to the financial statements and the *Corporations Regulations 2001*; and
 - (b) give a true and fair view of the company's financial position as at 30 June 2016 and of its performance for the year ended on that date in accordance with the accounting policies described in Note 2 to the financial statements.
2. In the directors' opinion, there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

This declaration is made in accordance with a resolution of the Board of Directors and is signed for and on behalf of the directors by:



Dr. A. L. Marxsen
Chairman

Melbourne
1 September 2016



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Independent Auditor's Report To the Members of Australian Energy Market Operator Limited

We have audited the accompanying financial report of Australian Energy Market Operator Limited (the "Company"), which comprises the statement of financial position as at 30 June 2016, the statement of profit or loss and other comprehensive income, statement of changes in equity and statement of cash flows for the year then ended, notes comprising a summary of significant accounting policies and other explanatory information and the directors' declaration of the Company.

Directors' responsibility for the financial report

The Directors of the Company are responsible for the preparation of the financial report that gives a true and fair view in accordance with Australian Accounting Standards and the Corporations Act 2001. The Directors' responsibility also includes such internal control as the Directors determine is necessary to enable the preparation of the financial report that gives a true and fair view and is free from material misstatement, whether due to fraud or error.

Auditor's responsibility

Our responsibility is to express an opinion on the financial report based on our audit. We conducted our audit in accordance with Australian Auditing Standards. Those standards require us to comply with relevant ethical requirements relating to audit engagements and plan and perform the audit to obtain reasonable assurance whether the financial report is free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial report. The procedures selected depend on the auditor's judgement, including the assessment of the risks of material misstatement of the financial report, whether due to fraud or error.

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In making those risk assessments, the auditor considers internal control relevant to the Company's preparation of the financial report that gives a true and fair view in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the Company's internal control. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of accounting estimates made by the Directors, as well as evaluating the overall presentation of the financial report.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

Independence

In conducting our audit, we have complied with the independence requirements of the Corporations Act 2001.

Auditor's opinion

In our opinion the financial report of Australian Energy Market Operator Limited is in accordance with the Corporations Act 2001, including:

- i giving a true and fair view of the Company's financial position as at 30 June 2016 and of its performance for the year ended on that date; and
- ii complying with Australian Accounting Standards and the Corporations Regulations 2001.

Grant Thornton

GRANT THORNTON AUDIT PTY LTD
Chartered Accountants

A handwritten signature in blue ink, appearing to read "M. Climpson".

Michael Climpson
Partner - Audit & Assurance

Melbourne, 1 September 2016

Directory

Australian Energy Market Operator Limited

ABN: 94 072 010 327

Registered and principal corporate head office

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Melbourne Victoria 3000

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Melbourne Victoria 3001

Telephone: 1300 858 724
Overseas callers: +61 3 9609 8000
AEMO Information and Support Hub: 1300 236 600

Statutory auditor

Grant Thornton

Market auditor

PricewaterhouseCoopers

Internal auditor

RSM BirdCameron

Banker

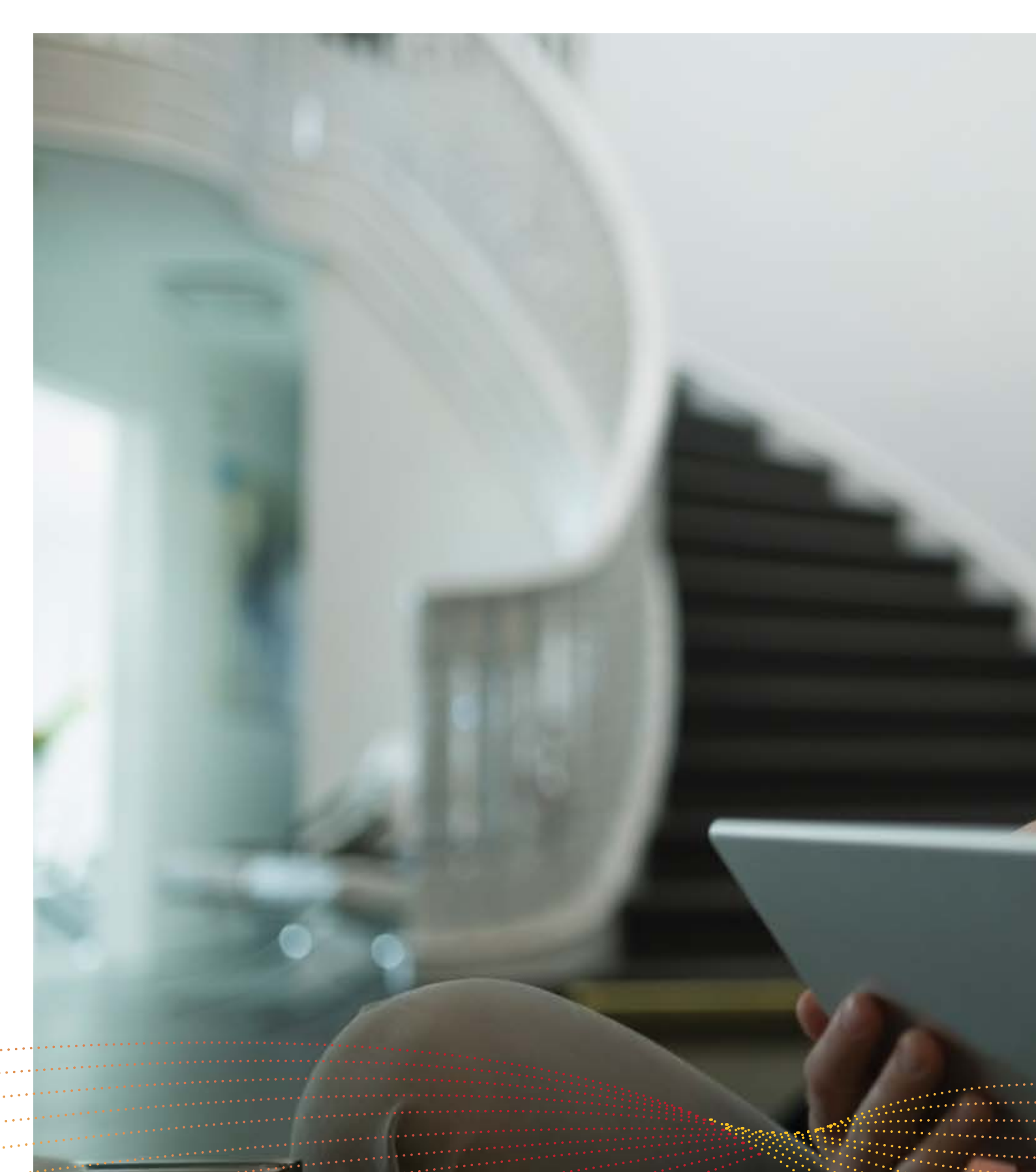
NAB

Solicitor

Principal Advisors

Allens Linklaters
Thomson Geer





Australian Energy Market
Operator Limited

ABN 94 072 010 327

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