# Annual Report 2020 – 2021

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## About AEMO

## Vision:

To be a world-leading energy system and market operator and system planner.

## Our role:

To ensure safe, reliable and affordable energy today, and enable the energy transition for the benefit of all Australians.

## The way we work:

Together we will work as one AEMO. Our approach is to collaborate with our stakeholders and adapt to changing industry needs. We will deliver and be accountable for our core obligations as we manage our way through the energy transition.

Living our values is central to our role. We will empower our people and stakeholders, we will collaborate in an inclusive and transparent manner, we will approach each stakeholder and problem with integrity, and ultimately, we will deliver excellence in our outcomes.

## AEMO's core responsibilities and services

#### System operations

- Real-time operations
- System service and security management, monitoring and review
- Engineering analysis, support and modelling
- Operating reserves and operational forecasting
- Emergency and outage management

#### Market operations

- Metering
- Generator and industry registrations and accreditation
- Settlements, prudentials and payments
- Market monitoring
- Retail market operations and procedures

## System planning

- Energy system forecasting
- System modelling and planning (including Victorian planning)
- Integrated system planning and WEM planning support
- Network connection enablement
- Technical analysis and resource adequacy assessments

#### **Others services**

- Stakeholder, member and industry support
- Technologies and data

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## AEMO system and market operations and system planning by state

system planning	g by state	WA	SA	VIC	NSW & ACT	QLD	TAS	NT
	NEM Power System				•			
	WEM South West Interconnected System							
System Operations	Victorian Transmission Network Service Provider			•				
	Victorian Declared Transmission System							
	UNEM NEM		•	•	•	•	•	
	• • WEM	•						
	das Bulletin Boards		٠	•		•	•	•
Malator	👌 Gas Retail Markets							
Market Operations	Day Ahead Auction							
	Short Term Trading Market							
	👌 Gas Supply Hubs							
	👌 Declared Wholesale Gas Market							
	NEM Integrated System Plan		•	•	•	•	•	
	NEM Electricity Statement of Opportunities			•	•	•	•	
	WA Electricity Statement of Opportunities	•						
System Planning – Major Publications	Gas Statement of Opportunities for East Australia		•	•	•	•	•	
	WA Gas Statement of Opportunities							
	🕴 Victorian Annual Planning Report							
	Victorian Gas Planning Report							

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## **Chairman's Message**

The past financial year has been a period of renewal for the Australian Energy Market Operator (AEMO) and an opportunity to focus on the future, despite the significant operational challenges and disruptive pressures impacting the entire industry.

The rapidly transforming energy landscape demands that AEMO continues to develop new ways of engaging with our stakeholders across the entire system, as we work to deliver safe, reliable and affordable energy today, and enable the energy transition, in the interests of Australian energy consumers.

The appointment of two new Board directors and the recruitment of a new Chief Executive Officer has brought fresh vigour and capabilities into the organisation.

Ms Julieanne Alroe and Mr Kee Wong joined the Board in June. Julieanne has more than 40 years' experience in senior roles, including as chair of an energy company and a Commonwealth agency and as a senior aviation industry executive. Kee has decades of experience as a technology entrepreneur, investor, adviser and non-executive director throughout the Asia Pacific region, with qualifications in engineering, information technology and business.

Their specialist skills build on the existing capability of the Board at a time of rapid economic, societal and technological change.

In February, the Board announced the appointment of AEMO's new Chief Executive, Daniel Westerman. He joined AEMO in May having held senior roles in the UK and US with National Grid PLC, a leading electricity and gas utility listed on the London Stock Exchange. At National Grid, Daniel had been responsible for engineering, planning and operational control of the electricity transmission network across Great Britain as well as the development of distributed energy systems such as rooftop solar, storage and energy metering. Most recently, he had grown a large-scale renewable energy business and led transformation and change programs across multiple business units and geographies – all extremely valuable experience for the Australian energy context.

Daniel has worked with the Board, the executive leadership team and staff to set a new corporate plan for the 2022 financial year. The plan establishes four strategic priorities that will guide AEMO's work. It focuses AEMO's efforts on engaging our stakeholders, enabling Australia's accelerating energy transition for the future, safely and securely managing the day-to-day operations of the nation's electricity and gas markets and systems, and evolving the organisation to meet these challenges efficiently. The plan also commits AEMO to greater transparency and openness in the way it goes about its work.

In response to a request from the NSW Government, at the end of the financial year, the Board established AEMO Services Limited, an independent subsidiary to provide advisory and energy services to member jurisdictions, with New South Wales as the first member jurisdiction. This structure is designed to ensure AEMO remains focused on its core functions, and is able to transparently deliver jurisdiction-specific mandates.

In July 2021, the New South Wales Government foreshadowed the formal appointment of AEMO Services to the role of NSW Consumer Trustee as part of its Electricity Infrastructure Roadmap for planning and developing future energy infrastructure in the state.

While AEMO works to its new goals, plans and leadership, I want to thank former chief executive Audrey Zibelman, who departed AEMO in December. She has been an outstanding leader through a time of significant change and has made a major contribution to the Australian energy transition. We wish Audrey every success in her new global energy role. I also want to thank and acknowledge interim chief executive Nino Ficca, who maintained AEMO's momentum while the search for a new CEO was conducted, before returning to the role as Non-independent Executive Director once Daniel commenced.

While this Annual Report highlights the many achievements of the past financial year, AEMO's Board, our CEO, executives and staff are firmly focused on the future. Australia is at a critical point in the evolution – indeed transformation – of our energy systems, as it becomes more digitalised, decarbonised and consumer-centric.

The Board and I do not underestimate these challenges but as we seek to transform ourselves, we are confident AEMO is firmly focused on the needs of Australian energy users and consumers, and the imperative of transparently sharing insights to help support the sector in grappling with and resolving these challenges.

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Drew Clarke

## A message from AEMO's CEO

## AEMO's role is to deliver safe, reliable and affordable energy today, and to enable the energy transition for the benefit of all Australians.

The view from AEMO's control rooms over the past year has highlighted the way Australia generates and consumes energy is changing, and that the rate of change is accelerating.

Australia's energy transition continues to move through its most extensive transformation in a century, becoming at once more decarbonised, decentralised, digitalised and democratised.

Increasing proportions of renewable generation – from commercial solar and wind farms, hydro and rooftop solar – are connecting to the grid and eroding the tradition role of thermal generation.

At the same time, we regularly witnessed new records of renewable energy supplying the grid, as demand for electricity drawn from the grid is falling to new lows, a phenomenon driven by Australia's world-leading uptake of rooftop solar.

Collectively, these factors pose new technical challenges for AEMO to manage as we work with the industry to ensure secure and reliable energy flows around Australia, particularly as traditional thermal spinning generators progressively retire.

## **Corporate and financial performance**

Through collaboration with our stakeholders AEMO has delivered on our core obligations as Australia's energy system and market operator and system planner in the 2020-21 financial year.

Together, the majority of strategic initiatives shared in our FY21 Corporate Plan were achieved, with the remaining due for completion in the early stages of the next financial year.

At the same time, AEMO achieved our budget this financial year, with total expenditure 3 per cent below budget, helped by cost savings and efficiencies Importantly, when benchmarked against international peers, AEMO has comparatively similar costs. However, to deliver our operational obligations and energy reform mandates, AEMO's financial position needs further strengthening. We will do this with members and the Financial Consultative Committee in establishing our budgets and fees.

As part of our commitment to transparency, this year's annual report provides a financial breakdown on key segments, including our roles in the NEM, the WEM, the Declared Wholesale Gas Market and as the Transmission Network Planner for Victoria.

## **Operational resilience**

The resilience of our transitioning energy systems was again tested during the year.

For the first time in Australia, curtailment of more than 10 MWs of rooftop solar PV in South Australia was required as a last resort in March 2021 when minimum operational demand levels threatened powersystem security as South Australia was operating in an islanded state.

On this day minimum system load fell to 358 MW, just shy of the 300 MW record set on 11 October 2020.

The emerging challenges associated with falling minimum system load are not unique to South Australia, with minimum operational demand across the NEM mainland expected to drop to a record low of 4 to 6 GW by 2025, down from 15 GW in 2019.

AEMO is working with industry, government agencies, market bodies and consumers to support the development of a range of measures that can manage this issue equitably and enable greater amounts of renewable energy in the NEM and maximise consumer benefits.

In May, a fire at the Callide Power Station led to underfrequency load shedding with more than 2,000 MWs of coal-fired generation lost and multiple Queensland transmission lines tripping, including the Queensland – New South Wales Interconnector.

During and after the event, AEMO worked with industry – generators, networks and retailers, and governments – to re-establish secure electricity supply and manage the knock-on impact to the gas network with increasing demand for gas-powered generation (GPG) going into winter.

Coal unavailability in Queensland, and Victoria due to the flooding risk at the Yallourn coal mine, coupled with more GPG led to reduced gas supply from Queensland to the southern states and a rapid draw down of gas stored at the Iona Gas Plant in south west Victoria.

These events showcase coupling of gas and electricity systems, as well as the collaborative industry responses that enabled these challenges to be safely and efficiently managed.

## Reforms

Ensuring the energy transition delivers benefits to all Australians requires reform to our systems and markets. Many of the reforms required – both in the NEM and the WEM – to navigate Australia's energy future have been under development or nearing finalisation in this past financial year.

In the NEM, some major reforms, designed to improve the operational efficiency of markets for the benefit of consumers, include Five Minute Settlements (5MS), Wholesale Demand Response (WDR) and two-day retail switching.

They are amongst the most significant reforms since the inception of the National Electricity Market and underwent final testing and refinement in the 2021 financial year.

Concurrently, AEMO contributed to developing the final recommendations for the Energy Security Board's (ESB) post-2025 market reforms.

The ESB reforms – essential system services, the integration of distributed energy resources, a potential capacity mechanism and managing network congestion – are designed to ensure the NEM is fit for purpose for 2025 and beyond.

In WA, WEM market reforms have moved into the delivery stage as AEMO, and stakeholders collaborate to achieve a 2023 market start.

All of these reforms will contribute to the toolkits that helps AEMO maintain energy affordability, reliability and security for consumers as we move towards enabling the power system to operate with up to 100% instantaneous renewable penetration.

### Moving forward

Our stakeholders have said clearly they want AEMO to be more open, transparent, consultative and collaborative. This is a strong priority for me too, and I was pleased with the results of the inaugural Financial Consultation Committee established to share our business priorities, budget position and considerations with members in the past financial year. In the coming year we will deepen our industry collaboration with a new Reform Delivery Committee that works transparently with industry and market bodies to drive down the costs and risk of implementing agreed NEM Post-2025 reforms.

Our stakeholders have shared that they want AEMO to prioritise our core role as the system and market operator and national planner, but also to partner on potential solutions to challenges in today's grid and markets, to smooth the energy transition underway.

Their feedback, along with the views of our staff, shaped AEMO's new Corporate Plan 2022 and its four strategic priorities for the year ahead:

- Operating today's energy systems and markets while maximising benefits in the interest of consumers.
- Navigating the energy future a roadmap that delivers least-cost and lowest risk outcomes for consumers.
- Engaging our stakeholders being transparent, collaborative and stakeholder-focused.
- Evolving the way we work improving AEMO's organisational efficiency.

This Annual Report assesses our performance against the four strategic priorities of our Corporate Plan.

These strategic priorities will enable us to deliver our core obligations and responsibilities to the Australian energy industry, while simultaneously preparing for the energy systems and markets of the future, and evolving the way we operate to become more efficient and effective.

While this Annual Report reflects on the achievements of the past financial year, AEMO is looking and planning sustainably for the future, so that Australia has the safe, reliable and affordable energy system that it deserves.

**Daniel Westerman** 

# FY21 key highlights



Wholesale gas purchased

Wholesale gas purchased

\$1,496M

Wholesale gas purchased

8

## NEM fuel split

Landfill Gas

Distillate

0.49%

0.03%



Total energy consumed

**\$1.6**B

Total value

# AEMO Executive Leadership Team



## **Daniel Westerman**

## Chief Executive Officer and Managing Director

Daniel oversees AEMO's strategy and operations, including collaboration with market participants and policy makers.

Prior to joining AEMO in May 2021, he held a variety of senior executive roles with London-listed electricity and gas utility, National Grid Plc. Most recently he served as Chief Transformation Officer and President of Renewable Energy where he led the company wide transformation program and grew a large-scale renewable energy business in the United States. Before this, Daniel worked at McKinsey & Company and Ford Australia.



## **Tony Chappel**

#### **Executive General Manager – Corporate Affairs**

Tony Chappel oversees AEMO's industry, government, media, communications, emergency management, and stakeholder relations.

Tony joined AEMO in July 2019, and has a long career working in and around energy policy issues, including at AGL Energy Ltd, the New South Wales government, and the resources and energy sectors, both locally and abroad.

Tony also worked at the Smith School for Enterprise and the Environment at the University of Oxford after completing post graduate study in energy policy in the UK on a Chevening Scholarship.



## **Michael Gatt**

## **Executive General Manager – Operations**

Michael Gatt has the responsibility for overseeing AEMO's electricity and gas system operations teams.

Prior to joining AEMO August 2020, Michael spent 15 years at TransGrid's where his most recent role was Executive General Manager of Works Delivery. At TransGrid he led the delivery of TransGrid's prescribed capital portfolio together with new generator connections, maintenance, project development, and emergency management functions.

Over the last 25 years, Michael has been an active part of the energy industry, always passionate about its role in society and the people that make it happen. Prior to TransGrid he worked for a distribution business, industry association and in energy policy roles throughout the development of the National Electricity Market.



## **Brett Hausler**

## Executive General Manager – Governance & General Counsel

Brett oversees AEMO's corporate governance, legal, risk, audit, compliance, transmission procurement, and finance functions.

Brett has been with AEMO since its commencement in 2009. Prior to this he was with the National Electricity Market Management Company (NEMMCO) where he was General Manager Corporate Services, after several years in the energy sector. Brett's previous career was in private legal practice.



## **Geraldine Leslie**

#### Executive General Manager – People & Culture

Geraldine is responsible for overseeing the health and safety, culture, capabilities and leadership for AEMO's workforce.

Geraldine joined AEMO in September 2020, having spent more than 10 years at AusNet Services as the EGM of People, Safety and Corporate Affairs. This role was responsible for leading the people and business operations, including safety, diversity and inclusion, culture and capability.

Prior to this, Geraldine gained extensive senior executive experience within a diverse range of organisations in energy, manufacturing, health and local government.



## Violette Mouchaileh

## **Executive General Manager – Reform Delivery**

Violette's role focuses on developing and implementing strategies for emerging areas, including integrating Distributed Energy Resources (DER), and developing value-add data and information services.

Prior to moving to her current role in December 2018, Violette held various roles at AEMO in market design development, market change implementation and operations.

Violette previously held roles driving energy market policy in the Commonwealth government and working on competition policy initiatives at the Australian Energy Regulator (AER) and Australian Competition and Consumer Commission (ACCC). Her experience includes economic regulation, energy policy development, development of regulatory frameworks, market development and design, and market change implementation.



## **Cameron Parotte**

## Executive General Manager - Western Australia

Cameron is responsible for the management and operations of Western Australia's electricity system and markets and gas services.

Cameron has led the Western Australian functions since January 2016, when AEMO began the transition to becoming responsible for wholesale and retail markets in Western Australia.

Cameron joined AEMO in 2016 from Western Power, where he had extensive experience in power system operations, design and planning over more than 20 years.



## Mario Tieppo

## Executive General Manager – Digital (Interim)

Mario is responsible for AEMO's technology ecosystem, both for employees and external stakeholders.

Joining AEMO in September 2021, Mario has more than 30 years' experience in business and technology roles in the energy utilities, retail, agriculture, logistics and warehousing and government sectors. Mario's most recent role was Executive General Manager - Technology, at AusNet Services Ltd, a publicly listed leader in the energy sector.



## **Julie Williams**

### **Executive General Manager – Finance**

Julie leads AEMO's financial and business services division.

Julie has over 30 years' experience across the energy and water industry with extensive experience in leadership of commercial and strategic finance, risk management and governance in both the private and public sector.

Julie held the position of Treasurer at State Electricity Sector in the 1990's before joining Citipower / Power Corp as their CFO in 2005, a position she held for eight years. More recently Julie has been working at Western Water as their CFO with responsibility for the financial and commercial planning function.



## **Alex Wonhas**

#### **Executive General Manager – System Design**

Alex is responsible for overseeing AEMO's expanded focus on system design, development, and engineering, which includes planning and forecasting.

Alex started at AEMO in January 2019. With more than 15 years' experience in the energy sector, Alex was previously the Managing Director – Energy, Resources and Manufacturing at international engineering and advisory firm Aurecon, focusing on growing its energy and resources advisory services to supplement its traditional engineering business.

## **Operating today's systems and markets**

The accelerated energy transition underway in Australia provided AEMO will another year of dynamic operating and market conditions for the country's major electricity and gas market and systems.

## During FY21 in the NEM:

33

generators registered (total capacity of 2.68 GW)

18

generators committed (2.1 GWs)

16

generators commissioned (1.73 GWs)

## **Electricity**

The decarbonisation and decentralisation of Australia's power system continued at pace, with inverter-based generation displacing synchronous thermal generation and the essential power-system services these coal, gas and hydro units provide.

AEMO's control room operators are challenged in maintaining system strength, frequency control, reliability and security levels with less synchronous generation, along with managing the supply-demand balance due to generation variability and uncertainty.

The shift to renewable generation, often located in remote and congested regions of the power system, has also impacted connection assessments, grid performance and operational stability.

This year, AEMO collaborated with stakeholders to identify priority actions to support the real-time operation, visibility, forecasting and predictability of the energy system.

#### **Primary Frequency Response**

To sustain frequency operating standards in the NEM, AEMO made a rule change to the AEMC requiring all scheduled and semi-scheduled generators to automatically respond to changes in power system frequency outside the operating band.

Historically, only synchronous generating systems provided PFR. With the rule change, the growing portfolio of wind and solar generation, and battery storage will also play a role in maintaining frequency in the normal operating band, a vital aspect of secure power system operation.

Following the AEMC's final rule change in March 2020, AEMO developed the PFR requirements and worked with each participant to successfully implement PFR in approximately 40 GW of the total 56 GW of generators in the NEM.

## The implementation of PFR has led to a significant improvement in frequency and essential power system resilience, as evidenced by the Callide C outage in May 2021.

AEMO provided the AEMC with a technical paper outlining the requirements for mandatory, narrow deadband PFR in the NEM power system as an input to the enduring PFR rule.

### Enhancing AEMO's forecasting capabilities

AEMO progressed improvements in our operational forecasting systems to better manage Australia's power system now and into the future.

This includes working with stakeholders to review and redevelop the **Pre-dispatch (PD) and Short Term (ST) PASA** methodology, the core systems used by AEMO and electricity industry stakeholders to identify and manage risks to power system security and reliability over the upcoming seven days. The new PD & ST PASA systems are proposed to provide more granular information about reliability issues and will be more flexible in modelling changing network conditions. These features have become critical in light of the changing power system where energy resources are becoming more variable and distributed and intraregional issues having a larger impact on system security and reliability.

A proof of concept of the proposed high-level design of the new system has been completed successfully and AEMO is now working towards detailed design and execution of the new system.

In addition, AEMO is developing an **'operational forecasting roadmap'** to ensure our system operators and market participants have the best situational awareness and critical information to make operational and financial decisions.

Aside from providing high quality five minute to sevenday supply and demand forecasts using a broader scope of forecasting concepts and sources throughout the energy supply chain, this program will qualify and quantify the high level of uncertainty and variability that will be an inherent part of the future energy system.

AEMO is now completing the detailed planning and design, including two proof of concept projects, before executing new systems and business processes.

#### Integrating DER

Australia's world-leading adoption of rooftop solar PV, approximately 14 GW or 23% of total generation capacity in the NEM, and growth in energy storage and management technologies is accelerating innovation and challenges to the grid. AEMO has pursued reforms, research and trials with the industry to progress the secure integration of distributed energy resources (DER), addressing technical and operational challenges.

A major milestone was finalising the **minimum DER technical standards** for launch in December 2021. Mandatory for new and replacement inverters in the NEM, the standards fix inverters disconnecting due to network disturbances and improve data, interoperability and communication standards that can enable active management of DER.

In addition, AEMO published its third knowledge sharing report for its **Virtual Power Plant (VPP) Demonstration Program**. This program, including eight VPP participants with more than 7,150 consumers with varying DER technologies, tests the capabilities of DER to deliver scalable energy and network services, traditionally performed by conventional electricity generators.

The insights showed that VPPs assisted in elevating operational demand by 5 MWs when South Australia reached a record minimum demand level on 11 October 2020. Further, VPPs prioritise fleet availability for Frequency Control Ancillary Services (FCAS) markets over other value streams, such as energy arbitrage. This makes accurately forecasting behaviour as VPPs scale more complex.

In Western Australia, has launched a **DER register** for the SWIS, a major milestone for the Western Australian Government's DER Roadmap. With continued DER investment forecast, is it critical that AEMO understands the operational capability of DER to ensure consumerled energy investments support energy system reliability and security and deliver maximum value for Western Australia's energy consumers.

AEMO worked with Western Power and the Western Australian Government to design and implement the DER Register, which is a cornerstone action for many of the DER Roadmap initiatives, enabling improved visibility and data for AEMO to use in its forecasting and operational functions.

Together, these initiatives work to safely enable the continued growth and shared community benefit from DER in a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

## **Operations and grid-connection tools**

To strengthen real-time operations and enable the control room of the future, AEMO progressing the design and implementation of two simulators.

At the end of July 2021, AEMO's **'digital twin' operational simulator** completed a proof-of-concept stage and is now embarking on system development, ahead of an expected launch by mid-2022.

Advancing current simulation capabilities, the new electromagnetic transient (EMT) simulator captures and predicts the behaviour of asynchronous generation (wind, solar and battery storage), which operate differently from synchronous generations. This will enhance AEMO's ability to prepare for and quickly respond to events threatening secure power-system operations in the NEM.

Secondly, AEMO is building a cloud-based resource available for developers to test and tune power system models for new generation projects planning to connect to the NEM.

With funding support from the Australian Renewable Energy Agency's (ARENA) Advancing Renewables Program, the **connection simulation tool** will help reduce risks, costs and time to approve the connection of new generation projects.

Testing will commence with industry participants in August on a working prototype, with a staged rollout of the connection simulator expected at the end of 2021. AEMO will work transparently with industry, engage with trial users, and incorporate stakeholder feedback at each stage.

#### Gas

The operation of Australia's eastern and south-eastern gas system was heavily affected by two events impacting coal generation unavailability in Queensland and Victoria.

In May 2021, an incident at Queensland's Callide Power Station resulted in a large portion of the state's coal generation fleet being offline, increasing demand for gas-powered generation (GPG). This event also reduced natural gas supply from Queensland to the southern states and a rapid draw down of gas stored at the Iona Gas Plant in south west Victoria.

GPG was also called upon in June with flooding risk at Victoria's Yallourn Power Station mine limiting generation to only one of four units at near minimum capacity. Iona's inventory continued to decline rapidly to support increased GPG demand and the usual large winter heating load.

Just as generation at Yallourn began to return to normal, Victoria's gas supply was challenged again with unplanned outages to repair gas leaks at the Iona facility and the Longford Gas Plant, which is Australia's largest gas production facility.

Iona UGS inventory continued to fall rapidly during the Longford outage lasting nearly 3 weeks. AEMO formally requested market participants to consider sourcing increased gas supply from Queensland and to provide updated gas supply and demand forecasts as well as Iona storage balance projections.

During this period gas market prices increased significantly with average weekly prices exceeding \$20/ GJ in Victoria's Declared Wholesale Gas Market (DWGM) as well as the Sydney and Adelaide. The DWGM hit \$58.44/GJ on 9 July, which is the third highest price since market start. Two additional price spikes above \$30/GJ occurred.

The situation improved in the second half of July. August was unusually mild and Victorian system demand did not exceed 1,000 TJ/d. Demand had exceeded 1,200 TJ/d several times during August 2019 and 2020, including the record demand of 1,308 TJ on 9 August 2019.

The mild conditions couple with continued supply from Queensland, assisted by an extended outage of an APLNG production train, increased Longford Gas Plant production and low levels of GPG demand enabled Iona UGS inventory to increase during August.

While these events are unusual (noting that the Yallourn mine also flooded in 2004 and 2012), the Yallourn and Longford issues narrowly avoided overlapping. AEMO's 2021 Gas Statement of Opportunities and the Victorian Gas Planning Report both highlighted the need for increased gas supply capacity as Longford production declines.

## Callide C response

On Tuesday 25 May 2021, one of the four units at CS Energy's Callide Power Station ceased generation due to a turbine hall fire. This led to under-frequency load shedding with more than 2,000 MWs of coal-fired generation lost and multiple Queensland transmission lines tripping, including the Queensland – New South Wales Interconnector (QNI).

As the incident unfolded, more than 400,000 homes and many large businesses lost power, reducing to 20,000 within a few hours and then none as the power system returned to a secure and stable state.

The large reduction of generation availability also led to actual Lack of Reserve 1 and 3 conditions, and forecast LOR3 conditions in Queensland, as well as activation of 15 MW of Reliability and Emergency Reserve Trader (RERT) capacity in Queensland. Actual LOR1 and forecast LOR2 conditions also occurred in New South Wales.

Following the unit fire and ongoing coal-fired unit outages, the supply-demand balance was tight in Queensland and New South Wales for much of the quarter, contributing to significant price volatility. Queensland's spot price averaging \$1,638/MWh for the day and the trading price hit the market price cap for an extended period.

During and after the event, AEMO worked with industry – generators, networks, retailers, governments – to avoid greater impacts from the emergency.

## **Further reading**

# Navigating the energy future

AEMO continues to collaborate with stakeholders to develop major planning and forecasting blueprints, along with regulations and market reforms to ensure the energy system remains fit-for-purpose to deliver benefits for consumers.

## 2021 Inputs, Assumptions and Scenarios Report (IASR)

At the end of July 2021, AEMO published its 2021 Inputs, Assumptions and Scenarios Report (IASR), listing five future energy scenarios that will inform the 2022 Integrated System Plan (ISP).

Developed over 10 months with a broad range of industry participants, governments and consumer representatives, stakeholders had an overwhelming response for scenarios to reflect the rapid decarbonisation of the energy sector and pathways to achieve net-zero emissions across the economy.

Compared to the 2020 ISP scenarios, these scenarios reflect the economic and technological change expected over the coming decades. Specifically, the pace of economy-wide decarbonisation, the ongoing consumer investment in distributed energy resources, and the growth of transport and industry electrification.

The IASR includes two 'central scenarios' as well as a 'hydrogen superpower' scenario based on a power system to support the development of a renewable hydrogen export economy.

AEMO will use the IASR inputs in future work, including the Draft ISP in December 2021 and the next final ISP due in June 2022.

## 10-year reliability outlook

AEMO's annual electricity and gas statement of opportunities reports assess the 10-year supply-demand balance outlook for both Australia's major energy systems and markets.

These reports help inform the decision-making processes of market participants, investors and jurisdictional bodies to assess future risks, opportunities, and development needs in the energy industry.

Key insights from this year's **NEM Electricity Statement** of **Opportunities (ESOO)** showed a positive reliability outlook to 2025, due in part to 4.4 GW of newly committed grid-scale generation and storage capacity. However, several generator retirements have been brought forward, contributing to forecast indicative reliability gaps from 2025 to 2030 in Victoria and from 2029 in NSW if no additional dispatchable energy or transmission projects come into the market.

In addition, a further 8.9 GW of commercial and residential solar PV forecast could see minimum operational demand drop to a record low of 4 to 6 GW by 2025, down from 15 GW in 2019. Without additional operational tools, AEMO may no longer be able to operate the mainland NEM securely from 2025 due to a lack of security services when demand from the grid is so low.

Meanwhile, the **WEM ESOO** portrays similar sufficient generation capacity to meet forecast demand in the South West Interconnected System (SWIS) over the next decade. The report projects rooftop and large-scale commercial solar systems will reach around 40% of total generation capacity by 2030-31. These installations



are expected to grow at an average annual rate of 8% (219 MW per year) to reach an estimated 4,069 MW of installed capacity by 2030-31.

Moving to the eastern and south-eastern Australian gas markets, the **2021 Gas Statement of Opportunities** (GSOO) and **2021 Victorian Gas Planning Report** (VGPR) forecast an improved outlook for gas supply until at least 2026 across the eastern and south-eastern gas systems. This is determined if committed field developments and pipeline expansions proceeded as planned, with operation of the Port Kembla Gas Terminal (PKGT) commencing before the 2023 winter.

However, southern supply risks remain for winter 2023 if PKGT is delayed and certain conditions emerge, such as a 1-in-20 maximum winter daily demand in Victoria, coincident peaks across southern regions, power-system events significantly increasing gas-powered generation of electricity (GPG), or gas production outages. The GSOO also highlights that the gas sector is on the cusp of transformation, with changes in consumption patterns forecast and alternate supply sources being actively developed.

The **2020 Western Australia Gas Statement of Opportunities** (WA GSOO) forecasts a 2.8 per cent annual decline in potential gas supply, with supply expected to exceed demand until 2026. This decline is in line with reserve depletion at existing production facilities and comes as upstream gas development projects have been delayed due to market dynamics, exacerbated by economic conditions resulting from the COVID-19 pandemic.

## **Market reforms**

In addition to power system publications, AEMO has worked with industry on implement a number of important market and regulatory initiatives on-track to launch in October 2021.

Over the past four years, AEMO has worked in collaboration with industry on the **Five-Minute Settlement** (5MS) Program, updating market procedures, designing and testing systems and coordinating industry readiness.

5MS will reduce the wholesale electricity spot market settlement period from 30 to 5 minutes. This change aims to provide a better price signal for investment in faster response technologies, such as batteries, gas peakers, and to enable more efficient bidding, operational decisions and investments, aligned to smaller financial settlement periods.

Another important reform is **Wholesale Demand Response** (WDR), which gives large end-use customers a market to offer reduced usage or 'demand' during times of supply scarcity.

WDR is an interim step towards a two-sided electricity market where both the supply and demand side participate in dispatch and price setting. In this way, WDR provides opportunities to effectively use of existing infrastructure and potentially defer the need for additional investment while new markets evolve.

And finally, AEMO has worked with the AEMC to simplify and improve the customer switching process in the NEM. The new framework will reduce the time it takes customers to change electricity retailers, from months to a same-day transfer.

Following a recommendation in the ACCC's Retail Electricity Pricing Inquiry report, AEMO developed and consulted on a process that will facilitate faster and more efficient switching, providing better outcomes for customers and electricity retailers.

Faster switching between energy retailers will make it easier for customers to transition to better electricity offers/rates and access new services and will provide retailers with a more streamlined process for switching in a new customer.

## **Engineering Framework**

Most critical transition developments will occur in the next five to 10 years, with the NEM expected to reach up to 100% instantaneous renewable penetration by 2025 if current trends continue.

This requires a significant overhaul of current rules, processes, and operational techniques. Through the Engineering Framework, AEMO will work with industry to facilitate an orderly transition towards this future. AEMO published the Engineering Framework March 2021 Report. Working in collaboration with industry, the framework seeks to establish a baseline that identifies possible future operational conditions for the NEM power system, work already underway to address these conditions, and where industry needs to collaborate on solutions to address the most urgent issues or opportunities.

The report identifies 10 focus areas – including voltage control, system strength, distributed energy resources (DER), system restoration and frequency control – where increased industry focus is needed to bridge the gap between current work and future operational conditions.

Complementing this work is AEMO's Advanced Inverter White Paper. Published in July 2021, the paper is designed to understand the potential of grid-forming inverters to address many of the challenges facing the future power system with reduced synchronous generation.



Deep collaboration with industry stakeholders informed the paper, helping AEMO identify four key areas of application for advanced inverters, including connecting IBR in weak grids, supporting system security, island operation, and system restart.

Further collaboration with stakeholders on these two pieces will continue.

## **Further reading**





# **Engaging our stakeholders**

AEMO has initiative an increased emphasis on transparent and efficient engagement with stakeholders to help shape our energy future, for the betterment of all Australians.

Underpinning this priority is listening and measuring our effectiveness with stakeholders and providing effective interfaces and engagement opportunities.

### Stakeholder reputation research

AEMO published its latest annual stakeholder reputation research, showing improvements from the 2020 study.

The research involved stakeholder interviews on AEMO's performance in operating the energy market, along with specific metrics on efficiency, accountability, transparency and collaboration.

The research and insight delivered further enables AEMO's commitment to become a trusted partner, better able to put our members and stakeholders at the centre of everything we do in the interests of consumers.

Our stakeholders have observed that we're listening, taking action and doing a good job in operating the market in a highly challenging environment.

Some of the key metric results from the study:

- Reputation Score of 53%
- Net Advocacy Score of -18%
- Trust Score to deliver the National Electricity
  Objective 62%
- Trust Score to do what we say we will do 68%

## AEMO implements new engagement model and forum structure

Following industry consultation on the Engagement Model – Options Paper, AEMO has completed its review with stakeholders on our consultative forums and working groups. AEMO hosts more than 50 forums and working groups annually, related to energy market operations, system planning and markets functions.

The outcomes of this review will help AEMO deliver a more collaborative, transparent, and dynamic experience for stakeholders engaging with AEMO.

In response to feedback, three new stakeholder forums have been added to the engagement model: the Financial Consultative Committee; Markets Forum; and Energy Roundtable.

In April 2021, AEMO commenced the new Financial Consultative Committee to consult in-depth on AEMO's annual budget and fees. Members represent a crosssection of industry and have been nominated by industry associations, with consumers represented by Energy Consumers Australia.

In addition, and in response to stakeholder feedback, AEMO will be refreshing our many working groups – including refreshing their terms of references, using them more for co-design and improving our forum processes.

## AEMO Electricity and Gas Participant Fees Structures

In March 2021, AEMO published its final reports on NEM market participant fee structures for electricity and gas, used to recover budgeted revenue requirements for AEMO's functions. These new structures were developed with careful consideration of participant feedback throughout a consultation process, including consultation papers and draft reports.

Since the last fee determination in 2016, there has been transformation, especially in the NEM, including a range of regulatory reform and operational changes needed to address the increasing complexities involved in planning and operating energy systems and markets. AEMO's responsibilities and functions have increased, and our scope and focus of interactions with registered participants has changed.

## **Connections Reform Initiative**

AEMO and the Clean Energy Council (CEC) launched the Connections Reform Initiative to improve the connection process for renewable and hybrid projects in the NEM.

This initiative builds on existing work the CEC and AEMO have led with CEC members, transmission and distribution businesses and industry stakeholders to address systemic issues of the connection process.

The initiative involves CEC members, network businesses, industry and market body representatives, including the AEMC, AER and the ESB.

#### **ISP Consumer Panel**

To better consider and integrate the perspectives of consumers into the 2022 ISP, AEMO established a 'consumer panel'.

The five-member panel, chosen through an expression of interest process, work with AEMO in developing the 2022 ISP, ensuring the best mix of energy resources to deliver lowest cost, sustainable and reliable energy to consumers.

The panel will also publish two reports on the IASR and Draft 2022 ISP, as well as engaging closely with AEMO through formal and informal submissions and other activities.



Mr Vincent Makota [left] from the Faculty of Engineering was this year's recipient of the Zema Energy Studies Scholarship, which supports PhD students to address Australia's energy sector challenges through multidisciplinary research.

## Matt Zema Energy Studies Scholarship

AEMO awarded the second Matt Zema Energy Studies Scholarship to Vincent Makota. The scholarship provides a \$35,000 per annum stipend and will support the recipient to undertake their PhD. Mr Makota's doctorate will focus on new technologies for providing system strength in electrically weak parts of the grid where substantial renewable energy generation potential exists.

The scholarship honours the memory of AEMO's founding Chief Executive Officer, energy reform leader and Monash alumnus Matt Zema. The Zema Scholarship aims to create a cohort of energy professionals with advanced multidisciplinary knowledge across Engineering, IT and Business/ Economics.



## 5MS engagement program

Over the past four years, AEMO has worked in collaboration with industry on the Five-Minute Settlement (5MS) Program, updating market procedures, designing and testing systems and coordinating industry readiness.

This has included hosting more than 140 working groups and executive forums to help the market prepare for the 5MS rule change and provide members with an opportunity to discuss and contribute feedback.

This extensive engagement program, including readiness and risk assessments, has helped us reach this key milestone together.

## **Further reading**



# **Evolving the way we work**

In a year where inclusiveness, empathy, resilience and innovation have made all the difference, AEMO's focus on evolving the ways we work through living our values, empowering our people, and optimising our workforce, has never been more important.

## Progressing our inaugural Diversity & Inclusion strategy and plan, incorporating:

- Virtual employee events for Flexible Working Day, International Women's Day, Harmony Day, International Day Against Homophobia, Biphobia, Intersexism and Transphobia, Wear It Purple Day, NAIDOC and International Day of People with Disability.
- In-house training to recognise and remove unconscious bias from our processes and behaviours as we seek to build a diverse and inclusive workplace.
- Partnering with the employee-led Women@ AEMO group to launch AEMO's inaugural female mentoring program, mPower.
- Completing AEMO's gender pay equity review and remedy program.
- Mapping out bold actions for the next 12 months as we continue our focus on attracting and developing a diversity of talents and perspectives across our organisation and the industry.



Our focus over the past 12 months has been the safety of our employees and stakeholders as the world navigates the Covid-19 pandemic, and ensuring that our employees are supported to continue to fulfill our roles and responsibilities to deliver secure, affordable and reliable energy to Australians.

In March 2020, AEMO worked quickly to successfully transition all non-control room operations staff (i.e. the majority of our workforce) to working from home, and working flexibly. This meant providing our people with the timely information, effective technology, flexible processes and policies, and strong leadership and communications to support our employees to manage home and work commitments amid shifting Covid-19 public health measures.

Despite challenging conditions and a highly uncertain environment, our people responded with enthusiasm to the challenge of finding new ways to come together to successfully implement key activities required to deliver on our FY2021 Corporate Plan objectives.

Highlights include:

- Rolling out our refreshed AEMO values designed to embody the culture we want to create for our people, and our ambitions as an organisation.
- Delivering our Senior Leadership Team Development program to advance the leadership skills and technical competencies required of our people to support the energy industry of the future.
- Completing the first iteration of our enterprise workforce plan to align resource and capability requirements to support the AEMO Organisational Excellence Program – accelerating improvement in our organisational efficiency, effectively and capability, bringing greater benefits to our stakeholders.

AEMO is on a journey of continual improvement to create an inclusive, adaptive, cost-effective, commercially minded and consumer-focused AEMO, focused on excellence, engaging with stakeholders, and making a positive difference to the future. This year, over 80 per cent of employees participated in our annual AEMO Culture and Engagement survey, providing key insights into the evolving culture roadmap.

Our next challenge is to continue delivering upon this roadmap through our leaders, with a focus on embracing our one team ethos; putting stakeholder and consumer considerations at the forefront of all that we do; setting out a talent strategy to have the right people in the right place and at the right time; and ensuring AEMO has the right strategic capability (people, process and system) to deliver on core obligations and future needs.

**Summary insights:** there is room for improvement in communicating our direction, empowerment, innovation, retaining talent and more flexible ways of working.

Theme		Insights
Ø	Organisational alignment	Employees want more communication around AEMO's strategic priorities and direction
4	Empowerment	AEMO can enable execution through empowerment, delegation and involving employees more
	Innovation	Opportunity to drive an innovation agenda and increase external focus, through more active collaboration across the organisation
	Talent retention	Employees expressed concern about losing talent to other organisations, with a downstream risk that AEMO will not continue to be a 'destination for talent
00	Flexibility	Employees are seeking more flexibility in defining their work arrangements. There is an opportunity to revisit how we optimise flexible working arrangements to balance individual, team and organisational needs.

AEMO is focused on supporting our people to deliver on our corporate plan and achieve our ambitions to create grids that can handle 100 per cent instantaneous penetration of renewables.



2021 Graduates Jordan Santer, Usman Haidar, Rebecca Atkins, and Caitlin Aynsley got to see first-hand how AEMO operates the grid from our Sydney control room.

## AEMO Graduate Development

This year AEMO welcomed another talented group of new graduates to our highly regarded Graduate Development Program, joining our existing graduates participating in the three-year program.

In keeping with our diversity and inclusion goals, we were thrilled to have a wide representation of talented graduates, including women, targeting our core technical areas of STEM (Science, Technology, Engineering and Maths).

The Graduate Development Program is a key talent pipeline for AEMO and the energy industry. It provides participating graduates with fast-paced, hands-on energy sector experience. Graduates are provided with four structured rotations across the entire AEMO organisation, building their knowledge of AEMO's operational and commercial areas, and Australia's energy sector as a whole.

**Further reading** 

## Financial Performance Report

In addition to AEMO's 2020-21 Fiancial Statements and Auditor's Report, AEMO is providing this additional function-based information to improve transparency.

## **AEMO 2021 Financial Performance**

In 2021, AEMO generated a financial surplus of \$2.5 million. However, the overall financial performance masks considerable variation across function areas, which is why we have taken the step to provide the breakdowns shown on following pages. The Victorian Transmission Network Service Provider (VicTNSP) function<sup>1</sup> contributed a surplus of \$21.7m to the overall AEMO 2021 financial result, and the Western Australia functions contributed a net \$0.7m to the surplus. Largely offsetting these, the NEM electricity and gas functions generated an annual net operating deficit of \$19.9m.

At 30 June 2021 AEMO's accumulated operating deficit was \$29.1m.

#### AEMO enterprise summary profit and loss statement for the year ended 30 June 2021

	2021	2020	Varian	ance fav/(unfav)	
	\$'000	\$'000	\$'000	%	
Revenue					
Transmission income	641,125	595,915	45,210	7.6	
Settlement residue	55,817	59,385	(3,568)	(6.0)	
Electricity Market income	156,773	141,775	14,998	10.6	
Gas Market income	42,997	44,137	(1,140)	(2.6)	
Other Revenue	37,996	28,143	9,853	35.0	
	934,708	869,355	65,353	7.5	
Expenses					
Network charges	661,473	646,035	15,438	2.4	
Operating Expenses	270,880	249,166	21,714	8.7	
	932,353	895,201	37,152	4.2	
Operating surplus/(deficit)*	2,355	(25,846)	28,201	(109.1)	
Other comprehensive income					
Net defined benefit gain	1,380	1,390	-10	(0.7)	
Comprehensive surplus/(deficit)	3,735	(24,456)	28,191	(115.3)	
Other Reserves					
Participant Compensation Fund	(1,042)	(1,126)	84	(7)	
Land Reserve	(227)	(227)	0	0	
Net Surplus/Deficit after Other Reserves	2,467	(25,808)	28,275	(109.6)	

\*AEMO is not subject to income tax, being tax exempt on the basis that it qualifies as a public authority constituted under an Australian law.

<sup>1</sup> Includes Settlement Residue Auction revenue and expenditure

#### **Total Revenue**

Transmission income reflects revenue recovery for the provision of shared transmission network services to users of the Victorian Declared Transmission System (DTS) including the planning of future requirements and the procuring of augmentations in the DTS. The 2021 increase in revenue reflects recovery of the net increase in expenditure associated with regulated and non-regulated network charges, net inter-regional Transmission Use of System (TUOS), settlement residue and AEMO's VicTNSP costs.

AEMO's NEM Fees and Tariffs are established to recover operating expenditure for each electricity and gas market it operates and the recovery of other services consistent with legislative authority. The 7.5% increase in 2021 revenue reflects recovery of higher operating expenditure as compared to 2020 and the net movement in particular function over or under recoveries.

The 2021 Other Revenue increase of 35% reflects an increase in both Vic TNSP and NEM connections activities, in addition to services provided to statebased members.

#### Total Expenses

Labour-related expenses and IT, forecasting and operating system maintenance, and investments required to plan and operate Australia's electricity and gas systems and markets represent the bulk of AEMO's expenses.

Expenditure excluding network charges increased by 8.7% to \$270.9m, with detail of the year-on-year variances discussed below the table.

The expenditure was approximately \$8m (3%) below the 2020-21 Budget, largely as a result of lower than planned VicTNSP consulting expenditure associated with the Victoria to New South Wales Interconnector (VNI) West project.

## AEMO total expenses for the year ended 30 June 2021

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	2021	2020	Varia	ance fav/(unfav)
	\$'000	\$'000	\$'000	%
Expenses				
Employee benefits	159,106	148,355	10,751	7.2
Depreciation & Amortisation	37,588	29,702	7,886	26.5
Consulting & contracting	27,977	29,698	(1,721)	(5.8)
IT & Telecoms	33,757	25,601	8,156	31.9
Finance Costs	1,248	1,723	(475)	(27.6)
Other expenses	11,204	14,087	(2,883)	(20.5)
	270,880	249,166	21,714	8.7
Network charges	661,473	646,035	15,438	2.4
Total Expenses	932,353	895,201	37,152	4.2

Key points of the 2021 expenditure are:

- Employee benefits are presented net of labour expensed to capital investment projects. The 7.2% year-on-year increase in employee benefits reflects wage escalation, and onboarding of headcount to support additional requirements for the National Transmission Planning function, Victorian grid connections and increased support for digital investments that have moved into service.
- Increased depreciation reflected the transition to production of assets on the Western Australian DER program, the digital strategy program including cyber security uplift, cloud design and build, and data capability uplift projects.
- Within the 2021 Depreciation & Amortisation is \$2.2m of asset impairments that reflect a decommissioning of assets no longer in use, and an assessment that expenditure incurred on planning for the DER market trials will not be capitalised.
- IT & telecoms expenditure increase of 32% is driven by increased licences, and increased software fees, and support and maintenance expense, recognising reform, lifecyle and uplift investments becoming operational.
- The reduced finance costs in 2021, as compared to 2020, reflects lower variable interest rates.
- Other Expenses fell by 26.4% in 2021 reflecting the impact of COVID-19 on travel, training and development, and office supplies expenditure. Insurance expense increased during 2021, and reported within Other Expenses, 2021 included an increase of \$0.8m in the expense for doubtful debts.
- AEMO is billed network charges by the Victorian electricity transmission network owners. The increase in year-on-year charges largely reflects recovery of increased network regulatory investments. The 2021 network charges expenditure of \$661.5m was approximately \$8m lower than anticipated in AEMO's 2020-21 Budget due to lower charges related to System Strength Remediation Services.

#### **Capital Expenditure**

AEMO invested \$143.1m in capital expenditure during the year compared to \$123.7m in 2020.

The 2021 capital expenditure was lower than anticipated in AEMO's 2020-21 Budget largely reflecting the smoothing of the digital program investment over an extended period, following a review of the program expenditure.

Expenditure during 2021 primarily included the continued investment in the Five Minute Settlements (5MS) and Global Settlement (GS) systems, the Western Australia reform program (particularly in relation to DER activities), digital platform and enablement investments, and initiatives to strengthen system security (including cyber investments) and resilience of AEMO services.

## Functional Breakdown of AEMO 2021 Financial Performance

AEMO operates more than 30 ring-fenced service functions, and revenue comprises fees charged for the recovery of expenditure incurred in relation to those functions. To provide insight into the financial performance of the functional areas operated by AEMO, the enterprise financial performance is presented below showing the financial contribution from individual and grouped functions as follows:

- National Electricity Market (NEM) Functions (excluding VicTNSP)
- VicTNSP Function
- Western Australia Wholesale Electricity Market (WEM) Functions
- Eastern States' Gas Functions
- Western Australia Gas Functions.



## Financial Performance – National Electricity Market (NEM) Functions (excluding VicTNSP)

The NEM is focused on power system security and reliability market operations and systems. wholesale metering, settlements and prudential supervision, longer-term energy forecasting and planning services for the eastern and southern states. The VicTNSP function has been excluded from the NEM financial performance below to reflect revenue and expenses on a consistent national basis.

In 2021, the NEM functions (excluding VicTNSP) generated a total comprehensive operating deficit of \$19.1m.

## NEM Functions (excluding VicTNSP) summary profit and loss statement

	2021	2020	Varia	Variance fav/(unfav)	
	\$'000	\$'000	\$'000	%	
Revenue					
Electricity Market income	124,748	110,811	13,937	12.6	
Other Revenue	24,011	15,638	8,373	53.5	
	148,760	126,449	22,311	17.6	
Expenses	168,742	156,247	12,495	8.0	
Operating deficit	(19,982)	(29,798)	9,816	(32.9)	
Other comprehensive income					
Net defined benefit gain	865	892	(26.1)	(2.9)	
Comprehensive deficit	(19,117)	(28,906)	9,790	(33.9)	
Other Reserves					
Participant Compensation Fund	(1,013)	(1,036)	24	(2)	
Land Reserve	(227)	(227)	0	0	
Net Deficit after Other Reserves	(20,356)	(30,169)	9,813	(32.5)	

The 2021 8% increase in expenses largely reflects increases associated with:

- employee benefits linked to wage escalation and increased headcount to support additional requirements for the National Transmission Planning function, Victorian grid connections and increased support for digital investments that have moved into service, and
- depreciation and amortisation reflecting digital and operational uplift investments required to deliver in the transforming energy environment.

The larger NEM functions include:

- NEM Core
- National Transmission Planner (NTP)
- Consumer Data Platform (CDP)
- Five Minute and Global Settlements (5MS & GS)
- Distributed Energy Resources (DER)
- Full Retail Contestability (FRC)

The contribution to AEMO's 2021 comprehensive operating deficit of \$19.1m from these NEM functions is presented in the chart.



## 2021 Function Contribution to Comprehensive Deficit - Surplus / (Deficit) \$'000's

## **Financial Performance – VicTNSP Function**

VicTNSP is responsible for both the efficient utilisation of the shared transmission network services to users of the Victorian DTS and the planning of future requirements and procuring of augmentations in the DTS.

The Vic TNSP function over recovered \$21.7m in 2021 that will returned to participants through lower charges in coming years. The operating surplus largely reflected:

- higher than anticipated net transmission income and network charges associated with Western Murray system strength remediation services; and
- under expenditure associated with timing in regulatory investment activities associated with the VNI West project.

At 30 June 2021, the VicTNSP accumulated surplus was \$22.1m, which will be returned to participants over coming financial years.

	2021	2020	Varian	ce fav/(unfav)
	\$'000	\$'000	\$'000	%
Revenue				
Transmission income	641,125	595,915	45,210	7.6
Settlement residue	55,817	59,385	(3,568)	(6.0)
Other Revenue	11,471	8,772	2,699	31
	708,412	664,072	44,341	6.7
Expenses				
Network Charges	661,473	646,035	15,438	2.4
Operating expenditure	25,678	21,641	4,038	0.5
	687,151	667,675	19,476	2.9
Operating surplus/(deficit)	21,261	(3,603)	24,865	(690.0)
Other comprehensive income				
Net defined benefit gain	416	399	16.8	4.2
Comprehensive surplus/(deficit)	21,677	(3,204)	24,882	(776.5)

## VicTNSP summary profit and loss statement

## Financial Performance – Western Australia Wholesale Electricity Market (WEM) Functions

The Western Australia WEM functions provide power system security and reliability, market operations and systems, wholesale metering, settlements, prudential supervision and long-term energy forecasting and planning services.

Fees and charges for these functions reflect recovery of expenditure aligned with the current three-year Economic Regulation Authority (ERA) determination on AEMO's allowable revenue and capital expenditure. The three-year period extends to 30 June 2022. The WEM functions contributed an operating surplus of \$1.3m for 2021, a 67% decline on 2020. The 2021 decrease was the result of:

- increased employee benefits reflecting wage escalation and onboarding of headcount to support the energy market transition, partially offset by lower consulting and contracting expenditure; and
- higher depreciation and amortisation reflecting the transition of assets into service for the Western Australian DER program and the digital platform strategy.

### Western Australia WEM Functions summary profit and loss statement

	2021	2020	Varia	nce fav/(unfav)
	\$'000	\$'000	\$'000	%
Revenue				
Electricity Market income	32,025	30,960	1,065	3.4
Other Revenue	84	583	(499)	(85.5)
	32,109	31,543	566	1.8
Expenses	30,792	27,605	3,187	11.5
Operating surplus	1,317	3,938	(2,621)	(66.6)

## Financial Performance – Western and Eastern States' Gas Functions

AEMO operates a number of wholesale gas markets, including the Declared Wholesale Gas Market (DWGM) and other markets supporting the secondary trading of gas and pipeline capacity across the west and east coasts of Australia. In addition, AEMO operates Australia's gas retailer markets, the Declared Transmission System in Victoria, and bulletin boards that provide up-to-date gas market and system information.

These functions across the western and eastern states contributed an immaterial net comprehensive financial deficit to AEMO's overall financial result.

### Eastern states' gas functions summary profit and loss statement

	2021	2021 2020		ance fav/(unfav)
	\$'000	\$'000	\$'000	%
Revenue				
Gas Market income	40,486	41,109	(623)	(1.5)
Other Revenue	2,430	3,154	(724)	(22.9)
	42,916	44,263	(1,347)	(3.0)
Expenses	42,521	40,473	2,048	5.1
Operating surplus	395	3,790	(3,395)	(89.6)
Other comprehensive income				
Net defined benefit gain	95	95	(0.7)	(0.7)
Comprehensive surplus	489	3,885	(3,396)	(87.4)

#### Western Australia gas functions summary profit and loss statement

	2021	2020	Varia	nce fav/(unfav)	
	\$'000	\$'000	\$'000	%	
Revenue					
Gas Market income	2,511	3,028	(517)	(17.1)	
	2,511	3,028	(517)	(17.1)	
Expenses	3,147	3,201	(54)	(1.7)	
Operating deficit	(636)	(173)	(463)	267	
Other comprehensive income					
Net defined benefit gain	4	4	(0)	(1)	
Comprehensive deficit	(632)	(169)	(463)	273	

## **AEMO Financial Position**

At 30 June 2021, the net assets of AEMO were negative \$8.9m.

AEMO's negative net asset position is the result of an accumulated operating deficit of \$29.1m at 30 June 2021 driven by under recovery of the NEM functions (discussed further below).

## AEMO summary statement of financial position

	2021	2020	Variance increase	e / (decrease)
	\$'000	\$'000	\$'000	%
Assets				
Cash and cash equivalents	222,803	62,738	160,065	255
Receivables	113,016	103,684	9,332	9
Intangible assets & PPE	347,378	234,464	112,914	48
Right-of-use assets	19,636	26,247	(6,611)	(25)
Other Assets	168	0	168	
Total assets	703,001	427,133	275,868	65
Liabilities				
Payables	210,036	96,887	113,149	117
Lease Liability	27,222	34,572	(7,350)	(21)
Other Liabilities	116,503	70,169	46,334	66
Borrowings	358,180	238,180	120,000	50
Total liabilities	711,941	439,808	272,133	62
Equity				
Capital contribution of members	7,093	7,093	0	0
Participant compensation fund reserve	9,689	8,648	1,041	12
Land reserve	3,399	3,172	227	7
Accumulated deficit/(deficit)	(29,121)	(31,588)	2,467	(8)
Total equity	(8,940)	(12,675)	3,735	(29)

Key points of the AEMO's Financial Position at 30 June 2021 are:

- Within the cash and cash equivalents 2021 balance of \$222.8m, \$41.4m cash on hand is available on demand for AEMO operational uses (\$30.8m 2020). Grant income of \$14.2m was held in trust along with \$9.5m of Participant Compensation Funds that is collected and held for participants under the NEM, DWGM and Short-Term Trading Market for compensation as a result of scheduling errors. In addition, not available for AEMO operational use, a cash balance of \$157.6m was held at 30 June 2021 consisting of participant security deposits and early settlement proceeds (\$23.4m in 2020). The increase in this security deposit and early settlement proceeds balance at 30 June 2021 reflects market pricing and volume conditions.
- The payables balance year-on-year increase of \$113.1m predominantly reflects a \$101m increased liability associated with the participant security deposits and early settlement proceeds held at 30 June 2021.
- The Intangible and PPE assets increase of \$112.9m reflects ongoing capital investment net of annual depreciation and asset decommissioning.
- Borrowings increased by \$120m in 2021, with debt funding drawn from AEMO's commercial bank facilities. The borrowed funds were utilised to fund the 2021 net capital investment and an increase in AEMO's cash on hand.

### **Debt Financing**

AEMO has a \$535m unsecured variable rate syndicated debt facility with National Australia Bank and the Australia and New Zealand Banking Group. In May 2021, the facility was renegotiated to extend the tenor of each tranche by 12 months and to increase Tranche A by \$35m to provide additional short-term liquidity. The facility consists of three tranches as follows:

- Tranche A: \$50m maturing May 2022
- Tranche B: \$242.5m maturing May 2024
- Tranche C: \$242.5m maturing May 2026

At 30 June 2021 the facility was drawn to \$358.2m, leaving \$176.8m undrawn and available.

Debt borrowings are utilised to fund asset investments, in addition to funding AEMO's net accumulated operating deficit.

## Accumulated operating deficit

AEMO's financial performance in recent years has resulted in AEMO carrying an accumulated deficit of \$29.1m at 30 June 2021.

AEMO's 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, provides a right for AEMO to recover the accumulated deficit.

AEMO's statutory financial report has been prepared on the going concern basis, assuming continuity of normal business activities, and the realisation of assets and the settlement of liabilities in the ordinary course of business. In assessing the appropriateness of the going concern assumption consideration has been given AEMO's statutory powers to recover all costs as well as under and over recoveries. In addition, it is noted that AEMO held undrawn debt facilities of \$176.8m at 30 June 2021.

The accumulated surplus / (deficit) attributable to each of AEMO's functions is reconciled and managed on an

ongoing basis. The accumulated deficit for 2021 and 2020 for each function is detailed on the following page.

The chart below presents the accumulated surplus / (deficit) of the functional areas of operations detailed earlier in this report.

The NEM functions' accumulated deficit of \$84.9m largely reflects expenditure increases in recent years associated with operational requirements and investments to maintain system stability and security in the transitioning energy and increased cyber-threat environments.

Focused on affordability of participants and consumers, recovery of the increased expenditure, and as such the accumulated deficit, has been smoothed and will continue to be smoothed over coming years. Also to minimise the price impact on participants and consumers, AEMO has, and continues to focus on reducing its cost base and increase its effectiveness.



### 2021 Accumulated surplus / (deficit) by functional group - \$'000's
## Accumulated surplus / deficit by function

	2021 \$'000	2020 \$'000
Accumulated Deficit	(29,121)	(31,588)
National Electricity Market (NEM)	(81,120)	(58,751)
Electricity Full Retail Contestability (FRC)	2,950	2,924
National Transmission Planner (NTP)	(6,969)	(3,977)
Five Minute Settlements (5MS)	(0)	(3,356)
Distributed Energy Resources (DER)	(784)	(3,157)
SA Planning Functions (SAP)	1,850	1,821
Consumer Data Platform (CDP)	(626)	(165)
Other	(158)	6
Declared Wholesale Gas Market (DWGM)	8,459	8,628
DWGM – Capital Contribution	8,704	8,704
Gas Full Retail Contestability (Gas FRC)	2,839	2,775
Short Term Trading Market (STTM)	9,002	8,706
Gas Supply Hub (GSH)	(4,524)	(4,456)
Gas Retail Business-to-Business (Gas B2B)	502	384
Gas Bulletin Board (GBB)	(83)	(48)
Gas Statement of Opportunities (GSOO)	1,728	1,553
Gas Capacity Trading (GCT)	(1,080)	(584)
Day Ahead Auction (DHA)	447	(20)
Victorian Transmission Network Service Provider (VicTNSP)	22,325	507
Settlement Residue Auction (SRA)	(206)	(61)
Western Australia Wholesale Electricity Market (WA WEM)	5,963	4,647
Western Australia Systems Management (WA SM)	842	880
Western Australia Gas Full Retail Contestability (WA Gas FRC)	639	777
Western Australia Gas Services Information (WA GSI)	182	675

\* 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.

# **Corporate Governance Report**

### **Corporate governance principles**

Robust corporate governance arrangements encourage the Board and Management to pursue objectives that are in the interests of the Company, its members and stakeholders. There is a clear correlation between a culture focused on achieving and maintaining high standards of corporate governance and the creation of value for AEMO's members and the broader community.

AEMO is committed to ensuring an effective corporate governance framework is in place and has continued to refine its approach to corporate governance, informed by the ASX Corporate Governance Principles and Recommendations, Not for Profit Good Governance Principles (AICD) and overseas trends, adapting as required to AEMO's corporate structure and Constitution.

As part of the corporate governance framework, the Board has established corporate policies and charters, which are updated, as required, to reflect the increasing governance expectations of society and the evolution of governance standards. These resources are published on AEMO's website.

## **Composition of the Board**

The Board, with the assistance of its Board Committees, oversees AEMO's activities to meet AEMO's objectives and responsibilities under relevant laws and regulatory regimes. The Board monitors the performance, cost-effectiveness and risks of AEMO's operations and systems.

As at 30 June 2021, AEMO had ten Board members including an independent Chairman, the Managing Director and Chief Executive Officer and eight nonexecutive Directors. Collectively, the Board possesses the skills and experience prescribed in AEMO's Constitution and those necessary to face challenges from an industry undergoing rapid transformation.

The selection process for a new Chair or non-executive Directors is overseen by the Board Nomination Committee with the interview short list, interview process and recommendations for appointment being made by the Independent Energy Appointments Selection Panel. In addition to the core skills and experience required by the Constitution, other factors such as independence, diversity, and succession planning are considered as part of the selection process.

AEMO's members (government and industry) must endorse the Appointments Selection Panel's report on its recommendations before they are submitted for approval by the Energy Ministers.

Directors are eligible for reappointment of a term of up to four years.

## Director induction and continuing education

Prior to commencement each Director undergoes a structured induction program and is provided with a letter of appointment and a Deed of Access, Indemnity and Insurance. They are also provided with AEMO's 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. The tailored induction program features briefing sessions with executives and senior managers on key aspects of AEMO's operations and site visits.

Directors are encouraged to continue their education and development 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 AEMO's performance management process. The Board assesses the performance of the Managing Director & Chief Executive Officer. The CEO assesses the performance of the Executive Leadership Team. The People and Remuneration Committee reviews and makes recommendations to the Board on the remuneration and performance payments 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 may be:

- Qualitative, quantitative or both.
- Informal or formal.
- A whole of Board review, or individual Directors.
- Self-administered, administered by the Chair, 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.

During the Financial Year 2020-21, an internal Board Performance Review was conducted to review Board performance and identify opportunities for improvement. The review focused on key areas of strategic and risk oversight and crisis preparedness, Board and leadership succession planning, director development and stakeholder and member engagement.

Opportunities identified included: a commitment to strengthening diversity, increased opportunities post COVID-19 for engagement with stakeholders and members and continued cyber risk capability uplift.

## **Director independence**

The Constitution requires the Chair and a majority of Directors to be independent, as defined in the Constitution. The independent Directors during 2020-21, were Julieanne Alroe, Drew Clarke AO, Dr Peter Davis, Jon Hubbard, Sibylle Krieger, Anne Nolan, John Pittard, and Kee Wong.

#### Responsibilities

Directors must act in the best interests of the Company. The Board's responsibilities under its charter include:

- Instilling AEMO values and monitoring AEMO culture.
- Approval of corporate strategies, capital investment, annual plan and budget and monitoring of organisational performance in delivering associated objectives and goals.
- Appoint and assess performance of the CEO and oversee executive leadership succession plans.
- Monitoring the integrity of AEMO's accounting and financial reporting.

- Reviewing emerging and identified risks and ensuring appropriate controls, monitoring and reporting mechanisms are in place.
- Monitoring compliance with ethical, legislative and regulatory requirements including occupational health and safety, equal opportunity, environmental, corporate governance and reporting obligations.
- Ensuring that AEMO's governance systems and practices are effective.

## Directors' access to information and advice

Directors have access to: a) any information they consider necessary to fulfil their responsibilities and to exercise independent judgment when making decisions; b) management to seek explanations and information from management; and c) auditors, both internal and external, to seek explanations and information from them without management being present.

They also have a right of access to Company records in accordance with the Deed of Access, Indemnity and Insurance approved by the Members and entered into between the Company and each Director. Directors have access to the Company Secretary about any matter related to their role as Director. The Directors also have the right to seek independent professional advice at AEMO's expense to help them carry out their duties, provided they have the prior approval of the Chairman, which will not be unreasonably withheld.

## **Conflicts of interest**

Directors must 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.

# **AEMO Board**



Drew Clarke AO PSM

Non-executive Independent Chairman



Daniel Westerman

Chief Executive Officer and Managing Director



**Julieanne Alroe** 

Non-executive Independent Director



**Tony Concannon** 

Non-executive Non-independent Director



**Dr Peter Davis** 

Non-executive Independent Director



**Betsy Donaghey** 

Non-executive Non-independent Director



Anne Nolan

Non-executive Independent Director

John Pittard

Non-executive Independent Director



Kee Wong

Nino Ficca

Non-executive

Independent Director

Non-executive Independent Director

# **Board Committees**

# The Board has set up a number of Board Committees to assist the Board in the discharge of its responsibilities.

Each Board Committee has a charter that outlines its role and responsibilities. At the next Board meeting, the Chairs of the Board Committees brief the Board on the outcomes of their respective committee meetings. The Board Chairman and Managing Director attend all Board Committee meetings. All Directors receive Board Committee papers and are entitled to attend Board Committee meetings with a number attending regularly in an *ex officio* capacity.

The responsibilities of each Board Committee are described below.

## **Risk and Audit Committee**

The Committee assists the Board in the effective discharge of its responsibilities for oversight and governance of financial reporting, financial management, risk management, compliance and corporate governance.

Its responsibilities include:

- Reviewing the annual financial statements and the appropriateness of AEMO's material accounting policies and procedures, significant estimates, judgements, and notes to the financial statements.
- Reviewing proposed annual budget and longer-term financial planning and raise any solvency or financial viability concerns with the Board.
- Recommending to the Board the appointment of, and monitoring the performance of, the external auditor.
- Approving the internal audit plan, and reviewing the findings of the internal audits and the effectiveness of the internal audit function.
- Reviewing the approach for the external market audits conducted to assess compliance for markets and systems operated by AEMO, the findings of the market auditors, and the effectiveness of the market audit functions.
- Assisting the Board by reviewing the principal risks facing AEMO, monitoring the effectiveness of the risk management framework, reviewing adequacy of AEMO's insurance program and facilitating a sound risk culture throughout the organisation.

- Monitoring the development and ongoing review of appropriate legislative and regulatory compliance programmes, and compliance reporting and analysis.
- Monitoring governance policies and procedures.
- Overseeing AEMO's policies, practices and systems for detecting, reporting and preventing fraud, whistleblower policies, and implementation.
- Overseeing the insurance program.

The Committee met four times during 2020-21.

## People and Remuneration Committee

The Committee's role is to make recommendations to the Board and otherwise to assist the Board with its oversight responsibilities, in relation to people strategies and policies and remuneration.

The Committee's responsibilities include:

- Reviewing AEMO's strategic human resource policies and practices.
- Monitoring the development of AEMO's people strategies for resourcing, recruitment and retention of people.
- Monitoring AEMO's processes for identifying, correcting and managing employee misconduct, including discrimination, harassment and bullying.
- Reviewing talent management and succession planning for the Managing Director, senior executives and critical talent.
- Reviewing remuneration strategies, including performance payments and other monetary and nonmonetary benefits, and the Enterprise Agreement.
- Reviewing and making recommendations to the Board on the Company's strategies and policies to support and maintain a culture aligned with AEMO's values and the Code of Conduct.
- Monitoring whether the "lived culture" aligns with AEMO's values.
- 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, and reviewing and monitoring AEMO's remuneration and incentive framework.
- Reviewing and recommending to the Board key measurable objectives on diversity, and reporting on key practices towards diversity and inclusion.

The Committee met four times during 2020-21.

## **Technical and Regulatory Committee**

The Committee assists the Board in the effective discharge of its responsibilities for oversight and governance of technical matters, including information technology (IT), technical publications, key industry developments, emergency preparedness, regulatory matters, emerging and future technologies, and general technical issues impacting the security, stability and reliability of Australia's energy system.

Its responsibilities include:

- Endorsing the strategic direction of AEMO's energy publications such as the Integrated System Plan, and the Electricity and Gas Statement of Opportunities for the NEM and WEM.
- Reviewing and providing input into development of IT strategic plans and monitoring IT performance.
- Reviewing and monitoring cyber security.
- Monitoring processes and procedures for operational preparedness and reviewing significant operational and market incidents.
- Monitoring the regulatory environment to identify regulatory developments that may impact AEMO and the markets it operates.
- Monitoring implications for future power system operations.
- Reviewing energy market performance.
- Reviewing regulatory reforms and proposals for regulatory reform.

The Committee met four times during 2020-21.

### Nomination committee

The Committee assists the Board in the effective discharge of its responsibilities in relation to the appointment, induction, independence and ongoing assessment of the skills and experience of Directors, Board composition, succession planning for Directors, and evaluation of the performance of the Board, its Committees and Directors.

This involves identifying the skills on the Board and those required on the Board to replace the skills of retiring Directors and for the future operation of the Board, the appointment of a search firm, assessing the suitability of potential candidates and providing input to the Independent Energy Appointments Selection Panel.

This Committee meets on an as needs basis. During 2021-2021 the Committee met twice.

### **Risk management**

AEMO faces a variety of strategic, operational and emerging risks given the nature of its functions. These include industry transformation, cybersecurity, regulatory, compliance, financial, prudential, reputational, people 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 enterprise 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 standard *ISO 31000:2018 Risk Management - Guidelines*.

During 2020-21, further improvements were made to the processes that support risk management, and with continuing domestic and global impacts our people have adapted to the changed governance and organisation needs arising from the COVID-19 pandemic.

Further review and enhancements in the risk matrices (Corporate, Project, Compliance) have been implemented, as well as the development of a new Risk Management Plan, with a focus on the uplifting of risk management culture, and further enablement of risk management practices to better support decisionmaking to manage an evolving risk environment. 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
- Fraud and corruption prevention
- Modern Slavery
- Whistleblower protection
- Diversity and inclusion.

## **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:

- 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.

### **Internal, Market and External Auditors**

The Risk and Audit Committee is responsible for the performance and objectivity of the internal auditor and the performance and independence of the market auditors.

Auditors are not permitted to provide any services to AEMO that might compromise its independence, where those services may be subsequently reviewed by the auditor through an audit process 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 available on the company's website. AEMO is committed to maintaining transparency on matters related to the operation and administration of its markets.

## Respecting 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 (AGMs) 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 wants 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 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.

## **Remunerating fairly and responsibly**

Non-executive directors are remunerated for fulfilling their Board and Board Committee duties in accordance with relevant industry benchmarks. At AEMO's AGM on 27 November 2020, the members approved an annual remuneration pool to be applied for three years. The Board of directors recommended no change in the annual remuneration pool.

The remuneration framework, policies, and practices for executives and employees at AEMO are designed to:

- a) Demonstrate a clear relationship between company performance and remuneration;
- b) Involve an appropriate balance between fixed and variable remuneration;
- c) Differentiate between higher and lower performers through the use of a performance management framework; and
- d) Be informed by relevant market data and remuneration practices.

# **Directors' Report**

# Your directors present their report on the Australian Energy Market Operator Limited (AEMO) for the year ended 30 June 2021.

## **Principal activities**

AEMO's principal activities over the 2020–21 year comprised he following:

- Market operation of the National Electricity Market (NEM) and the WA Wholesale Electricity Market (WEM).
- System operation and security of the NEM interconnected grid, Western Australia's South West Interconnected System (SWIS) and the Victorian Gas Declared Transmission System (DTS).
- Victorian electricity Transmission Network Service Provider (TNSP) responsibilities (including transmission network connections and procurement services).
- Operation of the Victorian Declared Wholesale Gas Market (DWGM).
- Facilitation of Full Retail Contestability (FRC) for electricity and gas in eastern and south-eastern Australia and gas in Western 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 and the West Australian Gas Bulletin Board.
- National integrated electricity system planning (National Transmission Planning) including the Integrated System Plan (ISP).
- Independent electricity and gas demand forecasting.
- Emergency management responsibilities for electricity and gas and supporting the National Gas Emergency Response Advisory Committee (NGERAC).
- Market operation of the Gas Capacity Trading Platform (CTP) and Day Ahead Auction (DAA).

## Corporate strategy and review of operations

As the national energy market and system operator and planner, AEMO plays an important role in supporting the industry to deliver safe, reliable and affordable energy supply.

As well as carrying out its core operational functions, AEMO delivered a range of important initiatives in 2020-21 to support the security and reliability of the transforming energy systems in the NEM and Western Australia.

During 2020-21 AEMO:

- Played a critical role in responding to COVID-19, through the activation of emergency protocols, updated demand forecasting methodologies, and generator outage and maintenance co-ordination.
- Published electricity and gas reliability assessments in the form of Electricity Statements of Opportunities for the NEM and Western Australia, and Gas Statements of Opportunities for the WA and east coast gas systems.
- Published the 2021 Inputs, Assumptions and Scenarios Report (IASR), developed over 10 months of deep collaboration with a broad range of industry participants, governments and consumer representatives. A complementary Transmission Cost Report and database was also published in response to stakeholder feedback on the 2020 ISP.
- Supported actionable ISP projects to be delivered to approved AER schedules for FY2021, noting that the Western Victoria project was delayed due to COVID-19, and a new timeline was approved by the AER in March 2021 for the VNI West project.
- Published the Operational Conditions report and Advanced Inverter White Paper, both aligned to the AEMO's Engineering Framework.
- Supported the Energy Security Board (ESB) post-2025 electricity market design work and recommendations, which went to Energy Ministers in July 2021. AEMO's role included developing high-level designs, reviewing over 100 submissions to the options paper, and developing policy positions, including

contributing to key reforms, such as potential resource adequacy mechanisms and DER integration initiatives.

- Supported the South Australian Government, network business and market participants to resolve power system security issues in respect of increasing rooftop PV levels.
- Delivered the Australian Standard AS/NZS 4777.2:2015 on schedule for go live in December 2021, having initiated a review into DER standards in 2019.
- Continued to test systems and lead industry readiness for Five Minute Settlement and Global Settlement, to commence 1 October 2021, along with Wholesale Demand Response on 24 October 2021.
- Contributed to the WA Government's 2021 Whole of System Plan (WoSP).
- Completed Western Australia's DER roadmap and commenced its implementation.
- Continued to invest in cyber security to provide reliable and secure systems for markets and grids.
- Awarded the second Zema Energy Studies Scholarship, developed in partnership with Monash University, to Mr Vincent Makota, who will investigate how emerging technologies, such as grid-forming inverters, can be used to reliably integrate more renewable resources with minimal impact into the transmission network.

AEMO's work in 2020-21 to build greater engagement with stakeholders, and increase energy knowledge in the sector and the broader community, included:

- Consulting on, and finalising a new stakeholder engagement framework.
- Publishing its second annual stakeholder reputation research report showing improvements from the 2020 study.
- Establishing a 'consumer panel' to better consider and integrate the perspectives of consumers into the 2022 ISP. The five-member panel will work with AEMO to ensure the best mix of energy resources to deliver lowest cost, sustainable and reliable energy to consumers.
- Establishing a new Financial Consultative Committee, to transparently share the drivers of and proposed elements of AEMO's annual budget and fees. Members representing a cross-section of industry and have been nominated by industry associations, with consumers represented by Energy Consumers Australia.
- Welcoming another group of graduates to the Graduate Development Program, with a wide representation of talented graduate targeting the core technical areas of STEM (Science, Technology, Engineering and Maths).

AEMO's achievements in supporting the health, safety and development of its people this year included:

- Rolling out refreshed values designed to embody the culture and organisation's ambitions.
- Delivering a Senior Leadership Team Development Program to advance the leadership skills and technical competencies of AEMO's people and the organisation's ability to support the energy industry of the future.
- Completing the first iteration of AEMO's enterprise workforce plan to align resource and capability requirements and deliver the Organisational Excellence Program – accelerating improvement in organisational efficiency, effectiveness and capability.
- Delivering employee well-being and mental health initiatives and flexible work practices to support AEMO's workforce, particularly during COVID-19.

### **Corporate structure**

AEMO is a not-for-profit public company limited by guarantee incorporated under the *Corporations Act* 2001 (*Cth*). 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 participants are eligible to become industry 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.

## Contributions on winding up

The Company is incorporated under the *Corporations Act 2001* (Cth) 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:

- a) Payment of the Company's debts and liabilities contracted before they ceased to be a Member;
- b) 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 2021, the total maximum amount that members of the Company are liable to contribute under the Constitution if the Company is wound up is \$103 (2020: \$103).

## Directors

The following persons were Directors for the full financial year ended 30 June 2021 and up to the date of this report unless otherwise stated:

Name, qualifications, current board appointments and experience	Period of appointment
Mr Andrew (Drew) Clarke, AO, PSM MSc, BAppSc, FTSE, MAICD	1 July 2020 to 30 June 2021
Non-executive Independent Chairman Member Technical and Regulatory Committee	
Director, NBN Co; Director CSIRO	
Member, Commonwealth Low-Emission Technology Investment Advisory Council; Chair, ACOLA, Australian Energy Transition Research Plan Steering Committee.	
Mr Clarke has served in energy policy leadership roles since 2003, including a term as Secretary of the Commonwealth Department of Resources and Energy.	
He led the Commonwealth's actions in the creation of the National Energy Market Rules and the three NEM market bodies, served as Chair of the Senior Committee of Officials under the COAG Ministerial Council on Energy, led establishment of the Australian Renewable Energy Agency (ARENA) and the Global Carbon Capture and Storage Institute, and was Australia's member on the Governing Board of the International Energy Agency.	
<b>Mr Daniel Westerman</b> BEng (Hons), BSc, MBA, CEng, CDir, FEI, FIET, FloD	17 May 2021 to 30 June 2021
Managing Director and Chief Executive Officer	
Mr Westerman commenced as CEO and Managing Director of AEMO in May 2021. He oversees AEMO's strategy and operations, including collaboration with market participants and policy makers.	
Prior to joining AEMO, Mr Westerman held a variety of senior executive roles with London-listed electricity and gas utility, National Grid Plc. Most recently he served as Chief Transformation Officer and President of Renewable Energy, where he led the company-wide transformation program, and grew a large-scale renewable energy business in the United States. In previous roles he has been responsible for engineering, planning and operational control of the electricity transmission network across Great Britain, as well as the development of distributed energy systems, such as rooftop solar, storage and energy metering.	
Prior to joining National Grid Plc, he held positions with McKinsey & Company and Ford Australia.	

Name, qualifications, current board appointments and experience	Period of appointment
Mr Nino Ficca BEng (Hons), Advanced Management Program Harvard USA, GradDip Mgt, MAICD, FIEAust Executive Director and Acting CEO Non-executive Independent Director	1 July 2020 to 10 December 2020 (as Director)
Member of Risk and Audit and, Technical and Regulatory Committees	11 December
Director, Transurban Queensland; Co-Founder and Director, TasRex; Member of Deakin University Council, Professor, Industry Engagement, Deakin University; (Note: these covered the period July 20 – June 21 except Deakin Council which was for the period January 21 – July 21)	2020 to 16 May 2021 (as AEMO Managing
As acting CEO Mr Ficca was responsible for overseeing all of AEMO's strategic, operations and administrative functions and responsibilities.	Director and Chief Executive Officer)
Mr Ficca was a non-independent Director for the financial year ended 30 June 2020. His status has been reviewed on the basis of Schedule 2 of the AEMO Constitution. As at 5 August 2020, the Board has determined that he is an independent Director.	
Mr Ficca has extensive senior executive experience in strategic and operational roles within the energy sector, including in the National Electricity Market and gas markets.	
He served as Managing Director of AusNet Services Limited and its predecessors, SP AusNet and SPI Powernet, from 2001-19.	
An electrical engineer by training, Mr Ficca has a deep understanding of energy transmission and distribution grids, and their importance in underpinning effective markets and maintaining secure, reliable and high-performing systems.	
In addition to his role as Acting CEO of AEMO, Mr Ficca is also the immediate past Chairman of the Energy Networks Association, and a past Chair of CIGRE Australia.	
<b>Ms Audrey Zibelman</b> BA, J.D.	1 July 2020 to 10 December
Managing Director and Chief Executive Officer Independent Director Member, Technical and Regulatory Committee Director, Melbourne Recital Centre Pty Ltd	2020
Ms Zibelman has more than 30 years' international experience in the public, private and not-for profit energy sectors. Prior to joining AEMO in March 2017, her roles included Chair of the New York State Public Service Commission, Executive Vice President and Chief Operating Officer of system operator PJM, and executive roles with Xcel Energy, one of the United States' largest integrated gas and electricity utilities. She also served on a number of energy industry advisory groups and Boards.	
Ms Zibelman serves on the CSIRO Energy Advisory Committee, the Melbourne Energy Institute's Advisory Board and the Board of the Melbourne Recital Centre.	

Name, qualifications, current board appointments and experience	Period of appointment
Ms Julieanne Alroe BEcon, MAICD	1 June 2021 to 30 June 2021
Non-executive Independent Director	
Chair of Infrastructure Australia and the Queensland Ballet, Board member of BESIX Watpac, President of the Queensland Futures Institute (QFI)	
Ms Alroe is a professional non-executive director. She is a Board member of the Australian Energy Market Operator (AEMO), BESIX Watpac and Gardior Pty Ltd. and a member of the University of Queensland Senate, Ms Alroe is also the Chair of the Queensland Ballet.	
She is also a Member of the Committee for Brisbane Advisory Board, the Inaugural President of the Queensland Futures Institute (QFI), the Queensland Business Hall of Fame Advisory Committee and a Member of the Queensland Thoroughbred Advisory Panel.	
Ms Alroe retired in June 2018 from Brisbane Airport Corporation (BAC) where she held the position of CEO and Managing Director since 1 July 2009. She was the Chair of ERM Power Ltd from 2018 until it was sold to Shell in late 2019. She was also the Chair of Infrastructure Australia for 5 years until August 2021.	
Ms Alroe has a Bachelor of Economics from the University of Queensland and was granted an Honorary Doctor of the Griffith University (honoris causa) in December 2016. She is a Member of the Australian Institute of Company Directors, a Fellow of the Queensland Academy of Arts and Sciences and a member of the Chief Executive Woman (CEW).	
<b>Mr Anthony Concannon</b> BSc (Hons), FAICD, FIMechE, AMIET	1 July 2020 to 30 June 2021
Non-executive Non-independent Director Member of People and Remuneration and, Technical and Regulatory Committees	
Director, Reach Solar Energy Management Co Pty Ltd.	
Mr Concannon has more than 30 years' experience within the power sector. He is a chartered power engineer with international experience in governance, investor relations, operations management, finance, and risk management.	
He was an Executive Director of International Power plc (2004-12), previous Chairman of the Electricity Supply Association of Australia (now known as the Energy Council of Australia), CEO for IPR Australia and CEO Asia Pacific region for GDF SUEZ energy until Q1 2014.	
In early 2015, he started up a large-scale solar PV business, Reach Solar energy, where he is Managing Director and CEO.	

Name, qualifications, current board appointments and experience	Period of appointment
<b>Dr. Peter Davis</b> BSc (Hons), BEd, MBA, PhD, FAICD, FIEAust	1 July 2020 to 30 June 2021
Non-executive Independent Director	
Member, Clean Energy Regulator; Member, University of Tasmania Built Environment and Infrastructure Committee; Member, University of Tasmania Built Environment and Infrastructure Committee until 31 December 2020.	
Chair of Technical and Regulatory Committee and Member of People and Remuneration Committee. Chair of Zema Scholarship Committee.	
Dr Davis has worked in the retail, distribution and generation sectors for more than 25 years, and has extensive knowledge of the energy industry.	
He has deep experience in leading integrated utility businesses, covering generation, distribution, electricity and gas retailing, and telecommunications in both regulated and competitive markets.	
He was CEO of Aurora Energy Pty Ltd from 2004-14.	
Ms Elizabeth (Betsy) Donaghey BSc, MSor	1 July 2020 to 30 June 2021
Non-executive Non-independent Director Member of Risk and Audit and, Technical and Regulatory Committees	
Director, Cooper Energy Limited (ASX: COE), Ampol Limited (ASX: APL) * appointed after 30 June 2021	
During her corporate career, Ms Donaghey held senior executive positions in strategy, marketing and business development at Energy Australia, Woodside Petroleum and BHP Petroleum.	
Mr Jon Hubbard BCom, CA, GAICD	1 July 2020 to 27 November
Non-executive Independent Director Chair of Risk and Audit Committee, and Member of Technical and Regulatory Committee	2020
Director, Infocus Wealth Management Limited (and related companies); Director, Ruffey Downs Pty Ltd; Director, Tempellier Pty Ltd; Director, Tavas Holdings Limited	
Mr Hubbard has extensive experience in the energy, utility and resource sectors, as well as a strong accounting and finance background.	
He is a former Partner of PwC and a former Director of CS Energy and Territory Generation. During his advisory career, Mr Hubbard specialised in providing advice to the energy industry in the areas of corporate strategy, industry reform, mergers and acquisitions, regulation, climate change and renewable energy.	

Name, qualifications, current board appointments and experience	Period of appointment
<b>Ms Sibylle Krieger</b> LLB (Hons), LLM, MBA, FAICD	1 July 2020 to 27 November 2020
Non-executive Independent Director Chair of People and Remuneration Committee and, Member of Technical and Regulatory Committee	2020
Director, MyState Limited; Director, Vesale Pty Ltd; Director, Openpay Group Limited	
Ms Krieger has more than 35 years' broad commercial experience as a lawyer, Non-Executive Director and economic regulator, with a particular focus on regulated industries and sectors undergoing rapid change.	
She is a former partner of two major commercial law firms and a former member of the NSW Independent Pricing and Regulatory Tribunal (IPART). Ms Krieger was also a member of the Dispute Resolution Panel for the National Electricity Market and the gas markets. Further she served as a member of the Tasmanian Government Energy Security Taskforce which was established following the prolonged failure of Basslink during a period of drought.	
Ms Krieger has extensive experience as a Board Chair, Non-Executive Director and Committee Chair in both listed and unlisted companies.	
<b>Ms Anne Nolan</b> B. Ec., M.Econ, Adjunct Professor with University of Western Australia	1 July 2020 to 30 June 2021
Non-executive Independent Director Member/Chair of Risk and Audit and, Technical and Regulatory Committees	
Director, Fremantle Port Authority; Member, University of Western Australia Business School; Director, Western Australian Symphony Orchestra, Director, Western Australian Coastal Shipping Commission	
Ms Nolan has had a distinguished career with the Western Australian public service sector. Leading the Department of Finance and the Department of State Development and serving as the Deputy Director-General, Cabinet and Policy Division in the Department of Premier and Cabinet.	
She was the inaugural Chief Executive of the Independent Market Operator for the WA Wholesale Electricity Market (WEM).	
She is an economist with broad public policy experience in mircoeconomic reform, energy, infrastructure, tax and Commonwealth-State relations.	
As Chief Executive of the Office of Energy from 2002-06, Ms Nolan was responsible for driving the reform agenda that saw the introduction of a competitive electricity market in the WEM, an independent third-party network access regime and the disaggregation of Western Power.	

Name, qualifications, current board appointments and experience	Period of appointment
Mr John Pittard BSc, MAICD.	1 July 2020 to 30 June 2021
Non-executive Independent Director Member of People and Remuneration and, Technical and Regulatory Committees	
Chair, RXP Services Ltd; Director, Barnardos Australia	
Mr Pittard has 30 years of experience in technology related roles and has led digital and technology transformations across several industry sectors in Australia, including media, telecommunications and resources.	
He has previously held senior executive roles with some of Australia's largest corporations, including NewsCorp Australia, Telstra, Pioneer International and Shell Australia.	
Mr Pittard has extensive experience as a Non-Executive Director with both listed and unlisted companies including a number "digital disruptors" such as REA Group and CareerOne Limited.	
<b>Mr Kee Wong</b> BE (Hons), MBA, GradD Computing (D)	1 June 2021 to 30 June 2021
Non-executive Independent Director	
Board member of Carsales.com, the Australian Institute of Company Directors (AICD), and the Committee for Melbourne; Trustee of the Arts Centre Melbourne; Non-Executive Director of Walter Eliza Hall Institute.	
Mr Wong is an experienced entrepreneur, investor, advisor and experienced non-executive Director with qualifications in engineering, information technology and business.	
Mr Wong joined IBM in 1994 as a senior executive running part of its e-business group in the Asia Pacific region, including Australia and New Zealand. In 1999, he founded e-Centric Innovations, an IT/Management consulting firm, and went on the establish several businesses. As adviser to the Victorian Government, Mr Kee helped develop an R&D venture that resulted in a new global joint venture between Xerox and VicTrack to commercialise new technology that will remotely monitor the structural health of bridges.	
Mr Wong is a member of the Victorian Government's Ministerial Advisory Council on International Education, Ministerial Innovation Taskforce and Transform Reform Board (Victorian Department of Transport). Recently, Mr Wong joined as a member of the VicTrack Strategic Innovation Advisory Group, the ANU Centre for Asian-Australian Leadership Advisory Board, and Swinburne University's Technology, Innovation and Value Creation Committee.	
Amongst previous Board positions, Mr Wong was also Chairman of the Australian Information Industry Association (AIIA), a Deputy Chairman of Asialink and a Director of LaunchVic.	

The Constitution requires that a majority of Directors, including the Chair, must be Independent Directors. Schedule 2 of the Constitution defines the independence requirements for Directors. Information pertaining to Directors' benefits is detailed in Note 8 – Key Management Personnel and Related Parties Disclosures in the Annual Financial Statements.

## **Company secretaries**

Ms Lisa Deramond was the Company Secretary for the period 1 July 2020 to 12 February 2021. Ms Kay Scanlon was the Acting Company Secretary for the period 29 March 2021 to 30 June 2021. Mr Brett Hausler is also registered as a company secretary for AEMO.

## **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 2021, and the number of meetings attended by each director were:

	Во	ard		le and eration	Risk Au	and dit		cal and latory	Nomi	nation		l Board hittees²
	Α	В	Α	В	Α	В	Α	В	А	В	Α	В
Mr Drew Clarke AO PSM	8	8	-	-	-	-	4	4	1	1	7	7
Mr Tony Concannon	8	8	4	4	-	-	4	4	1	1	7	7
Dr. Peter Davis	8	8	4	4	-	-	4	4	1	1	7	7
Ms Betsy Donaghey	7 <sup>1</sup>	8	2	2	1	1	4	4	1	1	6 <sup>1</sup>	6
Mr Jon Hubbard	7	7	-	-	1	1	2	2	1	1	4	4
Ms Sibylle Krieger	7	7	2	2	-	-	2	2	1	1	4	4
Mr John Pittard	8	8	2	2	3	3	4	4	1	1	7	7
Ms Anne Nolan	7 <sup>1</sup>	8	-	-	4	4	4	4	1	1	6 <sup>1</sup>	6
Mr Nino Ficca	8	8	-	-	4	4	4	4	1	1	7	7
Ms Julieanne Alroe	1	1	-	-	-	-	1	1	-	-	0	0
Mr Kee Wong	1	1	-	-	-	-	1	1	-	-	0	0
Mr Daniel Westerman	1	1	-	-	-	-	1	1	-	-	0	0
Ms Audrey Zibelman	8	8	-	-	-	-	2	2	0 <sup>1</sup>	1	4	4

**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 Board held eight scheduled meetings and seven unscheduled meetings during the financial year.

All Directors are members of the Technical and Regulatory Committee. The Chairman, and Managing Director and Chief Executive Officer attend all committee meetings ex officio. All other 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 endeavour to provide written comments prior to the meeting.

<sup>1</sup> Meeting missed due to Director being unable to attend due to a prior commitment.

<sup>2</sup> These meetings were out of session or Special meetings established to deal with ad-hoc matters.

Details of the functions and memberships of the Committees of the Board are presented in AEMO's Corporate Governance Statement.

### **Director and Executive Renumeration**

Non-executive directors are remunerated for fulfilling their Board and Board Committee duties in accordance with relevant industry benchmarks. At AEMO's AGM on 27 November 2020, 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.

The oversight of executive and employee remuneration is a key responsibility of the Board and the People and Remuneration Committee. In discharging its duties, the Board and the Committee regularly review AEMO's remuneration approach to ensure that it appropriately recognises performance in the context of its Corporate Plan, reflects individual accountability and reinforces alignment with company values.

The remuneration framework, policies, and practices for executives and employees at AEMO are designed to:

- a) Demonstrate a clear relationship between company performance and remuneration.
- b) Involve an appropriate balance between fixed and variable remuneration.
- c) Differentiate between higher and lower performers using a performance management framework.
- d) Be informed by relevant market data and remuneration practices.

There were no fundamental changes to AEMO's remuneration framework and policies during 2021.

### **Non-executive Director Remuneration**

At AEMO's AGM on 27 November 2020, 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. The amount of the pool includes fees paid to the Director chairing the Information Exchange Committee, and projected increases over a three-year period.

The current pool is \$1.35 million per year. The Board makes an annual determination as to the part of the approved pool to be applied as non-executive director fees, after considering advice from external remuneration advisers.

Non-executive Director remuneration is designed to ensure that Directors maintain objectivity and independence and that the Board attracts Directors with the necessary skills, expertise and capability. Nonexecutive Directors are not eligible for performance based or "at risk" remuneration. Reflecting the Board's annual determination, the allocation of the annual fee pool (inclusive of statutory superannuation) for the financial years ended 30 June 2021 and 30 June 2020 is set out below.

Remuneration Pool Allocation – Board and Committees	2021 \$'000	2020 \$'000
Board	1,023	1,023
Audit and Risk Committee	59	59
Technical and Regulatory Committee	98	98
People and Remuneration Committee	59	59
Information Exchange Committee	56	56
Nomination	-	-
	1,295	1,295

The 2021 allocation of remuneration per Board and Committee role is presented in the table below.

Remuneration per Role	Number of Roles	2021 \$'000
Board Chair	1	224
Non-Executive Director	8	100
People & Remuneration Committee Chair	1	19
People & Remuneration Committee	4	10
Risk & Audit Committee Chair	1	24
Risk & Audit Committee	3	11
Technical & Regulatory Committee Chair	1	19
Technical & Regulatory Committee	8	10
Information Exchange Committee Chair	1	56

Non-executive director remuneration expense for 2021 and 2020 is presented in the table below.

Remuneration Expense	2021 \$'000	2020 \$'000
Board <sup>a</sup>	897	1,009
Audit and Risk Committee	53	53
Technical and Regulatory Committee	83	95
People and Remuneration Committee	48	57
Information Exchange Committee	56	56
Nomination	-	-
	1,137	1 <b>,275</b> <sup>ь</sup>

<sup>a</sup> The Board remuneration paid in 2021 incorporates three non-executive director role vacancies for part of the year; including for the period a non-executive director was appointed to the interim Chief Executive Officer role. In 2021 a \$15,000 ex-gratia payment was made to a non-executive director for their role on the Energy Security Board.

<sup>b</sup> 2020 includes an ex-gratia \$50,000 payment made for additional services provided to AEMO.

## **Executive Personnel Remuneration**

For the purpose of this remuneration reporting Executive Personnel includes persons, whether on an interim basis or for the full period, assuming the Chief Executive Officer and executive leadership roles over the financial period.

Remuneration plans include a mix of fixed and variable compensation and short-term performance-based incentives. This approach to remuneration reflects the focus on outcomes that support value creation and sustainability of our business. Remuneration outcomes reflect both individual and overall company performance.

## Managing Director and Chief Executive Officer:

The position of the Managing Director and Chief Executive Officer is evaluated based on advice received from several remuneration and benefits specialists. The Board approves the Fixed Annual Reward (FAR) based on this advice. The Board approves any increase to the fixed pay component based on market movement and individual performance and approves any Short-Term Incentive (STI) based on corporate and individual performance.

### **Other Executive Personnel**

All positions have a role profile that is externally evaluated that supports their FAR. AEMO regularly seeks external remuneration advice regarding market movements for this group. The Board approves any increase to fixed pay based on both market movement and individual performance and approves any STI based on corporate and individual performance.

#### a) Fixed Pay Remuneration

While Executive Personnel fixed pay is reviewed annually, there is no contractual obligation to provide an annual increase. For the 2020 and 2021 years no annual remuneration increment was provided.

#### b) Short term Incentive Plan (STI)

The AEMO Short Term Incentive (STI) plan is designed to reward AEMO's Executive Personnel (and other participants) for achieving outcomes aligned to the delivery of AEMO's Corporate Plan. This component of remuneration is 'at risk', with vesting subject to meeting annual performance targets as agreed between the Executive and Chief Executive Officer, or in the case of the Chief Executive Officer, approved. by the Board.

The final short term incentive outcomes are reviewed and approved by the Board at the conclusion of the financial year and reflect both AEMO's and each Executive's overall performance throughout the financial year.

Executive Personnel' STI opportunity is based on an equal weighting of the following elements:

- A Corporate Scorecard, approved annually by the Board which includes Key Performance Indicators related to the whole of AEMOs performance; and
- An Individual Executive scorecard, including Key Performance Indicators related to the achievement of Corporate Plan Priorities.

The target STI opportunity for Executive Personnel is 30% of the fixed pay remuneration, with a maximum opportunity of 45%. STI awards are made in cash.

For 2021, AEMO Executives were awarded an average STI payment of 64.7% of the maximum opportunity.

#### c) Executive Personnel 2021 Remuneration

The table below sets out the aggregated remuneration expense for Executive Personnel including fixed annual remuneration and short-term incentive payments.

Executive Personnel Remuneration - aggregated <sup>a</sup>	2021 \$'000	2020 \$'000
Short-term employee benefits <sup>b</sup>	6,700	6,414
Post-employment benefits	-	-
Other long-term benefits	119	406
Termination benefits <sup>c</sup>	487	582
	7,306	7,401

<sup>a</sup> Includes persons, whether on an interim basis or for the full period during the financial year.

<sup>b</sup> Post-employment benefits for 2020 of \$197,000 have been transferred to Short-term employee benefits for disclosure in the table above as they represented AEMO's superannuation contribution component of employee benefits. For 2021 there are nil postemployment benefits (2020: nil).

<sup>c</sup> Represents amounts paid upon terminations. No further entitlements are payable.

The tables below set out the segmented remuneration expense for Executive Personnel remunerated over the course of 2021 and 2020 presented across individual salary bands. This includes fixed annual remuneration, STI expense, and termination benefits.

## **Executive Personnel Remuneration – 2021 segmented**

Total Remuneration Bands	Senior executives (Number) ª	Short-term employee benefits (\$'000)	Post- employee benefits (\$'000)	Other long- term benefits (\$'000)	Termination benefits (\$'000)	Total Actual paid (\$'000)
Executive Personnel						
\$0 - \$200,000	1	128	-	3	-	131
\$200,001 - \$500,000	2	721	-	9	-	730
\$500,001 - \$800,000	9	5,440	-	102	-	5,542
> \$800,000	1	411	-	5	487	903
Total	13	6,700	-	119	487	7,306

<sup>a</sup> Includes persons, whether on an interim basis or for the full period during the financial year.

## **Executive Personnel Remuneration – 2020 segmented**

Total Remuneration Bands	Senior executives (Number) ª	Short-term employee benefits (\$'000)	Post- employee benefits (\$'000)	Other long- term benefits (\$'000)	Termination benefits (\$'000)	Total Actual paid (\$'000)
Executive Personnel						
\$0 - \$200,000	1	79	-	25	-	104
\$200,001 - \$500,000	2	515	-	14	196	725
\$500,001 - \$800,000	7	3,505	-	324	386	4,215
> \$800,000	2	2,314	-	43	-	2,357
Total	12	6,414	-	406	582	7,401

<sup>a</sup> Includes persons, whether on an interim basis, including when acting in an executive role, or for the full period during the financial year.

## 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.

D-CL

A. Clarke, AO, PSM Chairman, Melbourne 3 November 2021

# **Financial Statements**

## for the year ended 30 June 2021

## **Financial Report Contents**

AEMO has pleasure in presenting its audited general purpose financial statements for the financial year ended 30 June 2021. This financial report is presented in the following structure:

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Australian Energy Market Operator Limited ABN 94 072 010 327





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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 2021, I declare that, to the best of my knowledge and belief, there have been:

no contraventions of the auditor independence requirements of the Corporations Act 2001 in relation to the audit; and а

b no contraventions of any applicable code of professional conduct in relation to the audit.

Grant Thornton Audit Pty Ltd **Chartered Accountants** 

**B** A Mackenzie Partner - Audit & Assurance

Melbourne, 9 September 2021

Grant Thornton Audit Pty Ltd ACN 130 913 594 a subsidiary or related entity of Grant Thornton Australia Ltd ABN 41 127 556 389

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## **Statement of Profit or Loss**

## For the year ended 30 June 2021

	<b>.</b>	2021	2020
	Notes	\$'000	\$'000
Revenue			
Transmission income	2(a)	641,125	595,915
Settlement residue	2(a)	55,817	59,385
Electricity Market income	2(a)	156,773	141,775
Gas Market income	2(a)	42,997	44,137
Other Revenue	2(a)	37,996	28,143
	2(a)	934,708	869,355
Expenses			
Network charges	3(b)	661,473	646,035
Employee benefits	3(c)	159,106	148,355
Depreciation	4(a), 5(d)	14,205	13,350
Amortisation	4(b)	21,174	15,579
Impairment of Assets	4(c), 5(b)	3,194	973
Consulting, contracting and outsourcing		27,977	29,698
Information technology and maintenance		33,757	25,601
Finance Costs	5(e)	1,248	1,723
Other expenses		10,219	13,887
		932,353	895,201
Surplus/(deficit) for the year		2,355	(25,846)

## **Statement of Comprehensive Income**

For the year ended 30 June 2021

		2021	2020
	Notes	\$'000	\$'000
Surplus/(deficit) for the year		2,355	(25,846)
Other comprehensive income			
Re-measurement of net defined benefit superannuation liability gain	3(d)(v)	1,380	1,390
Total comprehensive Surplus/(deficit)		3,735	(24,456)

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

## **Statement of Financial Position**

## As at 30 June 2021

		2021	2020
	Notes	\$'000	\$′000
ASSETS			
Current Assets			
Cash and cash equivalents	5(a)	222,803	62,738
Receivables	5(b)	112,487	102,821
Defined benefit superannuation	3(d)(iv)	168	-
Total current assets		335,458	165,559
NON-CURRENT ASSETS			
Receivables	5(b)	529	863
Property, plant and equipment	4(a)	45,372	42,338
Intangible assets	4(b)	302,006	192,126
Right-of-use assets	5(d)	19,636	26,247
Total non-current assets		367,543	261,574
Total assets		703,001	427,133
LIABILITIES			
Current liabilities			
Payables	5(c)	210,036	96,887
Lease Liability	5(e)	6,790	7,544
Other liabilities	5(f)	59,421	15,554
Provisions		-	500
Employee benefits	3(c)(ii),(iii)	53,232	50,121
Defined benefit superannuation	3(d)(iv)	-	1,014
Total current liabilities		329,479	171,620
NON-CURRENT LIABILITIES			
Lease Liability	5(e)	20,432	27,028
Borrowings	6(a)	358,180	238,180
Employee benefits	3(c)	3,850	2,980
Total non-current liabilities		382,462	268,188
Total liabilities		711,941	439,808
Net assets/(liabilities)		(8,940)	(12,675)
Equity			
Capital contribution of members		7,093	7,093
Participant compensation fund reserve	7(a)	9,689	8,648
Land reserve	7(b)	3,399	3,172
Accumulated surplus/(deficit)		(29,121)	(31,588)
Total equity		(8,940)	(12,675)

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 2021

	Capital Contribution of Members \$'000	Participant Compensation Fund (PCF) Reserve \$'000	Land Reserve \$'000	Accumulated Surplus/ (Deficit) \$'000	Total equity \$'000
At 1 July 2019	7,093	7,522	2,946	(5,780)	11,781
Deficit for the year	-	-	-	(25,846)	(25,846)
Other comprehensive income	-	-	-	1,390	1,390
Total comprehensive deficit	-	-	-	(24,456)	(24,456)
Transfer to/(from) reserves - PCF Reserve		1,126		(1,126)	
- Land Reserve	-	1,120	- 226	(1,120)	-
As at 30 June 2020	7,093	8,648	3,172	(31,588)	(12,675)
At 1 July 2020	7,093	8,648	3,172	(31,588)	(12,675)
Deficit for the year				2,355	2,355
Other comprehensive income	-	-	-	1,380	1,380
Total comprehensive deficit				3,735	3,735
Transfer to/(from) reserves - PCF Reserve	-	1,041	-	(1,041)	-
- Land Reserve	-	-	227	(227)	-
As at 30 June 2021	7,093	9,689	3,399	(29,121)	(8,940)

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 2021

Notes	2021 \$'000	2020 \$'000
CASH FLOWS FROM OPERATING ACTIVITIES		
Receipts		
Receipts from customers	241,712	239,883
Receipts from customers - Victorian TNSP function	762,566	682,217
Receipts of participants security deposits and prepayments	626,303	770,452
Interest received	203	128
Payments		
Payments to suppliers and employees	(228,864)	(238,340)
Payments for transmission network charges	(731,167)	(700,991)
Repayment of participants security deposits and prepayments	(478,923)	(782,195)
Interest and other finance costs paid	(1,351)	(952)
Net cash inflow/(outflow) from operating activities 9(d)	190,479	(29,798)
Cash flows from investing activities		
Receipts for grants related to intangible assets	740	2,155
Payments for plant, equipment and intangible assets	(143,098)	(125,945)
Net cash outflow from investing activities	(142,358)	(123,790)
Cash flows from financing activities		
Proceeds from borrowings	120,000	282,005
Repayment of borrowings	-	(136,625)
Repayment of lease liabilities	(8,056)	(7,506)
Net cash outflow from financing activities	111,944	137,874
Net increase/(decrease) in cash and cash equivalents	160,065	(15,714)
Cash and cash equivalents at the beginning of the financial year	62,738	78,452
Cash and cash equivalents at end of the financial year 5(a)	222,803	62,738

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

## **Notes to the Financial Statements**

## 1. About this Report

## **Reporting Entity**

Australian Energy Market Operator Limited (AEMO) is an independent, not-for-profit public company limited by guarantee, incorporated and domiciled in Australia. It is owned jointly by energy industry members and market participants (40%) and each of the Commonwealth, Victorian, New South Wales, Queensland, Tasmanian, South Australian, Western Australian and Australian Capital Territory governments (60%).

AEMO's primary activity is to operate energy systems and markets balancing supply and demand in real time, to provide safe, reliable, and affordable energy, across the eastern, southern and western states of Australia. AEMO also has responsibility for planning functions in the National Electricity Market at the national and Victorian level, and various subsidiary functions directed by government legislation and regulations.

AEMO's registered office and principal place of business is: Level 22, 530 Collins Street Melbourne, Victoria, 3000

## **Basis of preparation**

This financial report includes financial statements for AEMO as an individual reporting entity. The report is a general-purpose financial report that consists of a Statement of Profit and Loss, Statement of Comprehensive Income, Statement of Financial Position, Statement of Changes in Equity, Statement of Cash Flows, Directors' Declaration and notes accompanying these statements for the period ending 30 June 2021.

The financial report has been prepared in accordance with Australian Accounting Standards and other authoritative pronouncements of the Australian Accounting Standards Board and the Corporations Act 2001. AEMO has applied Australian Accounting Standards that are applicable to not-for-profit entities, as AEMO is a not-for-profit company.

AEMO is not subject to income tax, being tax exempt on the basis that it qualifies as a public authority constituted under an Australian law. AEMO was granted an income tax exemption for 10 years from 1 July 2018 to 30 June 2028. The accrual basis of accounting has been applied in the preparation of the financial statements whereby assets, liabilities, equity, revenue and expenses are recognised in the reporting period to which they relate, regardless of when cash is received or paid.

The financial statements were authorised for issue by the directors on 8 September 2021.

## **Accounting Policies**

Accounting policies are selected and applied in a manner that ensures the resulting financial information satisfies the concepts of relevance and reliability, thereby ensuring that the substance of the underlying transactions or other events is reported.

Unless otherwise stated, all accounting policies applied are consistent with those of the prior financial year.

There are no new accounting pronouncements or standards that came into effect from 1 July 2020 that apply to, or have been adopted by AEMO. AEMO has assessed the impact of the International Financial Reporting Interpretations Committee guidance in relation to the configuration or customisation costs in a Cloud Computing Arrangement and concludes there is no impact on the financial statements.

## Going concern

The financial report has been prepared on the going concern basis, which assumes continuity of normal business activities, and the realisation of assets and the settlement of liabilities in the ordinary course of business. AEMO has an overall accumulated deficit of \$29.121 million (2020: \$31.588 million). In assessing the appropriateness of the going concern assumption, the directors have considered:

 AEMO's 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, means that AEMO remains a going concern. It achieves cost recovery by including surpluses or deficits in future budgets and applying these to future fee recoveries for specific AEMO functions. The full recovery of previously incurred establishment costs for NEM, FRC Electricity and STTM over a period of up to 10 years are

examples demonstrating AEMO's ability to recoup costs incurred in managing its statutory functions. Accordingly, the accumulated surplus / (deficit) attributable to each of AEMO's functions is reconciled and managed on an ongoing basis, and,

• AEMO holds undrawn debt facilities of \$176.8 million at the date of this report.

### Functional and presentation currency

Items included in this report are measured using the currency of the primary economic environment in which AEMO operates (the functional currency). The financial statements are presented in Australian Dollars, which is AEMO's functional currency.

### Rounding

Unless otherwise stated, amounts in the report are rounded to the nearest thousand dollars ('000). Figures in the financial statements may not equate due to rounding.

### 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.

## Classification between current and non-current

In the determination of whether an asset or liability is current or non-current, consideration is given to the time when each asset or liability is expected to be realised or paid. The asset or liability is classified as current if it is expected to be turned over or settled within the next twelve months, being AEMO's operational cycle - see note 3(c)(ii)] under provisions for a variation in relation to employee benefits and note 6(b)(ii) under interest bearing liabilities for a variation in relation to borrowings.

### 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.

#### Critical accounting estimates

Preparation of the financial statements requires the use of certain critical accounting estimates and requires management to exercise judgement in the process of applying the accounting standards and the company's accounting policies. All judgements, estimates and assumptions are based on most current facts and circumstances and are reassessed on an ongoing basis. Actual results may differ for these estimates under different assumptions and conditions. This may affect financial results and the carrying amount of assets and liabilities to be reported in the next and future periods.

Significant judgements and key estimates and assumptions in applying accounting standards and AEMO's accounting policies are embedded within the following notes:

Note	Estimate assumption
3(b)	Network services use of assets
3(c)	Employee benefits
3(d)(iii)	Defined benefit superannuation
4(a), 4(b)	Depreciation and amortisation of assets
4(a), 4(b)	Useful lives and residual values of depreciable assets
4(c)	Impairment of non-financial assets
5(e)	Leases

## Impact of COVID-19

The impact of COVID on AEMO's financial performance is not material.

While the impacts of COVID-19 have not materially impacted AEMO's revenue, energy consumption patterns across markets and locations have been impacted, for example Central Business District industrial loads were lower but regional retail gas and electricity consumption increased.

Employee related expenses were lower particularly relating to travel, staff and facility amenities and fringe benefit tax due remote working for a significant portion of the year. Occupancy based social distancing measures and additional sanitation resulted in additional expenditure.

## **Notes to the Financial Statements**

(continued)

## 2. Revenue and Other Income

AEMO operates over 30 ring-fenced service functions, and revenue comprises fees charged for the recovery of expenditure incurred in relation to those functions. For reporting under this note, the functions have been segmented as follows:

- Victorian electricity transmission service provider functions
- Gas market functions
- Other Income.

Electricity market functions

### a) Summary of revenue

		2021	2020
	Notes	\$'000	\$'000
Revenue			
Victorian electricity transmission income	2(b)(i)	696,942	655,300
Electricity market income	2(b)(ii)	156,773	141,775
Gas market income	2(b)(iii)	42,997	44,137
Other revenue	2(c)	37,996	28,143
Total revenue and income from continuing operations		934,708	869,355

## b) Revenue from customers

AEMO derives revenue from the transfer of goods and/or services over time and at a point in time in the following revenue streams. Revenue is recognised when, or as, the performance obligations to the customer are satisfied.

AEMO has an ongoing obligation to provide continuous supply of the majority of its core services to energy market customers, participants and members in the markets it operates. Where this is identified, it is deemed that customers simultaneously receive and consume the benefit in line with AEMO performing its obligations, and the associated revenues are recognised over time.

Consideration received in advance of recognising the associated revenue from the customer is recorded as a contract liability. Where performance obligations are satisfied but not yet billed, a contract asset is recorded.

#### i) Victorian electricity transmission income

	2021	2020
	\$'000	\$'000
Transmission Use of Systems	591,491	549,564
Negotiated Services income	49,634	46,351
Settlement Residue	22,793	25,375
Settlement Residue Auctions	33,024	34,010
Total Victorian electricity transmission income	696,942	655,300

Transmission Use of Systems (TUoS) charges recover the costs for providing shared transmission network services in Victoria. TUoS prices are calculated in accordance with the National Electricity Rules and AEMO's pricing methodology. Included in the TUoS charges is collection of transmission easement tax (2021: \$168 million, 2020: \$166 million).

Negotiated Services income relates to grid connection augmentation services and transmission charges between generators and network service providers. This income is a direct pass-through as AEMO facilitates the contracts between infrastructure owner and grid beneficiaries for specific connections (that do not affect the whole network). Settlement residue income arises in the NEM when the amount paid by market participants to AEMO for spot transactions differs from the amount paid by AEMO to other market participants for the same transaction. The income is determined through a mathematical outcome uncontrollable by AEMO. Any NEM settlement residue surpluses received during the financial year are returned to Victorian Transmission Network Service Providers the following year.

Settlement residue auctions income represents auction proceeds of the net position of inter-regional settlement residue.

#### ii) Electricity market income

	2021	2020
	\$'000	\$'000
National Electricity Market	95,987	89,411
Electricity Full Retail Contestability	13,734	13,591
Western Australia Wholesale Electricity Market	13,615	13,017
Western Australia Systems Management	18,410	17,943
Registration Fees	2,821	2,352
National Transmission Planner	12,206	5,461
Total Electricity market income	156,773	141,775

Operating on a fee for service and cost recovery basis, electricity market revenue is received through fees and charges levied to relevant market participants. Each fee is limited to recovering the costs of providing that service, with over or under recoveries in a particular year able to be rolled to the future year or future years.

The structure of National Electricity Market (NEM) fees is established through a market consultation process, leading to a final determination. The current NEM fee structure is locked in through to 1 July 2026, other than in respect to declared projects. AEMO consults on its annual budgets and fees prior to the commencement of each financial year.

In Western Australia, AEMO's allowable electricity revenue requirement that translates into fees, is approved by the Economic Regulation Authority every three years – currently locked in to 30 June 2022.

#### iii) Gas market income

	2021 \$'000	2020 \$'000
Declared Wholesale Gas Market (Vic.)	22,584	22,539
Full Retail Contestability (Vic., S.A., N.S.W., Qld. and W.A.)	7,520	7,714
Short Term Trading Market (S.A. N.S.W., Qld.)	5,342	6,026
Gas Statement of Opportunities (Vic., ACT, S.A., N.S.W.)	2,138	2,161
Gas Services Information (W.A.)	1,115	1,708
Registration Fees	629	593
Other	3,669	3,396
Total Gas market income	42,997	44,137

AEMO operates several wholesale markets, including the Declared Wholesale Gas Market and other markets supporting the secondary trading of gas and pipeline capacity. In addition, AEMO operates Australia's gas retail markets, and bulletin boards that provide up-todate gas market and system information. As per the electricity market, operating on a fee for service and cost recovery basis, gas market revenue is received through fees and charges levied to relevant market participants. Each fee is limited to recovering the costs of providing that service, with over or under recoveries in a particular year able to be rolled to the future year or future years.

### c) Other Revenue

	2021	2020
	\$'000	\$'000
Network connections	24,220	16,481
Participant Compensation Funds contributions	998	1,000
Participant Compensation Funds interest	44	126
Contracted Services	6,401	2,668
Interest	161	318
Other	6,172	7,550
Total Other Income	37,996	28,143

Operating on a fee for service and cost recovery basis, network connections revenue is received for the provision of assessment and advisory services relating to a connection.

Participant Compensation Fund contributions are collected in accordance with the National Electricity Rules and National Gas Rules. Upon reaching the maximum allowable contributions the fund will cease to increase through regular allocations until such time it is claimed. The funds collected in 2020 and 2021 relate to the National Electricity Market. The fund under the National Gas Rules is at the maximum allowable contribution level. Contributions to the funds and interest earned on fund investments are recognised as a point in time revenue and transferred to the Participant Compensation Fund Reserve. Refer to Note 7(a) for further detail.

Contracted Services income reflects cost recovery for the provision of negotiated services predominantly in relation to market trials and engineering services.

Interest income is recognised as earned at the effective interest rate.
## (continued)

## 3. Expenses

### a) Summary of expense incurred in the delivery of services

		2021	2020
N	otes	\$'000	\$'000
Total Network charges	3(b)	661,473	646,035
Depreciation and amortisation expense			
Amortisation expense	4(b)	21,174	15,579
Depreciation – Property, Plant & Equipment	4(a)	8,162	6,914
Depreciation – Leased right-of-use assets	5(d)	6,043	6,436
Total Depreciation and amortisation expense		35,379	28,929
Employee benefits			
Wages & Salaries		162,279	145,936
Superannuation and other post retirement expenses		15,707	14,689
Other employee benefits expense		29,046	26,598
Less Capitalised labour		(47,926)	(38,868)
Total Employee benefits	3(c)	159,106	148,355
General operating expenses			
Consulting, contracting & outsourcing		27,977	29,698
Information technology & maintenance		33,757	25,601
Subscriptions & Research Data		1,144	1,164
Insurance		2,735	1,898
Travel & accommodation #		218	2,440
Recruitment		1,018	1,208
Facilities		2,220	2,225
Training #		780	1,746
Other operating expenses #		2,104	3,203
Total General operating expenses		71,953	69,184

	2021	2020
Notes	\$'000	\$'000
Financing costs		
Borrowing costs 6(a)	484	838
Leasing interest 5(e)	764	885
Total Financing costs	1,248	1,723
Impairment		
Property, Plant & Equipment 4(a)	475	784
Intangibles 4(c)	1,734	-
Doubtful debts 5(b)	985	189
Total impairment costs	3,194	973
Total Operating Expenditure	932,353	895,199

# Impacted during the financial year due to working from home arrangements relating to the COVID-19 pandemic.

Capitalised labour includes all salary and salary oncosts based on employee classification. This includes both long service leave and annual leave for full time staff, and any applicable on-costs for contractors. Capitalisation of

labour is based on actual approved time as incurred on a monthly basis. These charges are capitalised to projects where they meet the recognition criteria under AASB138 - Intangibles.

### b) Network Charges

	2021	2020
	\$'000	\$'000
Transmission charges	479,082	466,023
Inter-Regional TUoS	9,086	14,497
Easement Tax	168,100	165,515
Victorian National Transmission planning	5,205	-
Total network charges	661,473	646,035

Transmission charges are the Transmission Use of System (TUoS) charges that recover costs for the provision of shared transmission network services in Victoria. These charges are paid to transmission network asset owners for use of their transmission network.

Inter-regional TUoS relates to Settlement residue whereby the amount paid by market participants differs to amounts paid by AEMO.

Easement tax relates to amounts levied by the State Revenue Office on AusNet Services and is passed through to AEMO.

Victorian National Transmission planning relates to mandated rules to recover planning costs from Market Customers to Transmission Network Service Providers (TNSP's).

### c) Employee Benefits - net of capitalised expenses

#### i) Employee benefits -Statement of Profit or Loss

	2021	2020
	\$'000	\$'000
Wages and Salaries	114,373	107,067
Superannuation and other post retirement expense	15,707	14,689
Other employee tax and on-costs	11,073	9,970
Other employee benefits and entitlements expense	17,953	16,629
Total employee benefit expenses	159,106	148,355

Employee benefits is recorded in the statement of profit or loss net of capitalised labour costs. It includes all costs related to employment including salaries and wages inclusive of performance incentives, taxes, leave entitlements, termination payments and Workcover premiums.

The amount charged to the statement of profit and loss in respect of superannuation represents contributions made or due by AEMO to the relevant superannuation plans in respect to the services of AEMO's employees (both past and present). Superannuation contributions are made to the plans based on the relevant rules of each plan and any relevant compulsory superannuation requirements that AEMO is required to comply with.

### ii) Employee benefits – Statement of Financial Position

Provision is made for benefits accruing to employees in respect of annual leave and long service leave (LSL) for services rendered to the reporting date and recorded as an expense during the period the services are delivered. Prior year provisions were utilised for superannuation payments owing at year end.

Professional judgement has been applied in the determination of projected leave based on historical leave taken. This may be subject to change based on the impact of COVID restrictions, staff attrition and other environmental factors. Management is actively monitoring leave balances to ensure compliance with internal policies and occupational health and safety requirements.

(continued)

	2021	2020
	\$'000	\$'000
CURRENT PROVISIONS *		
Annual Leave		
Unconditional and expected to settle within 12 months	8,451	7,532
Unconditional and expected to settle after 12 months	5,179	4,615
Long Service Leave		
Unconditional and expected to settle within 12 months	6,795	6,596
Unconditional and expected to settle after 12 months	9,383	9,108
On-Costs		
Unconditional and expected to settle within 12 months	2,407	1,962
Unconditional and expected to settle after 12 months	2,285	1,776
Provision for Incentives	18,732	18,082
Provision (other) #	-	450
	53,232	50,121
NON-CURRENT PROVISIONS		
Long Service leave		
Unconditional and expected to settle after 12 months	2,812	1,661
Provision for on-costs	1,038	1,319
	3,850	2,980
TOTAL	57,082	53,101

\* The current provision balances have been presented disclosing the expected amount to be settled within 12 months and after 12 months. Total provision expected to settle within 12 months is \$36.8 million (2020: \$34.1 million). Total provision expected to settle greater than 12 months is \$16.8 million (2020: \$15.5 million). The provision balances have been assessed relative to actual leave taken to determine the expected timing of leave.

# Back-pay correction related to employee superannuation contributions.

Reconciliation of AEMO's movements in the employee provisions is as follows:

	2021
	\$'000
Opening balance	53,101
Additional provisions recognised	32,543
Amount utilised during the period	(27,916)
Prior year superannuation provision released	(450)
Effect of changes in the discount rate	(196)
Closing balance	57,082

#### Wages and salaries, annual leave, and sick leave

Liabilities for salaries and wages (including non-monetary benefits, annual leave, and on-costs) that are expected to be settled wholly within 12 months after the end of the period in which the employees render the related service are recognised in respect of employees' services up to the end of the reporting period and are measured at the amounts expected to be paid when the liabilities are settled. The liabilities are presented as current employee benefit obligations in the statement of financial position.

Liabilities for salaries and wages (including non-monetary benefits, annual leave and on-costs) are all recognised in the provision for employee benefits as 'current liabilities' as per AASB 119 Employee Benefits, as AEMO does not have an unconditional right to defer settlements of these liabilities.

Sick leave payments are made in accordance with relevant awards, determinations and AEMO policy. No provision is made in the Financial Statements for unused sick leave entitlements as these are non-vesting benefits.

#### Long Service Leave

Liability for long service leave (LSL) is recognised in the provision for employee benefits.

Unconditional LSL (representing seven or more years of continuous service) is disclosed as a current liability even where AEMO does not expect to settle the liability within 12 months as AEMO does not have an unconditional right to defer the settlement of the entitlement should an employee take leave within 12 months. Both components of this current LSL liability are measured at nominal value.

Conditional LSL is disclosed as a non-current liability as AEMO has an unconditional right to defer the settlement of the entitlement until the employee has completed the requisite years of service. This non-current LSL liability is measured at present value. Any gain or loss following revaluation of the present value of non-current LSL liability is recognised as a transaction, except to the extent that a gain or loss arises due to changes in bond interest rates for which it is then recognised in the statement of profit or loss.

#### Performance incentives

The performance incentive plan continued in operation during the current reporting year. Eligible employees have the capacity to earn a proportion of their base pay as a cash incentive annually. The incentive opportunity is set depending on an employment classification. The incentive payments are determined based on an achievement of a range of departmental and organisational goals.

A provision is recognised based on indicative achievement of corporate key performance indicators and goals subject to Board ratification.

#### d) Superannuation

#### i) Superannuation contributions

AEMO makes its employer superannuation contributions in respect of its employees to several superannuation funds, with most contributions made to the Equip Superannuation Fund (Equip super, the Fund).

The obligations for contributions to the Fund and other superannuation funds are recognised as an expense in the statement of profit or loss or directly charged to capital expenditure projects when they are incurred or due.

As at the reporting date, there was \$1.1 million payable to Equip super and \$0.1 million payable to other Superannuation Funds in the normal course of business and no loans issued from or to any of the above funds.

The expected contributions to be paid to the defined benefit category of Equip super for the year ending 30 June 2022 is \$nil (2021: \$nil).

The Funds have two categories of membership, accumulation, and defined benefit, each of which is funded differently.

#### ii) Accumulation

Contributions to the accumulation plans are expensed as the contributions are paid or become payable.

## (continued)

### iii) Defined Benefit

The plan was transferred to AEMO as part of the business combination with VENCorp on 1 July 2009. The plan is closed to new members.

AEMO's superannuation Defined Benefit Obligation (DBO) to its members is required to be revalued at fair value annually in accordance with the Australian Accounting Standards and presented as an asset or liability on the balance sheet. The company engages an actuarial expert each year for this revaluation.

At 30 June 2021, the plan comprises 7 employees and 8 pension members being unchanged from the prior year.

Defined benefit members receive either lump sum benefits or pension benefits on retirement, death, disablement or withdrawal.

### iv) Reconciliation of the assets and liabilities recognised in the Statement of Financial Position

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

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.

A summary of the Plan's asset is shown below:

	2021	2020
	\$'000	\$'000
Defined Benefit Obligation	18,883	19,027
Fair value of plan assets	(19,051)	(18,013)
Net defined benefit superannuation (asset) / liability	(168)	1,014

The defined benefit superannuation asset included in the Statement of Financial Position at 30 June 2021 is \$0.168 million. The liability was \$1.014 million at 30 June 2020, with the movement primarily due to a combination of an increase in corporate bond yields resulting in a decrease in the value of the defined benefit obligation and a lower rate of increase in salaries and pensions compared to the prior year.

The valuation of the Plan was performed in accordance with generally accepted actuarial principles and procedures. The accounting calculations provided are based on the assumptions, methods and accounting policies selected by AEMO.

### v) Reconciliation of the Net Defined Benefit Asset

The reconciliation of the asset related to AEMO's defined benefit plan is summarised as follows:

	2021	2020
Financial year	\$'000	\$'000
Net defined benefit (asset)/liability at start of the year	1,014	2,121
Current service cost	226	242
Net Interest	21	41
Net result before net actuarial gains	1,261	2,404
Actual return on plan assets (gains) less interest income	(1,049)	44
Actuarial losses/(gains) arising from changes in demographic assumptions Actuarial losses/(gains) arising from changes in financial assumptions	- (158)	(179) (1,209)
Actuarial losses/(gains) arising from liability experience	(173)	(46)
Net actuarial gains on re-measurement of net defined benefit superannuation liability	(1,380)	(1,390)
Employer contributions	(49)	-
Net defined benefit (asset)/ liability at end of the year	(168)	1,014

The key results are:

- the net defined benefit asset to be included in the Statement of Financial Position as at 30 June 2021 is \$0.168 million (2020: liability of \$1.014 million);
- the component of defined benefit cost to be recognised in Statement of Profit or Loss for the year ended 30 June 2021 is \$0.247 million (2020: \$0.283 million); and
- the component of defined benefit cost to be recognised in the Statement of Comprehensive Income (remeasurements) for the year ended 30 June 2021 is an income item of \$1.380 million (2020: \$1.390 million).

#### vi) Reconciliation of the present value of the defined benefit obligation

The reconciliation to the present value of the defined benefit obligation are as follows:

Financial year	2021 \$'000	2020 \$'000
Present value of defined benefit obligations at beginning of the year	19,027	20,282
Current service cost	226	242
Interest cost	435	426

Financial year	2021 \$'000	2020 \$'000
Contributions by plan participants	67	64
Actuarial (gains)/losses arising from changes in demographic assumptions	-	(179)
Actuarial (gains)/losses arising from changes in financial assumptions	(158)	(1,209)
Actuarial (gains)/losses arising from liability experience	(173)	(46)
Benefits paid	(517)	(509)
Taxes, premiums and expenses paid	(24)	(44)
Present value of defined benefit obligations at end of the year	18,883	19,027

### vii) Reconciliation of the fair value of plan assets

The movement in the present value of the defined benefit assets are as follows:

Financial year	2021 \$'000	2020 \$'000
Fair value of plan assets at beginning of the year	18,013	18,161
Interest income	414	385
Actual return on plan assets less Interest income	1,049	(44)
Employer contributions	49	-
Contributions by plan participants	67	64
Benefits paid	(517)	(509)
Taxes, premiums and expenses paid	(24)	(44)
Fair value of plan assets at end of the year	19,051	18,013

### viii) Fair value of plan assets

Financial year ended 30 June 2021	Total \$'000	Quoted prices in active markets for identical assets – Level 1 \$'000	Significant observable inputs – Level 2 \$'000	Unobservable inputs – Level 3 \$'000
Investment funds	19,051	-	19,051	-
Total	19,051	-	19,051	-

The percentage invested in each asset class at the reporting date is:

	2021	2020
As at 30 June	%	%
Australian equity	13	10
International equity	14	12
Fixed income	11	11
Property	6	4
Growth alternatives	8	9
Defensive alternatives	11	11
Cash	37	43

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

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

## ix) Principal actuarial assumptions at the balance sheet date

The principal assumptions used in determining pension and post-employment benefit obligations for the plan are shown below:

	2021	2020
Assumptions to determine defined benefit superannuation cost	% p.a.	% p.a.
Discount rate* (active members)	2.5	2.3
Discount rate (pensioners)	2.5	2.3
Expected salary increase rate	2.5	2.9
Expected pension increase rate	2.0	2.5

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

	2021	2020
Assumptions to determine defined benefit obligation	% p.a.	% p.a.
Discount rate* (active members)	2.5	2.5
Discount rate (pensioners)	2.5	2.5
Expected salary increase rate	2.0	2.5
Expected pension increase rate	2.0	2.0

\* The discount rate used is based on a Corporate bond yield of 7 years duration.

These rates are used to calculate the defined benefit obligation (future obligation) at year end and were developed by management with the assistance of independent actuaries.

#### x) Sensitivity Analysis

The defined benefit obligation as at 30 June 2021 under several scenarios is presented below. The defined benefit obligation has been recalculated by changing the assumption as detailed, while retaining all other assumptions. 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	+0.5% pa	-0.5%	+0.5%	-0.5% pa	+0.5% pa
		discount	discount	pa salary	pa salary	pensions	pensions
		rate	rate	increase	increase	increase	increase
				rate	rate	rate	rate
Discount rate	2.5% pa	2.0% pa	3.0% pa	2.5% pa	2.5% pa	2.5% pa	2.5% pa
Salary increase rate	2.0% pa	2.0% pa	2.0% pa	1.5% pa	2.5% pa	2.0% pa	2.0% pa
Pension increase rate	2.0% pa	2.0% pa	2.0% pa	2.0% pa	2.0% pa	1.5% pa	2.5% pa
Defined benefit obligation (\$'000)	18,883	19,739	18,085	18,729	19,040	18,291	19,520

#### xi) Asset-Liability matching strategies

No asset and liability matching strategies have been adopted by the plan.

#### xii) Funding arrangements

The Equip super 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 longterm contribution rate and an adjustment to meet the financing objective of a Target Funding Ratio of 104%.

The Target Funding Ratio reflects the proportion of salary related benefits and the allocation to "growth" assets for the Plan. The Funding Ratio is the ratio of assets to accrued liabilities, being the greater of vested benefits and the present value of past membership benefits.

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

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

#### xiii) Expected contributions

The below table summarises the expected future employer contributions

Financial year	2022 \$'000
Expected employer contributions	Nil

#### xiv) Maturity profile of defined benefit obligation

The weighted average duration of the defined benefit obligation as at 30 June 2021 is 9 years.

Expected benefit payments for the financial year ending on	\$'000
30 June 2022	1,574
30 June 2023	1,481
30 June 2024	1,393
30 June 2025	1,685
30 June 2026	1,861
Following 5 years	6,794

## (continued)

## 4. Key Assets

This section provides information on the key assets that are controlled and utilised by AEMO in fulfilling its objectives and conducting its activities.

### a) Property, Plant and Equipment

Property, plant and equipment captures physical hardware components including servers, storage, and

network equipment relating AEMO's wholesale, retail, and corporate systems.

The Land and buildings asset category incorporates the land and building AEMO owns in Sydney and the fit-out costs of our six offices.

	Technology Infrastructure	Leasehold Improvements	Land and Buildings	Total
	\$'000	\$'000	\$'000	\$'000
At 30 June 2020				
Cost	66,665	28,280	20,481	115,426
Accumulated depreciation	(48,566)	(17,826)	(6,696)	(73,088)
Carrying value at 30 June 2020	18,099	10,454	13,785	42,338
At 30 June 2021				
Cost	77,318	25,645	20,481	123,444
Accumulated depreciation	(53,887)	(17,055)	(7,130)	(78,072)
Carrying value at 30 June 2021	23,431	8,590	13,351	45,372

	Technology Infrastructure	Leasehold Improvements	Land and Buildings	Total
	\$'000	\$'000	\$'000	\$'000
RECONCILIATION OF CARRYING AMOUNT:				
Year ended 30 June 2020				
Carrying amount at 1 July 2019	13,609	8,646	14,220	36,475
Additions	9,317	3,461	-	12,778
Disposals	-	-	-	-
Depreciation	(4,827)	(1,653)	(435)	(6,915)
Carrying amount at 30 June 2020	18,099	10,454	13,785	42,338
RECONCILIATION OF CARRYING AMOUNT:				
Year ended 30 June 2021				
Carrying amount at 1 July 2020	18,099	10,454	13,785	42,338
Additions	11,477	28	-	11,505
Disposals	(292)	(18)	-	(310)
Depreciation	(5,853)	(1,874)	(435)	(8,162)
Carrying amount at 30 June 2021	23,431	8,590	13,350	45,371

## (continued)

	Technology Infrastructure	Leasehold Improvements	Land and Buildings	Total
	\$'000	\$'000	\$'000	\$'000
RECONCILIATION OF COST:				
Cost amount at 1 July 2019	57,347	24,819	20,481	102,647
Additions	9,318	3,461	-	12,779
Disposals	-	-	-	_
Cost amount at 30 June 2020	66,665	28,280	20,481	115,426
RECONCILIATION OF COST:				
Cost amount at 1 July 2020	66,665	28,280	20,481	115,426
Additions	11,477	28	-	11,505
Disposals	(824)	(2,663)	-	(3,487)
Cost amount at 30 June 2021	77,318	25,645	20,481	123,444

#### Cost and valuation

Plant and equipment is stated at historical cost, net of accumulated depreciation and/or any accumulated impairment losses. Historical cost includes expenditure that is directly attributable to the acquisition of the item. Depreciation is calculated on a straight-line basis over the estimated useful lives of the assets.

Consistent with AASB 13 Fair Value Measurement, AEMO determines the policies and procedures for both recurring fair value measurements such as infrastructure, property, plant and equipment and financial instruments and for non- recurring fair value measurements such as assets held for sale, in accordance with the requirements of AASB13 and the relevant Financial Reporting Directions.

Property Plant and Equipment is initially measured at cost then subsequently revalued at fair value should there be any indications of impairment or change of useful. Any change in fair value recognised during the year is transacted through the statement of profit or loss and the loss recognised as an expense.

The residual values, useful lives, impairment and amortisation methods are reviewed and adjusted if appropriate, at each financial year end. An item of property, plant and equipment is derecognised upon disposal or when no further future economic benefits are expected from its use or disposal.

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	3-7 years
Furniture and equipment	3-5 years
Office and technology infrastructure	7-10 years
Building Fit-out	10-15 years
Building	30 years

The estimation of the useful lives of assets has been based on historical and future estimated useful life, 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 for any impairment indicators and considered against the

remaining useful life. Adjustments to useful lives are made when considered necessary.

A further distinction is also made based on the effort and internal customisation, with significant or groundup programs providing longer future benefit and slower refresh than over-the-counter solutions. This is reflected in useful life ranges; specifically, for new markets or substantial participant facing redesign.

### b) Intangibles

Delivery of core functions requires significant investment in intangible assets, including both acquired and internally generated that AEMO classifies as software assets. This investment expenditure is largely related to the energy market transition that has resulted in a need to refresh current systems and carry out large regulatorydirected programs. The main areas of intangible asset investments in the current year are:

- Modernisation of technology platforms within the gas and electricity systems and databases; and
- Development and implementation of regulatory rule changes to evolve with reform and industry changes (includes Five Minute Settlements, WEM Reform Program and WEM DER).

Detail of AEMO's intangible assets and their carrying amounts is as follows:

	Total Software
	\$'000
At 30 June 2020	
Cost	431,023
Accumulated amortisation	(238,896)
Net carrying value at 30 June 2020	192,127
At 30 June 2021	
Cost	561,861
Accumulated amortisation	(259,855)
Net carrying value at 30 June 2021	302,006
	Total Software
	\$'000
RECONCILIATION OF COST:	
Cost amount at 1 July 2019	320,795
Additions	111,012

Asset write-off(784)Acquisition through business combination-Transfers-Disposals-

	Total Software
	\$'000
Cost amount at 30 June 2020	431,023
RECONCILIATION OF COST:	
Cost amount at 1 July 2020	431,023
Additions	132,953
Asset write-off	(1,734)
Acquisition through business combination	-
Transfers	-
Disposals	(381)
Cost amount at 30 June 2021	561,861

	Total Software \$'000
RECONCILIATION OF CARRYING AMOUNT FOR:	
Year ended 30 June 2020	
Carrying amount at 1 July 2019	97,478
Additions	111,012
Asset write-off	(784)
Acquisition through business combination	-
Transfers	-
Amortisation	(15,579)
Carrying amount at 30 June 2020	192,127
RECONCILIATION OF CARRYING AMOUNT FOR:	
Year ended 30 June 2021	
Carrying amount at 1 July 2020	192,127
Additions	132,953
Asset write-off	(1,734)
Disposals	(165)
Acquisition through business combination	-
Transfers	-
Amortisation	(21,174)
Carrying amount at 30 June 2021	302,006

Only costs that are directly attributable to a project's development phase and meet the requirements of AASB 136 *Impairment of Assets* are recognised as intangible assets. Development costs not meeting these criteria are expensed as incurred.

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

Following the initial recognition of the development expenditure as an asset, the asset is carried at cost less any accumulated amortisation and accumulated impairment losses. Amortisation of the asset begins when development is complete, and the asset is available for use. It is amortised over the period of expected future benefit. Amortisation is recorded in operating expenses and during the period of development, the asset is tested for impairment annually.

The fair value of intangible assets reflects market participants' expectations at the acquisition date about the probability that the expected future economic benefits embodied in the asset will flow to AEMO and as AEMO has the right to recover, the carrying value does not differ materially to the fair value.

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.

#### Software

#### Acquired software

Software applications are treated in accordance with AEMO's asset policy whereby the first year is capitalised and ongoing costs are considered operational.

#### Internally developed software

Expenditure required to develop or customise software 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 AASB 138. 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.

Software asset useful life is assessed specific to the asset and broader system it contributes to, to determine its expected useful life.

Assets are amortised over their estimated useful lives as follows:

NEM, WEM and FRC market management systems software	5-10 years
DWGM and FRC Gas IT system software	5-10 years
STTM system software	5-10 years
General IT systems software	3-7 years
Business applications software	5-7 years
WEM software	5-10 years
GSI software	5-10 years

#### c) Impairment of non-financial assets

Non-financial assets, including items of plant and equipment and intangibles that have an indefinite useful life, are tested at least annually for impairment or more frequently if events or changes in circumstances indicate that they might be impaired. 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.

Where an asset measured at cost is written down to its recoverable amount, an impairment loss is recognised through the statement of profit and loss. Where a previously revalued asset is written down to its recoverable amount, the loss is recognised as a revaluation decrement through other comprehensive income.

As at 30 June 2021, an impairment loss of \$2.21 million (2020: \$0.74 million) was recognised consisting of:

- Work in progress expenses of \$1.27 million relating to Distributed Energy Resource program assets for market trials and planning that have been assessed as not meeting AEMO's capitalisation criteria.
- Intangible asset expenses of \$0.46 million relating to systems and applications assessed as no longer meeting AEMO's asset criteria.
- Impairment expenses of \$0.48 million for decommissioned assets no longer in use.

There were no further indications of impairment to property, plant and equipment or intangibles.

If there is an indication that there has been a reversal in impairment, the carrying amount shall be increased to its recoverable amount. However, this reversal should not increase the asset's carrying amount above what would have been determined, net of depreciation or amortisation, if no impairment loss had been recognised in prior years.

### (continued)

## 5. Other Assets and Liabilities

This section provides information that is most relevant to understanding AEMO's other assets and liabilities during the year.

### a) Cash and cash equivalents

This section provides information on the purpose and availability for company use, of the cash and cash equivalents held at 30 June 2021.

	2021	2020
	\$'000	\$'000
Cash at bank and on hand	41,408	30,811
Security deposits and early settlement proceeds	157,647	23,365
Participant Compensation Fund (PCF)	9,528	8,562
Grants held in trust	14,220	-
Total cash and cash equivalents	222,803	62,738

Cash and cash equivalents comprise cash on hand available on demand and deposits held at call with financial institutions. Cash and cash equivalents are measured at amortised cost, being the principal amount. Cash also includes other highly liquid investments not subject to significant risk of change in value, with short periods to maturity, net of any bank overdraft.

Cash at bank and on hand represents AEMO operating funds and is available for company use.

Security deposits and early settlement proceeds are funds received from market participants, that are not available for AEMO's operational use, and are held on behalf of participants in accordance with the National Electricity and Wholesale market rules. The 2021 balance reflects higher prices and demand in the later part of 2021.

Participant compensation funds are collected and held for participants under the National Electricity Market, Declared Wholesale Gas Market and Short-Term Trading Market for compensation as a result of scheduling errors. These funds are not available for AEMO's operational use.

Grant cash flow received in the 2021 financial year incorporates funding for a joint industry project whereby AEMO will forward agree cash payments to project participants as milestones are achieved. A liability for the industry component of the grant funding (\$12.9 million) is carried in a liability account.

### b) Receivables

	2021	2020
Notes	\$'000	\$'000
Current		
Participant fees receivable	20,194	20,428
TUoS revenue receivable	63,513	56,043
Other receivables	21,327	19,448
Prepayments	7,453	6,902
Total current receivables	112,487	102,821
Non-current		
Prepayments (Deferred Expenses)	529	863
Total non-current receivables	529	863
Total receivables	113,016	103,684

Other Receivables include accrued revenue (\$6.2 million) and amounts receivable for GST (\$6.4 million).

Trade receivables are recognised initially at fair value plus transaction costs and then subsequently measured at amortised cost using the effective interest rate method, less impairment. Collectability of trade receivables is reviewed on an on-going basis. Individual debts that are known to be uncollectible are written off when identified. An impairment provision is recognised when there is objective evidence that the entity will not be able to collect the receivable. Financial difficulties of the debtor, default payments or debts greater than trade terms are considered objective evidence of impairment.

Receivables largely comprise wholesale market settlement transactions that have occurred but are yet to be settled and transmission use of system (TUOS) fees which are billed to transmission network users one month in arrears.

AEMO's credit risk for trade and other receivables is low because payment terms or settlement statements for the industry are stipulated under the National Electricity Laws, National Gas Rules or Transmission use of System Agreements.

Current and non-current receivables are initially recognised at the fair value of the amounts to be

received and are subsequently measured at amortised cost, less any allowance for expected credit losses.

Collectability of receivables is reviewed on an ongoing basis. Debts that are known to be uncollectable are written off.

Accounts receivable are non-interest bearing and the net carrying value of trade receivables is considered a reasonable approximation of fair value.

Receivables are recognised where the right to consideration from the customer is unconditional, with only the passage of time required before payment is due. Accrued revenue is recognised where AEMO has provided services to the customer, but does not have the unconditional right to invoice the customer at reporting date.

All of AEMO's trade and other receivables in the comparative periods have been reviewed for indicators of impairment. AEMO used a significant degree of professional judgement and considered forward-looking assumptions and information regarding expected future conditions affecting historical customer default rates to assess any indications of impairment. The impaired trade receivables are mostly in relation to aged receivables, renewable (solar and windfarm) grid connection applications.

Trade receivables are non-interest bearing and are generally on 30-90-day terms. A provision for impairment loss is recognised when there is objective evidence that an individual trade receivable is impaired.

An impairment loss of \$1.2 million (2020: \$0.2 million) has been recognised by AEMO. No individual amount within the impairment allowance is material.

Prepayments represent payments made for services to be provided or consumed over future months. IT support costs represent a large proportion of these with the remainder mostly comprising of property lease agreements and insurance premiums. 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) Payables

Trade and other payables 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.

Participant security deposits relating to the NEM and Gas Supply Hub are monies held by AEMO (in cash and cash equivalents) and are held on behalf of the registered market customers for prudential requirements.

Trade and other payables are carried at amortised cost and due to their short-term nature, they are not discounted. They represent liabilities for goods and services provided to AEMO prior to the end of the financial year that are unpaid and arise when AEMO becomes obliged to make future payments in respect of the purchase of these goods and services. The amounts are unsecured and are usually paid within 30 to 90 days of recognition.

Details of AEMO's Payables and their carrying amounts are as follows:

	2021	2020
	\$'000	\$'000
Current		
Accounts payable	26,142	14,398
Accrued network charges	55,636	56,442
Finance costs payable	9	111
Participant security deposits	112,302	11,123
Other creditors and accruals	15,947	14,813
	210,036	96,887

Payables are recognised at the amounts payable when AEMO becomes obliged to make future payments as a result of a purchase of assets or services. The carrying amount is equivalent to fair value as settlement is generally within 30 days.

Accrued Network Charges represent network charges that has become due but not yet paid.

Other creditors and accruals includes accrued capital of \$5.8 million and accrued expenses of \$8.4 million being amounts due to suppliers but unpaid at the end of the reporting period. AEMO considers the carrying amount of accrued capital and expenses to be equivalent to its fair value.

### d) Right-of-use assets

A right-of-use asset is recognised at the commencement date of a lease. The right-of-use asset is measured at cost, which comprises the initial amount of the lease liability, adjusted for, as applicable, any lease payments made at or before the commencement date net of any lease incentives received, any initial direct costs incurred, and, except were included in the cost of inventories, an estimate of costs expected to be incurred for dismantling and removing the underlying asset, and restoring the site or asset.

Right-of-use assets are depreciated on a straightline basis over the unexpired period of the lease or the estimated useful life of the asset, whichever is the shorter. Where the Company expects to obtain ownership of the leased asset at the end of the lease term, the depreciation is over its estimated useful life. Right-of use assets are subject to impairment or adjusted for any remeasurement of lease.

AEMO has elected not to recognise a right-of-use asset and corresponding lease liability for short-term leases with terms of 12 months or less and leases of low-value assets. Lease payments on these assets are expensed as incurred. Variable payments attached to a lease, such as outgoings, are expensed as incurred.

The right-of-use lease assets recognised by AEMO include most tenanted properties leased and data centres for on-premises applications. Properties not recognised as a right-of-use asset include those with a shorter-term lease that are mostly in place to accommodate project resources.

The value of the right-of-use asset at 30 June 2021 was \$19.6 million (2020: \$26.2 million) at 30 June 2020. Amortisation expense for the year of \$6.0 million and a disposal of \$0.6 million was recognised during the year accounting for the yearly movement in the right-of-use asset.

The following outlines the movement of the right-ofuse asset:

	2021
	\$'000
Gross carrying amount	
Balance at 1 July 2020	26,247
Additions	-
Lease incentive received and offset against the right-of-use lease asset	
Depreciation – Leased right-of-use assets	(6,043)
Disposals	(568)
Balance at 30 June 2021	19,636
	2020
	\$'000
Gross carrying amount	
Balance at 1 July 2019	33,493
Additions	-
Lease incentive received and offset against the right-of-use lease asset	(810)
Depreciation – Leased right-of-use assets	(6,436)
Disposals	-
Balance at 30 June 2020	26,247

### e) Lease liabilities

Liabilities arising from a lease are initially measured as the present value of lease payments over the term of the agreement that are not paid at that date. Lease liabilities include the following lease payments:

- Fixed payments (including in substance fixed payments), less any lease incentives receivable; and
- Variable lease payments that are based on an index or a rate, initially measured using the index or rate as at the commencement date. At 30 June 2021 AEMO did not have any variable lease payments.

A lease liability is recognised at the commencement date of a lease. The lease liability is initially recognised at the present value of the lease payments to be made over the term of the lease, discounted using the interest rate implicit in the lease or, if that rate cannot be readily determined, an incremental borrowing rate.

In calculating the present value of lease payments, AEMO uses its incremental borrowing rate at the lease commencement date because the interest rate implicit in the lease is not readily determinable. The discount rate is established on lease commencement and is not changed during the lease term unless there has been a modification to the lease that impacts the remaining lease payments.

Lease payments comprise of fixed payments less any lease incentives receivable, variable lease payments that depend on an index or a rate, amounts expected to be paid under residual value guarantees, exercise price of a purchase option when the exercise of the option is reasonably certain to occur, and any anticipated termination penalties. The variable lease payments that do not depend on an index or a rate are expensed in the period in which they are incurred.

Lease liabilities are measured at amortised cost using the effective interest method. The carrying amounts are remeasured if there is a change in the following: future lease payments arising from a change in an index, or a rate used; residual guarantee; lease term; certainty of a purchase option and termination penalties.

When a lease liability is remeasured, an adjustment is made to the corresponding right-of use asset, or to profit or loss if the carrying amount of the right-of-use asset is fully written down.

Lease liabilities are presented in the statement of financial position as follows:

	2021	2020
Lease liabilities	\$'000	\$'000
Current	6,790	7,544
Non-Current	20,432	27,028
Balance as at 30 June	27,222	34,572

The following outlines the movement of the combined current and non-current lease liabilities.

	2021 \$'000	2020 \$'000
Lease liabilities recognised under AASB 16 at the beginning of the financial year	34,572	41,193
Interest expense	706	885
Lease payments made	(8,056)	(7,506)
Lease liabilities recognised under AASB 16 at the end of financial year	27,222	34,572

### f) Other liabilities

Contract liabilities mainly relates to gross pre-paid settlement payments received in advance from DWGM and STTM market participants, who are close to their credit limits to enable them to continue trading in their respective markets in accordance with the National Gas Rules.

Details of AEMO's carrying amount in other liabilities are as follows:

	2021	2020
	\$'000	\$'000
Current		
Contract liabilities (pre-paid settlement payments)	41,838	12,717
Government grants received in advance	17,519	2,837
Other liabilities	64	-
	59,421	15,554

Government grants are recognised where there is reasonable assurance that the grant will be received, and all attached conditions will be complied with. When the grant relates to an expense item, it is recognised as income on a systematic basis over the periods that the related costs, for which it is intended to compensate, are expensed. When the grant relates to an asset, it is recognised as income in equal amounts over the expected useful life of the related asset.

The carrying values of Other Liabilities are a reasonable approximation of fair value.

## 6. Financing

### a) Borrowings

AEMO amended its syndicated debt facility in May 2021 to extend the tenor of each tranche by 12 months and increase tranche A (one year tenor) by \$35 million. The syndicated debt facility agreement is with National Australia Bank and the Australia and New Zealand Banking Group. This agreement provides for a \$535 million facility with a mix of tenors over one, three and five years. The syndicated facility replaces all previous lending arrangements in place with all borrowings now shown as non-current.

Detail of AEMO's drawn borrowings consist of the following Financial Liabilities held at fair value:

	2021	2020
	\$'000	\$'000
NON-CURRENT		
Bank Loans		
Syndicated facility	358,180	238,180
	358,180	238,180
TOTAL	358,180	238,180

The above borrowings are unsecured.

All borrowings are initially recognised at fair value of the consideration received less directly attributable transaction costs. After initial recognition, interest bearing borrowings are subsequently measured at amortised costs using the effective interest method. Borrowings are classified as current liabilities unless AEMO has an unconditional right to defer settlement of the liability for at least 12 months after the reporting date.

Borrowings are initially recognised at fair value, net of transaction costs incurred. Borrowings are subsequently measured at amortised cost. Any difference between the proceeds (net of transaction costs) and redemption amount is recognised in the statement of profit or loss over the period of the borrowings using the effective interest rate method.

#### i) Borrowing Costs

Borrowing costs consist of interest and other costs that AEMO incurs in connection with the borrowing of funds.

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. AEMO's borrowing costs directly attributable to the acquisition, construction or production of an asset are capitalised as part of the cost of the asset.

### b) Financial risk management

#### i) 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 credit risk. AEMO's exposure to market risk is primarily through interest rate risk, noting its exposure to foreign currency is limited to specific software purchases and credit risk is managed through cash investments being held with tier one Australian banks. AEMO's exposure to interest rate risk arises from longterm syndicated facility agreement borrowings that are at variable rates. No interest rate hedges have been entered into as at 30 June 2021.

AEMO's financial sensitivity to movements in interest rates is presented below.

2021	Carrying	Interest rate Risk +1%		e Risk +1% Interest rat	
	Amount \$′000	Net Result \$'000	Equity \$'000	Net Result \$'000	Equity \$'000
Financial Assets					
Cash and cash equivalents	222,803	10	10	(10)	(10)
	222,803	10	10	(10)	(10)
Financial Liabilities					
Interest bearing liabilities	358,180	66	66	(66)	(66)
	358,180	66	66	(66)	(66)

2020	Carrying	Interest rate Risk +1%		Interest rate Risk -1%	
	Amount \$'000	Net Result \$'000	Equity \$'000	Net Result \$'000	Equity \$'000
Financial Assets					
Cash and cash equivalents	62,738	5	5	(5)	(5)
	62,738	5	5	(5)	(5)
Financial Liabilities					
Interest bearing liabilities	238,180	36	36	(36)	(36)
	238,180	36	36	(36)	(36)

#### ii) 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.

### Undrawn borrowing facilities

	Limit	Balance	Undrawn
30 June 2020	\$'000	\$'000	\$'000
Total facility available	500,000	238,180	261,820
30 June 2021	Limit	Balance	Undrawn
30 June 2021	\$'000	\$'000	\$'000
Total facility available	535,000	358,180	176,820

### Loan repayment commitments

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

	< 1 year	1–5 years	> 5 years	Total
30 June 2021	\$'000	\$'000	\$'000	\$'000
Syndicated Facility	1,473	365,604	-	367,077
Total Commitments	1,473	365,604	-	367,076
	< 1 year	1–5 years	> 5 years	Total
30 June 2020	\$'000	\$'000	\$'000	\$'000
Syndicated Facility	2,386	244,564	-	246,950
Syndicated Facility	1	,		

## (continued)

## 7. Capital

This section provides information that is most relevant to understanding AEMO's Reserves and Accumulated Surpluses and deficits.

### a) Reserves

#### i) 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 \$1.0 million and \$5.0 million minus the amount which AEMO reasonably estimates will be the balance of the PCF at the end of the relevant financial year.

#### 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 \$0.5 million and \$1.0 million minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.

#### 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:

- a) **Sydney hub:** The lesser of \$0.335 million and \$0.670 million minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.
- b) Adelaide hub: The lesser of \$0.115 million and \$0.330 million minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.
- c) Brisbane hub: The lesser of \$0.225 million and \$0.450 million minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.

The balances for all PCFs, except the National Electricity Market PCF, 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. The National Electricity Market PCF has fallen below the funding requirement and therefore PCF fees of \$1.0 million have been charged in the 2020-21 financial year in line with the National Electricity Rules.

The balance of each of the Participant Compensation Fund reserves at 30 June are:

		PCF Vic				
		Wholesale	PCF STTM	PCF STTM	PCF STTM	
	PCF NEM	Gas	Sydney hub	Adelaide hub	Brisbane hub	TOTAL
	\$'000	\$'000	\$'000	\$'000	\$'000	\$'000
2020						
Balance 1 July 2019	2,030	3,722	849	427	494	7,522
Contributions during the year	1,000	-	-	-	-	1,000
Interest earned during the year	36	61	14	7	8	126
Payments of claims during the year	-	-	-	-	-	-
Balance 30 June 2020	3,066	3,783	863	434	502	8,648
2021						
Balance 1 July 2020	3,066	3,783	863	434	502	8,648
Contributions during the year	998	-	-	-	-	998
Interest earned during the year	15	19	4	3	3	44
Payments of claims during the year	-	-	-	-	_	-
Balance 30 June 2021	4,079	3,802	867	437	505	9,690

### ii) Land Reserve

The Land Reserve has been established to recover the cost of the purchase of its Norwest land from participants over a 30-year period.

### b) Accumulated Surplus/(Deficit)

AEMO's operational results in recent years have resulted in AEMO carrying an accumulated deficit of \$29.1 million at 30 June 2021 (2020: \$31.6 million).

AEMO's 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, provides a right for AEMO to recover the accumulated deficit. 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.

## (continued)

## 8. Key Management Personnel and Related Parties

This section provides information on further disclosures regarding responsible persons for the reporting period, as required by AASB 124 Related Party Disclosures.

### a) Key Management Personnel

Key management of AEMO include directors and members of the executive leadership team considered as having the strategic decision-making authority for the planning, directing and controlling of the overall activities of AEMO. The following persons were key management personnel of AEMO during the financial year:

Name	Title	Period of appointment
Mr Andrew Clarke, AO, PSM	Chairman	1 July 2020 to 30 June 2021
Ms Julieanne Alroe	Director	1 June 2021 to 30 June 2021
Mr Anthony Concannon	Director	1 July 2020 to 30 June 2021
Dr. Peter Davis	Director	1 July 2020 to 30 June 2021
Ms Elizabeth Donaghey	Director	1 July 2020 to 30 June 2021
Mr Nino Ficca	Director	1 July 2020 to 10 December 2020 and 15 May to 30 June 2021
Mr Jonathan Hubbard	Director	1 June 2020 to 27 November 2020
Ms Sibylle Krieger	Director	1 July 2020 to 27 November 2020
Ms Anne Nolan	Director	1 July 2020 to 30 June 2021
Mr John Pittard	Director	1 July 2020 to 30 June 2021
Mr Kee Wong	Director	1 June 2021 to 30 June 2021
Ms Audrey Zibelman	Managing Director and Chief Executive Officer	1 July 2020 to 10 December 2020
Mr Nino Ficca	Managing Director and Chief Executive Officer	11 December 2020 to 14 May 2021
Mr Daniel Westerman	Managing Director and Chief Executive Officer	17 May 2021 to 30 June 2021
Mr Michael Gatt	Chief Operations Officer	17 August 2020 to 30 June 2021
Mr Cameron Parrotte	Executive General Manager WA	1 July 2020 to 30 June 2021
Ms Julie Williams	Chief Financial Officer	29 August 2020 to 30 June 2021
Mr Alex Wonhas	Chief System Design Officer	1 July 2020 to 30 June 2021

#### i) Remuneration of Key Management Personnel

Aggregated remuneration received or receivable by the key management personnel of AEMO, as detailed above, during the reporting periods is as follows:

	2021	2020
	\$'000	\$'000
Key Management Personnel		
Short-term employee benefits	4,555	4,753
Post-employment benefits	-	-
Other long-term benefits	62	183
Termination benefits	-	-
	4,617	4,936

A review of AEMO's Key Management Personnel was undertaken during the year, largely to review the executive personnel that have strategic decisionmaking authority for the planning, directing and controlling of the overall activities of AEMO. Arising from the review, the Key Management Personnel were determined as all Directors, the Managing Director and Chief Executive Officer, along with four executive management personnel – refer to note 8(a). In 2020, all executive management personnel were reported as Key Management Personnel (total 2020 remuneration of \$7.464 million). As such the 2020 comparative remuneration reported in the table above has been adjusted to reflect the 2021 change in Key Management Personnel.

#### ii) Retirement benefits of Key Management Personnel

No retirement benefits were paid by AEMO in connection with the retirement of key management personnel for the 2021 financial year (2020: \$nil).

#### Chairman and the Non-executive Board members:

The annual Directors remuneration pool was last approved by Members at the Annual General Meeting in 2020. The amount of the pool includes fees to the Director chairing the Information Exchange Committee, and projected increases over a three-year period. The current pool is \$1.35 million per year. The Board makes an annual determination as to the part of the approved pool to be applied as fees to each director, after considering advice from external remuneration advisers.

#### Managing Director and Chief Executive Officer:

The position of the Managing Director/Chief Executive Officer is evaluated based on advice received from several remuneration and benefits specialists. The Board approves the Total Employment Cost (TEC) based on this advice. The Board approves any increase to fixed pay based on market movement and individual performance and approves any Short-Term Incentive (STI) based on corporate and individual performance.

#### Other key management personnel

All positions have a job profile that is externally evaluated that supports their TEC. Each year AEMO seeks remuneration advice from Hay Group regarding market movements for this group. The Board approves any increase to fixed pay based on both market movement and individual performance and approves any STI based on corporate and individual performance.

### b) Related Parties

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AEMO's related parties have been determined as follows:

- Key Management Personnel and their close family members
- Government and industry members as detailed below.

#### **AEMO Government Members**

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

### **AEMO Industry Members**

- Ararat Wind Farm Pty Ltd
- Advanced Energy Resources
- AETV Pty Ltd
- AER Retail Pty Ltd
- A-Star Electricity Pty Ltd
- AGL Energy Ltd
- AGL Loy Yang Marketing Pty Ltd
- AGL Macquarie
- Agora Retail Pty Ltd
- Allgas Energy Pty Ltd
- APA EE Holdings Pty Ltd
- APA GasNet Australia (Operations) P/L
- Alinta Sales Pty Ltd
- Alinta Energy Retail Sales Pty Ltd
- Amalgamated Energy Services P/L
- Amanda Energy PL
- APT Facility Management 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
- Australian Pipeline Trust
- Aus Gas Trading Pty Ltd
- AusNet Services
- Bluewaters Power 1 Pty Ltd
- Bluewaters Power 2 Pty Ltd
- Central Ranges Pipeline Pty Ltd
- Chinova Resources Osborne Pty Ltd
- CitiPower Pty Ltd
- Clean Energy Investments Pty Ltd
- Click Energy Pty Ltd
- Collgar Wind Farm Pty Ltd
- Covau Pty Ltd
- Delburn Wind Farm Pty Ltd

- Delta Electricity
- Denmark Community Windfarm Ltd
- Diamond Energy Pty Ltd
- Directlink Joint Venture
- Directlink Pty Ltd
- Dodo Power & Gas Pty Ltd
- East Australian Pipeline Pty Ltd
- EDL Group Operations Pty Ltd
- ElectrAg Pty Ltd
- ElectraNet Pty Ltd
- Endeavour Energy
- Energex Limited
- Energy Australia Gas Storage Pty Ltd
- Energy Australia Pty Ltd
- Energy Australia Yallourn Pty Ltd
- Energy Pacific (Vic) Pty Ltd
- Enova Energy Pty Ltd
- Epic Energy South Australia Pty Ltd
- Ergon Energy Pty Ltd
- ERM Power Ltd
- ERM Power Retail Pty Ltd
- ESCO Pacific Pty Ltd
- Essential Energy
- FPC 30 Ltd
- FRV Services Australia Pty Ltd
- GSP Energy Pty Ltd
- Hydro-Electric Corporation
- Hydro Power Pty Ltd
- ICAP Australia Pty Ltd
- Infigen Energy Markets Pty Ltd
- Infratil Energy Australia Pty Ltd
- Hydro-Electric Corporation
- Hydro Power Pty Ltd
- ICAP Australia Pty Ltd
- Infigen Energy Markets Pty Ltd
- Infratil Energy Australia Pty Ltd
- International Power (Engie Energy) P/L
- Jemena Ltd
- Kiamal Solar Farm Pty Ltd
- LMS Energy Pty Ltd
- Marubeni Australia Power Services P/L
- Millmerran Energy Trader Pty Ltd
- MTA Energy Pty Ltd
- Murraylink Transmission Company P/L
- Newcrest Mining Limited
- NewGen Power Kwinana Pty Ltd

- New Gullen Range Wind Farm Pty Ltd
- N. P. Power Pty Ltd
- OneSteel Manufacturing Pty LtdOnsite Energy Solutions Pty Ltd

Overland Sun Farming Company

Oxley Solar Development Pty Ltd

• Pacific Hydro Challicum Hills Pty Ltd

• Pacific Hydro Clements Gap Pty Ltd

Pacific Hydro Portland Wind Farm

• Pacific Hydro Retail Pty Ltd

Pooled Energy Pty Ltd

Pooled Energy Pty Ltd

RES Australia Pty Ltd

Snowy Hydro Limited

SPI Electricity Pty Ltd

Syncline Energy Pty Ltd

• Urth Energy Pty Ltd

Vicpower Trading

• Water Corporation

WINconnect Pty Ltd

Yarranlea Solar Pty Ltd

TasNetworks

TransGrid

Simcoa Operations Pty Ltd

Phoenix Energy Australia Pty Ltd

Phoenix Energy Australia Pty Ltd

• Reach Solar Energy Management

SIMEC ZEN Energy Retail Pty Ltd

Solar Reserve Australia II Pty Ltd

• South East Australia Gas Pty Ltd

Tasmanian Gas Pipeline Pty Ltd

Strategic Gas Market Trading

Vellocet Clean Energy pty Ltd

Wesfarmers Kleenheat Gas Pty Ltd

• Westpac Banking Corporation

Western Downs Solar Project Pty Ltd

Queensland Electricity Transmission

Powercor Australia Pty Ltd

Origin Energy Electricity Ltd

Origin Energy Eraring

Pty Ltd

Pty Ltd

Co P/L

Santos Ltd

Perth Energy

## (continued)

#### i) Significant transactions with Key Management Personnel

There were no significant transactions with Key Management Personnel during the reporting year.

#### ii) Significant transactions with related party entities

AEMO's significant related party transactions during the reporting year consisted of:

#### **Markets and Settlements**

AEMO's core system operations, markets and settlements activities involve significant, regular material transactions with most members. The transactions are governed by regulations, rules and published arrangements and occur at arm's length, with no special consideration or discounts. The majority of the activities are subject to annual audits. Further, no debt or equity inter-relationships exist between AEMO and market participants. Given the nature of these related party transactions and the operational controls in place to mitigate related party transaction risk, the transactions are not presented in detail.

#### Connections

Connection activities are underpinned by contractual arrangements, without special considerations or discounts. The total connections revenue during the financial year equated to \$24.2 million.

Related parties with annual connections revenue of or above \$500,000 are detailed below.

#### **Annual Connections revenue**

\$500,000 to \$1,000,000	\$1,000,000 to \$1,500,000	\$1,500,000 to \$2,000,000	Above \$3,000,000
Berrybank Development Pty Ltd	Bulgana Wind Farm Pty Ltd	Powerlink	TransGrid
Dundonnell Wind Farm Pty Ltd	ElectraNet Pty Ltd		
Energy Queensland	Ergon Energy		
Essential Energy	Stockyard Hill Wind Farm		
Golden Plains Wind Farm Pty Ltd	Powercor Australia Ltd		
Goldwind Australia	Victorian Big Battery Pty Ltd.		
Murra Warra II Asset Trust			

### **Government Members**

Government engagements are either underpinned by legislative requirements or milestone driven contractual arrangements subject to annual audits. Government related parties with annual interactions of above \$500,000 are detailed below.

Member / Engagement	\$'000
<ul> <li>Department of Planning, Industry and Environment (NSW)</li> <li>New South Wales Electricity Infrastructure Roadmap implementation</li> </ul>	661
<ul> <li>Western Power (WA)</li> <li>Contracted services pending the power system operations transition</li> </ul>	1,854
State of South Australia (SA) <ul> <li>Region specific energy planning and advisory</li> </ul>	1,000
<ul> <li>Department of Environment, Land, Water and Planning (VIC)</li> <li>Renewable Energy Zones Development Plan</li> <li>Victoria – New South Wales Interconnector System Integrity Protection Scheme</li> </ul>	1,921
<ul> <li>Australian Renewable Energy Agency (Commonwealth)</li> <li>Project Edge (Victorian Energy Marketplace Trial)</li> <li>Virtual Power Plant Demonstrations Project</li> </ul>	13,667

### (continued)

## 9. Other Financial Information

### a) Commitments

The capital commitments at balance date represent contractual consultancy arrangements for AEMO's major projects. The capital commitments at balance date mostly relate to Five Minute Settlements, Project Edge and Digital (including Cyber security) initiatives. At 30 June AEMO had capital commitments of \$21.6 million (2020: \$13.9 million) relating to contractual consultancy arrangements for AEMO' major projects.

AEMO's capital commitments is detailed below:

	2021	2020
	\$'000	\$'000
Capital Commitments		
Not later than one year	21,786	13,911
Later than one year but not later than five years	768	-
Later than five years	44	-
	22,598	13,911

### b) Contingent liabilities

From time-to-time AEMO may be involved in disputes with registered participants. As referred to in Note 7(a) (i) 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. Payment of such claims are capped to the extent of the funds available in the applicable PCF. Disclosure of details of claims are not provided where the directors consider that this would be prejudicial to AEMO in resolving the disputes.

Contingent liabilities and contingent assets are not recognised in the statement of financial position but are

### c) 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: reported in the notes. They may arise from uncertainty as to the existence of a liability or asset, or represent an asset or liability in respect of which the amount cannot be reliably measured. Contingent assets are disclosed when settlement is probable but not virtually certain and contingent liabilities are disclosed when settlement is greater than remote.

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.

	2021 \$′000	2020 \$'000
	<b>\$ 000</b>	\$ 000
Statutory financial audit services Services provided by the financial auditor Grant Thornton		
Statutory audit of the financial statements of the company	105	105
Other assurance services	11	11
Other services		
Other audit services not provided by AEMO's financial auditor *	1,041	723

\* Other Audit services 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.

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

	2021 \$'000	2020 \$'000
(Deficit)/Surplus	2,355	(25,846)
Depreciation and amortisation	29,327	22,492
Non-cash defined benefit expense	198	283
Write off of Intangible Assets	2,208	784
Non-cash doubtful debt expense	985	-
Non-cash movement in employee benefits	1,682	-
Change in operating assets and liabilities		
Increase in trade and other receivables	(10,318)	(14,596)
(Increase)/decrease in prepayment and other assets	6,611	(26,248)
Increase / (decrease) in creditors and accruals	8,252	14,830
Increase in provisions	1,800	10,245
Net cash inflow/(outflow) provided by operating activities before movements in security deposits	43,099	(18,056)
(Decrease)/increase in participant security deposits and gas prepayments	147,380	(11,742)
Net cash inflow/(outflow) provided by operating activities before	190,479	(29,798)

## (continued)

### e) Events occurring after balance sheet date

On 14 July 2021 AEMO incorporated AEMO Services Ltd (AEMO Services) as a subsidiary, being a company limited by guarantee, with AEMO as the initial sole member.

AEMO Services has been established to enable the transparent provision of advisory and energy services to AEMO member jurisdictions. For New South Wales (NSW), on the 20<sup>th</sup> of July 2021 the role of the NSW Consumer Trustee was conferred AEMO Services. The role of NSW Consumer Trustee supports the delivery of the NSW Electricity Infrastructure Roadmap. It is intended that once commercial agreements between AEMO and the NSW government are executed, NSW will then become a member of AEMO Services.

All transactions between AEMO and AEMO Services will be at arm's length commercial terms and will be separate from AEMO's ongoing operations, with AEMO Services responsible for performing statutory functions conferred on it.

### (continued)

## **10. Directors' Declaration**

The directors of Australian Energy Market Operator Limited declare that:

- The financial statements, comprising the statement of profit or loss, statement of 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 1 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 2021 and of its performance for the year ended on that date in accordance with the accounting policies described in Note 1 to the financial statements.
- 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:

D-CL

A. Clarke AO, PSM Chairman

9 September 2021

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## **Independent Auditor's Report**

To the Members of Australian Energy Market Operator Limited

Report on the audit of the financial report

Grant Thornton

#### Opinion

We have audited the financial report of Australian Energy Market Operator Limited (the Company), which comprises the statement of financial position as at 30 June 2021, 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, and notes to the financial statements, including a summary of significant accounting policies, and the Directors' declaration.

In our opinion, the accompanying financial report of the Company is in accordance with the Corporations Act 2001, including:

- a giving a true and fair view of the Company's financial position as at 30 June 2021 and of its performance for the year ended on that date: and
- b complying with Australian Accounting Standards and the Corporations Regulations 2001.

#### **Basis for opinion**

We conducted our audit in accordance with Australian Auditing Standards. Our responsibilities under those standards are further described in the Auditor's Responsibilities for the Audit of the Financial Report section of our report. We are independent of the Company in accordance with the Corporations Act 2001 and the ethical requirements of the Accounting Professional and Ethical Standards Board's APES 110 Code of Ethics for Professional Accountants (including Independence Standards) (the Code) that are relevant to our audit of the financial report in Australia. We have also fulfilled our other ethical responsibilities in accordance with the Code.

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

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## Grant Thornton

#### Information other than the financial report and auditor's report thereon

The Directors are responsible for the other information. The other information comprises the information included in the Company's annual report for the year ended 30 June 2021, but does not include the financial report and our auditor's report thereon.

Our opinion on the financial report does not cover the other information and accordingly we do not express any form of assurance conclusion thereon.

In connection with our audit of the financial report, our responsibility is to read the other information and, in doing so, consider whether the other information is materially inconsistent with the financial report or our knowledge obtained in the audit or otherwise appears to be materially misstated.

If, based on the work we have performed, we conclude that there is a material misstatement of this other information, we are required to report that fact. We have nothing to report in this regard.

#### Responsibilities of the Directors 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.

In preparing the financial report, the Directors are responsible for assessing the Company's ability to continue as a going concern, disclosing, as applicable, matters related to going concern and using the going concern basis of accounting unless the Directors either intend to liquidate the Company or to cease operations, or have no realistic alternative but to do so.

#### Auditor's responsibilities for the audit of the financial report

Our objectives are to obtain reasonable assurance about whether the financial report as a whole is free from material misstatement, whether due to fraud or error, and to issue an auditor's report that includes our opinion. Reasonable assurance is a high level of assurance, but is not a guarantee that an audit conducted in accordance with the Australian Auditing Standards will always detect a material misstatement when it exists. Misstatements can arise from fraud or error and are considered material if, individually or in the aggregate, they could reasonably be expected to influence the economic decisions of users taken on the basis of this financial report.

A further description of our responsibilities for the audit of the financial report is located at the Auditing and Assurance Standards Board website at: <u>http://www.auasb.gov.au/auditors\_responsibilities/ar4.pdf</u>. This description forms part of our auditor's report.

Grant Thornton Audit Pty Ltd Chartered Accountants

B A Mackenzie Partner – Audit & Assurance

Melbourne, 9 September 2021



Australian Energy Market Operator Limited

ABN 94 072 010 327

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