

Annual Report



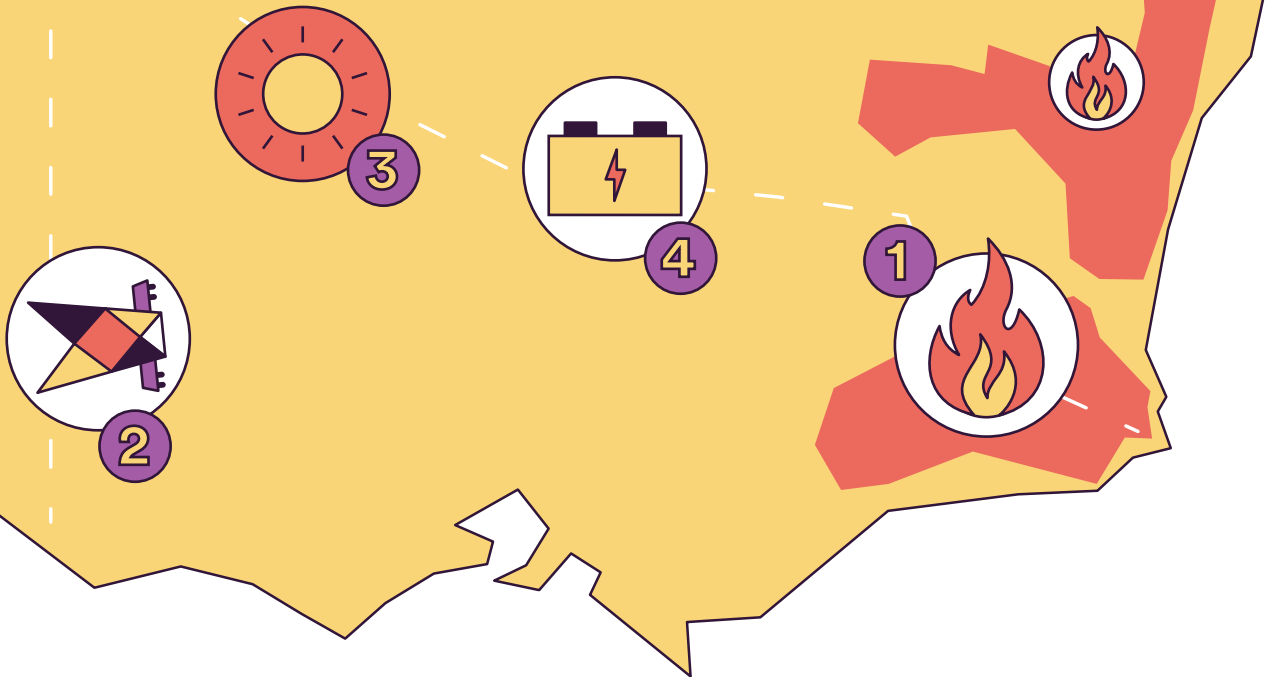
2019–2020





38,055 MW

Record NEM underlying demand reached.



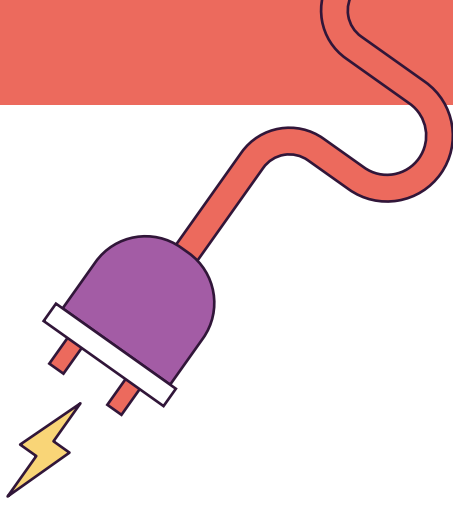
Resilience of the NEM challenged

The inside cover captures how the resilience of the National Electricity Market (NEM) was severely tested on 31 January 2020, one of many challenging days during the 2019-20 summer.

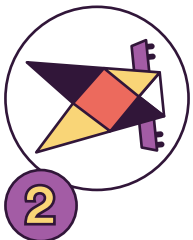
Widespread bushfires threatened critical energy infrastructure, specifically on the Victoria to New South Wales border, while heatwave conditions led to record electricity demand levels requiring reserve activations in both states.

In addition, a severe convective wind downburst felled six transmission towers in south-west Victoria, separating the Mortlake Power Station, the Portland aluminium smelter, and South Australia from the rest of the NEM for a 17-day period.

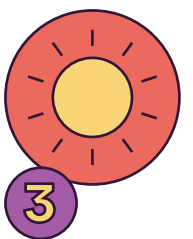
AEMO's people, collaborating with many in the industry, averted the risk of system collapse and devised a unique solution to reconfigure the available transmission network to enable electricity supply to the smelter from the Mortlake Power Station, while maintaining stable power system operation in South Australia.



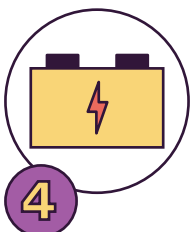
Widespread and prolonged bushfires across multiple states, damaging critical energy infrastructure and power system operations.



SA 'islanded' after cyclonic winds bring down the Heywood interconnection.



Heatwave conditions across SA, VIC, NSW and TAS.



Lack of Reserve (LOR) conditions in NSW and VIC, requiring RERT (reserve) activations in both states.

Contents

| | |
|--|----|
| About AEMO | 04 |
| Chairman's Message | 05 |
| A message from AEMO's Managing Director and CEO | 06 |
| AEMO Executive Leadership Team | 10 |
| Reliable, secure and efficient system operations | 14 |
| Future system design | 16 |
| Consumer engagement and access | 19 |
| Adaptive markets and regulations | 22 |
| Digital and data | 24 |
| People, culture and capabilities | 26 |
| Corporate Governance Report | 28 |
| AEMO Board | 30 |
| Board Committee focus areas | 32 |
| AEMO members | 35 |
| Financial Statements | 36 |



About AEMO

AEMO is the independent system and market operator and planner for the National Energy Market (NEM), the West Australian Wholesale Electricity Market (WEM), wholesale and retail gas markets and supply hubs, and gas systems.

Our role is to pursue the national electricity, gas and energy retail objectives of *“promoting efficient investment in ... operation and use of electricity and natural gas services for the long-term interests of consumers ... with respect to price, quality, safety, reliability and security of supply”*.

For the NEM, these functions are prescribed in the National Electricity Law and National Gas Law; in turn, the *National Electricity Rules and National Gas Rules* provide the regulatory framework, procedures and processes for the electricity and gas markets.

AEMO is a not-for-profit organisation partly owned by federal and state governments, along with our members made up of generation, distribution, retail and resources businesses across Australia.

AEMO operates within a broader energy market governance structure, alongside the Australian Energy Market Commission (AEMC) and the Australian Energy Regulator (AER).

The organisation also works closely with our members and a range of important energy industry stakeholders on issues of future system security and design.

AEMO collaborates with, and undertakes work at the request of, individual jurisdictions, the Council of Australian Governments (COAG) Energy Council, AEMC, AER, and Western Australia’s Public Utilities Office (PUO) and Economic Regulation Authority (ERA). AEMO’s CEO and Managing Director is also a member of the Energy Security Board (ESB).

In addition, we work in close partnership with major national agencies such as the CSIRO, the Australian Renewable Energy Agency (ARENA) and the Bureau of Meteorology (BOM) as well as international counterparts so we continue to discover how best to help assure that the technology transition occurring in the energy sector benefits Australian consumers.

Our Values

Our values, along with our mission and vision are what makes us AEMO and are evidenced through the behaviours that we emulate in our interactions with stakeholders and among ourselves.

Inclusive

Strength through diversity and collaboration

- We encourage and respect a diversity of views
- We value learning and collaboration
- We celebrate everyone’s contribution

Integrity

Courage to share knowledge and be evidence-based

- We share knowledge and value candour
- We stand up for what we know is true
- We deliver on our commitments

Empowered

Accountable and supported to achieve

- We take accountability as individuals and work as a team
- We make the most of our collective expertise
- We actively encourage innovation

Excellence

Passion to learn, grow and perform

- We are persistent in the face of challenge
- We value learning as much as knowledge
- We strive to deliver the highest standard

Chairman's Message

As set out in this Annual Report, AEMO delivered on corporate priorities during FY20 and achieved our primary objectives despite the challenges of a severe summer and the COVID-19 pandemic.

This included meeting all operational energy system security and reliability requirements, our prudential and reporting obligations, and budget and other performance indicators as set out in our 2019-20 Corporate Plan.

Supporting the achievement of these objectives were the ongoing efforts of the Board and management to uplift AEMO's transparency and stakeholder engagement practices. These efforts, and a focus on our costs, will be a continuing priority in FY21. Our major operational challenges in FY21 include connection of new generation to the transmission system and managing daytime minimum demand.

In parallel to overcoming the many operational challenges which threatened the resilience of the power system – captured in detail in this report – AEMO progressed several strategic initiatives in FY20 including:

- System planning, with publication of the Renewable Integration Study Stage 1 and the second Integrated System Plan, outlining an optimal development roadmap for the National Electricity Market and what will be needed to maintain system security with a high share of renewable resources.



- Regulatory and market reforms in both Western Australia and the NEM, working collaboratively with energy market bodies, the ESB, industry participants and consumer representatives to facilitate future system security and support optimum consumer outcomes.
- Digital transformation, replacing legacy information technology systems with modern, cost-efficient digital platforms that reduce long-term operating costs for AEMO and the industry, while enabling consumer value and choice through access to data and new services.

AEMO's non-executive Directors thank the Managing Director and CEO, Ms Audrey Zibelman, and the organisation's executive leaders for their efforts, achievements and management of all AEMO staff, who play a vital role in supporting Australia's energy future.

Audrey has advised the Board that she is resigning in December 2020. 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.

Two long-serving independent non-executive Directors are also retiring in 2020, Ms Sibylle Krieger and Mr Jon Hubbard. Sibylle and Jon have played critical roles in the governance of AEMO, including as Chairs of the People and Remuneration Committee and of the Risk and Audit Committee. I thank them both for their support, advice and exemplary service.

I look forward to another year working with the AEMO Board and management as we help to shape a better energy future for all Australians.

A handwritten signature in black ink, appearing to read 'Drew Clarke'. The signature is fluid and cursive, with a long horizontal stroke at the end.

Drew Clarke

A message from AEMO's Managing Director and CEO

I am likely joining many others around the world when I say that the two phrases I hope we can retire in 2021 are, “this is unprecedented” and “you are on mute”.

This was a year full of challenges for AEMO employees and the industry. Looking back, I am proud of the resiliency, ingenuity, commitment to consumers and performance excellence of AEMO and our colleagues in the industry, whose efforts helped us get through the year so well.

Resiliency

The extreme heat and bushfires that dominated the 2019-20 summer provided first-hand evidence of the importance of collaboration, training and investment in our energy and information systems to ensure they manage successfully through unparalleled climate challenges.

The preparatory work and summer-long collaboration of AEMO employees with industry and governments were critical and effective in ensuring that we were able to keep the system performing despite record high temperatures and demand levels, widespread and prolonged bushfires, significant smoke and dust, and violent storm activity.

Immediately following these operational and connection challenges, in February the COVID-19 pandemic further tested the resilience of AEMO, our people and all parties across Australia's energy ecosystem.

AEMO acted quickly to protect the health of our people and support them working remotely under enforced restrictions across Australia. We also led an industry response to the crisis, activating emergency protocols, updating demand forecasting methodologies and coordinating generator outage and maintenance.

I'm pleased to report that no employee has been infected at our workplace, and that the industry has worked together to successfully maintain operational resilience through these unprecedented times.

Ingenuity

The transition from hundreds of centralised generation units to millions of decentralised inverter-based generators is challenging the physics of the traditional power system, along with incumbent markets and regulations.

In the last 12 months, AEMO and the network service providers (NSPs) registered and commissioned 27 projects with a combined 3 gigawatts of new generation capacity. Many of these project developers have chosen to connect in remote and congested parts of the grid. This is exposing engineering challenges for managing network security that have never been experienced before in Australia, and in many respects, globally.

AEMO has responded by initiating a collaborative industry process to develop an improved assessment approach and identify new innovative solutions.

This includes developing and implementing generator control systems to meet new system performance requirements, declaring and filling system strength gaps, and developing a world-first cloud-based PSCAD power system model for new generators to complete their system strength assessments.

In order to better accommodate the change to a more distributed energy system, the NEM celebrated the launch of the Virtual Power Plant (VPP) Demonstrations program in August 2019 and the Distributed Energy Resources (DER) Register in March 2020.



These initiatives provide visibility on the growing volumes and location of residential generation and storage devices to better manage the electricity grid, along with testing the capability of DER to deliver network services, such as frequency services traditionally performed by large-scale, conventional electricity generators.

In the WEM, our work with Western Power, Synergy and the WA Government to support safe integration of DER and enable consumer market participation included bringing across our experience with the NEM to develop a DER Register and implementing a DER Marketplace Demonstration Pilot.

Commitment to consumers

The transition to a more distributed system further enhances the role of competition, as consumer-owned resources can play a critical role in keeping the grid secure and cost-effective.

To support this change, AEMO progressed our digital strategy to improve access and useability of consumer data. During 2019, AEMO developed a Consumer Data Platform (CDP), enabling third parties to access actual electricity usage data to offer consumer-focused services and associated benefits, such as comparing energy deals and accessing new products and services.

This year, both the Victorian Government and the AER re-launched their energy comparison websites with AEMO's CDP. In the first 10 months of operation, the AEMO solution enabled 250,000 users to access services based on their consumption data, allowing them to switch providers and save an estimated \$200 on average on their electricity bill.

Performance excellence

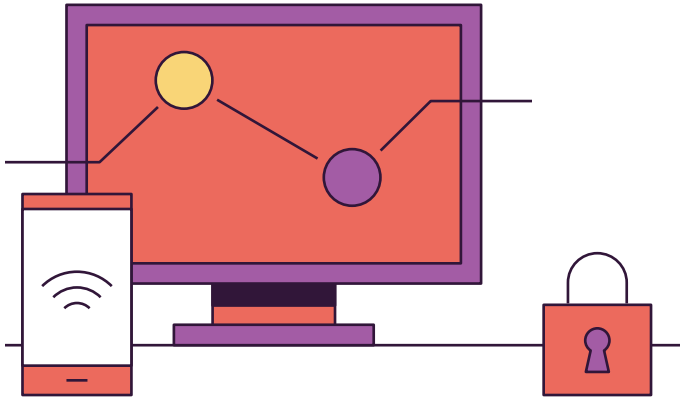
Despite the numerous challenges during the year, I am proud to report that AEMO employees remained focused on ensuring that Australian's energy systems continued to meet the needs of both current and future energy consumers.

We began the year with an ambitious agenda, outlined in our Corporate Plan, targeting 31 specific actions to assure the continued security and reliability of our energy systems.



I am proud of the fact that AEMO employees delivered successfully on 98 per cent of these goals, both meeting our annual performance targets and completing actions that are essential for our changing power systems. These efforts are detailed in the Annual Report, but include the following key highlights.





Resource adequacy

After nearly two years of scenario analysis, modelling and stakeholder consultation, AEMO published our second ISP in July 2020.

The 2020 ISP outlines the optimal development pathway for the NEM that will both maximise consumer benefits and deliver \$11 billion in net market benefits to 2040.

With 63 per cent of coal plants retiring in the next 20 years, the ISP recommends strategic investments in transmission infrastructure and renewable energy zones (REZs). This investment, when coupled with low-cost firming resources, will be the most cost-effective way to add generation capacity and balance variable resources across the NEM.

AEMO's Renewable Integration Study (RIS) furthers the work of the ISP and evaluates the likely challenges of maintaining power system security while operating the power system with very high instantaneous penetrations of wind and solar generation.

Our Stage 1 RIS report in March 2020 recommends actions and reforms needed to keep operating the NEM securely, now and as the power system transitions. AEMO looks forward to working with stakeholders to refine and progress the recommended actions that together with the ISP will ensure a resilient NEM power system into the future.

AEMO also published the Gas Statement of Opportunities (GSOO), Victorian Gas Planning Report (VGPR) Update and an Electricity Statement of Opportunities (ESOO) for the NEM and for the WEM, assessing the 10-year supply-demand balance outlook.

These reports provide technical and market data that informs the decision-making processes of market participants, new investors, and jurisdictional bodies to assess future risks, opportunities, and development needs in the energy industry.

Regulatory and market reform

If we are to overcome the technical issues in the RIS and realise the benefits of timely and efficient investment in the ISP, we will need regulatory and market reforms that complement the transition underway across the NEM.

AEMO collaborated with the AEMC, the AER and the ESB on the ESB's Post 2025 energy market design project. These reforms seek to build markets that help integrate new sources of generation and storage, keep the system in a secure operating state and facilitate consumer participation in energy markets.

AEMO also worked closely with the AEMC and the AER to implement progress rule changes, including Wholesale Demand Response (WDR), Five-Minute Settlement (5MS) and Global Settlement (GS), and customer switching. These regulation and market reforms will better coordinate the energy transition and enable consumers to enjoy the benefits of the move to zero-cost fuel sources and technological advances.

In Western Australia's WEM, AEMO continued to prepare for and implement the WA Government's constrained access and associated market reforms via the WEM Reform Program. We supported the development of Information Papers that set out the basis for future market and regulatory design, and provided analysis and recommendations for IT system design and initiating the first tranche of implementation projects.

Cyber security

AEMO continued to invest in cyber and data control to safeguard AEMO's and Australia's energy systems from cyber threats.

We also continued to contribute to industry working groups to improve cyber readiness and resilience, working in conjunction with market participants, the Australian Cyber Security Centre, and the Critical Infrastructure Centre to lead the development and implementation of a framework to improve the grid's cyber security resilience. This was reinforced by assurance testing and national cyber resilience exercises.

Our talent

We continued to invest in the talent and capabilities at AEMO to navigate Australia through the rapid energy sector transition. We do this through our graduate and learning programs, and by building a diverse and inclusive culture that attracts, develops and retains the best people and enables our employees to contribute their unique talents.

AEMO was thrilled to announce high calibre appointments to the executive leadership team, including Michael Gatt as Chief Operations Officer, Geraldine Leslie as Chief People Officer and Julie Williams as Chief Financial Officer.

Looking forward

In December 2020, I will leave AEMO after nearly four years as Managing Director and CEO. I resigned my position to take on a new role at X, an Alphabet Company to focus on the intersection of energy and advanced analytics to support our changing power system.

The decision to leave AEMO and return to the United States was very difficult. Australia is lucky to have people at AEMO who, every moment of every day, focus on making sure Australians' need for reliable, secure and affordable energy is being met.

I felt extremely fortunate to have had this opportunity to work with my colleagues at AEMO, the industry, the ESB and other market bodies and government colleagues as we together navigated the best way forward for these critical industries. I am also fortunate to have had the guidance of the AEMO Board of Directors, who provided outstanding guidance and support during these amazing times.

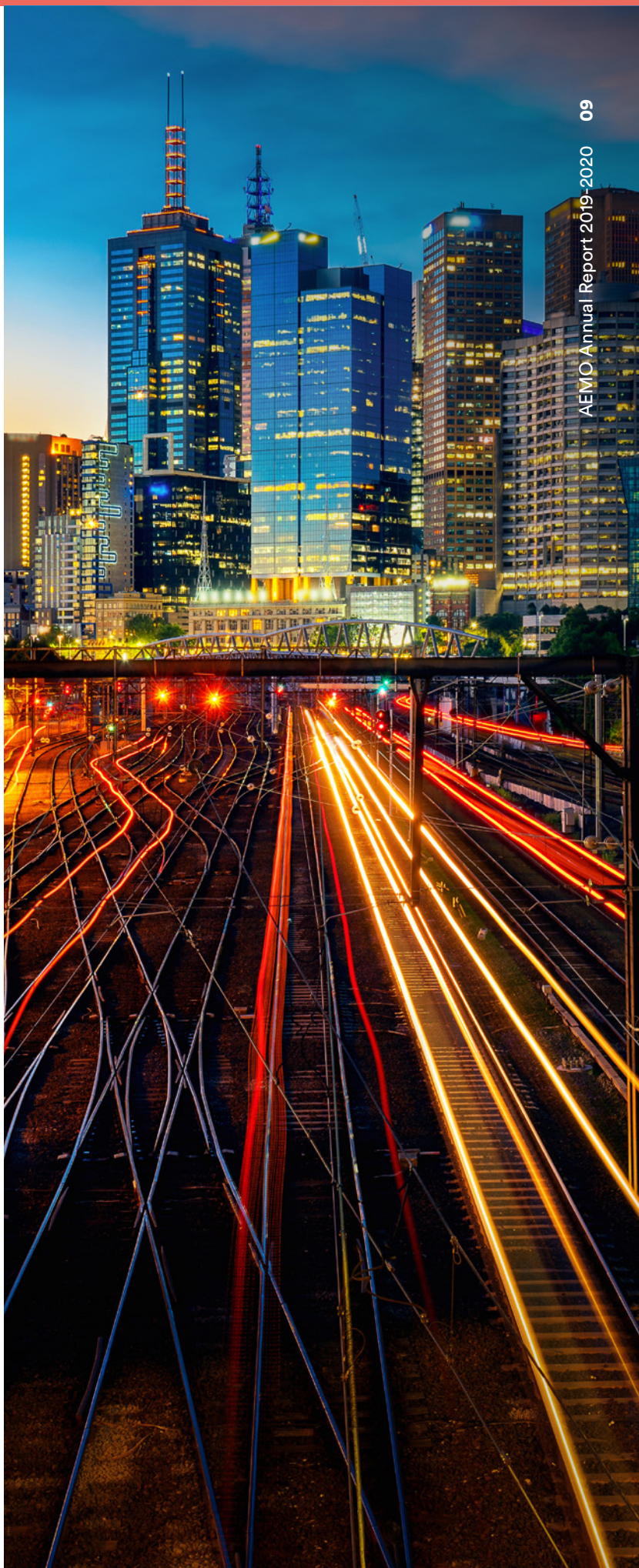


I want to take this opportunity to thank everyone I have encountered for your support and friendship during my time at AEMO. I know the organisation will continue to be exemplary in all that it does.

Lastly, because it is the energy industry and Australia is now my second home, I will not say goodbye, but will look forward to watching and supporting AEMO and all our members as we continue to lead the world in a successful industry transformation.

A handwritten signature in black ink, reading 'Audrey Zibelman'.

Audrey Zibelman



AEMO Executive Leadership Team

Audrey Zibelman



Chief Executive Officer and Managing Director

Audrey oversees all of AEMO's strategic, operations and administrative functions and responsibilities.

Audrey 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, executive roles with Xcel Energy, one of the United States largest integrated gas and electricity utilities and served on a number of energy industry advisory groups and Boards.

In addition to her role as CEO of AEMO, Audrey also serves on the CSIRO Energy Advisory Committee, the Melbourne Energy Institute's Advisory Board, and as a Director of the Melbourne Recital Centre and the Advanced Energy Economy Institute.

Chief External Affairs Officer

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.

Tony Chappel



Michael Gatt



Chief Operations Officer

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.

Chief Strategy and Markets Officer

Peter is responsible for overseeing and evolving the financial operation of, and transactions across Australia's gas, electricity and retail markets including market design, market analytics, settlements, prudential management and metering. He is also responsible for AEMO's regulatory affairs and corporate strategy functions.

Peter joined AEMO in 2008 and has held a variety of roles, including Group Manager of AEMO's Markets and Business Strategy divisions.

Peter has worked extensively in the energy industry for a decade before joining AEMO, with extensive energy trading and strategy experience at several major Australian energy companies as well as international commodity trading houses.

Peter Geers



Brett Hausler



Chief Governance Officer and 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



Chief People Officer

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.

Chief Digital and Business Transformation Officer

Joe is responsible for AEMO's Technology, People, Procurement, Facilities and Property functions.

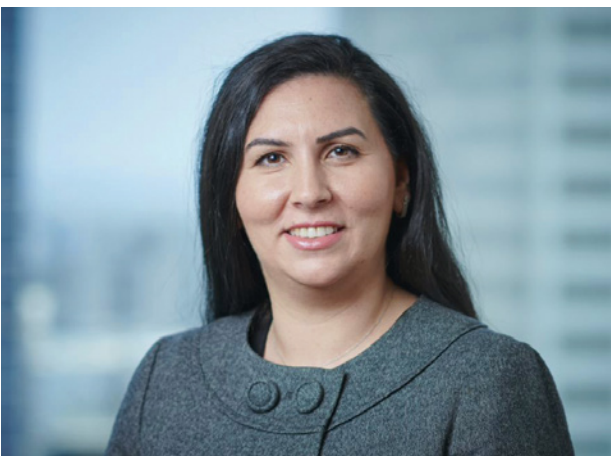
Joe joined AEMO in March 2018, with more than 20 years of experience in executive IT management and executive roles at Emirates Airlines, Cathay Pacific Airlines, China Light & Power, AusPower, Yallourn Energy and Village Roadshow.

Joe holds a bachelor's degree in Economics and Commerce from University of Melbourne, a graduate diploma in Marketing from Monash University and Strategic Application of Information Technology from Stanford University Graduate School of Business.

Joe Locandro



Violette Mouchaileh



Executive General Manager, Emerging Markets and Services

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 Australian Functions

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.

Chief Financial Officer

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.

Julie Williams



Alex Wonhas



Chief System Design and Engineering Officer

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. Prior to working at Aurecon, Alex was the executive director responsible for CSIRO's research and development in environment, energy and resources.

Reliable, secure and efficient system operations

As an operationally focused organisation, AEMO is adapting and finding solutions to efficiently address the immediate and long-term technological challenges confronting the energy industry.

Each year AEMO undertakes significant planning and real-time actions with industry to support the operation of the electricity and gas networks through the summer and winter peaks respectively.

This requires managing power system frequency, voltage and system strength, gas system pressures and supply adequacy, and forecasting supply and demand balances.

Summer resilience

The resilience of the NEM faced heightened and unprecedented operational challenges in the 2019-20 summer, as the real-time operations of Australia's physical gas and electricity infrastructure were threatened by extreme conditions.

The NEM experienced its second warmest summer on record, setting a new underlining demand record of 38,055 MW, while prolonged bushfires in multiple states threatened or damaged critical energy infrastructure.

The extreme heat degraded not only the electricity output of the aging generation fleet, but also, for the first time, wind generation. Further, bushfires and storm events contributed to six separation events, compared to zero in the previous summer, cutting supply availability between states and across the NEM.

The commitment, knowledge and ingenuity of AEMO's staff – working closely with generators and NSPs – kept the power systems operating while minimising the disruption caused by compounding network events.

This response required a record number of AEMO directions, the majority issued to maintain system strength during summer, along with the activation of the Reliability and Emergency Reserve Trader (RERT) mechanism on four days in Victoria and New South Wales.



AEMO will continue to develop the capabilities of both our people and our systems and apply the lessons learned from the summer, to efficiently manage the evolving dynamic real-time requirements of integrated power and gas systems.

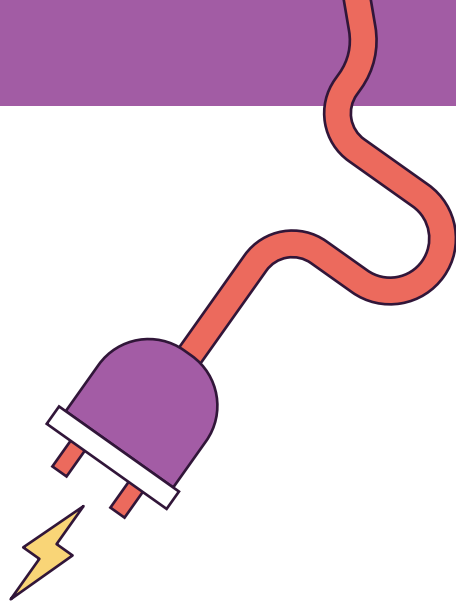
COVID-19 response

In early 2020, the arrival of the COVID-19 pandemic further tested the resilience of AEMO and Australia's energy ecosystem.

The Australian Consumer and Competition Commission (ACCC) authorised AEMO and gas and electricity market participants to cooperate on measures to secure Australia's energy supplies during the COVID-19 pandemic.

This included AEMO establishing business continuity processes and working with the government and industry to protect staff. It also included leading the energy industry response through the activation of emergency protocols, updated demand forecasting methodologies and generator outage and maintenance co-ordination.

Operationally, the economic impact of COVID-19 contributed to an estimated 2.1 per cent reduction in total electricity demand in the NEM for the second quarter of 2020. By sector, there were large reductions in commercial demand (around 10-20 per cent) and large increases in residential demand, with industrial demand mostly flat.



The gas markets demonstrated a similar trend of reduced commercial and industrial demand, offset by increased residential demand; this was particularly apparent in Victoria. Weekday gas demand on cold wet days was up to 5 per cent higher than usual, requiring AEMO to schedule “peak shaving” gas from the Dandenong liquefied natural gas (LNG) storage facility and profile gas supplied from the Longford Gas Plant more often to maintain gas supplies to customers.

Enhancing weather and energy demand forecasting

AEMO is collaborating with the BoM and the CSIRO on the Electricity Sector Climate Information (ESCI) Project.

Funded by the Australian Government, the project is designed to improve the reliability and resilience of the NEM to risks from climate change and extreme weather, with improved accuracy of weather and energy demand forecasting.

This year, the project contributed to resilience and climate change analysis in the 2020 ISP, extreme weather case studies in the 2020 ESOO, and decision-making frameworks for the 2022 ISP that will build power system resilience.

Gas record demand

On Friday 9 August 2019, Victoria experienced a new gas demand record for the Declared Transmission System (1,308 terajoules (TJ), comprising 1,199 TJ for residential, commercial and industrial gas demand (system demand) and 109 TJ of gas-powered generation (GPG). This breaks the previous record of 1,282 TJ set on 17 July 2007, which comprised 1,257 TJ of system demand and 25 TJ of GPG.

South Australia separates from the NEM

On 31 January 2020, six transmission towers in south-west Victoria collapsed in a severe convective wind downburst, separating the Mortlake Power Station, the Portland aluminium smelter, and South Australia from the rest of the NEM.

At that time, AEMO was faced with high temperatures across south-east Australia and multiple generation outages, and electricity supply scarcity in both New South Wales and Victoria, eventually requiring reserve activations.

With South Australia “islanded” from the NEM, AEMO’s operational team led the immediate response with transmission network businesses and generators to stabilise the power system, averting the risk of system collapse or physical damage to critical infrastructure.

Collective efforts from multiple divisions within AEMO swiftly devised a solution to reconfigure the available transmission network to enable electricity supply to the smelter from the Mortlake Power Station, while maintaining stable power system operation in South Australia.

For the next 17 days, while transmission owner and operator AusNet Services installed temporary solutions allowing the re-energisation of the 500 kilovolt (kV) lines, AEMO took operational actions to minimise security and reliability risk to South Australia’s power system with no synchronous connection to the NEM.

These system security actions include operating increased levels of GPG, limiting or constraining the output of some wind and solar generators in South Australia and in south-west Victoria, and directing South Australia’s grid-scale batteries to operate in a mode that would stabilise the “islanded” power system.

AEMO’s pre-summer training for operations staff, involving courses and exercises using a NEM Simulator, proved effective in mitigating the power system impacts of the summer heat, the fires and the separation events.



Future system design

AEMO envisions and develops Australia's energy system in the interests of consumers in an environment of rapid, world-leading technological change.

Integrated energy roadmap

AEMO consulted with consumers and their representative bodies, governments and industry on high-quality blueprints for Australia's future electricity and gas system.

Our planning and forecasting analysis and publications capture the rapid transformation of the energy landscape, including across generation, transportation, storage, consumption, and sector coupling with gas and transport.

These trends are further supported by the continual increase in new connections, which our team facilitated while ensuring power system security and stability as Australia experiences the world's fastest energy transition.

2020 Integrated System Plan (ISP)

AEMO published the final 2020 ISP in July 2020, the culmination of 18 months consultation that included stakeholder feedback on the draft 2020 ISP released in December 2019.

The ISP is a 20-year roadmap for the NEM, determining the most efficient ways to meet power system needs through extensive coal-generation retirements, in the long-term interests of consumers.

The ISP modelling confirms a transition from a power system dominated by centralised coal-fired generation to a highly diverse portfolio of behind-the-meter and grid-scale renewable energy resources. These must be supported by dispatchable firming resources and enhanced grid and service capabilities to ensure the power system remains physically secure.

The optimal development path comprises transmission augmentation projects complemented with REZs. REZs are clusters of large-scale renewable energy which can be developed to promote economies of scale in high-quality areas and capture geographic and technological diversity in renewable resources.

The ISP demonstrates how we can manage the transition out of coal to a future industry structure that provides \$11 billion in net benefits to energy consumers

AEMO also progressed integrated resource planning simulations, market modelling and report writing for Western Australia's equivalent of the ISP, the Whole of System Plan (WoSP).

Integration of renewable energy resources

AEMO is working with consumers, industry participants and market bodies to help facilitate the secure and efficient integration of renewable energy.

In April 2020, AEMO published stage 1 of the RIS, which evaluated the technical challenges associated with operating the NEM at higher penetrations of wind and solar resources (including large-scale and distributed PV).

For the period up to 2025, the study confirms that at times, as much as 75 per cent of electricity could be provided by wind and solar resources.

However, to ensure that consumers' access to electricity remains secure and reliable, a range of physical power system properties must be available and effectively managed (variability and uncertainty, frequency, and system strength). Managing such a transformed power system will require new analytical tools, much better data and enhanced data analysis capability, machine learning and artificial intelligence, and near real-time simulation capability.



To help manage system strength and other requirements, AEMO identified 15 actions to address key regional and NEM-wide challenges out to 2025, as well as highlighting the importance of transmission investment identified in the ISP, new distributed solar PV standards to maximise contributions, and the design and deployment of the ESB Post 2025 reform program.

Next steps include AEMO delivering on the actions, including the frequency control work plan published in September 2020, and working with industry to develop an integrated roadmap of priority security activities by June 2021.

Victorian network planning

As the planner for the shared transmission network in Victoria, AEMO is supporting the grid investments required for Victoria’s changing energy mix through several Regulatory Investment Tests for Transmission (RIT-Ts). This includes potential transmission network and non-network projects to ensure a reliable, secure and affordable energy supply.

Grid connections

The growth in new generation continued in the NEM with more than 3 GW of projects registered and commissioned in 2019-20, equating to 5.4 per cent of total NEM generation capacity. Wind and solar accounted for 94 per cent of this new capacity.



The rapid scale and pace of inverter-based renewable generator connections, often in remote and congested regions of the power system, has resulted in globally unique technical issues, impacting connection assessments, grid performance and operational stability.

Alongside identifying transmission augmentation projects and renewable energy zones in the ISP, AEMO has stepped up collaboration with developers, governments and industry to develop and apply technical solutions, while contributing to essential regulatory and market reforms.

In recognition of mounting complexities with new connections, AEMO commenced establishing an account management framework and function. This includes introducing dedicated case managers to guide individual projects through the connection process and liaise with NSPs.

The emergence of significant congestion and constraints in parts of the network again highlighted the need for market and regulatory reform to ensure transmission projects are able to be delivered in a timely and cost-effective fashion, ensuring consumers can access the new resources being built out.

| RIT-T Project | Benefit | Status |
|---|---|---|
| Victoria to NSW Interconnector Upgrade | Alleviate power transfer capacity limitations from Victoria to NSW, improving utilisation of renewable generation in the southern states, and allowing improved supply sharing between regions | August 2019: AEMO/TransGrid published second of three RIT-T reports (PADR). February 2020: AEMO/TransGrid published final RIT-T report (PACR). June 2020: Awarded AusNet Services the contract to deliver Victorian components of the preferred option. |
| Victoria to NSW Interconnector West | Strengthen bi-directional interconnection between Victoria and NSW to maintain system security and reliability in Victoria following expected coal-fired plant retirement, providing more efficient connection and dispatch of new renewable generation and enabling more efficient sharing of resources between NEM regions. | December 2019: Published first of three RIT-T reports (PSCR). The second RIT-T report is expected in Q1 2021. |
| Victorian Reactive Power Support | Deliver additional reactive support in Victoria to alleviate voltage control issues at times of low demand. | December 2019: Published third and final RIT-T report (PACR). September 2020: Awarded AusNet Services the contract to deliver preferred option. |
| Western Victoria Renewable Integration | Reduce network congestion and facilitate connection of additional generation in Western Victoria. | July 2019: Published third and final RIT-T report (PACR). December 2019: Awarded AusNet Services the contract to deliver the Western Victorian Transmission Network Project. |

Gas and electricity statement of opportunities

AEMO produced a Gas Statement of Opportunities (GSOO) for eastern and south-eastern Australia and a GSOO for Western Australia, and an Electricity Statement of Opportunities (ESOO) for the NEM and an ESOO for the WEM, assessing the 10-year supply-demand balance outlook. AEMO also published a five-year outlook for Victoria in a Victorian Gas Planning Report (VGPR) Update.



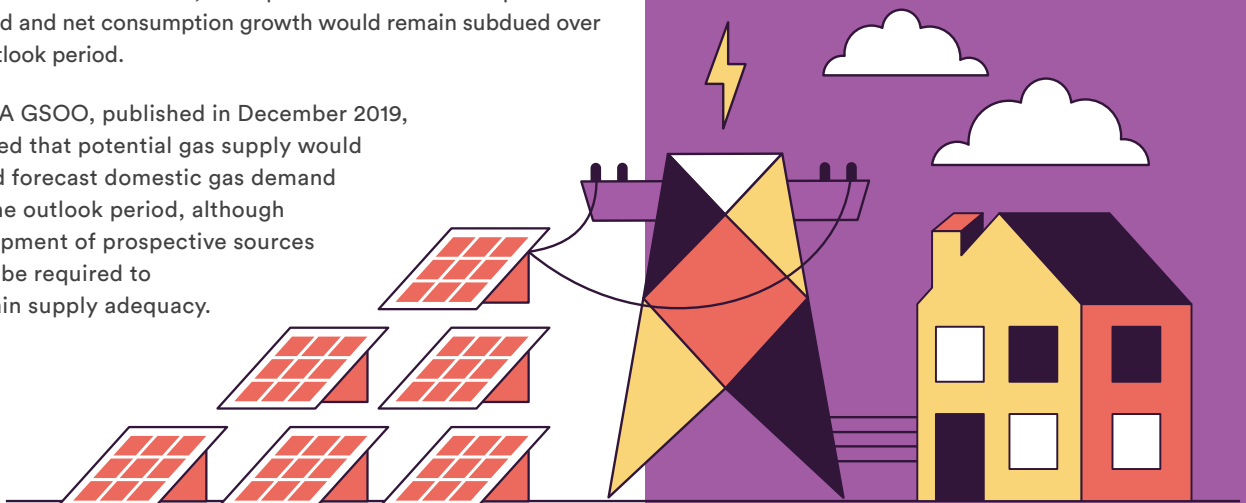
These reports provide technical and market data that informs the decision-making processes of market participants, new investors, and jurisdictional bodies to assess future risks, opportunities, and development needs in the energy industry.

The GSOO for eastern and south-eastern Australia and VGPR Update, both released in March 2020, identified a projected shortfall of gas supply on peak winter days in the southern states from 2024, absent new resources being developed or existing pipeline capacity being expanded.

The NEM ESOO, released in August 2019, forecast tight electricity supply-demand conditions in several states for the upcoming 2019-20 summer and a greater risks of load shedding due to uncontrollable, but increasingly likely, high impact events. Further, the report highlighted the need for investment in dispatchable resources and transmission.

The WA ESOO, released in June 2020, illustrated how the South West integrated system (SWIS) power system is transforming towards a more decentralised, democratised, and digitalised system, as increasing numbers of households and businesses invest in rooftop solar PV, storage systems, and energy efficiency improvements. As a result, the report forecast that both peak demand and net consumption growth would remain subdued over the outlook period.

The WA GSOO, published in December 2019, reported that potential gas supply would exceed forecast domestic gas demand over the outlook period, although development of prospective sources would be required to maintain supply adequacy.



Collaborating to unlock the West Murray Zone

In 2019, five solar farms produced voltage oscillations following a transmission fault, exceeding regulated power system limits, which required AEMO to apply generation constraints to protect the stability and security of the grid.

These generators are located in north-west Victoria and south-west NSW, in an area known as the West Murray Zone, a remote and electrically weak part of the NEM that has attracted significant investment in grid-scale solar and wind generation.

The nature, extent and causes of these issues only became apparent with the advanced and detailed modelling capability that is now essential for technical assessments in weak areas of the grid.

AEMO, in close collaboration with the original equipment manufacturer, developers, NSPs and industry groups, developed a novel solution to this Australian-first issue. Once implemented, the solution allowed constraints to be lifted.

Similar solutions are now implemented in other weak parts of the NEM, such as Northern Queensland, to prevent constraints and maximise output of renewable generators by fully utilising the capability of modern inverters.

Consumer engagement and access

AEMO is empowering consumers with access to energy-related data, via innovative solutions that improve decision-making and choice and facilitate a pathway for consumer-owned resources to participate in Australia's energy markets.

Data and data access

Consumer Data Right

In August 2019, the Australian Government legislated the introduction of Consumer Data Right (CDR), enabling consumers to share their data from an existing service provider to an accredited third party, initially in the banking and energy sectors.

In July 2020, the Federal Treasurer made AEMO responsible for building and operating a CDR gateway in the energy sector, and for being a data holder for crucial usage and connection point data. The gateway will provide a high level of user functionality and is a cost-effective and secure mechanism for providing accredited third parties with consumer data where a consumer has provided consent.

Over the last 12 months, AEMO has worked with the ACCC, Data61 and industry to progress the conceptual design for the implementation of the CDR in energy, focusing on understanding the needs of potential users of CDR, usability for data recipients, and cost-effectiveness. We look forward to working with the industry on the next phases of CDR.

Customer switching

Reducing the time for individuals to change electricity retailers, from months to a same day or next day transfer, will make it easier for customers to move to better electricity offers and access new services.

AEMO has worked with the AEMC on simplifying and improving the customer transfer process in the NEM, following a request by the COAG Energy Council. We undertook extensive consultation with interested parties on procedure and system changes to accelerate a change of electricity retailer, then published a regulation change proposal in December 2019. This proposal, approved by

the AEMC in March 2020, will enable retailers to offer same or next day switching, or agree a date of switch with the customer in the future or the recent past. Transition to the new framework is scheduled for implementation in October 2021.

Integrating DER

Australia's energy systems and markets have historically been the domain of industry-scale participants, but individual consumers are increasingly becoming active participants in the future power system through DER.



AEMO is committed to the efficient and sustainable integration of DER across the NEM and WEM. This will enable DER to safely, reliably and securely connect to and work with the grid and provide DER owners the ability to participate in the electricity markets.

AEMO, through our DER Program, has pursued key foundational reforms and undertaken relevant trials in partnership with the industry, that will deliver significant benefits:

- Improve the productivity and resilience of DER devices and the ability for that capability to be accessed.
- Enable better management of local network issues, enhanced system security, and the creation of a two-way system for the benefit of energy users.
- Ensure consumers extract full value from these technological advances.

DER Register

Following months of consultation with distribution NSPs, equipment installers, third-party application developers, consumer representatives and other groups on design, data guidelines and collection processes, AEMO launched Australia's first DER Register in March 2020, and in June 2020 published our first quarterly report on the number of installed capacity and DER devices installed across the NEM.

The register is a database of DER information captured at installation which:

- Provides visibility on the growing volumes and geographical distribution of small-scale energy generation and storage devices to better manage the electricity grid.
- Ensures these devices deliver expected consumer value, today and into the future.
- Helps enable effective delivery of the CDR reforms and DER access to markets.

Under the WA Government's DER Roadmap, AEMO is also working with Western Power to extend the DER Register to the WEM in 2021, to collect and make available data on DER installed across the SWIS.

DER standards

DER data, interoperability and communication standards aim to mitigate unintentional issues for real-time grid operations (such as residential solar PV disconnections following grid voltage disturbances), and to enable active management of DER. These capabilities are key in moving towards a two-sided system and marketplace, in which individuals are rewarded for trading grid services from their DER devices.

Over the last 12 months, AEMO, through the Standards Australia and Distributed Energy Integration Program (DEIP) processes, has worked with industry to develop proposals for changes to the DER standards. Some of these changes are currently being considered by Standards Australia, with decisions expected in early 2021.

AEMO and the ESB delivered a rule change proposal in May 2020 and have consulted on minimum DER technical standards for implementation in October 2020. AEMO has also worked on broader governance changes for DER standards and will continue to provide the support needed to help progress these through the AEMC rule change processes.

Wholesale Demand Response (WDR)

AEMO has worked closely with the AEMC and industry on the framework for the WDR mechanism. In November 2019, following publication of the first draft determination, AEMO wrote to the AEMC to propose a collaboration to design and deliver a lower-cost, shorter lead time mechanism through strategic changes to scope that would maintain many of the AEMC's policy objectives, including minimising impacts to retailers' systems and business models.

Through a second draft determination process, the outcome was a significantly reduced implementation cost and a delivery date prior to summer 2020-21 (a year earlier than the previous model).

WDR reform continues to attract very strong support from consumer advocate bodies, and gives end-use consumers opportunities to actively engage and leverage their ability to manage energy demand during times of supply scarcity.

VPP demonstrations

In August 2019, AEMO launched our VPP Demonstrations program to test the operational capabilities of DER, such as rooftop PV systems and residential batteries, operating as 'virtual power plants' to deliver scalable energy and network services traditionally performed by large-scale, conventional electricity generators. In the initial year, two participants participated in the trial, with a number expected to join over 2020.



The demonstrations have shown that consumer DER, when aggregated and coordinated in a VPP, can contribute to maintaining real-time power system reliability, security and affordability, while also rewarding households participating. For example, VPPs can respond to disturbances on the network, including charging and discharging batteries as market prices change and in response to frequency deviations to maintain stable NEM frequency levels.

The program has been extended to June 2021, subject to obtaining additional participants.

To further understand the experience of residents participating in VPPs, AEMO, in partnership with ARENA, is undertaking a customer insights survey to existing VPP Demonstrations customers. Insights are due for sharing in early 2021.

WEM DER Roadmap

Following publication of the WA DER Roadmap in April 2020, AEMO began work with Western Power, Synergy and the WA Government on four key workstreams.

These seek to address emerging risks and support the evolution of the SWIS and WEM to safely integrate DER and enable consumer participation in energy and related markets.

Specifically, this work includes expanding the NEM DER Register for the WEM, uplifting tools and capabilities to forecast, plan and operate a secure and reliable high-DER SWIS, and implementing a DER Marketplace Demonstration Pilot to run trials that test and design systems to support DER orchestration.

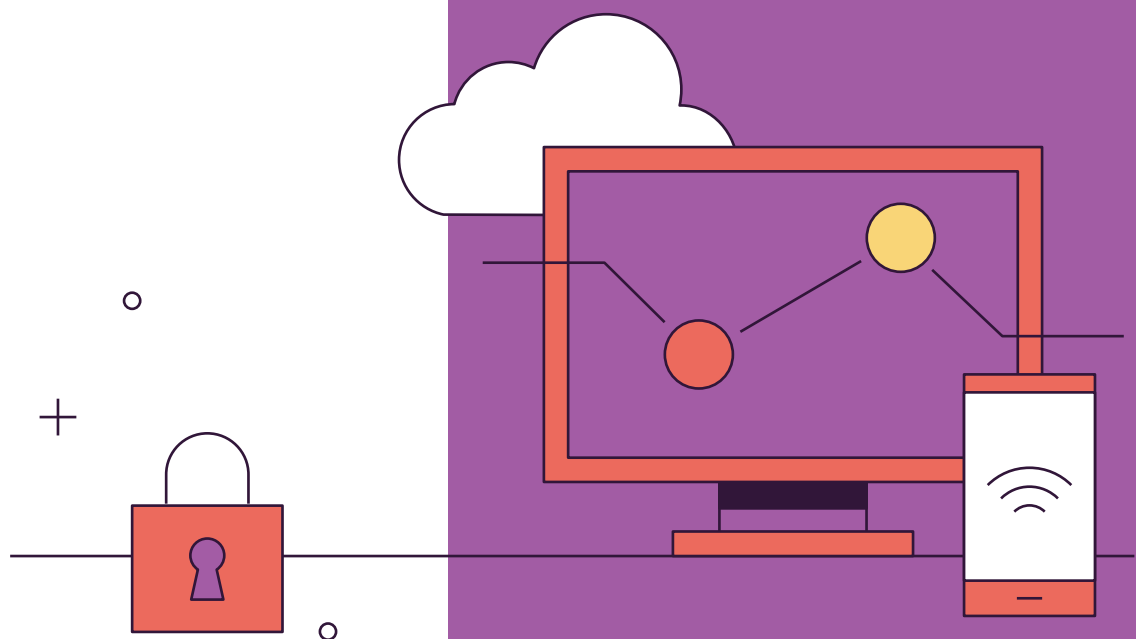
Consumer Data Platform (CDP)

During 2019, AEMO developed the CDP, enabling third parties to access actual electricity usage data to offer consumer-focused services and associated benefits, such as comparing energy deals and accessing new products and services.

This year, both the Victorian Government (Victorian Energy Compare) and the AER (Energy Made Easy) re-launched their energy comparison websites with the AEMO CDP. For the first time, users could access retail energy comparisons based on actual electricity usage data to quickly compare the cheapest electricity offers.

The AEMO CDP is proving to be an important, live, successful example of how to balance the benefits of providing access to consumer energy data with the need to have appropriate controls in place to ensure the safety and security of such access.

In its first 10 months of operation, the AEMO solution delivered direct benefits to many consumers. It enabled 250,000 users to access services based on their consumption data, allowing them in seconds to understand how they might save on their electricity bill. Of these, 27,000 users chose to switch, to save an average \$200.



Adaptive markets and regulations

AEMO applies its operational experience, technical and engineering expertise to contribute to the design and implementation of market reforms for Australia's gas and electricity wholesale and retail markets, aligned with developing technologies that can produce positive outcomes for consumers.

AEMO has worked with market participants and consumer representatives, as well as policy and rulemaking bodies, to identify required and beneficial changes to current regulatory and market design for the near term and future.

ESB reliability reform and Post 2025 market design

AEMO supported the ESB's review of the reliability standard, which found there was economic benefit in moving to a higher standard. The COAG Energy Council adopted the ESB's recommendation to implement an interim reliability measure which governs the level of reserves AEMO can procure if a reliability gap is identified in the NEM ES00.

The Energy Ministers tasked the ESB to develop a market design for the NEM that delivers secure and reliable power at least cost to consumers, and accommodates the changes underway and expected in the future.

As an ESB member, AEMO, along with the AER and AEMC, worked with the ESB during 2019-20 to identify improved immediate, intermediate and long-term rule, regulatory and procurement pathways as part of the Post 2025 energy market design project.

The Post 2025 program will identify reforms aimed at modernising the NEM's regulatory, rule and operating frameworks, to better coordinate the energy transition and enable consumers to enjoy the benefits of the move to zero-cost fuel sources and technological advances.

AEMO's position as system operator and national transmission planner gives us unique experiences and insights into today's operating environment and the wave of changes coming over the near and longer term. The ESB is using our ISP forecasts, and our detailed power system assessments in the RIS, to help identify the future challenges and opportunities provided by the changing electricity system infrastructure, market and financial environments.

The Post 2025 project is considering seven market design initiatives, with AEMO leading two of these, Essential System Services and Scheduling and Ahead Mechanisms.

In these initiatives, AEMO worked with the ESB, market bodies and stakeholder technical working groups to identify:

- How to value the services the power system needs and develop options and pathways for procuring them in future.
- How best to achieve the efficient coordination of resources, ensuring greater visibility and certainty so the delivery of electricity continues to be reliable and resilient, and costs to consumers are minimised, as the system features more complex and variable patterns of supply and demand.
- At the same time, the AEMC has been progressing a number of rule change proposals that are highly interconnected with the ESB reforms, and AEMO has provided knowledge, data and expertise on system requirements related to security, resilience, and reliability.

Five-minute and global settlements

AEMO continues to progress the implementation of 5MS and GS, key market reforms endorsed by the AEMC in November 2017 and December 2018 respectively.

The 5MS rule will reduce the wholesale electricity spot market settlement period from 30 minutes to five minutes. This change aims to provide a better price signal for investment in faster response technologies (e.g. batteries, gas peaking generation) and to enable more efficient bidding, operational decisions and investments, aligned to smaller interval dispatch and financial settlement periods.

The GS rule will change the way AEMO recovers the cost of unaccounted-for energy (UFE) by moving from settlements by difference (where the local retailer in a market area is financially responsible for UFE) to global settlements, where UFE is assigned to all retailers in a market area on a pro-rata basis.

AEMO's role is to define the required changes to market procedures, design, test, and implement changes to its market systems, and coordinate, assist and prepare the industry for the transition.

In July 2020, due to COVID-19, the AEMC announced the deferred commencement of 5MS (to October 2021) and GS (until May 2022). Despite the delay, AEMO will deploy the required systems changes in March and April 2021, which will allow market participants that choose to progress according to the original timeline to begin bidding and submitting meter reads at five-minute intervals if they choose to. During this "transition period", the market will continue to be settled at 30-minute intervals.



AEMO is currently preparing for the industry readiness phase with market participants through the 5MS Working Groups. The industry readiness phase includes periods of industry testing and market trials prior to the switch to 5MS scheduled for 1 October 2021.

Wholesale demand response

The AEMC is introducing a new market participant category – the wholesale demand response provider – that will be responsible for coordinating and offering demand response into the NEM from October 2021.

This new participant will have its demand response settled in the market at the prevailing spot price. This approach introduces an avenue for consumer participation in a two-sided electricity market, and provides opportunities to maximise the effective utilisation of infrastructure and potentially defer the need for additional investment as this new market evolves.

Electricity and gas retail market procedural reforms

As part of the procedural process, each year AEMO works with the key technical working groups in the NEM to determine strategic priorities and potential procedural and transactional improvements. AEMO also undertakes a similar process with the retail gas market in Western Australia under conditions set out in the Western Australia Gas Market Agreement (WAGMA).

Over the past 12 months, 13 gas retail market consultations were completed, including developing a uniform approach to registering gas and electricity life support customers. In the

electricity retail market, two complex consultations were completed, including AEMO completing the procedural consultation to provide the transactions and processes to enable market participants to effect the customer switching rule change requirements.

Similarly, for the business-to-business (B2B) changes, AEMO successfully consulted on updates to three versions of the B2B procedures on behalf of the Information Exchange Committee.

WEM Reform

AEMO continued to fulfil its obligations under the WEM Rules to prepare for and implement the WA Government's constrained access and associated market reforms via the WEM Reform Program.

Key deliverables for AEMO during the year included supporting the Energy Transformation Implementation Unit to develop 23 Taskforce Information Papers that set out the basis for the future market and regulatory design.

AEMO also completed analysis and recommendations for IT system design and initiating the first tranche of implementation projects.

These reforms, captured under the Foundational Regulatory Framework component of the WA Government's Energy Transformation Strategy, will enable security constrained economic dispatch in the WEM by October 2022.

| 2019-20 Summary Annual Trades and Volumes | |
|---|-------------|
| NEM | |
| Energy purchased | 182,108 GWh |
| Purchase value | \$13,026 M |
| Declared Wholesale Gas Market (DWGM) | |
| Wholesale gas withdrawal | 220.0 PJ |
| Wholesale gas purchased | \$1,740 M |
| Short Term Trading Market (STTM) | |
| Wholesale gas withdrawal | 146.9 PJ |
| Wholesale gas purchased | \$924 M |
| Gas Supply Hub (GSH) | |
| Wholesale gas withdrawal | 25.2 PJ |
| Wholesale gas purchased | \$158 M |
| WEM | |
| Total energy consumed | 17,665 GWh |
| Total value | \$1,701 M |

Digital and data

AEMO is investing in the digital systems and data-enabled capabilities to unlock new levels of efficiency and cost savings, while providing greater value for employees, consumers and energy-sector participants.

During the year, AEMO progressed initiatives in our transformational digital strategy, the digital platforms and services required to meet emerging market and stakeholder expectations in a data-driven, technology-enabled energy sector.

Data

The emergence of digital technologies and the explosion of data is having a profound influence on Australia's energy system and markets, critical to the industry going forward.

With this growth, AEMO is developing new data and analytics capabilities to accommodate the increasing need for speed, capacity, flexibility, data management and cyber protection.

Each day, AEMO collects, curates and uses 2 million demand and weather forecasts to operate the NEM, extracting data from more than 100 wind and solar farms, 30,000 rooftop PV systems, 517 weather stations, and other sources.



As Australia's energy ecosystem continues its transition, including a greater dependence on weather-based generation, our data requirements are expanding exponentially. AEMO's data capabilities need to better facilitate and enable the adoption of changes in systems, markets and policy.

AEMO continues to streamline and modernise internal data management platforms to further improve data visibility from weeks or months to hours or days, improving quality and accuracy of forecasting and analytics.

These capabilities are supporting a number of digital initiatives outlined in our Corporate Plan, including our VPP Demonstrations program, Consumer Data Platform, along with consumer switching, WDR and 5MS for implementation in late 2021.

5MS alone will create huge volumes of new data to collect, store, present and manage; our current 90 million meter reads per year is likely to jump to 1.8 trillion.

These initiatives are creating new value for consumers and market participants, through greater choice and competition, all enabled through efficient digital systems and access to energy-related data.

Systems and platforms

AEMO is investing in a modern digital platform that unlocks new value in the market for consumers and facilitates innovation for the benefit of members and industry participants.

It will offer participants improved speed of market access, better data and insights, and will reduce their costs and investment needs, while also lowering barriers to entry to enhance competition.

Cyber security

A core element of our digital and data systems pillar is the ability to safeguard the cyber security of AEMO's energy systems.

Our cyber uplift program is delivering extensive capabilities to detect and respond to cyber-attacks, while continually enhancing the protection of our people, data and systems.

AEMO's identity governance capability has advanced considerably, with both identity lifecycle management and privileged access management embedded into our ongoing security operations. Critical cyber control investments have hardened many of our services over the past year and extensive foundations have been laid for a range of new capabilities in 2021.

AEMO continued to play a leadership role to improve cyber readiness and resilience across the energy sector. This included establishing the Australian Energy Sector Cyber Security Framework, providing market participants with a clear snapshot of their cyber maturity allowing for focused, prioritised investment, and a directed cyber uplift program.

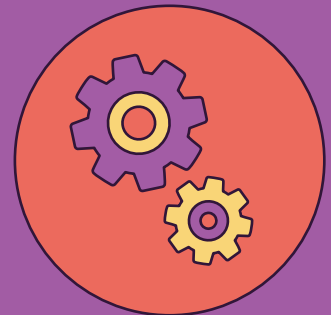
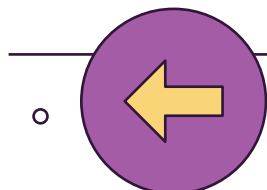
In addition, AEMO partnered with the Australian Cyber Security Centre (ACSC) to plan and run GridEx V, a two-day national cyber exercise involving electricity organisations and government agencies from every jurisdiction (560 personnel from 32 organisations) with the aim of strengthening participants' response to a significant cyber incident affecting Australia's electricity sector.

1,400

more visitors to AEMO's redesigned website each day

4,000

views to AEMO's website per day



AEMO website redevelopment

In January, AEMO launched our redesigned website with the goal of further enabling easy and simple access to vital power systems and energy markets information.

The website is based on robust and scalable automated technology to deal with significant peaks during power system and operational events to improve the flow of information to consumers and industry.

The refreshed website is already proving more accessible – new users to the site are up 77 per cent, with around 1,400 more visitors each day and a 10 per cent increase in visitors accessing the website via smart phones. Critically, NEM Data Dashboards views have doubled to around 4,000 views per day, and page views are up 31 per cent.

31%

increase in page views



People, culture and capabilities

AEMO is continuing to accelerate the capability of our highly skilled workforce to stay aligned to the future needs of Australia's energy system, while fostering a flexible and adaptive workplace culture.

We continue to pursue our commitment to a working environment that attracts and retains the best people, and to developing new ways of working that enable our people to collaborate, learn and deliver value to consumers and the industry.

Supporting our workforce through COVID-19

In response to the COVID-19 pandemic, AEMO enacted our response plan to protect the health and wellbeing of employees and contractors, while ensuring AEMO carried out our critical industry role in maintaining the safe and secure supply of energy for all Australians.

With declining infection rates, AEMO co-ordinated, staged employee returns to the workplace, in states where this was allowed, and in accordance with relevant government restrictions and safety legislation and guidelines.

Capabilities for the future

AEMO strives to attract and develop the best and brightest people – highly regarded in the industry for their technical excellence, innovative thinking and collaborative approach – to be part of our critical role in a rapidly transforming energy landscape.

Through a values-based culture, learning and leadership programs, opportunities for international peer engagement and flexible work arrangements, staff are supported to be effective and engaged.

AEMO is also committed to providing equal opportunity in all aspects of employment, including respect for diversity and a fair, safe and supportive environment that is free from bullying, harassment and discrimination.

Graduate program

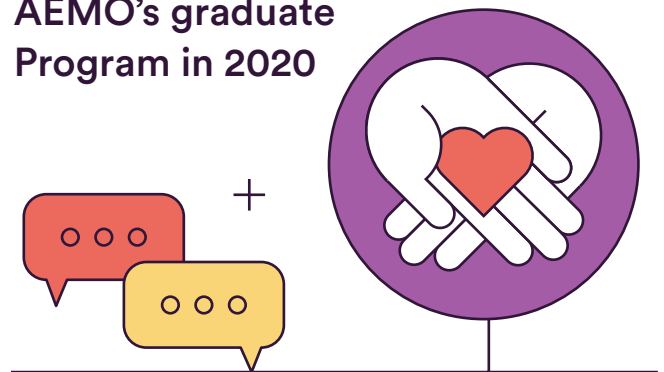
AEMO welcomed nine new graduates to the Graduate Program in 2020, including four women, bring the total number of graduates currently participating in the three-year program to 24.

Successful applicants have completed or nearly completed degrees in commerce, econometrics, economics, engineering (electrical – power systems, chemical – gas operations), information systems, IT, mathematics, science or statistical modelling.

The program is a key talent pipeline for AEMO and the energy industry, and provides graduates with broad professional and personal development through four rotations.

9

**graduates in
AEMO's graduate
Program in 2020**



Learning and leadership development

In July 2019, AEMO launched the Learning Academy, a new online mobile-enabled education platform. Participants include AEMO employees and external stakeholders, with a growing number of international enrolments from 29 different countries.

During the year, AEMO's new Learning Academy platform facilitated more than 10,000 enrolments across 220 instructor-led and eLearning courses, providing participants with in-depth information about Australia's energy systems and AEMO policies and procedures. Importantly, the Learning Academy was also used to transition our workforce to remote working and manage other health and technical impacts due to the COVID-19 pandemic.

We kicked off our senior leadership program as well as running several Manager Fundamentals sessions, to continue our investment in our leaders by helping them in their role to support their people and ensuring that we lead a high-performing culture that delivers value for consumers.

Zema energy studies scholarship

AEMO established the Zema Energy Studies Scholarship in partnership with Monash University, with the support of the COAG Energy Council, to honour the memory of AEMO's founding CEO, energy reform leader and Monash alumnus Matt Zema.

Designed to support the next generation of leaders to meet Australia's energy sector challenges, the inaugural scholarship was awarded to Lakshan Bernard from the Monash University Faculty of Engineering.

Mr Bernard's doctoral project will combine electrical engineering with advanced analytical and forecasting tools to solve significant challenges in future power networks and integrating renewable energy resources.

Diversity and inclusion

AEMO values the diversity of our employees and stakeholders and we are committed to supporting and encouraging this diversity, fostering an inclusive workplace where all our employees feel safe, respected, and supported to succeed.

To deliver on AEMO's vision, mission and values, we are focused on building a diverse and inclusive culture that attracts, develops and retains the best people and enables our employees to contribute their individual uniqueness.

Over the last 12 months, we have worked hard as an organisation to move the dial on three key focus areas that our people told us mattered most to them: gender, flexibility and cultural inclusion. Actions included:

- Launching our Women@AEMO working group, which is starting a pilot program to mentor high-potential female employees.
- Identifying and addressing any gender pay gaps.
- Encouraging flexible working through information campaigns, support and manager training.
- Rolling out unconscious bias training.
- Hosting organisation-wide events to celebrate the diversity of our people and raise awareness of issues and communities that are important to us, including International Women's Day, NAIDOC Week, reconciliation week, IDAHOBIT, Wear it Purple Day, Flexible Working Day and Harmony Day.

Pleasingly, an internal engagement survey found that 83% of our people agree that we build diverse teams and that people from all backgrounds have equal opportunities to succeed at AEMO.

Culture uplift through our new mission, vision and values

During the year, AEMO launched a new mission and vision to deliver value to the industry and consumers in this time of unprecedented industry challenge and change.

Mission: Design and operate a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

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

In the past year, AEMO also reviewed and refreshed our corporate values: to be excellent, have integrity, be empowered and work inclusively for the betterment of the industry. Our values, along with our mission and vision, are what make us AEMO, and are fundamental to how we make decisions and meet the challenges that lay ahead.

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 a robust corporate governance framework is in place, and has used a range of sources to continue to refine its approach to corporate governance, including 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 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 and cost-effectiveness of AEMO's operations and systems.

As at 30 June 2020, AEMO had 10 Board members including an independent Chairman, the Managing Director and Chief Executive Officer and eight non-executive Directors. Collectively, the Board possesses the skills and experience prescribed in AEMO's Constitution and necessary to face the challenges from an industry undergoing transformation.

The selection process for a new Chair or Directors is overseen by the Board Nomination Committee with the 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) approve the Appointment Selection Panel's report on its recommendations before they are submitted for approval by the National Cabinet Reform Committee on Energy.

In relation to Director reappointments, the Chairman reviews all Directors whose terms are due to expire and who are eligible for reappointment and then compiles a list of Directors whom the Chairman recommends for reappointment.

AEMO's members approve the submission of the list to the National Cabinet Reform Committee on Energy for approval. Under the Constitution, Directors are eligible for reappointment of a term of up to four years.

Director induction and continuing education

Prior to commencement on the Board, each Director undergoes a full induction program. Each Director 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 induction program includes briefing sessions with executives and senior managers on key aspects of AEMO's operations and site visits with the program tailored to meet the needs of the new Director.

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 a review of individual Directors.
- Self-administered, administered by the Chair, or administered by an independent expert.
- Focused internally on the Directors or involve the wider body of corporate stakeholders including, but not limited to, AEMO members.

During the Financial Year 2019-20, the Board conducted a Board Performance Review that covered:

- An assessment of Board performance;
- An assessment of Chairman and Board Committee performance; and
- Management's assessment of Board performance.

The Board agreed actions to improve the Board's strategic focus, agree priorities for Director and Executive succession, and improve stakeholder engagement reporting and meeting planning.

During the Financial Year 2020-21, the Board conducted an internally facilitated review.

Director independence

The Constitution requires the Chair and a majority of Directors to be independent, as defined in the Constitution. The independent Directors during 2019-20 were Drew Clarke, Peter Davis, Jon Hubbard, Sibylle Krieger, Anne Nolan and John Pittard.

Responsibilities

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

- Overseeing the company's activities to achieve the objectives set out in the Constitution.
- Setting the Company's goals and strategy.
- Determining the financial, operational, human, technological and administrative resources required by the Company to meet its objectives and goals.
- Establishing and maintaining adequate and effective reporting lines and procedures that enable all material matters and information to be identified and reported to the Board.

- Ensuring clear delegation, authorisation and accountability frameworks are in place.
- Approving the Company's annual budget and monitoring compliance with financial reporting obligations.
- Appointing the Chief Executive Officer and monitoring their performance.
- Establishing and approving the charters of the Board Committees.
- Establishing effective controls and procedures to enable risks to AEMO to be identified, assessed, and managed.
- Monitoring compliance with ethical, legislative, and regulatory requirements including occupational health and safety, equal opportunity, environmental, corporate governance, and reporting obligations.

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



Audrey Zibelmann

Managing Director
and Chief Executive
Officer

**Andrew (Drew)
Clarke AO PSM**

Non-Executive
Independent
Chairman

John Pittard

Non-Executive
Independent
Director

Mr Nino Ficca

Non-Executive
Non-Independent
Director

Sibylle Krieger

Non-Executive
Independent
Director



Dr Peter Davis

Non-Executive
Independent
Director

Betsy Donaghey

Non-Executive
Non-Independent
Director

Anne Nolan

Non-Executive
Independent
Director

Jon Hubbard

Non-Executive
Independent
Director

Tony Concannon

Non-Independent
Non-Executive
Director

Board Committee

focus areas

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 risk, audit, corporate governance, and compliance matters.

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.
- 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, risk management strategy and reporting, AEMO's strategic and key operational risks, and the system of identifying, assessing, monitoring, and managing material risk throughout AEMO.

- 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 2019-20.

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 non-monetary 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 2019-20.

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 2019-20.

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.

During 2019-20, the Committee met twice to consider the appointment of two new directors.

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 Risk Management Standard ISO 31000:2018.

During 2019-20, further improvements were made to the processes and systems that support risk management, including improved risk reporting to the Board, the Risk and Audit Committee, and the Executive Leadership Team, as well as refinements to the risk appetite and tolerance statements and risk matrix to support the work being undertaken to enhance the risk culture across AEMO.

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

- IT security
- Site security
- Regulatory compliance
- Financial compliance
- Financial information management
- Privacy
- Competition and consumer law
- Workplace health safety and environment
- Fraud and corruption prevention
- 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.

The external auditor is 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 and enhancing 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 shared understanding of emerging problems and challenges, 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 collaboration, 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 Australia's interconnected energy systems. AEMO strives to be a constructive facilitator, bringing stakeholders together so that all viewpoints are heard and considered, building consensus on the right way forward where possible. In doing so, AEMO is focused on meeting the National Electricity Objective and National Gas Objective.

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, opportunities and market changes, 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 1 November 2017, 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 pool is due for consideration by members at AEMO's 2020 AGM.

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.

AEMO members

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

- Advanced Energy Resources
- AETV Pty Ltd
- AER Retail Pty Ltd
- A-Star Electricity Ptd 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) Pty Ltd
- 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
- Ausgrid
- Bluewaters Power 1 Pty Ltd
- Bluewaters Power 2 Pty Ltd
- Central Ranges Pipeline Pty Ltd
- CitiPower Pty Ltd
- Clean Energy Transfer Fund Investments Pty Ltd as trustee for Clean Energy Transfer Fund Trust
- 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 (ABN 16 779 340 889) (Directlink (No. 1) Pty Limited ABN 85 085 123 468, Directlink (No. 2) Pty Limited ABN 87 095 439 222, and Directlink (No. 3) Pty Limited ABN 86 095 449 817 trading as Directlink Joint Venture)
- Dodo Power & Gas Pty Ltd
- East Australian Pipeline Pty Ltd
- EDL Group Operations Pty Ltd
- ElectrAg Pty Ltd
- ElectraNet Pty Ltd
- Endeavour Energy
- Energex Limited
- EnergyAustralia Gas Storage Pty Ltd
- EnergyAustralia Pty Ltd
- EnergyAustralia Yallourn Pty Ltd
- Energy Pacific (Vic) Pty Ltd
- EnerNOC Pty Ltd
- Enova Energy Pty Ltd
- Epic Energy South Australia Pty Ltd
- ERM Power Ltd
- ERM Power Retail Pty Ltd
- ESCO Pacific Pty Ltd
- Essential Energy
- Flinders Operating Services Pty Ltd
- FPC 30 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
- Jemena Ltd
- Kiamal Solar Farm Pty Ltd
- LMS Energy Pty Ltd
- Marubeni Australia Power Services Pty Ltd
- Millmerran Energy Trader Pty Ltd
- Murraylink Transmission Company Pty Ltd
- MTA Energy Pty Ltd
- Newcrest Mining Limited
- NewGen Power Kwinana Pty Ltd
- New Gullen Range Wind Farm Pty Ltd
- N. P. Power Pty Ltd
- OneSteel Manufacturing Pty Ltd
- Onsite Energy Solutions Pty Ltd
- Origin Energy Electricity Ltd
- Origin Energy Eraring
- Overland Sun Farming Company Pty Ltd
- Oxley Solar Development Pty Ltd
- Pacific Hydro Challicum Hills Pty Ltd
- Pacific Hydro Clements Gap Pty Ltd
- Pacific Hydro Portland Wind Farm Pty Ltd
- Pacific Hydro Retail Pty Ltd
- Perth Energy
- Phoenix Energy Australia Pty Ltd
- Pooled Energy Pty Ltd
- Powercor Australia Pty Ltd
- Queensland Electricity Transmission Corporation Limited (trading as Powerlink Queensland)
- Reach Solar Energy Management Co Pty Ltd
- RE Oakey Pty Ltd
- Santos Ltd
- Simcoa Operations Pty Ltd
- SIMEC ZEN Energy Retail Pty Ltd
- Solar Reserve Australia II Pty Ltd
- South East Australia Gas Pty Ltd
- Snowtown Wind Farm Pty Ltd
- Snowtown Wind Farm Stage 2 Pty Ltd
- Snowy Hydro Pty Ltd
- SPI Electricity Pty Ltd
- Strategic Gas Market Trading Pty Ltd
- Tasmanian Gas Pipeline Pty Ltd
- TasNetworks Pty Ltd
- Vellocet Clean Energy Pty Ltd
- TransGrid
- Yarranlea Solar Pty Ltd
- Vicpower Trading (State Electricity Commission of Victoria trading as Vicpower Trading)
- Water Corporation
- Wesfarmers Kleenheat Gas Pty Ltd
- Western Downs Solar Project Pty Ltd
- Westpac Banking Corporation
- WINconnect Pty Ltd

Financial Statements

| | | | |
|---|-----------|--|-----------|
| Directors' Report | 37 | 16. Remuneration of auditors | 72 |
| Auditor's independence declaration | 43 | 17. Contingent liabilities | 72 |
| Statement of profit or loss and other comprehensive income | 45 | 18. Commitments | 72 |
| Statement of financial position | 46 | 19. Accumulated surplus/(deficit) | 73 |
| Statement of changes in equity | 47 | 20. Events occurring after balance sheet date | 74 |
| Statement of cash flows | 48 | 21. Reconciliation of surplus/(deficit) to net cash inflow/(outflow) from operating activities | 74 |
| Notes to the financial statements | 49 | 22. Related party transactions | 74 |
| 1. Introduction | 49 | Directors' Declaration | 75 |
| 2. Revenue | 52 | Independent Auditor's Report | 76 |
| 3. Expenses | 54 | | |
| 4. Cash and cash equivalents | 55 | | |
| 5. Trade and other receivables | 55 | | |
| 6. Property, plant and equipment | 56 | | |
| 7. Intangibles | 58 | | |
| 8. Right-of-use assets and lease liabilities | 60 | | |
| 9. Trade and other payables | 61 | | |
| 10. Borrowings | 62 | | |
| 11. Provisions | 64 | | |
| 12. Other liabilities | 64 | | |
| 13. Defined benefit superannuation plan | 65 | | |
| 14. Reserves | 69 | | |
| 15. Key management personnel disclosures | 71 | | |

In summary

The aim of the text in the "In summary" boxes is to explain more complex sections in plain English.



Directors' Report

Your directors present their report on the Australian Energy Market Operator Limited (AEMO) for the year ended 30 June 2020.

Principal activities

AEMO's principal activities over the 2019–20 year comprised the 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 a more integrated, secure, and cost effective national energy supply.

As well as carrying out its core functions, AEMO delivered a range of important initiatives in 2019-20 to support the security and reliability of the transforming power system in the NEM and Western Australia.

During 2019-20 AEMO:

- Led the energy industry response to COVID-19 through the activation of emergency protocols, updated demand forecasting methodologies and generator outage and maintenance co-ordination.
- Managed the NEM and WEM through summer including managing the impact of severe weather and fires, six separation events and five Reliability and Emergency Reserve Trader (RERT) activations.
- Developed and implemented an emergency operational solution to maintain secure supply to support the Portland smelter using the Mortlake Power Station in an electrical island with South Australia, following storm damage to transmission towers in western Victoria.
- Supported the South Australian government, network business and market participants to resolve power system security issues in respect of increasing rooftop PV levels.
- Published the Draft 2020 Integrated System Plan (ISP) and continued extensive stakeholder consultation on the Final 2020 ISP, which was released 30 July 2020.
- Progressed committed 2018 ISP group 1 and group 2 actionable projects through the regulatory framework.
- Published Stage 1 of the Renewable Integration Study.

- Supported the Energy Security Board (ESB) work program across seven different work streams to facilitate the energy transition including two sided markets, ahead markets, security services, thermal exit and DER integration. Further participation in 25 ESB, AEMC and AER reviews.
- Developed and deployed a Voluntary Book Build mechanism to support the Retailer Reliability Obligation (RRO).
- Commenced implementation for 5 Minute Settlement & Global Settlement to achieve industry Go Live.
- Completed Western Australia's DER roadmap and commenced its implementation.
- Supported the ACCC and Data 61 on Consumer Data Right design and delivered a customer data platform and supporting price comparator sites.
- Continued to invest in AEMO cyber security posture to provide reliable and secure systems for markets and grids.
- Mobilised more than 40 projects and completed 20 to deliver a modern digital platform that will provide a frictionless, secure and scalable digital experience, unlocking new value in the market for consumers and facilitating innovation for the benefit of participants, consumers, third parties, and AEMO.
- Established and launched the Zema Energy Studies Scholarship in partnership with Monash University to honour the memory of AEMO's founding Chief Executive Officer and support the next generation of leaders to meet Australia's energy sector challenges.

AEMO's work in 2019-20 to build greater energy knowledge in the sector and the broader community included:

- Released a revamped website and new Energy Live mobile app to enhance the experience for industry and consumers.
- Launched AEMO Learning Academy with 155 online courses delivered.
- Welcomed nine new graduates to the AEMO Graduate Program in 2020, including four females within the cohort, bringing the total number of graduates participating in the 3-year program to 24.

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

- Delivering significant employee well-being and mental health initiatives and flexible work practices to support our 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.

Directors

The following persons were Directors for the full financial year ended 30 June 2020 and up to the date of this report:

| Name, qualifications, experience and special responsibilities | Current Board appointments |
|--|---|
| <p>Mr Andrew (Drew) Clarke, AO, PSM <i>MSc, BAppSc, FTSE, MAICD</i></p> <p>Non-executive Independent Chairman Member Technical and Regulatory Committee</p> <p>Mr Clarke has served in energy policy leadership roles since 2003, including a term as Secretary of the Commonwealth Department of Resources and Energy.</p> <p>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.</p> | <p>Director, NBN Co;</p> <p>Director, CSIRO</p> |
| <p>Mr Anthony Concannon <i>BSc (Hons), FAICD, FIMecLE, AMIET</i></p> <p>Non-executive Non-independent Director Member of People and Remuneration and, Technical and Regulatory Committees</p> <p>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.</p> <p>He was an Executive Director of International Power plc (2004-11), 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.</p> <p>In early 2015, he started up a large-scale solar PV business, Reach Solar energy, where he is Managing Director and CEO. Mr Concannon was appointed to the Tasmanian Government Energy Security Taskforce following the drought and undersea cable failure in late 2015.</p> | <p>Director, Reach Solar Energy Management Co Pty Ltd</p> |
| <p>Dr. Peter Davis <i>BSc (Hons), BEd, MBA, PhD, FAICD, FIEAust</i></p> <p>Non-executive Independent Director Chair of Technical and Regulatory Committee and Member of People and Remuneration Committee. Chair of Zema Scholarship Committee.</p> <p>Dr Davis has worked in the retail, distribution and generation sectors for more than 25 years, and has extensive knowledge of the energy industry.</p> <p>He has deep experience in leading integrated utility businesses, covering generation, distribution, electricity and gas retailing, and telecommunications in both regulated and competitive markets.</p> <p>He was CEO of Aurora Energy Pty Ltd from 2004-14.</p> | <p>Director, Clean Energy Regulator</p> |
| <p>Ms Elizabeth Donaghey <i>BSc, MSor</i></p> <p>Non-executive Non-independent Director Member of Risk and Audit and, Technical and Regulatory Committees.</p> <p>Ms Donaghey has more than 30 years' energy and resources sector experience.</p> <p>During her corporate career, Ms Donaghey held senior executive positions in strategy, marketing and business development at Energy Australia, Woodside Petroleum and BHP Petroleum.</p> | <p>Director, Cooper Energy Limited (ASX: COE)</p> |

| Name, qualifications, experience and special responsibilities | Current Board appointments |
|---|--|
| <p>Mr Nino Ficca <i>BEng (Hons), Advanced Management Program Harvard USA, GradDip Mgt, MAICD, FIEAust</i></p> <p>Non-executive Independent Director Member of Risk and Audit and, Technical and Regulatory Committees</p> <p>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.</p> <p>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.</p> <p>He served as Managing Director of AusNet Services Limited and its predecessors, SP AusNet and SPI Powernet, from 2001-19.</p> <p>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.</p> <p>Mr Ficca is the immediate past Chairman of the Energy Networks Association, and a past Chair of CIGRE Australia.</p> | <p>Director, Transurban Queensland;</p> <p>Director, Green Energy Supply Chain Australia;</p> <p>CEO & Managing Director, AusNet Services Limited until 31 October 2019.</p> <p>Director of various subsidiaries until 11 December 2019.</p> |
| <p>Mr Jon Hubbard <i>BCom, CA, GAICD</i></p> <p>Non-executive Independent Director Chair of Risk and Audit Committee, and Member of Technical and Regulatory Committee.</p> <p>Mr Hubbard has extensive experience in the energy, utility and resource sectors, as well as a strong accounting and finance background.</p> <p>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.</p> | <p>Director, Infocus Wealth Management Limited (and related companies);</p> <p>Director, Ruffey Downs Pty Ltd;</p> <p>Director, Tempellier Pty Ltd;</p> <p>Director, Tavas Holdings Limited</p> |
| <p>Ms Sibylle Krieger <i>LLB (Hons), LLM, MBA</i> <i>FAICD</i></p> <p>Non-executive Independent Director Chair of People and Remuneration Committee and, Member of Technical and Regulatory Committee.</p> <p>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.</p> <p>She is a former partner of two major commercial law firms and a former member of the NSW Independent Pricing and Regulatory Tribunal (IPART). Prior to joining the AEMO Board, Ms Krieger was also a member of the Dispute Resolution Panel for the National Electricity Market and the gas markets.</p> <p>In 2016/17 Ms Krieger was a member of a three person Energy Security Taskforce reviewing energy shortages caused by the combination of drought affecting hydro generation and the prolonged failure of the Basslink undersea interconnector. All recommendations of the taskforce were accepted by government.</p> <p>Ms Krieger has extensive experience as a Board Chair, Non-Executive Director and Committee Chair in both listed and unlisted companies.</p> | <p>Chair of Xenith IP Group Limited (ASX: XIP) until 15 August 2019;</p> <p>Director, MyState Limited (ASX: MYS);</p> <p>Director, Vesale Pty Ltd;</p> <p>Director, Openpay Group Limited (ASX: OPY).</p> |

| Name, qualifications, experience and special responsibilities | Current Board appointments |
|---|--|
| <p>Ms Anne Nolan <i>B. Ec., M.Econ, Adjunct Professor with University of Western Australia</i> MAICD</p> <p>Non-executive Independent Director Member of Risk and Audit and, Technical and Regulatory Committees.</p> <p>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.</p> <p>She worked closely with large resource companies such as Chevron, Shell, BHP, Rio Tinto and Woodside in large capital investment projects in Western Australia. Prior to this she served as the Deputy Director-General, Cabinet and Policy Division in the Department of Premier and Cabinet.</p> <p>She was the inaugural Chief Executive of the Independent Market Operator for the WA Wholesale Electricity Market (WEM).</p> <p>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.</p> | <p>Director, Fremantle Port Authority;</p> <p>Director, Western Australian Symphony Orchestra,</p> <p>Director, Western Australian Coastal Shipping Commission</p> |
| <p>Mr John Pittard <i>BSc</i></p> <p>Non-executive Independent Director Member of People and Remuneration and, Technical and Regulatory Committees.</p> <p>Mr Pittard has led digital and technology transformations across several industry sectors in Australia, including media, telecommunications and resources.</p> <p>He has previously held senior executive roles with some of Australia's largest corporations, including NewsCorp Australia, Telstra, Pioneer International and Shell Australia, and has been a Director of a number of digital companies, including REA Group and CareerOne Limited.</p> | <p>Chair, RXP Services Ltd;</p> <p>Director, Barnardos Australia</p> |
| <p>Ms Audrey Zibelman <i>BA, J.D.</i></p> <p>Managing Director and Chief Executive Officer Member, Technical and Regulatory Committee.</p> <p>Audrey oversees all of AEMO's strategic, operations and administrative functions and responsibilities.</p> <p>Audrey 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.</p> <p>In addition to her role as CEO of AEMO, Audrey also serves on the CSIRO Energy Advisory Committee, the Melbourne Energy Institute's Advisory Board and the Board of the Melbourne Recital Centre.</p> | <p>Director, Melbourne Recital Centre Pty Ltd</p> |

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 15 – Key Management Personnel Disclosures.

Company secretaries

Ms Lisa Deramond is the Company Secretary. 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 2020, and the number of meetings attended by each director were:

| | Board | | People and Remuneration | | Risk and Audit | | Technical and Regulatory | | Nomination | | Special Board Committees ⁵ | |
|-----------------------|-----------------|----|-------------------------|---|----------------|---|--------------------------|---|------------|---|---------------------------------------|---|
| | A | B | A | B | A | B | A | B | A | B | A | B |
| Mr Drew Clarke AO PSM | 13 | 13 | 4* | 4 | 4* | 4 | 4 | 4 | 2 | 2 | 1 | 1 |
| Mr Tony Concannon | 12 ³ | 13 | 3 ³ | 4 | - | - | 3 ³ | 4 | 2 | 2 | - | - |
| Dr. Peter Davis | 13 | 13 | 4 | 4 | - | - | 4 | 4 | 2 | 2 | - | - |
| Ms Betsy Donaghey | 13 | 13 | 4* | 4 | 4 | 4 | 4 | 4 | 2 | 2 | - | - |
| Mr Jon Hubbard | 13 | 13 | 3* | 4 | 4 | 4 | 4 | 4 | 2 | 2 | 1 | 1 |
| Mr Nino Ficca | 12 ¹ | 13 | 4* | 4 | 3 | 4 | 4 | 4 | 2 | 2 | - | - |
| Ms Sibylle Krieger | 13 | 13 | 4 | 4 | 1* | 4 | 4 | 4 | 2 | 2 | - | - |
| Ms Anne Nolan | 11 ⁴ | 13 | 3* | 4 | 2 ⁴ | 4 | 4 | 4 | 2 | 2 | - | - |
| Mr John Pittard | 12 ² | 13 | 4 | 4 | 1* | 4 | 4 | 4 | 2 | 2 | - | - |
| Ms Audrey Zibelman | 13 | 13 | 4* | 4 | 4* | 4 | 4 | 4 | 2 | 2 | - | - |

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 five 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, and attends a committee meeting their attendance is shown in the table above with * to denote that they are not committee members but have attended all or part of this meeting. When a Director is unable to attend a meeting they endeavour to provide written comments prior to the meeting.

¹ Meeting missed due to Director being unable to attend due to a potential conflict of interest.

² Meeting missed as an out of session meeting held at short notice which the Director was unable to attend due to prior commitments.

³ Meeting missed due to a family emergency.

⁴ Meeting missed due to a commitment made prior to her appointment as Director.

⁵ This was an out of session Board sub-committee meeting established to deal with ad-hoc matters delegated to the relevant sub-Committee by the Board. The membership of such special Committees may vary.

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

Additional committee meetings attended by Directors outside of Board committees included the Information Exchange Committee (IEC), AEMO IT Advisory Committee (ITAC) and Zema Scholarship Fund. The IEC is a national electricity rules committee responsible for reviewing B2B procedures with the IEC Chair required to be an AEMO Director. The ITAC aims to provide independent, external advice to AEMO on new and emerging technologies that will inform the Australian energy market and future corporate strategy at AEMO. AEMO is the trustee of the Zema Scholarship Fund with the Board appointing committee members who oversee the scholarship program.

| | IEC | | ITAC | | Zema Scholarship Fund | |
|-----------------------|-----|---|------|---|-----------------------|---|
| | A | B | A | B | A | B |
| Mr Drew Clarke AO PSM | - | - | 3 | 3 | - | - |
| Dr. Peter Davis | - | - | - | - | 5 | 5 |
| Ms Sibylle Krieger | - | - | - | - | 5 | 5 |
| Mr John Pittard | 4 | 4 | 3 | 3 | - | - |
| Ms Audrey Zibelman | - | - | 3 | 3 | 5 ¹ | 5 |

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.

¹A delegate attended three meetings due to scheduling conflicts with other Board commitments.

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
- (c) Adjustment of the rights of the contributories among themselves,

an amount not to exceed \$1.00.

At 30 June 2020, the total maximum amount that members of the Company are liable to contribute under the Constitution if the Company is wound up is \$103 (2019: \$103).

Rounding

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

Auditor's independence declaration

A copy of the auditor's independence declaration as required under Section 307C of the *Corporations Act 2001* is set out on page 44.

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.



A. Clarke, AO, PSM
Chairman

3 September 2020



Collins Square, Tower 5
727 Collins Street
Melbourne Victoria 3008

Correspondence to:
GPO Box 4736
Melbourne Victoria 3001

T +61 3 8320 2222
F +61 3 8320 2200
E info.vic@au.gt.com
W www.grantthornton.com.au

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 2020, I declare that, to the best of my knowledge and belief, there have been:

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

Grant Thornton Audit Pty Ltd
Chartered Accountants

B A Mackenzie
Partner – Audit & Assurance

Melbourne, 3 September 2020

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

www.grantthornton.com.au

'Grant Thornton' refers to the brand under which the Grant Thornton member firms provide assurance, tax and advisory services to their clients and/or refers to one or more member firms, as the context requires. Grant Thornton Australia Ltd is a member firm of Grant Thornton International Ltd (GTIL). GTIL and the member firms are not a worldwide partnership. GTIL and each member firm is a separate legal entity. Services are delivered by the member firms. GTIL does not provide services to clients. GTIL and its member firms are not agents of, and do not obligate one another and are not liable for one another's acts or omissions. In the Australian context only, the use of the term 'Grant Thornton' may refer to Grant Thornton Australia Limited ABN 41 127 556 389 and its Australian subsidiaries and related entities. GTIL is not an Australian related entity to Grant Thornton Australia Limited.

Liability limited by a scheme approved under Professional Standards Legislation.

Statement of profit or loss and other comprehensive income

Year ended 30 June 2020

| | Notes | 2020 \$'000 | 2019 \$'000 |
|--|-------|-----------------|-----------------|
| Revenue | | | |
| Transmission income | 2 | 595,915 | 500,237 |
| Settlement residue | 2 | 59,385 | 68,720 |
| Electricity Market income | 2 | 141,775 | 127,916 |
| Gas Market income | 2 | 44,137 | 42,247 |
| Other Revenue | 2 | 28,143 | 19,014 |
| | 2 | 869,355 | 758,134 |
| Expenses | | | |
| Network charges | 3 | (646,035) | (599,771) |
| Employee benefits | 3 | (148,355) | (126,776) |
| Depreciation | 3,6,8 | (13,350) | (5,428) |
| Amortisation | 7 | (15,579) | (13,627) |
| Consulting, contracting and outsourcing | | (29,698) | (28,935) |
| Information technology and maintenance | | (25,601) | (23,728) |
| Insurance | | (1,898) | (1,881) |
| Finance Costs | 3 | (1,723) | (846) |
| Travel and accommodation | | (2,440) | (3,736) |
| Occupancy | | (1,290) | (7,595) |
| Other expenses | | (9,232) | (8,686) |
| | | (895,201) | (821,009) |
| Deficit before income tax | | (25,846) | (62,875) |
| Income tax expense | 3 | - | - |
| Deficit for the year | | (25,846) | (62,875) |
| Other comprehensive income | | | |
| Re-measurement of net defined benefit superannuation liability gain/(loss) | 13 | 1,390 | (2,741) |
| Total comprehensive deficit | | (24,456) | (65,616) |

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

Statement of financial position

As at 30 June 2020

| | Notes | 2020 \$'000 | 2019 \$'000 |
|---------------------------------------|-------|-----------------|----------------|
| ASSETS | | | |
| Current Assets | | | |
| Cash and cash equivalents | 4 | 62,738 | 78,452 |
| Trade and other receivables | 5 | 102,821 | 87,919 |
| Total current assets | | 165,559 | 166,371 |
| Non-current assets | | | |
| Trade and other receivables | 5 | 863 | 1,059 |
| Property, plant and equipment | 6 | 42,338 | 36,473 |
| Intangible assets | 7 | 192,126 | 97,477 |
| Right-of-use assets | 8 | 26,247 | - |
| Total non-current assets | | 261,574 | 135,009 |
| Total assets | | 427,133 | 301,380 |
| LIABILITIES | | | |
| Current liabilities | | | |
| Trade and other payables | 9 | 96,887 | 109,038 |
| Borrowings | 10 | - | 15,700 |
| Provisions | 11 | 50,621 | 41,101 |
| Other current liabilities | 12 | 15,554 | 35,095 |
| Defined benefit superannuation | 13 | 1,014 | 2,121 |
| Lease liabilities | 8 | 7,544 | - |
| Total current liabilities | | 171,620 | 203,055 |
| Non-current liabilities | | | |
| Trade and other payables | 12 | - | 7,190 |
| Borrowings | 10 | 238,180 | 77,100 |
| Provisions | 11 | 2,980 | 2,254 |
| Lease liabilities | 8 | 27,028 | - |
| Total non-current liabilities | | 268,188 | 86,544 |
| Total liabilities | | 439,808 | 289,599 |
| Net assets/(liabilities) | | (12,675) | 11,781 |
| EQUITY | | | |
| Capital contribution of members | | 7,093 | 7,093 |
| Participant compensation fund reserve | 14 | 8,648 | 7,522 |
| Land reserve | | 3,172 | 2,946 |
| Accumulated surplus/(deficit) | 19 | (31,588) | (5,780) |
| Total equity | | (12,675) | 11,781 |

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

Statement of changes in equity

Year ended 30 June 2020

| | Capital Contribution of Members \$'000 | PCF Reserve \$'000 | Land Reserve \$'000 | Accumulated Surplus/ (Deficit) \$'000 | Total equity \$'000 |
|------------------------------------|---|--------------------------|---------------------------|--|------------------------|
| At 1 July 2018 | 7,093 | 6,349 | 2,720 | 61,235 | 77,397 |
| Deficit for the year | - | - | - | (62,875) | (62,875) |
| Other comprehensive income | - | - | - | (2,741) | (2,741) |
| Total comprehensive deficit | - | - | - | (65,616) | (65,616) |
| Transfer to/(from) reserves | | | | | |
| - PCF Reserve | - | 1,173 | - | (1,173) | - |
| - Land Reserve | - | - | 226 | (226) | - |
| As at 30 June 2019 | 7,093 | 7,522 | 2,946 | (5,780) | 11,781 |
| 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 | - | - | 226 | (226) | - |
| As at 30 June 2020 | 7,093 | 8,648 | 3,172 | (31,588) | (12,675) |

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

Statement of cash flows

Year ended 30 June 2020

| | Notes | 2020 \$'000 | 2019 \$'000 |
|---|-------|------------------|-----------------|
| Cash flows from operating activities | | | |
| Receipts from customers | | 922,221 | 834,710 |
| Payments to suppliers and employees | | (939,453) | (851,316) |
| | | (17,232) | (16,606) |
| Interest received | | 128 | 1,100 |
| Interest and other finance costs paid | | (952) | (688) |
| | | (18,056) | (16,194) |
| Net cash outflow from operating activities before movements in security deposits | | | |
| Receipts of participants' security deposits | | 770,453 | 1,377,530 |
| Repayment of participants' security deposits | | (782,195) | (1,360,782) |
| Net cash (outflow)/inflow from operating activities | 21 | (29,798) | 554 |
| Cash flows from investing activities | | | |
| Payments for plant, equipment and intangible assets | | (123,790) | (69,369) |
| Net cash outflow from investing activities | | (123,790) | (69,369) |
| Cash flows from financing activities | | | |
| Proceeds from borrowings | | 282,005 | 81,600 |
| Repayment of borrowings | | (136,625) | (1,822) |
| Repayment of lease liabilities | | (7,506) | - |
| Net cash inflow from financing activities | | 137,874 | 79,778 |
| Net (decrease)/increase in cash and cash equivalents | | (15,714) | 10,963 |
| Cash and cash equivalents at the beginning of the financial year | | 78,452 | 67,489 |
| Cash and cash equivalents at end of the financial year | 4 | 62,738 | 78,452 |

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

Notes to the financial statements

Year ended 30 June 2020

1. Introduction

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

Level 22, 530 Collins Street
Melbourne, Victoria, 3000

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

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

(a) Basis of preparation

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

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

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

Historical cost convention

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

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 \$31.6m (2019: \$5.8m). In assessing the appropriateness of the going concern assumption, the directors have considered the following:

- 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 \$261.8m at the date of this report.

Notes to the financial statements (continued)

Year ended 30 June 2020

Critical accounting estimates

Preparation of financial statements that conform with the Australian Accounting Standards requires the use of certain critical accounting estimates. It also requires management to exercise judgement in the process of applying the company's accounting policies. Areas involving a higher degree of judgement or complexity, or areas where assumptions and estimates are significant to the financial statements, are tabled below:

| Area | Estimate assumption |
|------------------------------------|---|
| Defined benefit superannuation | Actuarial assumptions used in determining the defined benefit obligations and the related carrying amounts are discussed in Note 13. |
| Depreciation and amortisation | 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. |
| Use of assets for network services | <p>AEMO has ongoing Transmission Network Service Provider agreements under which AusNet Services and Murraylink provide network services to AEMO in relation to the Victorian electricity transmission network. The charges levied on AEMO by AusNet Services and Murraylink for the provision of transmission services under the agreements are regulated by the Australian Energy Regulator (AER). AEMO incorporates these charges into its fees to network users.</p> <p>AEMO has determined that these arrangements are not, and do not contain, a lease in accordance with AASB Interpretation 4 <i>Determining whether an Arrangement contains a Lease</i>.</p> |

(b) Currency

Functional and presentation currency

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

(c) 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.

(d) New accounting standards and interpretations

A number of new and revised accounting standards are effective for annual periods beginning on or after 1 July 2019.

AEMO has adopted all new and revised standards and Interpretations issued by the Australian Accounting Standards Board (the AASB) which are mandatory to apply to the current reporting period.

New standards adopted during the year

AASB 16 Leases (Effective date: 1 July 2019)

AASB 16 Leases replaces AASB 117 Leases and several lease-related interpretations. The adoption of this new Standard has resulted in the Company recognising a right-of-use asset and related lease liability in connection with all former operating leases except for those identified as low-value or having a remaining lease term of less than 12 months from the date of initial application.

The new Standard has been applied using the modified retrospective approach, with measurement of the lease liability at the date of initial application (1 July 2019) at the present value of the remaining lease payments based on the Company's incremental borrowing rate over the remaining lease term. Prior periods have not been restated and there have been no adjustments to opening retained earnings on transition to AASB 16.

Notes to the financial statements (continued)

Year ended 30 June 2020

On transition, for leases previously accounted for as operating leases with a remaining lease term of less than 12 months and for leases of low-value assets the Company has applied the optional exemptions to not recognise right-of-use assets but to account for the lease expense on a straight-line basis over the remaining lease term.

For those leases previously classified as finance leases, the right-of-use asset and lease liability are measured at the date of initial application at the same amounts as under AASB 117 immediately before the date of initial application.

On transition to AASB 16 the weighted average incremental borrowing rate applied to lease liabilities recognised under AASB 16 for all leases was 2.5%. The alternative to leasing available to the Company is to finance the purchase using debt and therefore AEMO's incremental borrowing rate

has been applied on transition in adopting the new leasing accounting standard.

The value of the right-of-use asset at 1 July 2019 was \$29.3m and \$26.2m at 30 June 2020. The right-of-use asset depreciation expense for the year was \$6.4m. The Company has elected to measure the right-of-use assets at an amount equal to the lease liabilities adjusted for lease incentives that existed on transition.

The following is a reconciliation of the total operating lease commitments reported at 30 June 2019 as disclosed in the financial statements to 30 June 2019 to the lease liabilities now recognised at 1 July 2019 under AASB 16. At 30 June 2020, the Company did not have any reasonably certain extension options.

| | | |
|--|---------|---------------|
| Total operating lease commitments disclosed at 30 June 2019 | | 39,877 |
| Recognition exemptions | | |
| Leases with remaining lease term of less than 12 months | (95) | |
| Previous lease incentives now recognised in right-of-use asset | 7,700 | |
| Variable lease payments not recognised | (8,183) | |
| Option extensions recognised in FY20 | 3,862 | |
| Commitments in FY19 excluded from opening lease liabilities | (3,187) | 97 |
| Operating lease liabilities before discounting | | 39,974 |
| Discounting using incremental borrowing rate | | (2,981) |
| Total lease liabilities recognised under AASB 16 at 1 July 2019 | | 36,993 |

Notes to the financial statements (continued)

Year ended 30 June 2020

2. Revenue

In summary

This section provides detail on the services that AEMO provides and the revenue received to recover the costs of providing those services.

Electricity transmission income is received in our role as the Victorian Electricity Transmission Network Service Provider. This income represents greater than 68% of our total revenue and primarily relates to the recovery of network asset charges paid to the transmission network asset owners.

Settlement residue income (intra-regional) is received in our role as Victorian TNSP. Settlement residue 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 settlement residue surpluses received during the financial year are returned to Victorian TNSP owners the following year. Settlement residue income (inter-regional) represents the net position of settlement residue auction proceeds of positive and negative settlement residues received and paid during the financial year. In 2020, total settlement residue income (intra and inter) represents 7% of total revenue.

Electricity market income and gas market income reflects the annual fees and charges AEMO budgets and consults on with industry prior to the commencement of each financial year. The fee structures for these income streams are mainly driven by energy consumption for wholesale markets such as the NEM, WEM and DWGM, or connection points in the electricity and gas full retail contestability markets.

Revenues for government advice and new generator connections are increasing driven by market complexity, growth in renewables, and increased demand for AEMO's engineering skills in the industry.

AEMO operates over 30 ring-fenced functions, and revenue comprises fees charged for the recovery of expenditure incurred primarily in relation to providing the following services:

- Victorian Electricity Transmission Network Service Provider (TNSP).
- National Electricity Market (NEM).
- Electricity Full Retail Contestability (FRC).
- Victorian Declared Wholesale Gas Market (DWGM).
- Gas FRC in Victoria, South Australia, New South Wales, Queensland and Western Australia.
- Short Term Trading Market (STTM).
- National Transmission Planning (NTP).
- South Australian Planning.
- Western Australia Wholesale Electricity Market (WEM).
- Western Australia Gas Services Information (GSI).
- Western Australia Systems Management (SM).
- Gas Supply Hub (GSH).
- Gas Statement of Opportunities (GSOO).
- Gas Business to Business (B2B).
- Gas Bulletin Board (GBB).
- Settlement Residue Auctions.
- Gas Capacity Trading Platform (CTP).
- Gas Day Ahead Auction (DAA).

Revenue is recognised as the services are provided, or when milestones are met under grant agreements.

The National Electricity Rules and National Gas Rules each require AEMO to establish and maintain a Participant Compensation Fund. Note 14 provides further details of AEMO's participant compensation funds.

Contributions to the funds and interest earned on fund investments are recognised as revenue and transferred to the Participant Compensation Fund Reserve.

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

Notes to the financial statements (continued)

Year ended 30 June 2020

| | 2020 \$'000 | 2019 \$'000 |
|--|----------------|----------------|
| From continuing operations | | |
| TUOS income | 549,564 | 460,838 |
| Funded augmentation income | 46,351 | 39,399 |
| Electricity Transmission income | 595,915 | 500,237 |
| Settlement residue (TNSP) | 25,375 | 44,666 |
| Settlement residue auctions (TNSP) | 34,010 | 24,054 |
| Settlement residue | 59,385 | 68,720 |
| NEM Fees | 89,411 | 80,237 |
| FRC tariffs - electricity | 13,591 | 12,566 |
| Registration fees | 2,352 | 1,613 |
| National Transmission Planner | 5,461 | 4,259 |
| WEM | 13,017 | 12,271 |
| WA System Management | 17,943 | 16,970 |
| Electricity market income | 141,775 | 127,916 |
| DWGM tariffs | 22,539 | 21,123 |
| FRC tariffs - gas | 7,714 | 7,940 |
| STTM | 6,026 | 7,053 |
| Gas SOO | 2,161 | 2,014 |
| Registration fees | 593 | 298 |
| GSI | 1,708 | 1,519 |
| Other gas revenues | 3,396 | 2,200 |
| Gas market income | 44,137 | 42,247 |
| PCF interest | 126 | 173 |
| PCF contributions received | 1,000 | 1,000 |
| Bank interest revenue | 318 | 926 |
| Government advice | 2,668 | 1,284 |
| New connection assessments | 16,482 | 8,014 |
| Other | 7,549 | 7,617 |
| Other revenue | 28,143 | 19,014 |
| | 869,355 | 758,134 |

Notes to the financial statements (continued)

Year ended 30 June 2020

3. Expenses

In summary

This section provides detail on the key expenditure items of the company.

Network charges represent a large portion of AEMO expenses. These are charges paid to transmission network asset owners for use of the transmission network.

Wages and salaries reflect the largest controllable cost component of our expenses to operate the functions under our remit.

Amortisation expenditure mainly reflects improvements to our electricity and gas wholesale and retail market systems for operations, metering and settlements and long-term energy forecasting tools.

Depreciation for property plant and equipment relates to information technology hardware, building and office fit out costs. From 1 July 2019 costs associated with AEMO's leased premises, which are now recognised as a right-to-use asset, are depreciated over the expected lease term for each property under the new leasing accounting standard.

Financing costs include bank fees and net interest expenses incurred and from 1 July 2019 now also include leasing interest costs now recognised under the new leasing accounting standard that relate to discounting applied to the unwinding of lease liabilities.

AEMO has been granted an income tax exemption for 10 years from 1 July 2018 to 30 June 2028 on the basis that it qualifies as a public authority constituted under Australian law.

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| (Deficit)/Surplus before income tax includes: | | |
| Network Charges | 646,035 | 599,771 |
| Amortisation expense | 15,579 | 13,627 |
| Depreciation – Property, Plant & Equipment | 6,914 | 5,428 |
| Depreciation – Lease right-of-use assets | 6,436 | - |
| Depreciation expense | 13,350 | 5,428 |
| Wages and Salaries | 107,068 | 94,059 |
| Defined contribution superannuation expense | 14,406 | 10,875 |
| Defined benefits superannuation expense | 283 | 243 |
| Other employee benefits expense | 26,598 | 21,599 |
| Employee benefits | 148,355 | 126,776 |
| Employee benefits above exclude capitalised employee costs | 38,868 | 18,768 |
| Bank fees | 153 | 80 |
| Interest expense | 685 | 767 |
| Leasing interest | 885 | - |
| Finance costs | 1,723 | 846 |

Notes to the financial statements (continued)

Year ended 30 June 2020

4. Cash and cash equivalents

In summary

AEMO's cash and cash equivalents are segregated into three different categories which determine the purpose and availability for company use.

- Cash at bank and on hand is the company's operating funds.
- 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 Rules.
- Participant compensation funds are collected and held for participants under the NEM, DWGM and STTM for compensation as a result of scheduling errors. These funds are not available for AEMO's operational use.

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Cash at bank and on hand | 30,811 | 24,162 |
| Security deposits and early settlement proceeds not available for use | 23,365 | 46,863 |
| Participant Compensation Fund (PCF) | 8,562 | 7,427 |
| | 62,738 | 78,452 |

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

5. Trade and other receivables

In summary

Trade and other 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.

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Current | | |
| Participant fees receivable | 20,428 | 21,935 |
| TUOS revenue receivable | 56,043 | 45,529 |
| Other receivables | 19,448 | 15,619 |
| Prepayments | 6,902 | 4,836 |
| | 102,821 | 87,919 |
| Non-current | | |
| Non Current Prepayments (Deferred Expenses) | 863 | 1,059 |
| | 863 | 1,059 |

Notes to the financial statements (*continued*)

Year ended 30 June 2020

Financial risk management - credit risk

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

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

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

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

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

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.

6. Property, plant and equipment

In summary

This section represents the current book value for our wholesale and retail market systems, and corporate systems. The majority of our systems are nearing or have reached their end of estimated useful life.

Land and buildings reflect the fit-out costs of our six offices and the land and building AEMO owns in Norwest, Sydney.

Right-of-use Lease assets now recognised under AASB 16 are not shown in the table below.

Notes to the financial statements (continued)

Year ended 30 June 2020

| | Electricity Systems (NEM, FRC and WEM) \$'000 | Gas Systems (DWGM, GSH and FRC) \$'000 | Short-term Trading Market Systems \$'000 | Plant and Equipment \$'000 | Land and Buildings \$'000 | Total \$'000 |
|---|---|---|--|----------------------------------|---------------------------------|-----------------|
| At 30 June 2019 | | | | | | |
| Cost | 18,086 | 3,320 | 530 | 35,330 | 45,381 | 102,647 |
| Accumulated depreciation | (15,186) | (3,201) | (525) | (25,157) | (22,105) | (66,174) |
| Net book value at 30 June 2019 | 2,900 | 119 | 5 | 10,173 | 23,276 | 36,473 |
| Reconciliation of carrying amount: | | | | | | |
| Year ended 30 June 2019 | | | | | | |
| Carrying amount at 1 July 2018 | 2,951 | 119 | - | 7,166 | 24,511 | 34,747 |
| Additions | - | - | 5 | 6,300 | 849 | 7,154 |
| Disposals | - | - | - | - | - | - |
| Depreciation | (51) | - | - | (3,293) | (2,084) | (5,428) |
| Carrying amount at 30 June 2019 | 2,900 | 119 | 5 | 10,173 | 23,276 | 36,473 |
| Reconciliation of cost: | | | | | | |
| Cost amount at 1 July 2018 | 18,086 | 3,320 | 525 | 29,030 | 44,532 | 95,493 |
| Additions | - | - | 5 | 6,300 | 849 | 7,154 |
| Disposals | - | - | - | - | - | - |
| Cost amount at 30 June 2019 | 18,086 | 3,320 | 530 | 35,330 | 45,381 | 102,647 |
| At 30 June 2020 | | | | | | |
| Cost | 18,086 | 3,364 | 530 | 44,630 | 48,816 | 115,426 |
| Accumulated depreciation | (15,186) | (3,201) | (525) | (29,897) | (24,279) | (73,088) |
| Net book value at 30 June 2020 | 2,900 | 163 | 5 | 14,733 | 24,537 | 42,338 |
| Reconciliation of carrying amount: | | | | | | |
| Year ended 30 June 2020 | | | | | | |
| Carrying amount at 1 July 2019 | 2,900 | 119 | 5 | 10,173 | 23,276 | 36,473 |
| Additions | - | 44 | - | 9,300 | 3,435 | 12,779 |
| Disposals | - | - | - | - | - | - |
| Depreciation | - | - | - | (4,740) | (2,174) | (6,914) |
| Carrying amount at 30 June 2020 | 2,900 | 163 | 5 | 14,733 | 24,537 | 42,338 |
| Reconciliation of cost: | | | | | | |
| Cost amount at 1 July 2019 | 18,086 | 3,320 | 530 | 35,330 | 45,381 | 102,647 |
| Additions | - | 44 | - | 9,300 | 3,435 | 12,779 |
| Disposals | - | - | - | - | - | - |
| Cost amount at 30 June 2020 | 18,086 | 3,364 | 530 | 44,630 | 48,816 | 115,426 |

Property plant and equipment

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

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

Depreciation of assets is calculated on a straight-line basis to write off the net cost of each item of property, plant and equipment (excluding land) over its expected useful life.

Estimates of remaining useful life are made on a regular basis for all assets, with annual reassessments for major items. Land is not depreciated.

Depreciation is charged from the month the asset commences service.

Expected useful life periods are as follows:

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

Notes to the financial statements (continued)

Year ended 30 June 2020

7. Intangibles

In summary

This section represents costs to establish our markets and enhancements to software to run those markets, along with corporate software costs.

The major additions in 2019-20 include the ongoing modernisation of technology platforms and technology systems modernisation for electricity and gas functions (which includes Five Minute Settlements and Distributed Energy Resource programs).

| | NEM Establishment costs \$'000 | FRC Establishment costs \$'000 | Software - Electricity (NEM, FRC and WEM) \$'000 | Software - Gas (DWGM, GSH and FRC) \$'000 | STTM \$'000 Establishment Costs & Software \$'000 | Technology & Other \$'000 | Total \$'000 |
|---|---|---|--|--|--|------------------------------------|-----------------|
| At 30 June 2019 | | | | | | | |
| Cost | 44,473 | 27,330 | 150,435 | 31,909 | 23,013 | 43,635 | 320,795 |
| Accumulated amortisation | (44,473) | (27,330) | (100,861) | (17,652) | (21,411) | (11,590) | (223,318) |
| Net book value at 30 June 2019 | - | - | 49,574 | 14,256 | 1,602 | 32,045 | 97,477 |
| Reconciliation of carrying amount: Year ended 30 June 2019 | | | | | | | |
| Carrying amount at 1 July 2018 | - | - | 30,600 | 9,050 | 529 | 8,710 | 48,889 |
| Additions | - | - | 2 5,285 | 8,956 | 1,436 | 26,538 | 62,215 |
| Asset write-off | - | - | - | - | - | - | - |
| Amortisation | - | - | (6,311) | (3,750) | (363) | (3,203) | (13,627) |
| Carrying amount at 30 June 2019 | - | - | 49,574 | 14,256 | 1,602 | 32,045 | 97,477 |
| Reconciliation of cost: | | | | | | | |
| Cost amount at 1 July 2018 | 44,473 | 27,330 | 125,150 | 22,953 | 21,577 | 17,097 | 258,580 |
| Additions | - | - | 25,285 | 8,956 | 1,436 | 26,538 | 62,215 |
| Asset write-off | - | - | - | - | - | - | - |
| Disposals | - | - | - | - | - | - | - |
| Cost amount at 30 June 2019 | 44,473 | 27,330 | 150,435 | 31,909 | 23,013 | 43,635 | 320,795 |
| At 30 June 2020 | | | | | | | |
| Cost | 44,473 | 27,330 | 194,383 | 34,096 | 23,790 | 106,951 | 431,023 |
| Accumulated amortisation | (44,473) | (27,330) | (108,340) | (21,644) | (21,460) | (15,650) | (238,897) |
| Net book value at 30 June 2020 | - | - | 86,043 | 12,452 | 2,330 | 91,301 | 192,126 |
| Reconciliation of carrying amount: Year ended 30 June 2020 | | | | | | | |
| Carrying amount at 1 July 2019 | - | - | 49,574 | 14,256 | 1,602 | 32,045 | 97,477 |
| Additions | - | - | 44,732 | 2,187 | 777 | 63,316 | 111,012 |
| Asset write-off | - | - | (784) | - | - | - | (784) |
| Amortisation | - | - | (7,479) | (3,991) | (49) | (4,060) | (15,579) |
| Carrying amount at 30 June 2020 | - | - | 8 6,043 | 12,452 | 2,330 | 91,301 | 192,126 |
| Reconciliation of cost: | | | | | | | |
| Cost amount at 1 July 2019 | 44,473 | 27,330 | 150,435 | 31,909 | 23,013 | 43,635 | 320,795 |
| Additions | - | - | 44,732 | 2,187 | 777 | 63,316 | 111,012 |
| Asset write-off | - | - | (784) | - | - | - | (784) |
| Disposals | - | - | - | - | - | - | - |
| Cost amount at 30 June 2020 | 44,473 | 27,330 | 194,383 | 34,096 | 23,790 | 106,951 | 431,023 |

Notes to the financial statements (continued)

Year ended 30 June 2020

Intangibles

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.

AEMO's capital spend is largely driven by the significant change the industry is going through, which has resulted in a need to refresh current systems and carry out large regulatory-directed 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 and WEM Reform Program).

Software

Acquired software

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

Internally developed software

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

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

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

Assets are amortised over their estimated useful lives as follows:

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

Significant assets that have now been fully depreciated mainly relate to:

i. NEM establishment costs

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

ii. Electricity FRC costs

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

iii. STTM establishment costs

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

Additions of assets

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

All other repairs and maintenance are charged as expenses during the financial period in which they are incurred.

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

Impairment of assets

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

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

Notes to the financial statements (continued)

Year ended 30 June 2020

8. Right-of-use assets and lease liabilities

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 where 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 straight-line 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 liabilities.

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, have also been excluded and are expensed as incurred.

The right-of-use lease assets recognised by AEMO include most tenanted properties leased and data centres for on-premise 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 following outlines the movement of the right-of-use asset from 1 July 2019 to 30 June 2020.

| | 2020 \$'000 |
|--|------------------------|
| Balance as at 1 July 2019 | 29,293 |
| Additions | 4,200 |
| Lease incentive | (810) |
| Depreciation expense | (6,436) |
| Carrying amount at 30 June 2020 | 26,247 |

Lease liabilities

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.

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.

Notes to the financial statements (continued)

Year ended 30 June 2020

The following outlines the movement of the lease liabilities from 1 July 2019 to 30 June 2020.

| | 2020 \$'000 |
|-----------------------------------|------------------------|
| Balance as at 1 July 2019 | 36,993 |
| Additions | 4,200 |
| Interest expense | 885 |
| Payments | (7,506) |
| Balance as at 30 June 2020 | 34,572 |
| Current | 7,544 |
| Non-current | 27,028 |

9. Trade and other payables

In summary

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.

| | 2020 \$'000 | 2019 \$'000 |
|-------------------------------|------------------------|------------------------|
| Current | | |
| Accounts payable | 14,398 | 23,220 |
| Accrued network charges | 56,442 | 51,847 |
| Finance costs payable | 111 | 225 |
| Participant security deposits | 11,123 | 22,588 |
| Other creditors and accruals | 14,813 | 11,158 |
| | 96,887 | 109,038 |

Notes to the financial statements (continued)

Year ended 30 June 2020

10. Borrowings

In summary

AEMO executed a new syndicated debt facility in March 2020 with National Australia Bank and the Australia and New Zealand Banking Group (ANZ). This agreement provides for a \$500m facility with a mix of tenors over three and five years.

The syndicated facility replaces all previous lending arrangements in place with all borrowings now shown as non-current.

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Current | | |
| Bank Loans | | |
| Norwest (current) | - | 700 |
| Working capital) | - | 15,000 |
| | - | 15,700 |
| Non-current | | |
| Bank Loans | | |
| Norwest (non current) | - | 10,500 |
| Working capital and capital projects(non current) | - | 66,600 |
| Syndicated facility | 238,180 | - |
| | 238,180 | 77,100 |
| TOTAL | 238,180 | 92,800 |

The above borrowings are unsecured.

Borrowing Costs

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

Financial risk management - market risk

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

AEMO's interest rate risk arises from its long-term borrowings, all of which are issued at variable rates.

On occasions AEMO enters into contracts denominated in foreign currency for mainly IT related purchases.

Financial risk management - 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.

Notes to the financial statements (continued)

Year ended 30 June 2020

Undrawn borrowing facilities

30 June 2020

| | Limit \$ '000 | Balance \$'000 | Undrawn \$'000 |
|--------------------------|------------------|-------------------|-------------------|
| Total facility available | 500,000 | 238,180 | 261,820 |

30 June 2019

| | Limit \$ '000 | Balance \$'000 | Undrawn \$'000 |
|--------------------------|------------------|-------------------|-------------------|
| Total facility available | 180,000 | 92,800 | 87,200 |

Loan repayment commitments

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

30 June 2020

| Institution | < 1 year \$'000 | 1-5 years \$'000 | > 5 years \$'000 | Total \$'000 |
|---------------------------------|--------------------|---------------------|---------------------|-----------------|
| Syndicated Facility (ANZ & NAB) | 2,386 | 244,564 | - | 246,950 |
| TOTAL COMMITMENTS | 2,386 | 244,564 | - | 246,950 |

30 June 2019

| Institution | Loan name | < 1 year \$'000 | 1-5 years \$'000 | > 5 years \$'000 | Total \$'000 |
|--------------------------|--|-----------------------|------------------------|------------------------|-----------------|
| CBA | Norwest | 942 | 3,627 | 8,621 | 13,190 |
| | Working capital (<12 months) | 15,290 | - | - | 15,290 |
| | Working capital (>12 months) and capital projects | 1,531 | 42,858 | 29,852 | 74,241 |
| TOTAL COMMITMENTS | | 17,763 | 46,485 | 38,473 | 102,721 |

Notes to the financial statements (continued)

Year ended 30 June 2020

11. Provisions

In summary

The company's provisions mainly relate to employee benefits (annual leave, long service leave and performance incentives).

- **'Current' liability - Short-term employee benefits including annual leave and short term performance incentives** – Current liabilities include long service leave estimated to be payable within 12 months, total annual leave liability and employee short term performance incentives.
- **'Non-current' liability - Long service leave** – Long service leave not payable for more than 12 months from the reporting date is recognised as a non-current liability measured at the present value of expected future payments. Consideration is given to expected future wage and salary levels, experience of employee departures, and periods of service.

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Current | | |
| Provision for employee entitlements | 49,671 | 40,601 |
| Provision (other) | 950 | 500 |
| | 50,621 | 41,101 |
| Non-current | | |
| Provision for employee entitlements (non current) | 2,980 | 2,254 |
| | 2,980 | 2,254 |
| TOTAL | 53,601 | 43,355 |

12. Other liabilities

In summary

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.

Government grants received during the year include those relating to the Gas Bulletin Board scoping study, and the Electricity Consumer Data Rights Platform and the Distributed Energy Resources Register.

Lease incentives previously recognised in 2019, shown in Other liabilities, have been de-recognised and now included as part of the right-to-use lease asset under the new leasing accounting standard.

Notes to the financial statements (continued)

Year ended 30 June 2020

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Current | | |
| Contract liabilities (pre-paid settlement payments) | 12,717 | 24,328 |
| Government grants received in advance | 2,837 | 9,539 |
| Other liabilities | - | 1,228 |
| | 15,554 | 35,095 |
| Non-current | | |
| Lease incentive | - | 7,190 |
| | - | 7,190 |

13. Defined benefit superannuation plan

In summary

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

The defined benefit superannuation obligation 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 uses an actuarial expert annually for this revaluation.

The plan comprises 7 employees and 8 pension members at 30 June 2020, unchanged from the previous year.

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

The defined benefit superannuation liability at 30 June 2020 is \$1.014m. The liability was \$2.121m at 30 June 2019 and the movement is primarily due to a combination of an increase in corporate bond yields decreasing the value of the defined benefit obligation and a lower rate of increase in salaries and pensions compared to the prior year.

i. Defined contribution plans

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

ii. Defined benefit plans

Through the business combination that occurred on 1 July 2009 AEMO acquired responsibility for the defined benefit superannuation plan from VENCORP. No new members are permitted to join the plan, however it is continuing for the benefit of existing members. The defined benefit plan comprises 7 employees and 8 pension members.

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

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

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.

Notes to the financial statements (continued)

Year ended 30 June 2020

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

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Defined Benefit Obligation | 19,027 | 20,282 |
| Fair value of plan assets | (18,013) | (18,161) |
| Net defined benefit superannuation liability | 1,014 | 2,121 |

Reconciliation of the Net Defined Benefit Liability

| Financial year | 2020 \$'000 | 2019 \$'000 |
|--|----------------|----------------|
| Net defined benefit (asset)/liability at start of the year | 2,121 | (863) |
| Current service cost | 242 | 270 |
| Net Interest | 41 | (27) |
| Actual return on plan assets (gains) less interest income | 44 | (252) |
| Actuarial losses/(gains) arising from changes in demographic assumptions | (179) | - |
| Actuarial losses/(gains) arising from changes in financial assumptions | (1,209) | 2,319 |
| Actuarial losses/(gains) arising from liability experience | (46) | 674 |
| Net actuarial losses/(gains) on re-measurement of net defined benefit superannuation liability | (1,390) | 2,741 |
| Employer contributions | - | - |
| Net defined benefit liability at end of the year | 1,014 | 2,121 |

Reconciliation of the present value of the defined benefit obligation

| Financial year | 2020 \$'000 | 2019 \$'000 |
|--|----------------|----------------|
| Present value of defined benefit obligations at beginning of the year | 20,282 | 16,881 |
| Current service cost | 242 | 270 |
| Interest cost | 426 | 556 |
| Contributions by plan participants | 64 | 74 |
| Actuarial (gains)/losses arising from changes in demographic assumptions | (179) | - |
| Actuarial (gains)/losses arising from changes in financial assumptions | (1,209) | 2,319 |
| Actuarial (gains)/losses arising from liability experience | (46) | 674 |
| Benefits paid | (509) | (441) |
| Taxes, premiums and expenses paid | (44) | (51) |
| Present value of defined benefit obligations at end of the year | 19,027 | 20,282 |

Notes to the financial statements (continued)

Year ended 30 June 2020

Reconciliation of the fair value of plan assets

| Financial year | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Fair value of plan assets at beginning of the year | 18,161 | 17,744 |
| Interest income | 385 | 583 |
| Actual return on plan assets less Interest income | (44) | 252 |
| Employer contributions | - | - |
| Contributions by plan participants | 64 | 74 |
| Benefits paid | (509) | (441) |
| Taxes, premiums and expenses paid | (44) | (51) |
| Fair value of plan assets at end of the year | 18,013 | 18,161 |

Fair value of plan assets

| Financial year ended 30 June 2020 | 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 | 18,013 | - | 18,013 | - |
| Total | 18,013 | - | 18,013 | - |

| As at 30 June | 2020 % | 2019 % |
|------------------------|-----------|-----------|
| Australian equity | 10 | 8 |
| International equity | 12 | 12 |
| Fixed income | 11 | 12 |
| Property | 4 | 5 |
| Growth alternatives | 9 | 10 |
| Defensive alternatives | 11 | 6 |
| Cash | 43 | 47 |

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

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

Notes to the financial statements (continued)

Year ended 30 June 2020

Principal actuarial assumptions at the balance sheet date

| | 2020 % p.a. | 2019 % p.a. |
|---|----------------|----------------|
| Assumptions to determine defined benefit superannuation cost | | |
| Discount rate (active members) | 2.3 | 3.5 |
| Discount rate (pensioners) | 2.3 | 3.5 |
| Expected salary increase rate | 2.9 | 2.9 |
| Expected pension increase rate | 2.5 | 2.5 |

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

| | 2020 % p.a. | 2019 % p.a. |
|--|----------------|----------------|
| Assumptions to determine defined benefit obligation | | |
| 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 |

* 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.

Sensitivity Analysis

The defined benefit obligation as at 30 June 2020 under several scenarios is presented below.

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

| | Base Case | Scenario A -0.5% pa discount rate | Scenario B +0.5% pa discount rate | Scenario C -0.5% pa salary increase rate | Scenario D +0.5% pa salary increase rate | Scenario E -0.5% pa pension increase rate | Scenario F +0.5% pa pension increase 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 | 2.5% pa | 2.5% pa | 2.5% pa | 2.0% pa | 3.0% pa | 2.5% pa | 2.5% 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) | 19,027 | 19,944 | 18,177 | 18,852 | 19,208 | 18,394 | 19,712 |

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

Notes to the financial statements (continued)

Year ended 30 June 2020

Asset-Liability matching strategies

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

Funding arrangements

The Equipsuper Contribution and Funding Policy provides for a review of the financial position of the Plan each six months, as at 30 June and 31 December, with the Company contribution rate comprising a long-term contribution rate and an adjustment to meet the financing objective of a 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 salary sacrifice contributions and at the required rates for accumulation members.

Expected contributions

| Financial year | 2021 \$'000 |
|---------------------------------|----------------|
| Expected employer contributions | - |

Maturity profile of defined benefit obligation

The weighted average duration of the defined benefit obligation as at 30 June 2020 is 7 years.

| Expected benefit payments for the financial year ending on | \$'000 |
|--|--------|
| 30 June 2021 | 1,487 |
| 30 June 2022 | 1,452 |
| 30 June 2023 | 1,374 |
| 30 June 2024 | 1,301 |
| 30 June 2025 | 1,566 |
| Following 5 years | 7,313 |

The weighted average duration of the defined benefit obligation at 30 June 2019 was 7 years.

14. Reserves

Nature and purpose of reserves

Participant Compensation Fund Reserve

AEMO maintains the following participant compensation funds:

National Electricity Market

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

Victorian Declared Wholesale Gas Market

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

Notes to the financial statements (continued)

Year ended 30 June 2020

Short Term Trading Market

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

- i. **Sydney hub:** The lesser of \$335k and \$670k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.
- ii. **Adelaide hub:** The lesser of \$115k and \$330k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.

- iii. **Brisbane hub:** The lesser of \$225k and \$450k minus the amount AEMO reasonably expects to be the balance of the fund at the end of the financial year.

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 \$1,000k have been charged in the 2019-20 financial year in line with the National Electricity Rules.

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

| | PCF NEM \$'000 | PCF Vic Wholesale Gas \$'000 | PCF STTM Sydney hub \$'000 | PCF STTM Adelaide hub \$'000 | PCF STTM Brisbane hub \$'000 | TOTAL \$'000 |
|------------------------------------|-------------------|---------------------------------------|--|---------------------------------------|---------------------------------------|-----------------|
| 2019 | | | | | | |
| Balance 1 July 2018 | 997 | 3,627 | 828 | 416 | 481 | 6,349 |
| Contributions during the year | 1,000 | - | - | - | - | 1,000 |
| Interest earned during the year | 33 | 95 | 21 | 11 | 13 | 173 |
| Payments of claims during the year | - | - | - | - | - | - |
| Balance 30 June 2019 | 2,030 | 3,722 | 849 | 427 | 494 | 7,522 |
| 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 |

Land Reserve

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

Notes to the financial statements (continued)

Year ended 30 June 2020

15. Key management personnel disclosures

Directors

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

Chairman – non-executive

A. Clarke AO, PSM

Chief Executive Officer and Managing Director

A. Zibelman

Non-executive directors

A.P. Concannon

Dr. P.L. Davis

E.A. Donaghey

N. Ficca

J.G. Hubbard

S. Krieger

A. Nolan

J. Pittard

All of the above persons were directors for the full financial year and up to the date of this report.

Directors' and Key management personnel compensation

| | 2020 \$'000 | 2019 \$'000 |
|---------------------------------|----------------|----------------|
| Directors' compensation | | |
| Short-term employee benefits | 1,227 | 1,068 |
| Post-employment benefits | 115 | 103 |
| Other long-term benefits | - | - |
| Termination benefits | - | - |
| | 1,342 | 1,171 |
| Key management personnel | | |
| Short-term employee benefits | 5,803 | 5,788 |
| Post-employment benefits | 196 | 215 |
| Other long-term benefits | 123 | 153 |
| Termination benefits | - | 928 |
| | 6,122 | 7,084 |
| | 7,464 | 8,255 |

In this table, the remuneration of the Managing Director is included under Key management personnel.

Key Management Personnel remuneration

Chairman and the Non-executive Board members:

The annual Directors remuneration pool was last approved by Members at the Annual General Meeting in 2017. The amount of the pool includes fees to the Director chairing the Information Exchange Committee, and projected increases over a three year period.

The pool is due for review by Members at the 2020 Annual General Meeting. External advice is sought to determine appropriate levels of remuneration taking into account a range of factors. The current pool is \$1.35 million per year. Once Members approve the pool, the Board makes an annual determination as to the part of the 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 evaluated using Hay Group evaluation methodology. This determines 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.

Notes to the financial statements (continued)

Year ended 30 June 2020

16. 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:

| | 2020 \$'000 | 2019 \$'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 | 10 | 11 |
| Other services | | |
| Other audit services not provided by AEMO's financial auditor * | 724 | 1,262 |

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

17. Contingent liabilities

In summary

A contingent liability is a liability that may be incurred but is dependent on an uncertain future event.

From time to time AEMO may be involved in disputes with registered participants. As referred to in Note 14 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. Where the probable outcome against the company can be measured, an appropriate liability is recognised in the financial statements. Where the outcome is unknown and the company is defending the action, or it is unlikely that any significant liability will arise, an amount is not recognised in the financial statements. Disclosure of details of claims are not provided where the directors consider that this would be prejudicial to AEMO in resolving the disputes.

18. Commitments

Capital commitments

| | 2020 \$'000 | 2019 \$'000 |
|---|----------------|----------------|
| Not later than one year | 13,911 | 14,155 |
| Later than one year but not later than five years | - | 1,956 |
| Later than five years | - | - |
| | 13,911 | 16,111 |

In summary

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 and Digital (including Cyber security) initiatives.

Notes to the financial statements (continued)

Year ended 30 June 2020

19. Accumulated surplus/(deficit)

The accumulated surplus/(deficit) attributable to AEMO's functions is detailed below:

| | 2020 \$'000 | 2019 \$'000 |
|--------------------------------|-----------------|----------------|
| NEM | (58,751) | (36,822) |
| Electricity FRC | 2,924 | 1,920 |
| Victorian TNSP | 507 | 3,797 |
| DWGM – capital contribution | 8,704 | 8,704 |
| DWGM | 8,628 | 6,490 |
| Gas FRC (excluding WA) | 2,775 | 3,091 |
| WA Gas FRC | 777 | 1,136 |
| STTM | 8,706 | 7,194 |
| NTP | (3,977) | (1,209) |
| Gas Supply Hub | (4,456) | (4,703) |
| WEM | 4,683 | 2,956 |
| GSI | 675 | 486 |
| WA Systems Management | 915 | (1,410) |
| Gas B2B | 384 | (49) |
| Settlement Residue Auction | (61) | (147) |
| Gas Bulletin Board | (48) | 30 |
| Gas Statement of Opportunities | 1,553 | 1,404 |
| Gas Capacity Trading | (584) | (124) |
| Day Ahead Auction | (20) | (156) |
| Five Minute Settlements | (3,356) | - |
| Other | (1,566) | 1,632 |
| Accumulated Deficit | (31,588) | (5,780) |

In summary

While noting the overall accumulated deficit, 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. 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.

Note operating costs are included to support the implementation of Five Minute Settlements.

Notes to the financial statements (continued)

Year ended 30 June 2020

20. Events occurring after balance sheet date

There are no material events occurring after balance sheet date up to the date of signing the report.

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

| | 2020 \$'000 | 2019 \$'000 |
|---|-----------------|----------------|
| (Deficit)/Surplus | (25,846) | (62,875) |
| Depreciation and amortisation | 22,492 | 19,055 |
| Non-cash defined benefit expense | 283 | 243 |
| Write off of Intangible Assets | 784 | - |
| Change in operating assets and liabilities | | |
| Increase in trade and other receivables | (14,596) | (3,185) |
| Increase in prepayment and other assets | (26,248) | - |
| Increase in creditors and accruals | 14,830 | 25,045 |
| (Decrease)/increase in participant security deposits | (11,742) | 16,748 |
| Increase in provisions | 10,245 | 5,523 |
| Net cash inflow/(outflow) provided by operating activities | (29,798) | 554 |

22. Related party transactions

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

During the period, there were three directors occupying roles in other energy companies which either paid fees to AEMO and/or which AEMO made payments to.

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

Directors' Declaration

The directors of Australian Energy Market Operator Limited declare that:

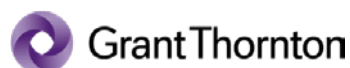
1. The financial statements, comprising the statement of profit or loss and other comprehensive income, statement of financial position, statement of changes in equity, statement of cash flows, and accompanying notes, are in accordance with the *Corporations Act 2001* and:
 - (a) comply with Accounting Standards as described in Note 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 2020 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.
2. In the directors' opinion, there are reasonable grounds to believe that the company will be able to pay its debts as and when they become due and payable.

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



A. Clarke AO, PSM
Chairman

3 September 2020



Collins Square, Tower 5
727 Collins Street
Melbourne Victoria 3008

Correspondence to:
GPO Box 4736
Melbourne Victoria 3001

T +61 3 8320 2222
F +61 3 8320 2200
E info.vic@au.gt.com
W www.grantthornton.com.au

Independent Auditor's Report

To the Members of Australian Energy Market Operator Limited

Report on the audit of the financial report

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 2020, 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 2020 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* (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.

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 Director's report for the year ended 30 June 2020, but does not include the financial report and our auditor's report thereon.

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

www.grantthornton.com.au

'Grant Thornton' refers to the brand under which the Grant Thornton member firms provide assurance, tax and advisory services to their clients and/or refers to one or more member firms, as the context requires. Grant Thornton Australia Ltd is a member firm of Grant Thornton International Ltd (GTIL). GTIL and the member firms are not a worldwide partnership. GTIL and each member firm is a separate legal entity. Services are delivered by the member firms. GTIL does not provide services to clients. GTIL and its member firms are not agents of, and do not obligate one another and are not liable for one another's acts or omissions. In the Australian context only, the use of the term 'Grant Thornton' may refer to Grant Thornton Australia Limited ABN 41 127 556 389 and its Australian subsidiaries and related entities. GTIL is not an Australian related entity to Grant Thornton Australia Limited.

Liability limited by a scheme approved under Professional Standards Legislation.



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: http://www.auasb.gov.au/auditors_responsibilities/ar4.pdf. This description forms part of our auditor's report.

Grant Thornton Audit Pty Ltd
Chartered Accountants

B A Mackenzie
Partner – Audit & Assurance

Melbourne, 3 September 2020



**Australian Energy Market
Operator Limited**

ABN 94 072 010 327

www.aemo.com.au