Corporate Plan FY2021





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Message from the Chairman and Managing Director/CEO

We are pleased to publish AEMO's Corporate Plan for FY2021. It updates our 3-year goals and sets out our priorities for 2020-21, incorporating the issues associated with the ongoing COVID-19 pandemic and the experiences of a spring and summer of extreme weather and unprecedented bushfires.

While the energy industry and indeed the nation are still working through these challenging events, the disruption and transition of our sector has continued apace. This Corporate Plan demonstrates AEMO's focus on transforming learnings from these events into the actions we will take to meet our core mission: the design and operation of a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

When we are vulnerable to the effects of extreme weather and socio-economic events, it is even more vital for Australian homes and businesses to remain confident in the reliability of essential services, particularly gas and electricity. We are extremely proud of our staff who, through their commitment, knowledge and ingenuity, have kept the NEM and WEM power systems operating over the summer whilst minimising the disruption caused by multiple substantial and unprecedented events. They then made a rapid transition to working-from-home, protecting the critical staff operating these systems during the pandemic, with minimal impact on productivity.

The bushfires and COVID-19 are harsh reminders that even with the best of planning we cannot anticipate all the potential events that will impact the country's energy systems. Nonetheless, they emphasise the importance of having the capability to respond when extreme shocks occur.

They also highlight the importance of AEMO's forecasting in both the Gas and Electricity Statements of Opportunity, that identify the emerging needs of the energy systems. This is integral to the robust scenario planning and engineering analysis that inform the Integrated System Plan for the NEM and the Whole of System Plan (WoSP) in Western Australia.

In the coming year, we will continue to focus on ensuring the integrity of our forecasting and planning work. Utilising data analytics and a new collaborative stakeholder framework, we will continue to plan our future energy systems to be more resilient and secure, delivering more affordable energy to Australia's households and businesses.

At an operational level, we will continue to develop the capabilities of both our people and our systems. The sophistication of our forecasting and analytic decision tools will be further enhanced, to both integrate new resources onto the system and to manage the evolving dynamic realtime requirements of integrated power and gas systems. A particular challenge for AEMO and transmission network service providers remains the safe and timely integration of the substantial volume of new generation projects currently in development or nearing completion. The implementation of new processes and tools this year should enable a more efficient and transparent connections process.

These efforts are complemented by continued work in supporting consumer investments in rooftop solar, distributed storage and energy efficiency capabilities, along with better information access to allow consumers to manage their energy use and their energy bills.

This year AEMO will also progress the essential multi-year digital transformation program. This major refresh of our IT systems to a modern digital platform will significantly increase our data processing capability and reduce both our members' and our own operating expenses through simpler architecture and cloud-based systems.

Achieving the best overall economic outcome for consumers from the energy transition requires both sound engineering and supportive regulation. AEMO is uniquely placed to manage the real-time technical challenges, plan for the future and contribute to the regulatory reform process. As the technical challenges continue to grow, we will need more flexible regulatory frameworks and markets to produce good outcomes for consumers. Our Renewable Integration Study (Stage 1) Report, published in April 2020, is an example of this role.

AEMO will continue to convert our analysis and learnings into informative insights to support governments, stakeholders and our fellow market bodies, promoting a more collaborative approach to the reforms needed to incentivise least-cost investments and achieve more affordable energy for all consumers.

AEMO must also remain vigilant against a growing and more insidious phenomenon; increases in malicious cyber-attack. We will continue to upgrade and harden our systems against cyber activity, increase the cyber literacy of our employees and work with governments and agencies to support continued industry-wide cyber vigilance and resilience.

We are acutely aware of the economic challenges confronting both consumers and market participants at this time and are pursuing multiple complementary actions to support our stakeholders.

First, we have commenced a comprehensive organisational transformation program, supported by external advice. This is designed to make AEMO leaner and more productive, while continuing to invest to meet growing demands. The learnings from working during the pandemic will contribute to this, with further efficiencies to come.

Message from the Chairman and Managing Director/CEO (continued)

Second, we will undertake a review of our fee structures this year, in consultation with stakeholders. In the context of the major disruptions in the energy sector, we need to ensure that AEMO's fees are being paid by the participants who directly benefit from the activities we undertake to manage energy systems and markets. It is a careful balance as fees should also be adequate to recover current operating expenses and required capital investments, without overly burdening industry participants.

Third, we will engage with our members on options for alternative business structures to best enable AEMO and our members to reduce costs and deliver maximum consumer benefits.

Restraints in the existing fee structure impact our ability to accumulate reserves and make AEMO reliant on debt funding for any capital investment. AEMO's capital is principally used to pay for the development and maintenance of forecasting, planning and operating IT systems, implementation programs for new markets and regulatory compliance (including WEM and NEM reforms, 5-minute settlement (5MS) and cyber uplift), and the upgrade to a modern digital platform. While our current debt-funding envelope of up to \$500 million supports our ability to meet existing projected capital requirements, even with further actions to reduce our capital expenses, it is unlikely to be sufficient if new obligations or reforms continue to be imposed.

The current business model made sense in a period of modest incremental change, but in recent years AEMO has experienced a major increase in both market obligations and operational complexity. We do not foresee these trends declining in the near term, and consequently we will explore alternative approaches with our government and participant members that could prove more efficient.

A specific process improvement we want to pursue is a requirement for governments and market bodies to detail the cost impacts of rule changes on both AEMO and the market, making an up-front determination of who will pay as part of the cost-benefit analysis. It is critical for transparency and sound decision-making to better understand the costs and benefits of each reform and to agree as part of the process on how, and by whom, the reforms will be funded and implemented.

Finally, while we must all do our part, AEMO's overall costs represent a small fraction of consumers' energy bills. Our calculation is that for the average homeowner, AEMO's total operating costs represent less than \$4 annually. Consequently, even after reducing our own costs, AEMO's greatest contribution to reducing consumer energy bills is likely to be through the actions we take to ensure that sector investments are supporting the most economically efficient outcomes.

While our planning and market operations are designed to support participants to achieve efficient outcomes for consumers, we do believe more can be done. For example, in the past year, AEMO has commenced work on an effort to improve transmission company and developer access to power system information, accelerating the process of accommodating new connections and removing barriers to entry. This effort is designed to significantly reduce time and costs for developers and improve investor confidence. We are working to expand this capability this year through a modest investment in a new system simulator.

Similarly, AEMO believes there may be ways to implement participant compliance obligations and share critical data about the system, including weather forecasts, to both reduce costs and improve operations. We have started this conversation with industry members in the context of our build-out of the 5MS rule change and will seek further efficiencies in implementing future reforms.

The identification and adoption of these more systemic and comprehensive cost reduction activities requires a much more collaborative approach. This year AEMO will consult with our members to identify and implement changes in our stakeholder engagement processes, designed to increase mutual transparency and better identify solutions to benefit both members and consumers.

We look forward to sharing these plans with you and to working together to jointly navigate the energy transition, creating a positive energy future that will best support Australia's energy consumers and our economy in this most challenging but also exciting time for our industry.

Drew Clarke AO Chairman

Audrey Zibelman Managing Director/CEO

AEMO's mission, vision and values

AEMO is the independent electricity and natural gas system planner and system and market operator for the National Electricity Market (NEM), the Victorian Declared Shared Network (DSN), the Victorian Gas Declared Transmission System (DTS), the Declared Wholesale Gas Market (DWGM), Short Term Trading Markets (STTM), the Gas Supply Hub (GSH), Gas Bulletin Boards (GBB) and the Western Australian Wholesale Electricity Market (WEM).

Our responsibilities include the forecasting and planning of a reliable and secure power system, the forecast requirements for a reliable gas supply, the day-to-day operations of a secure power and gas system and competitive wholesale markets, and the effective operation of retail electricity and gas markets.

In fulfilling these obligations, AEMO is guided by the objectives set forth in the National Electricity Objective (NEO), the National Gas Objective (NGO), and the National Energy Retail Objective (NERO) for the NEM, and the Wholesale Electricity Market (WEM) Rules (Section 1.2) and the Gas Service Information (GSI) Rules in Western Australia.

Collectively, the NEO, NGO and NERO are '...to promote efficient investment in, and efficient operation and use of, electricity and natural gas services for the long-term interests of consumers of electricity or natural gas with respect to:

- Price, quality, safety, reliability and security of supply of electricity and natural gas.
- The reliability, safety and security of the national electricity systemⁱ.

In Western Australia, there is an additional explicit goal to reduce greenhouse gas emissionsⁱⁱ through non discriminatory market rules as well as the direct consideration of energy efficiencyⁱⁱⁱ.

AEMO's committed and passionate experts are proud to fulfil this critical role for Australian energy consumers and the energy industry.

AEMO's mission:

The design and operation of a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

Our Corporate Plan articulates foundational pillars and actions required to fulfil our mission. We have observed that the speed, scope and scale of the current energy transformation required us to adopt new ways of working and adapt our tools and technology to the changes occurring in the industry.

Even as the energy landscape continues to evolve, AEMO is constantly dealing with new and unforeseen challenges such as January's devastating bushfires and the COVID-19 pandemic. This reinforces the importance of adapting our ways of working to ensure we incorporate learnings from these events for the benefit of consumers, our members and the industry as a whole.

Recent Energy Consumers Australia (ECA) surveys have found that consumers are more satisfied with the value for money they receive for their energy services. This is despite consumer confidence in the market working to their benefit remaining low at (36%). It is fundamental to AEMO's mission to ensure our actions positively support the long-term interests of consumers. We can best do that by not only keeping our costs low, but also by supporting a more collaborative approach to identifying and delivering the market and regulatory reforms that incentivise least-cost investments and achieve more affordable energy for all consumers.

AEMO's commitment to our corporate mission is also evident in the vision we have created for our organisation and the corporate values that guide our behaviour.

Figure 1. Key statistics









Australia's energy

networks extend

gas

electricity

000km

918,000km







renewable energy sources





AEMO's vision:

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

In many respects, Australia is leading the world in the energy transformation, and doing so in one of the most challenging physical environments due to our size, population base, ageing infrastructure and climate. With these unique and complex challenges confronting us every day, AEMO is committed to demanding the best of ourselves in everything we do. AEMO will achieve our critical mission and vision because our cultural values, behaviours and associated ways of working are embedded in our organisation to match our purpose and resolve. We will continue to pursue our commitment to a working environment that attracts and retains the talent required and develop new ways of working that enable our people to collaborate, excel and deliver value to consumers and the industry.

In the past year AEMO has reviewed and refreshed our corporate values. These values are fundamental to how we act to capture the opportunities, and meet the challenges, that lay ahead. Our values, along with our mission and vision, are what make us AEMO and are evidenced through the behaviours we emulate in our interactions with stakeholders and among ourselves.

Figure 2. AEMO's values

Inclusive

Strength through diversity and collaboration

We encourage our people to work collaboratively with all stakeholders to solve complex problems and deliver on our Corporate Plan and obligations. We celebrate inclusivity and diversity of thought. We continue to cultivate a sought-after environment where our diverse, talented people can thrive, and AEMO can become an employer of choice.

- 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 speak candidly and stand up for what we know is true by sharing reliable, evidence-based knowledge and demonstrating integrity of character. Our goal is to be known as thought leaders in the industry and to be trusted as an independent source of truth by both our stakeholders and Australian consumers.

- 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

To ensure we remain a reliable source of truth in the industry, we create an environment of trust for our people and foster innovation by encouraging them to use their collective expertise to identify solutions and deliver on their commitments. At AEMO, we work together with our stakeholders to deliver results for the benefit of Australian consumers and the industry as a whole.

- 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 pursue technical excellence through collaboration and innovation, to produce best-in-class solutions to emerging challenges, deliver benefits to consumers, and shape a better energy future for all Australians. We continue to build on our key assets - our people - by broadening our technical skills and evolving our culture to continue to embrace learning and build our organisational knowledge.

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

Embracing disruption to deliver the future energy system

Australia's energy landscape has always been a complex intersection of technical, regulatory and market forces. The pace and scope of system transformation and societal change, as well as unprecedented climate and economic events, emphasise the inherent challenges of designing and operating energy systems and the evolving demands on AEMO's technical capabilities.

Continuing rapid and complex transformation across Australia's energy systems forces the need for increased resilience and adaptive regulatory structures. Our summer of unprecedented weather events, followed by the COVID-19 pandemic, demonstrates the need for increased vigilance in supporting the reliable delivery of affordable energy while taking necessary steps to increase system resilience to minimise disruptions for consumers and businesses.

For AEMO to continue to advise on how best to focus investment in a future energy system to deliver enduring value to Australian consumers, we must maintain a deep understanding of technical innovations and the spectrum of changes and events that can impact energy systems and markets. This will allow us to increase the value and benefits to consumers. AEMO must also have capabilities to manage secure and reliable system and market operations in real time, in the face of a challenging operating environment, while anticipating uncertainties and responding to the simultaneous occurrence of unforeseen events.

AEMO's Corporate Plan for Financial Year 2021 (FY2021), reflects the external factors disrupting and transforming the Australian energy industry, including the as yet unknown medium- and long-term impacts of the COVID-19 pandemic. The following seven drivers of change will have significant impacts on the industry and AEMO across the next three financial years.





Australia's world-leading adoption of solar PV and increasing uptake of smart technologies and energy management systems^{iv} is allowing a new and exciting household level of energy consumption, participation and control. This increase in consumer-driven energy production and management is driving accelerated innovation and new opportunities. While consumer choice is being enhanced by simplified data access for individuals and third parties^v, soon there will be significant benefits from a two-way market system that allows both the simultaneous use and production of energy. To continue to maximise benefits for energy consumers, AEMO will collaborate with relevant parties to resolve:

- The technical and operational challenges of distributed energy resources (DER) and the complex task of managing low-demand periods.
- An adaptive least-cost market design that ensures reliability and security, while incentivising consumer participation and innovations.
- More timely access to data and information to better enable consumers to exercise choice.

Ageing infrastructure and integration of renewable energy resources

Across the next 20 years, about 15 GW or nearly 65% of Australia's coal-fired generation will retire, and based upon current economics and consumer preference, will likely be replaced by a combination of renewable energy resources, storage and flexible gas plants^{vi}. The combination of challenges associated with managing power systems with high levels of inverter-based variable energy resources, while managing the declining performance and falling revenues associated with ageing thermal units, significantly changes the requirements for maintaining secure and reliable energy systems. System planning and operational capabilities are required to efficiently manage and address these risks:

- The integration of at least an additional 30 GW of variable renewable energy (VRE) capacity – beyond current project commitments – at least cost^{vii}.
- The incorporation of at least a further 21 GW of firm dispatchable generation to manage the volatility associated with a highly weather-dependent system^{vii}.
- The forecast depletion of existing gas reserves and the timing of the emergence of hydrogen^{viii}.
- Agile policy and regulatory responses to ensure greater transparency and a modern market that incentivises and increases system security services^{ix}.



Digital disruption throughout the energy sector is causing an exponential increase in the creation, collection, dissemination and use of data. This growth requires new industry-wide systems and processes to manage and ensure the integrity of energy information. In addition, advances in computational capability, analytics, design and digitalisation require a corresponding adjustment to energy system infrastructure and the energy grid to support more cost and price efficient, productive, real-time operation of the energy systems and markets. AEMO will harness the numerous opportunities and coordinate industry where appropriate to:

- Ensure secure storage of ever-increasing data.
- Increase the visibility of and easy access to data, enabling better choices for consumers.
- Develop systems and technologies critical to the operation of the energy system and markets.
- Investigate and provide enhanced technologies to facilitate a more interconnected energy system.
- Work with the Commonwealth, States and industry to improve cyber readiness and resilience.

Efficacy and effectiveness of regulatory and market arrangements

The rapid pace of change in technology and generation mix across the NEM is currently outpacing the rate at which market bodies can modernise the regulatory and rule frameworks that govern our system. Energy markets and regulatory frameworks must be able to adapt with the speed necessary to provide investor confidence, take advantage of low-cost capital, and empower industry to develop and deploy solutions to emerging challenges. In collaboration with stakeholders, AEMO will leverage our knowledge to promote effective rule and market design to benefit businesses and consumers. Although AEMO and market participants continue to focus on timely regulatory and market changes through coordinated rule change processes, being led by the Energy Security Board (ESB), consensus must be gained on:

- The use of adaptive regulatory tools and finalisation of the regulatory sandbox approach.
- The application of a portfolio of current and prospective rule changes to facilitate the transition to the future energy system.
- The policy and regulatory responses required to ensure greater transparency of information associated with operating and planning for the future energy system.



A turbulent year of unpredictable events has highlighted the increasing resilience needed to better meet the challenges presented by climate-driven, international, economic and human health events. In the first six months of 2020, AEMO managed significant bushfires, damaging storms and the COVID-19 pandemic. While these events are unconnected, they all require effective system resilience and responsibility to manage and ensure:

- Energy supply is protected from the effects of increasing frequency, extremity and scale of climate-induced weather events.
- Our ability to respond to and recover from events is as fast and economically efficient as possible.
- That the energy industry can meet any emerging threats, including the substantive consequence posed by malicious cyber-attacks.
- Our organisation is lean and focused on the cost and value of energy to consumers through both internal efficiency improvements and increased support for market participants.

Proliferation of industry participants across the energy ecosystem

The growing number of consumers, market participants and stakeholders reinforces the importance of effective collaboration, to recognise and solve complex technical, economic and social challenges for the Australian energy system, markets and its consumers. Throughout the term of our Corporate Plan, AEMO will build and improve its stakeholder engagement, transparency and collaborative capacity to capture new members and add value to our participant members, stakeholders and consumers by:

- Building a new stakeholder framework to better align and leverage two-way communication and engagement.
- Reforming and refreshing our industry forums to ensure they remain fit-for-purpose, engaging and valuable.
- Better coordinating and leveraging AEMO's intellectual know-how for the benefit of the industry as a whole.
- Consulting on a fee structure that ensures AEMO's costs are understood, agreed to and paid for efficiently and equitably.

Evolving workforce and labour market

AEMO is a critical member of the larger energy ecosystem in Australia. It is crucial that we are an employer of choice that can attract, retain and develop an exceptional and talented workforce that enables us to meet the challenges and opportunities we confront today and into the future. AEMO's workforce must possess the right skills and competencies to plan, develop, support and maintain modern and digital energy systems and markets. Our employees must be skilled at multi-disciplinary capabilities, ideation, collaboration, innovation, influencing and change management. Our leaders must display strong business acumen and leadership skills to help facilitate the energy transformation and lead our people by:

- Ensuring management sets the example and lives by AEMO's mission, vision and values.
- Fostering a more agile workplace and transparent decision-making process.
- Maintaining a healthy and rewarding culture that embraces alternate ways of working post COVID-19.

COVID-19 highlights the importance of a resilient energy system

The pandemic has reinforced the important role that energy plays in everyday lives – supporting consumers, businesses and the economy. The pandemic has also highlighted areas of risks and opportunities for our organisation and the energy eco-system around resiliency particularly at a time of significant sector change.

On the heels of a spring and summer of unprecedented bushfires, and in the midst of the continued transformation to the power sector, we are also faced with a world-wide pandemic. COVID-19 is expected to have profound short-, medium- and longer-term impacts on the local and global economy, the energy industry, and the way we work. The possible changes that stem from the challenges and potential opportunities that COVID-19 presents affect all of AEMO's strategic pillars.

With this in mind, AEMO established business continuity processes to enable us to respond to and navigate the evolving COVID-19 situation. This included working with the industry and government to manage a range of issues to ensure the safe and secure operation of the energy system and initiating internal processes to protect the health and safety of our employees. Contingency planning processes have been employed, using scenario-based analysis to better understand what could happen next in terms of the virus, the economy, the industry, and the potential risks, opportunities and actions for our operations over multiple time horizons. These exercises have been important in enabling us to prepare and respond to the evolving COVID-19 situation, but to also reinforce the key activities to be undertaken by our organisation over the coming year as part of this Corporate Plan.

The pandemic has reinforced the important role energy plays in everyday lives, and how important this essential service is in supporting consumers, businesses and the economy. The pandemic has also highlighted areas of risks and opportunities for our organisation and the energy ecosystem around resiliency:

Grid resilience: The energy sector is already undergoing significant change. The pandemic has highlighted the potential for system security and reliability issues to emerge through risks such as falling demand exacerbating system issues, increased forced outages or supply chain issues, and supply side/resource adequacy risks. These events highlight the importance of having the appropriate tools and processes in place across our forecasting, planning and operational functions to enable AEMO to respond with agility to an expanding range of complex situations and reliable state.

Market and regulatory resilience: There is a significant reform agenda underway to ensure that the market and regulatory regime is able to support the changing power sector. The pandemic has highlighted the importance of these reforms to support the transition and the need for a fitfor-purpose regulatory framework to keep up with an everevolving energy system. The pandemic has also highlighted the opportunity to work together with market bodies and industry to ensure reforms are sequenced and that we consider a whole-of-system implementation approach to reduce overall costs to service energy consumers.

Financial resilience: In recent years, operational complexity, compliance requirements and reform implementation obligations have all expanded significantly. Events during the past summer and the impacts of COVID-19 further increase market uncertainty and operational complexity. All of this also presents opportunities to adapt our work practices. To that end, AEMO is using the learnings from our COVID-19 response as a catalyst to initiate a comprehensive review of both our ways of working and our approaches to technology investment. To ensure we do not overlook opportunities, we have also engaged an external consultancy to assist our review. The pandemic has also reinforced the need to review our fee recovery model to ensure the services we provide are aligned and better funded by those who benefit, and the efficiency of our business structures is enabling efficient market outcomes and consumer benefits.

Rethinking the organisation - how we work: To respond to the evolving COVID-19 situation, we have had to work in ways we never thought possible prior to the pandemic. Like many organisations, AEMO has been provided with opportunities to review and adapt our work practices across people, processes and technology, taking the learnings to set the new normal for our organisation and help us become more nimble and effective in how we deliver our services and get our work done.

A number of the actions identified in this Corporate Plan look at addressing the resiliency issues identified above, and have been built into the actions incorporated in each pillar. We continue to capture the learnings that have and will emerge to inform our recovery process and focus our post-pandemic practices. We look forward to working with the industry to share knowledge and learn from each other in these unprecedented times. We will continue to monitor the evolving COVID-19 situation and particularly the economic impacts, to ensure we are able to appropriately respond in line with our core mission - the design and operation of a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

We will pursue six pillars to benefit consumers in a time of change

AEMO's core purpose is constant, however the accelerating change and increased market disruption across the next 10 years means we will need to build new capabilities and practices to continue to deliver a safe, reliable and cost-efficient service to consumers.

AEMO's Corporate Plan is built on six strategic pillars to help it meet the challenges of the next decade (see Figure 4). The first four pillars span our core responsibilities: to plan and operate Australia's energy systems and AEMO's exchanges (markets) for the economic benefit of Australian consumers:

- 1. Reliable, secure and efficient system operations focuses on the operation of the changing and evolving energy system.
- 2. Future system design challenges us to co-design, plan and help facilitate the system transformation.
- 3. Adaptive markets and operations shape the way we collaborate, discuss and implement effective regulatory and market reforms.
- 4. Consumer engagement and access ensures we put the consumer at the heart of our purpose and assist the industry in exploring and integrating solutions designed to meet their needs.

Figure 4. AEMO's strategic response to change - six strategic pillars

The final two pillars represent the technologies and capabilities AEMO requires to deliver our responsibilities now and into the future:

- 5. Digital and data unlock the power of technology to advance energy systems and markets in a coordinated and cost-effective way.
- 6. People, culture and capabilities build a workforce and culture that excels and delivers value to the industry and consumers.

Our strategic approach embodied in these six pillars is enabled through the organisational foundations of transparency and effective stakeholder engagement, financial and corporate sustainability and good governance.

This Plan offers an understanding of each pillar and foundation: why it is needed, its core objective over the next three years (FY2021 to 2023), and the outcomes that will be pursued in the immediate year (FY2021).



Foundations that support all pillars

Stakeholder engagement and transparency Develop aligned and fit-for-purpose engagement tools and skills to bring stakeholder voices inside our organisation and deliver AEMO's voice transparently and with clarity.

Financial and corporate sustainability Ensure efficient business operations to enable AEMO to meet its obligations.

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Corporate governance Maintain AEMO's legal and ethical standing in the eyes of government and industry members, stakeholders, regulators and consumers and ensure business continuity at all times.



1. Reliable, secure and efficient system operations

As conventional thermal generators exit, to be replaced by a combination of weather-dependent VRE and consumer-led DER, AEMO must ensure sufficient dispatchable resources and system services are retained to maintain reliability and guarantee security.

To address increasing challenges to system strength, frequency control, reliability and security, AEMO will pursue industryleading technical and engineering capabilities and evolve our support and computational tools to strengthen real-time operations and enable the control room of the future.

AEMO will focus on building resilience through enhanced and coordinated business continuity management plans and programs, which build on our COVID-19 response. Consistent with AEMO's approach to summer preparedness, we will apply and augment crucial learnings into our current investments in relevant capabilities and digital systems.

Our objective is to:

Maintain energy system reliability by adapting to changes in generation, including fuel and demand forecasting capabilities.

Key areas of focus for AEMO over the coming three years are:

- The need to plan for and manage the exit of traditional generators while ensuring timely replacement with firmed generation and upgrades to the transmission system are coordinated in the most efficient manner.
- The development of new decisional and operational tools that support real-time operation of the energy system and enhance energy system visibility and predictability by leveraging advanced analytics and forecasting capabilities.
- Enhanced and coordinated system and business continuity management programs and plans to build operational resilience of the energy network.

The following table sets out the 3-year goals we will pursue for our Reliable and secure system operations pillar and the priority actions and outcomes we will deliver in FY2021.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Secure energy system operations - we continuously adapt and innovate to ensure Australia's energy systems can be securely and reliably operated under all foreseeable conditions	f	Primary frequency control and minimum	 Implement Primary Frequency Response (PFR) 	 Stage 1 (above 200 MW) implemented and tested Stage 2 and 3 assessments and reviews completed
		demand	 Identify and develop responses to decreasing minimum demands, voltage management and increasing VRE 	 Minimum demand levels identified for each region and operational procedures to manage these are in place
Goal 2 Operational tools and forecasting - we leverage advanced analytics, tools and forecasting capabilities to operate and coordinate the energy system effectively, as new dominant energy system co-dependencies increase	1000 1000 1000 1000 1000	Forecasting and system operations technologies	• Continue to improve operational forecasting systems and upgrade system operation tools to enable management of the changing generation mix and weather as a fuel, including day ahead, reliability and security forward forecasts	 Operational forecasting system lifecycle upgrades completed Roadmap for supporting future market operations completed ST-PASA system replacement and system operation tools requirements scoped and design completed
Goal 3 Operational resilience - we quickly recover from disruptions to generation, fuel supply and transmission, weather and other external disturbances, to continually and securely operate Australia's energy systems		Operational resilience	• Engage with stakeholders to review learnings from recent operational and environmental events to determine what changes are required to rules, procedures, standards and IT systems to improve operational resilience and business continuity prior to broader reforms	 Rule and procedure changes identified to improve understanding of generator (including fuel) and transmission reliability and capabilities Gaps identified for operational continuity and cyber response, including COVID-19 learnings with implementation plans developed



2. Future system design

The future for Australia's electricity and gas systems will be fundamentally different. The market must be able to accommodate a diverse generation mix with a high share of inverter-based VRE, two-way household-level energy flows, enhanced inter-sector coupling, and new technologies such as hydrogen. This is happening under the lens of increasing weather extremes and climate events and heightened risks associated with the creation and use of escalating amounts of data.

AEMO, as the system planner, has a responsibility to ensure that the energy system remains fit-for-purpose, keeps pace with consumer expectations, enables advances in technologies, and incentivises timely and efficient investment to deliver benefits for consumers. The transition to our future energy system must balance the multiple objectives of lowcost and economic efficiency, system security and reliability and consumer choice, as well as government priorities including environmental and emission policies.

Our objective is to:

Facilitate the future energy system to enhance reliability and security while lowering costs and incorporating emission policies.

In collaboration with stakeholders, the key areas of focus for AEMO over the coming three years are:

- The design and implementation of whole-of-system highquality actionable blueprints across electricity and gas, to include an actionable ISP for the NEM, a Whole of System Plan (WoSP) for Western Australia, and DER blueprints and roadmaps for both markets.
- Studies into and development of actionable blueprints (including technologies for electricity and hydrogen) for a technically robust, climate-resilient system.
- A fit-for-purpose grid connection process.

There are three primary goals that underpin our Future system design pillar through which we will pursue a series of priority actions and outcomes in FY2021.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Energy blueprints - we continuously improve and seek government, consumer and industry input on high-quality blueprints for Australia's future energy system across electricity and gas, through the ISP, WoSP,		ISP and statutory publications	• Deliver the ISP every two years as well as all other statutory publications	 Framework for the 2022 ISP developed incl. resilience framework, H2 impact, novel storage solutions 2020 ESOO and 2021 GSOO delivered Contribution provided to the design of the inaugural NSW REZ
ESOO and GSOO		WA WoSP	• Support delivery of Western Australia's 2020 Whole of System Plan and improve AEMO's modelling capability to support future WoSPs	 WA Government-led 2021 WoSP published, well received by key stakeholders and priority projects initiated, and WEM Market model created within AEMO
		Renewable Integration Study (RIS)	 Anticipate and address key system security and operability issues 	 Implementation commenced of RIS Stage 1 workplan Scope of RIS Stage 2 report agreed RIS Stage 2 report delivered to plan
		Novel solutions	• Trial new technology solutions to overcome system limitations, e.g. system strength	 Technology white paper developed to highlight the current state and potential applications of grid forming inverters
Goal 2 Energy system implementation - AEMO has a fit-for-purpose grid connection process and supports the ongoing development of transmission infrastructure that meets consumer needs		Grid connections	 Improve NEM grid connection process through improved account management, new tools, better processes and information Consider rule changes to better manage connections in marginally stable parts of the system 	• New tools and processes implemented that will give connection applicants greater transparency of timelines and progress of applications as well as a better understanding and timely resolution of issues that must be resolved
		ISP implementation	 Progress and support delivery of Group 1 and 2 ISP projects 	 Actionable ISP projects delivered to plan
		SWIS grid connection	 Work with key WA stakeholders to improve Generator Performance Standards (GPS) and Generator Interim Access (GIA) to facilitate new connections prior to completion of WEM reform 	 New generator connection to the SWIS enabled, and new GPS incorporated into WEM/SWIS Technical/Market Rules
Goal 3 Gas supply and market transparency - AEMO has systems and processes that support increased gas supply and market transparency	1	GSOO and Gas Bulletin Board (East coast)	 Identification and analysis of gas infrastructure that could address the forecast gas supply shortfall in the southern states 	• Analysis of gas supply options completed for the southern states included in the 2021 GSOO



Despite world-leading uptake in renewable energy resources, Australia's market architecture is adapting more slowly than international peers. It is becoming increasingly urgent that we modernise the regulatory and market framework to better support and incentivise a transition to future energy markets.

There is a range of reforms and regulatory changes being driven through the Ministerial Council on Energy (MCE)^{*} that AEMO is supporting. However, more can be done to ensure cost-effective VRE and DER integration, data transparency, system security, storage and ancillary services and new market structures. Many of these reforms will need to be planned and thoroughly tested through trials before full implementation, creating further cause for urgency.

Throughout this it will be vital that AEMO maintains a transparent and open dialogue through partnerships with policy makers, market bodies, the wider industry and consumers.

Our objective is to:

Implement and shape new market arrangements together with our stakeholders in line with regulatory processes, to support the energy transition to the benefit of all Australian consumers.

Key areas of focus for AEMO over the coming three years are:

- To support the ESB or its equivalent, Australian Energy Regulator (AER) and Australian Energy Market Commission (AEMC), and work with market participants and consumer representatives, to identify beneficial changes to current regulatory and market design.
- To collaboratively investigate and progress policy and rule changes necessary to ensure efficient generation, fuel supply, storage and load response reliability and resilience, and the provision of essential system services.
- To, where feasible, minimise the implementation costs associated with legal and rule changes by working with participants and stakeholders to co-design improvements in the efficacy of energy system and market operations.

We will deliver the following priority actions and outcomes in FY2021 in pursuit of three goals for our Adaptive markets and regulations pillar during the term of our Corporate Plan.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Future market design - together with our stakeholders, we facilitate and shape new market arrangements to support the energy transition and benefit all Australian consumers	WEM reform	• Continue to support the WA Government's ETS Foundational Regulatory Frameworks (FRF), including finalisation of new market design and implementation planning	 AEMO provides support to enable WA Minister for Energy approval of revamped WEM Rules AEMO Implementation Plan, conceptual architectural design and initial projects complete 	
	Pilbara reform	• Work with Energy Policy WA and stakeholders on Pilbara Independent System Operator (ISO) implementation and if requested by the WA Government, take on and implement the new Pilbara ISO	• New Pilbara ISO function implemented (Subject to WA Government request, timing and funding)	
		Market strategy 2025	• Continue to support and drive market design changes required via ESB or equivalent, AER and AEMC to support system operations and reliability	where required for security services
	Gas reform	 Continue to work with regulatory processes and stakeholders to implement beneficial changes to the Declared Wholesale Gas Market (DWGM) and Gas Bulletin Board (GBB) 	 Industry-wide gas market efficiency options identified 	
Goal 2 Current market reform - all market reform programs are successfully implemented and developed in collaboration with stakeholders	● ● ● ●	NEM market changes	 Implement agreed market reform programs that improve the efficiency of the wholesale and retail market arrangements by continuously engaging with stakeholders through to optimise outcomes for businesses, industry and consumers 	 Market arrangements implemented that improve customers and information transparency Positive feedback received from stakeholders
Goal 3 NEM efficacy and effectiveness - together with stakeholders review the prioritisation, market responses and risk factors in the NEM in view of recent operational outcomes and external shocks such as COVID-19	NEM arrangements	• Work with stakeholders and regulatory institutions to improve the financial resilience of the NEM in normal operation and in the event of external shocks such as COVID-19	• Operational improvements identified to support improved financial resilience and financial support of the NEM under a variety of scenarios	
		• Review recent operational separation events and the effectiveness of market arrangements to respond in a timely manner and resolve issues where systemic risks exist	 Market and operational issues identified, prioritised and resolved 	



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

To support consumers, increased access to data and information will be important. AEMO is working with the Australian Competition and Consumer Commission (ACCC), Data61 and the industry to support innovative solutions to tailor services to consumer needs.

Key foundational reforms that improve the productivity and resilience of DER devices, and the ability for that capability to be accessed, will enable local network issues to be managed, system security to be enhanced, and a two-way system created for the benefit of energy users. Implementing these reforms and undertaking relevant trials in partnership with the industry will ensure consumers extract full value from these technological advances.

To do this successfully, AEMO will continue to work with the ESB or equivalent agency, regulatory bodies and industry to promote power system coordination and market design necessary for a two-way power system, including opportunities for new and traditional market participants to enhance value to consumers.

Our objective is to:

Empower consumers to exercise choice and control in the energy market through supportive regulation and easier access and sharing of energy data.

Key areas of focus for AEMO over the coming three years are:

- To enable consumers and their representatives to access data and information through the implementation of Consumer Data Right reforms, and transfer retailer data in a timely manner to enable consumers to obtain preferred deals.
- To increase consumer and third-party access to markets, initially through the Wholesale Demand Response draft rule change (WDR)^{xi} and VPP trial.
- To initiate minimum DER technical standards, covering inverter standards, cyber requirements, communication, and interoperability capability.
- To conduct trials to develop fit-for-purpose platforms to leverage DER investments for the benefits of all consumers connected to the energy system.

We will pursue two core goals over the next three years for our Consumer engagement and access pillar and deliver the following actions and outcomes in FY2021.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Distributed energy resources - we can reliably and securely manage markets and energy systems with high levels of distributed energy		DER implementation	• Work in partnership with ESB or equivalent, market bodies, and stakeholders to design and implement technical integration of DER	 WA Government DER roadmap implementation supported Minimum DER technical standards developed and implemented
resources, by enabling greater choice, business models and participation for consumers	*	Virtual Power Plants (VPPs)	• Leverage learning from trials to introduce third parties and alternative models to provide aggregated resources into markets	 Operationalisation plans for VPP trial developed and implementation commenced
	*	Wholesale Demand Response (WDR)	• Implement third-party demand response service providers to participate in the wholesale energy market	• Design, procedures and technical specifications completed for the integration of Wholesale Demand Response
Goal 2 Choice and control for consumers - we enable easier access and sharing of energy data (through accredited third parties) and have the means to exercise greater choice and control to meet their own energy needs	*	Consumer Data Rights (CDR)	• Work in partnership with ACCC, Data61, and industry to facilitate consumer and third-party access to data, so consumers can make informed decisions about energy	 CDR Gateway design completed and implementation in progress (in accordance with final government timelines and funding)
	*	Customer switching	 Implement two-day switching to enable consumers to access their energy supplier of choice within two business days 	 Two-day switching implementation well progressed for go-live in early FY2022



AEMO's technological architecture is being challenged by market disruption and the exponential increase in the creation, collection and use of data. Legacy systems must be modernised to accommodate the increasing need for speed, capacity, flexibility, scalability, data management and cyber protection. In addition, our technologies need to better facilitate and enable adoption of changes in systems, markets and policy.

AEMO proposes to implement a modern digital platform which will lower barriers to entry, enhance competition and unlock new services and value for consumers.

A new digital platform is an essential investment for our future energy system and should be designed to achieve long-term benefits that reduce duplicated investment and operating costs for AEMO and the industry.

This also needs to improve service delivery and retain flexibility for market participants and consumers, with improved data access, consumer choice and user experiences.

Our objective is to:

Deliver a modern digital platform to provide more reliable and transparent data, improve system reliability and forecasting, and lower the transactional costs to industry and consumers.

Key areas of focus for AEMO over the coming three years are:

- The development of systems and technologies critical to the operation of the energy system and markets.
- The investigation and provision of enhanced technologies to facilitate a more interconnected energy system, which achieves lowest-cost outcomes for consumers by maximising the effective use of all connected devices.
- The increased provision of data and transparency to markets and consumers through digital channels.
- The security of Australia's critical national energy data and systems from the threat of a cyber-attack.

Over the next three years we will progress four goals to deliver our Digital and data pillar and achieve the following priority actions and outcomes in FY2021.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021		
Goal 1 Efficiency and experience - we provide efficient online experiences	**		 Implement new web and participant engagement platforms 	 Number of portals for interacting with AEMO reduced 		
to consumers, participants and staff, through automation and technology solutions			 Provide more granular and timely data to members and participants 	 AEMO data warehouse developed and populated with new data sets for use by industry 		
Goal 2 Data and analytics capability - we develop new capabilities enabled by technology such as cloud infrastructure, artificial intelligence and machine learning		Digital program	• Develop strategic forecasting capabilities to absorb new data sets, fine tune algorithm accuracy and improve scalability and timeliness	 Existing medium-/long-term forecasting systems upgraded Short-term forecasting systems redeveloped 		
	0		• Further develop AEMO's Data Platform to allow the use of data by Industry, researchers and others to create value	 Data platform on scalable cloud environment delivered and made available digitally in a secure manner 		
Goal 3 Cyber security - we safeguard AEMO's and Australia's energy systems and data from malicious intent and leakage and work with participants to improve cyber readiness and resilience					 Uplift capability across cyber and data control to prevent/ detect attack and control data leakage 	 Cyber security software and processes delivered to NIST standards Identity access management to AEMO systems and platforms completed
			 Contribute to cyber industry working groups to improve detection and incident response protocols and processes Involvement in cyber incident response exercises with participants and government 	 Industry preparedness to detect and coordinate response to cyber incidents improved, in conjunction with federal government agencies and subject to enabling cyber legislation, regulation and funding 		
Goal 4 System and market technologies – we implement industry technologies on-time and to budget	Œ	5MS and GS	 Implement system and digital components of 5MS and other regulatory projects 	 NEM 5MS implemented and ready for Industry testing 		
		Australian Energy Simulation Centre	• Develop simulation tool to improve system design, operation and connection processes	• First phase of simulation tool developed to assist in connection process		



AEMO is a knowledge-based engineering, economic and commercial organisation. We seek to attract and develop the best and brightest people, who are highly regarded in the industry for their technical and professional excellence, and role model our values.

None of our corporate objectives can be achieved unless AEMO remains a sought-after working environment and strives to be the employer of choice for talented people who will enable us to meet the complex challenges of our industry.

Utilising this talent, and realising the potential of every individual who works with AEMO, requires shared values and an environment where our people can thrive and grow. Our focus is to create a strong cultural foundation that empowers our people to make the right decisions, feel safe and included in a supportive and flexible workplace, embed resilience and adapt to the rapidly changing external environment.

The key elements of our strategy are clearly anchored to leadership and talent, change enablement, flexible ways of working, effective workforce planning and efficient delivery of human resource services and solutions.

All these elements are designed around our shared values of Inclusive, Integrity, Empowered and Excellence as we work to design and operate a sustainable energy system that provides affordable, safe and reliable energy for all Australians.

Our objective is to:

Continue to attract, retain and develop the critical leadership and technical capabilities of our people to deliver our strategic business objectives in the most efficient way.

Key areas of focus for AEMO over the coming three years are:

- To identify, design and build a diverse, inclusive workforce with the critical skills and competencies to support the energy industry of the future.
- To provide a more flexible and inclusive working environment which supports our workforce through COVID-19 recovery, and also enables innovation, agility and performance across our workforce.
- To improve our human resource practices to support our leaders, the changes we need to implement, and to ensure we achieve our talent outcomes.
- To continue to build a learning culture so that our people can adapt and excel as the energy industry transforms.

To achieve our People Objective, there are four key goals and a series of priority actions and outcomes in FY2021, as outlined in the following table.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Values-based culture - our people consistently demonstrate our shared values and behaviours in order to create a culture where people are empowered, adapt to change and can thrive and grow	E	Culture Roadmap	 Values and behaviours embedment Implement Ways of Working tools, flexible work policies and training to enable more flexible work practices and support remote working 	 Culture survey (OHI) actions are implemented AEMO's values behaviours are designed into our performance review process Flexible work policy, and tools are implemented
Goal 2 Capable people - we are known for our industry expertise and leadership across all the domains we operate, to support AEMO's role in the Australian energy industry now and into the future	<u>ii</u>	Capability Plan	 Implement targeted development programs in Leadership, Change, Stakeholder Engagement and Business Acumen Manage succession plans for leadership pipeline and critical roles Uplift Human Resource (HR) Foundations to Human Resource Information System (HRIS), HR processes and team ways of working 	 People capabilities uplifted and positive impact to learning and business outcomes observed via development review and program evaluations Leadership and critical role succession plans are in place and associated talent development actioned HRIS roadmap agreed and HR process improvements achieved
Goal 3 Workforce optimisation - we have the right people, with the right competence, in the right place, at the right time, at the right cost to deliver on our operational and strategic		Workforce Plan	 Develop an enterprise workforce plan for FY2021 and beyond, aligned to resource and capability requirements of the new AEMO Operating Model 	• Enterprise strategic workforce plan developed and implemented to support labour objectives of the Operating Model review
objectives			• Streamline labour utilisation across the enterprise	 Labour plans and budgets agreed for FY2022
Goal 4 D&I by design - we are recognised as having an inclusive work environment, which demonstrates that diversity, in all its forms, is truly valued and celebrated		Diversity & Inclusion Plan	Continue to implement the Diversity & Inclusion Plan	• Diversity and inclusion principles and practices are embedded in key Human Resource processes for pay equity, talent acquisition, talent development and promotion

Our pillars are underpinned by firm organisational foundations

Our strategic approach is enabled through an organisational foundation driven by transparency and effective stakeholder engagement, financial and corporate sustainability and good corporate governance.

Stakeholder engagement and transparency

The scale of challenges confronting the transforming energy ecosystem necessitates a step change in collaboration and engagement by AEMO with our stakeholders. This step change will also require AEMO to consistently deliver clear, transparent communication.

Members, stakeholders and industry partners

There are currently 423 market participants in the NEM and 80 in the WA WEM, with 153 participants in the east coast Gas Markets and 68 in the Western Australia Gas Services. As the energy sector transitions, AEMO's members and stakeholders are rapidly growing in number and becoming more diverse in fuel, technology type, service provision and location.

Along with market participants, AEMO works closely with Commonwealth and state government departments, the ESB, market bodies, industry associations, official AEMO members, consumer representatives, non-government organisations, universities, research agencies and international energy organisations to build and share expertise and harness insights in the long-term interests of consumers.

AEMO is adopting a participatory model of stakeholder and member engagement, to transparently and collaboratively help manage the challenges and opportunities that the ongoing energy transition presents.

Our objective is to:

Ensure aligned and fit-for-purpose engagement tools and skills to bring stakeholder voices inside AEMO and deliver AEMO's voice transparently and with clarity. In FY2021, in conjunction with stakeholders and members, AEMO will co-design a new engagement framework, refresh engagement practices, and seek to improve dialogue with stakeholders and members on our core workstreams and strategic priorities. Through this process, AEMO will align and integrate the existing plethora of working groups to better capture opportunities for collaboration both in problem definition and solution analysis.

We will also work with industry and consumer stakeholders to consult on and implement a structure of co-chaired committees across AEMO's system design, markets, operational and WA functions, to enable deeper partnerships and shared learnings.

Over the coming three years, we will have an increased emphasis on efficient stakeholder engagement and enhanced industry, member and government collaboration to help shape Australia's energy future, for the betterment of all Australians. We will do this through our engagement priorities:

- Increased transparency regarding AEMO processes, data and analysis to support a shared understanding of emerging problems and a collaborative approach to devising solutions.
- Timely release of insights into market incidents and emerging challenges, to provide information for participants to manage business decisions and enable better collaboration across the sector in development of solutions.
- Establishment of an ISP Consumer Panel to commence in September 2020, to better integrate the perspective of consumers into the 2022 ISP.

We will continue to progress three primary goals to ensure we understand, collaborate and incorporate the needs of our stakeholders and members in our core workstreams and strategic priorities and achieve key actions and outcomes in FY2021.

3-year goals	Drivers	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Stakeholder sentiment - we will measure and share stakeholder assessments of our engagement processes and their effectiveness	***	Stakeholder sentiment	• Implement AEMO-wide stakeholder sentiment assessment process and measure stakeholder's views on AEMO engagement	 Initial stakeholder engagement survey results published and ongoing stakeholder sentiment assessment process established
Goal 2 Stakeholder engagement and transparency - we have consistent, coordinated external interfaces and effective engagement opportunities for diverse stakeholder needs	**	Transparency for stakeholders	 Continue to develop a clear external interface, aimed at communicating transparently and working collaboratively with stakeholders Further understand the nature of information stakeholders value to inform their business operations and implement identified improvements from FY2020 Review existing fora and committees in consultation with industry participants and consumer representatives 	 Transparency improved and data and information available to participants (in accordance with agreed scope for FY2021) Renewed fit-for-purpose fora and committee structures implemented
Goal 3 Reform agenda - we collaborate with stakeholders to champion energy reform that best serves consumer interests through efficiency, cost- effectiveness and energy bill impact		Reform agenda	 In partnership with members and consumer advocates, identify, assess and influence reform activities that will deliver the greatest value to consumers in Australia's energy transformation 	 Reform agenda progressed with stakeholders and participants

Financial and corporate sustainability

Annual budget, fees and levels of cost recovery

Each year, AEMO prepares a budget outlining its fees and charges for each energy market we operate and the recovery of other services consistent with our legislative authority. In Western Australia the fees and charges are approved by the Economic Regulation Authority (ERA).

We currently operate on a 'fee for service' and cost recovery basis, recovering all operating expenditure through approximately 20 different fees levied to participants. Each fee is limited to recovering the costs of providing that particular service.

COVID-19 impacts

Participant fee recovery, in some instances, is calculated on the basis of energy consumption.

The COVID-19 pandemic is impacting AEMO's actual and budgeted revenue, due to falling electricity demand reducing total MWh volumes. In relation to the NEM, revenue was down ~\$0.6m in FY2020 and estimated to be ~\$3.0m lower in FY2021. There has also been a decrease in revenue from the WEM.

Due to the continuing uncertainty over the potential impact of COVID-19, further scenarios have also been modelled that consider a greater impact on revenue.

As part of the FY2021 annual budget, AEMO will absorb the reduction in revenue based on the best estimate of COVID-19 impacts through a corresponding reduction in operating costs.

Participant fees

For FY2021, AEMO's operating budget, excluding amortisation and depreciation, is \$251 million and capital budget is \$164 million with an accumulated deficit estimated to be \$60.5 million. For many markets and services that AEMO operates, fees will decline in the coming year, with nine fee sets having a reduced fee in FY2021. However, for connections and registrations, NEM fees and some other fee categories, increases are projected.

Given the rate of change occurring across the NEM in both markets and operations, in 2018 AEMO elected to cap the rate of the NEM fee increases to 12% a year to mitigate the impact on participants. The accumulated deficit largely reflects the delay in recovery of AEMO's costs that are a result of this voluntary cap.

In considering the pressure on all elements of the energy supply chain caused by COVID-19, AEMO recognises that the previous guidance on a projected fee increase of 12% in NEM fees would not be acceptable to its stakeholders. AEMO will be reducing the NEM fee increase from a projected 12% down to 9% for FY2021. Options are being considered internally as to how this decrease can best be managed, while minimising the impact on the services we provide.

In relation to other fees, the WA WEM fees will increase by 4% to reflect the ERA's final determination. AEMO's other notable fee movements include an increase in the Declared Wholesale Gas Market (DWGM) of 2% and a general reduction across most Full Retail Contestability (FRC) Gas markets and a reduction in the Short-Term Trading Market (STTM) fees. The National Transmission Planner (TP) revenue requirement is increasing as result of AEMO's expanded role to deliver an actionable ISP. The costs associated with the development of the first actionable ISP will continue to be reviewed and refined

AEMO's continued capital investment is driven by regulatory change and to extend required capabilities and technology. AEMO looks to moderate the costs of these investments on our members through actions to increase organisational efficiencies.

Financial efficiency

The consequence of a rapidly evolving and increasingly complex energy system is an increase in not only recurrent, but also new expenditure for the industry and subsequently AEMO. How AEMO executes on its core activities and strategic initiatives has a direct and indirect impact on energy system and market participants' costs. The suite of anticipated regulatory changes, along with the rapid transformation of the energy industry, is expected to continue to create upward pressure on AEMO's operating and capital expenses. This will translate into further increases in participant fees under the existing 'fee for service' and cost recovery model.

Our objective is to:

Ensure efficient business operations to enable AEMO to meet its obligations.

Over the last several years, AEMO has experienced increased complexity and obligations associated with the successful management and transition of the evolving energy system. This has resulted in increased resource needs for the organisation, as well as new investments in the systems that are being developed to assure a fit-for-purpose market and energy system, including a necessary focus on capabilities that provide much needed resiliency. At the same time, AEMO wants to make certain that it is efficient and adds value for what is ultimately the consumer's energy dollar.

Furthermore, AEMO's fees, particularly in the NEM, have been impacted by increasing regulatory obligations. This is evidenced through:

- The NEM Rule change volume has tripled in the past three years.
- 23 of 24 open rule changes directly impact AEMO.
- There has been a 30% increase in references to AEMO in the National Electricity Rules over the past three years.

To that end, AEMO is using the learnings from the COVID-19 experience of working from home as the catalyst to initiate a comprehensive review of both our ways of working and approaches to technology investment. To ensure we do not overlook opportunities, we have also engaged an external consultancy to assist. We anticipate these reviews will support changes that drive further efficiencies and become part of the operating models we will adopt to guide our business. AEMO's current fee recovery model was designed over twenty years ago and could be considered no longer fitfor-purpose for the changes and challenges facing AEMO and the industry. To maintain fees at a stable level, AEMO is under recovering its actual costs associated with performing its functions in the NEM, which is resulting in an accumulated deficit that will need to be recovered in later years.

Restraints in existing fee structures impact our ability to accumulate reserves and make AEMO reliant on debt funding for any capital investment to implement new rule changes and update technologies critical to planning and operating the energy systems and markets. The level of investment necessitated by the volume and scale of the rule changes and the requirement to replace ageing IT systems with a more efficient digital platform, requires significant borrowings to fund this capital expenditure before it can be recovered through participant fees. The level of capital expenditure is higher than at any other time in the history of the NEM for the system and market operator.

AEMO has recently entered into a debt facility up to \$500m to potentially fund the capital program, accumulated deficit and other operating requirements over the next few years. Where possible, AEMO will use its efforts to minimise required operating expense and capital spend to minimise the need for, or defer the use of, the debt facility or potentially reduce the facility. We will also continue to seek government funding or grant funding for programs or investments related to policy initiatives or innovation efforts. Over the financial year, AEMO shall be undertaking consultation with participants and stakeholders on a fees and charges regime that reflects the changing nature of our services and operating environment.

AEMO's fee structures determine how costs in annual budgets are allocated to participants or participant classes. The review will consider the fee structures for fees associated with the NEM electricity and gas markets and systems that AEMO operates. The determinations on the new fee structures are required to be published by 31 March 2021, so as to take effect from 1 July 2021.

AEMO will also separately explore with stakeholders and participants whether AEMO's current legal entity and funding model is fit-for-purpose in enabling consumer benefits for the sector, as further legal and regulatory changes are made to accommodate the transition of the energy industry.

3-year goals	Initiatives	Priority actions for FY2021	Key outcomes for FY2021
Goal 1 Affordability and fee structures - our fee structures reflect industry changes and are allocated to those participants that benefit from the services provided	Participant fee structures	 Consult on and develop new participant fee structures 	 Final determinations on NEM and other fee structures published by 31 March 2021
Goal 2 Cost efficiency - AEMO delivers its functions and responsibilities in an optimal and cost-effective manner	Cost efficiency review	 Complete an external review of AEMO's operational and capital expenditures 	Cost efficiency review completed
		Implement improvements to service provision to achieve cost reductions	 Phase 1 cost efficiency and optimisation improvements implemented to plan
Goal 3 Financial sustainability - AEMO continually pursues actions to reduce the financial impact of increasing cost pressures	Business models	 Undertake a review of current and prospective revenue sources 	 Possible alternative corporate and funding models developed for AEMO

Financial summary

Table 1 provides a financial summary of the budgeted profit and loss, and capital expenditure for FY2021.

AEMO's budgeted annual deficit for FY2021 is \$25m. As discussed above, the consequences of a rapidly evolving and complex energy system are that AEMO's cost base has increased. To limit participant fee volatility, AEMO is planning to smooth the required fee increases over forward years to fully recover its costs.

Table 1. AEMO's financial summary for FY2021

Profit and loss	Budget FY2021 (\$m)
Revenue	254
Operating expenditure	279
Annual deficit	(25)
Capital expenditure	
Capital expenditure	164

For further information on AEMO's FY2021 budget and fees, please go to https://www.aemo.com.au/about/corporate-governance/energy-marketfees-and-charges

Fees

Table 2. AEMO's fee summary for FY2021

Function	FY2021	FY2020	Change	Key drivers of fee change
Electricity				
NEM (\$/MWh)	0.54	0.50	+9%	Lower than guidance provided last year
FRC (\$ per connection point per week)	0.02550	0.02550	0%	Lower than the small fee increase outlined in last year's budget
National Transmission Planner (\$m)	19.9	5.5	n/a	Expanded ISP responsibilities requiring significant uplift in resourcing
VIC TNSP - TUOS fees (\$m)	591.5	549.6	+8%	Higher Western Murray system strength remediation services, lower settlement residue and additional project costs for the Western Victoria Renewable Integration project and the Victoria to New South Wales Interconnector project
WA WEM fee (\$/MWh)	0.894	0.861	+4%	Lower than guidance provided last year
Gas				
DWGM - Energy tariff (\$/GJ withdrawn)	0.08887	0.08713	+2%	Lower than the 3% increase projected last year
STTM - Activity fee (\$/GJ withdrawn)	0.03684	0.04258	-13%	Significant decrease as system life fully depreciated and loan repaid
VIC FRC (\$/customer supply point per month)	0.06221	0.06548	-5%	Gas FRC Fees in line with previous guidance
QLD FRC (\$/customer supply point per month)	0.26441	0.24482	+8%	Gas FRC Fees in line with previous guidance
SA FRC (\$/customer supply point per month)	0.20214	0.20839	-3%	Gas FRC Fees in line with previous guidance
NSW and ACT FRC (\$ per customer supply point per month)	0.14040	0.15097	-7%	Gas FRC Fees in line with previous guidance
WA FRC (\$ per customer supply point per month)	0.12170	0.12811	-5%	Gas FRC Fees in line with previous guidance
Gas Statement of Opportunities (\$ per customer supply point per month)	0.03869	0.03989	-3%	Lower than increase provided in previous guidance
Gas Supply Hub - Daily (\$/GJ)	0.03000	0.03000	0%	In line with guidance provided last year
Gas Supply Hub - Weekly (\$/GJ)	0.02000	0.02000	0%	In line with guidance provided last year
Gas Supply Hub - Monthly (\$/GJ)	0.01000	0.01000	0%	In line with guidance provided last year
Capacity Trading Platform - Daily (J/GJ) *	0.045	0.044	+3%	In line with guidance provided last year
Capacity Trading Platform - Weekly (J/GJ) *	0.035	0.034	+3%	In line with guidance provided last year
Capacity Trading Platform - Monthly (J/GJ) *	0.025	0.024	+3%	In line with guidance provided last year
Day-ahead Auction (DAA) (J/GJ) *	0.035	0.034	+3%	In line with guidance provided last year
Gas Bulletin Board - Producer rate (\$/GJ)	0.00048	0.00054	-12%	Lower than increase provided in previous guidance
G as Bulletin Board - W/S gas market (\$/GJ)	0.00244	0.00268	-9%	Lower than increase provided in previous guidance
WA Gas Services Information (\$m)	1.1	1.7	-35%	Lower than increase provided in previous guidance
Other				
SA Planning (\$m)	1.0	1.0	0%	No change from last year
Settlement Residue Auctions (\$m)	0.6	0.7	-13%	Lower due to a gradual recovery of system costs used to facilitate a secondary trading market

*The variable fee for Capacity Trading Platform and DAA includes a fee of \$0.003 relating to the Operational Transport Service code panel.

Corporate governance

Our directors, officers and people adapted to the changed governance and organisational needs arising from the world-wide COVID-19 pandemic. AEMO can assure that appropriate governance and business continuity practices are in place to continuously fulfil its legal obligations and duties.

AEMO is governed by a Board of Directors, which is accountable for the overall direction, management and corporate governance of the company. AEMO is committed to ensuring that a robust corporate governance framework is in place and that industry best practices are adopted.

Members of the Board are appointed by the Ministerial Council on Energy (MCE) following a selection process involving the Nomination Committee of the Board, the MCE Appointments Selection Panel, and AEMO's members (government and industry).

The Constitution requires the Chairman and a majority of Directors be independent of management and free of any real or perceived business or other relationships that could materially interfere with the exercise of their unfettered and independent judgement or could reasonably be perceived to do so. The Board oversees the management of AEMO's business affairs to meet the company's objectives and responsibilities under relevant legal and regulatory regimes, and also monitors the performance and cost-effectiveness of AEMO's operations and systems.

Collectively, the members of the Board possess the core skills prescribed in AEMO's Constitution and provide a broad and diverse range of skills and experience necessary to face the challenges of an industry undergoing significant transformation.

The COVID-19 outbreak and ensuing government restrictions will continue to have wide-scale implications for the Australian economy during the term of our Corporate Plan. AEMO has proactively responded and quickly mobilised to ensure business continuity and ongoing effective governance during this time. COVID-19 has provided us with a unique opportunity to test and review our business continuity and emergency response practices and operate and govern our business and workforce remotely.

Our objective is to:

Maintain AEMO's legal and ethical standing in the eyes of government and industry members, stakeholders, regulators and consumers and ensure business continuity at all times.

Risk statement

AEMO has a strong risk management culture at all levels within the organisation. The priority risks and mitigation actions identified following have been incorporated into the planning for each of AEMO's strategic pillars.

Our approach to risk management is aligned to the international standard for risk management: AS ISO 31000:2018.

The Risk Management Policy and Framework clearly define our risk management objectives, structures, systems, tools and accountabilities for effective risk management. AEMO has in place a risk appetite statement and risk tolerances for functions across AEMO that provide guidance on the level of risk that is acceptable or appropriate to meet our Corporate Plan objectives.

Accountability for risk management and its implementation across AEMO sits with the Board. The Risk and Audit Committee, a sub-committee of the Board, assists the Board in the effective oversight of risk. The Managing Director/CEO has clear accountability for the implementation of the Risk Policy and Framework and is accountable to the Board for fostering a positive, transparent risk management culture supported by the Executive Leadership Team (ELT) in integrating risk management into key operational decision-making.

The Risk and Compliance team under the leadership of the Chief Governance Officer helps to maintain the Risk Management Framework and support the business with appropriate guidance and tools (for example, risk matrix, risk tolerance statements) to identify, manage and report on our key risks.

Our risk management program is supported by a detailed program of internal audit, market and financial audits that provide assurance to management, the Board and its committees on the effectiveness of the internal control environment implemented to manage our key risks, both strategic and operational, including compliance risk.

Top corporate risks

Key risk	How we are managing our risks
Inability to adapt our workforce and culture to meet future needs and drive transformation.	Our transformation program continues to support and improve strategic capabilities in digital, engineering excellence, stakeholder engagement and business acumen. We are introducing new ways of working to embed a collaborative, productive, agile and customer-centric culture with an emphasis on being able to adapt our operating environment to a 'new normal' during and post COVID-19.
Ineffectively articulating and achieving necessary changes to manage industry transformation resulting in reputational damage.	We continue to work with government, industry working groups and market bodies to influence change within the industry (for example, acceptance of the ISP and the work in progress to implement this plan). We are working with the ESB (and other regulatory bodies) to enhance future ISPs and working with WA stakeholders to develop the inaugural WoSP for the WA WEM. Furthermore, we are working with the AER and the AEMC to ensure current reform programs can reasonably be delivered in light of the long-term economic impacts of COVID-19.
Our legacy technology systems, if not updated, will lead to increasing cost and compromise our ability to manage the transformation of the energy industry and execute our strategy.	We continue to make significant investments in our digital strategy; examples include investments in DER Register, Consumer Data Platform, 5MS and Global Settlements Platform. It is expected this will significantly uplift our service delivery to members, participants, consumers and employees, facilitating innovation and value creation across the industry.
Increasing complexity of compliance risks impacting our ability to deliver on our core objectives as an independent systems and market operator.	We continue to uplift our capabilities, skills and controls in areas where our compliance obligations are expanding to reflect the changing nature of our role and strategic focus, for example Consumer Data Platform (CDP), Consumer Data Right (CDR) and DER Register. We have a risk based approach to compliance management and a program of key controls testing. In addition, we continue to provide assurance to our internal and external stakeholders through our independent market audit reports.
Ineffective delivery of projects will impact our ability to meet the demands of a changing energy industry and our ability to drive transformation.	We continually prioritise our portfolio of programs and projects to ensure we meet regulatory deadlines at least cost and now in light of the impact of COVID-19. We are working with industry stakeholders, suppliers and our staff to ensure we have clear expectations and deliver to these expectations.
Unable to maintain power and gas system security and reliability due to disruption in the energy ecosystem.	To enhance AEMO's present role in managing energy system security and reliability, we are progressing a range of approaches to facilitate the energy transition in terms of the effective management of frequency, voltage, system strength and re-start capabilities. To strengthen AEMO's preparedness to address asymmetric events such as COVID-19 and summer bushfires, we are implementing a Strategic Continuity Plan for the energy systems and markets that we operate.
A preventable cyber incident results in a loss of grid system and/or market suspension.	AEMO is leading the development of greater cyber security readiness across the industry, in line with the AEMO developed Australian Energy Sector Cyber Security Framework (AESCSF). We maintain continued engagement with key Commonwealth agencies and other relevant stakeholders (for example, NBN Cyber Security team). The Cyber Security Uplift program continues to deliver increasing IT and cyber security maturity and sustainable capability through partnering with vendors, TNSPs and government.
Our existing funding model may be unable to meet the changing needs and environment of the energy industry.	We continue to review our operating environment to find efficiencies and cost savings in operational and capital activities. We are also pursuing grant and other funding mechanisms with relevant agencies to subsidise eligible activities. We are reviewing our current fee for service model to ensure it is sustainable. We have also secured a debt facility that provides AEMO with financial flexibility to manage through any event particularly economic consequences of events, such as COVID-19.
The medium- and longer-term impacts of COVID-19 may challenge our operating environment and ability to deliver on our objectives but will provide opportunities for AEMO in adapting to a new way of operating.	An executive led Plan Ahead Group is preparing a Strategic Business Continuity Plan to support AEMO's enterprise resilience and operational readiness to carry out its responsibilities through events such as COVID-19.

Performance

AEMO will continually measure performance to ensure that we meet expected outcomes. Each Corporate Plan includes the 3-year goals we will pursue to enable us to be a world leading market and system operator and system planner. Our annual key performance outcomes for FY2021 are detailed throughout this plan.

In addition, we will continue to publish the information necessary to fulfil our regulatory obligations and inform our members. We will also continue to undertake broader stakeholder consultation to discover additional information of value to participants seeking to remain well-informed on system and market performance.

We will measure our progress against our Corporate Plan through:

- The outcomes we will deliver over the next 12 months.
- The Key Performance Indicators (KPIs) that will ensure the continuation of our core functions.
- Our program of publications that will provide transparent and robust information on the energy systems.

Table 3. AEMO's annual corporate Key Performance Indicators (KPIs)

AEMO's annual corporate KPIs and publications

AEMO commits to annual corporate Key Performance Indicators (KPIs) to ensure that the organisation continues to deliver its core functions (listed in Table 3). Importantly, AEMO considers that the intent of the outcomes by strategic pillar, along with the annual KPIs, provide the 'right' balance and focus for its day-to-day responsibilities, while ensuring that AEMO is accountable for its commitments in enabling Australia's future energy system.

Corporate KPI Stretch target Target No preventable load shedding occurs 100% 100% 100% 100% Meet operational energy system security requirements 0 No loss of system and/or market suspension due to preventable cyber incident 0 impacting **ÁEMO** systems Achieve all material legal and reporting obligations 100% 100% Achieve annual budget -3% -5% Incorporating COVID-19 and NEM fee reduction impacts Achieve all material prudential supervision obligations 99% 100% Net advocacy score +2% +4% Increase from inaugural stakeholder survey score baselined in FY2021 Execute the Corporate Plan 75% 90% People, safety and engagement including: • Achieve WHSE scorecard 100% 100% • Organisational Health Index (OHI) Score 73 76

Table 4. AEMO's publications

Publication	Indicative timing
Gas Statement of Opportunities for east Australia Prepared annually forecasting annual gas consumption, maximum gas demand and the adequacy of eastern and south-eastern Australian gas markets to supply forecast demand for the next 20 years.	March
Victorian Gas Planning Report Prepared annually to provide information relating to gas supply, demand, network capability and Victorian Declared Transmission System for the next five years.	March
WA WEM Electricity Statement of Opportunities Prepared annually and provides forecasts and analysis of peak demand and energy use in the South West Integrated System for the next 10 years.	June
Victorian Annual Planning Report Prepared annually to provide information relating to electricity supply, demand, network capability and development for Victoria's electricity transmission declared shared network.	June
Integrated System Plan Prepared biennially to forecast a wide spectrum of interconnected infrastructure and energy development scenarios and plans including transmission, generation, gas pipelines, and distributed energy resources.	Biennial: Draft by December with Final by June
AEMO's Corporate Plan Prepared annually to present AEMO's three year rolling strategy and forward plans to manage energy systems and markets.	July
NEM Electricity Statement of Opportunities Prepared annually to provide forecasts and analysis of technical and market data for the NEM for the next 10 years.	August
AEMO's Annual Report Prepared annually to present AEMO's organisational, operating and financial results for the most recent financial year.	November
Energy Adequacy Assessment Projection Prepared annually to quantify the impact of potential energy constraints on expected levels of unserved energy in the NEM for the next two years.	November
South Australian Electricity Report Prepared annually for the South Australian Minister for Energy and Mining about South Australia's electricity supply and demand.	November
WA Gas Statement of Opportunities Prepared annually to provide forecasts of gas demand and supply for the West Australian gas industry, including overview of gas infrastructure and emerging issues, for the next 10 years.	December
AEMO's Quarterly Energy Dynamics Prepared quarterly to provide a summary of electricity and gas market dynamics, trends and outcomes for the previous quarter compared to historic quarters for Western Australian energy markets and NEM, and east coast gas markets.	Quarterly
Medium-term PASA Prepared weekly to provide information on peak load forecasts, total available generation capacity, demand-side management capacity, any identified capacity shortfall of ancillary services, transmission outages, any security problems, fuel supply and logistics, and any facility testing for each week for the next two years.	Weekly

i The NEO, NGO and NERO are expressed separately in: the National Electricity Law, which is a Schedule to the National Electricity (South Australia) Act 1996 (s 7); the National Gas Law, which is a Schedule to the National Gas (South Australia) Act 2008 (s 23); and the National Energy Retail Law, which is a Schedule to the National Energy Retail Law (South Australia) Act 2011 (s 13).

ii Section 122 (2) (c) of the *Electricity Industry Act 2004*: to avoid discrimination in that market against particular energy options and technologies, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions.

iii Section 122 (2) (e) of the Electricity Industry Act 2004: 'to encourage the taking of measures to manage the amount of electricity used and when it is used.'

iv Energy Consumers Australia, Energy Consumer Sentiment Survey, June 2020.

v https://www.accc.gov.au/focus-areas/consumer-data-right-cdr/energy-cdr

vi 2018 Integrated System Plan (ISP) - https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2018-integrated-system-plan-isp

vii 2018 Integrated System Plan (ISP) - https://aemo.com.au/en/energy-systems/major-publications/integrated-system-plan-isp/2018-integrated-system-plan-isp

viii Gas Statement of Opportunity - https://aemo.com.au/-/media/files/gas/national_planning_and_forecasting/gsoo/2020/2020-gas-statement-of-opportunities.pdf?la=en.

ix COAG communiqué - http://www.coagenergycouncil.gov.au/sites/prod.energycouncil/files/publications/documents/EC%20-%20communique%20 -%2020200320.pdf

x The 29 May National Cabinet communication (see https://www.pm.gov.au/media/update-following-national-cabinet-meeting) announced the creation of a National Federation Reform Council to replace the existing COAG model, which includes the COAG Energy Council. Accordingly, for the Corporate Plan, for historic national reform activity AEMO shall reference the COAG Energy Council and the ESB. For prospective national energy reform activity we have not referenced these institutions.

xi Wholesale Demand Response Mechanism - https://www.aemc.gov.au/rule-changes/wholesale-demand-response-mechanism

We look forward to hearing your feedback

Please provide feedback to corporateplanfeedback@aemo.com.au.

For more information

For more information about AEMO and our Corporate Plan FY2021, please visit the 'About AEMO' section of our website, www.aemo.com.au.



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