Strategic Corporate Plan

**FY24** 

This corporate plan represents AEMO's Statement of Corporate Intent under AEMO's Constitution.

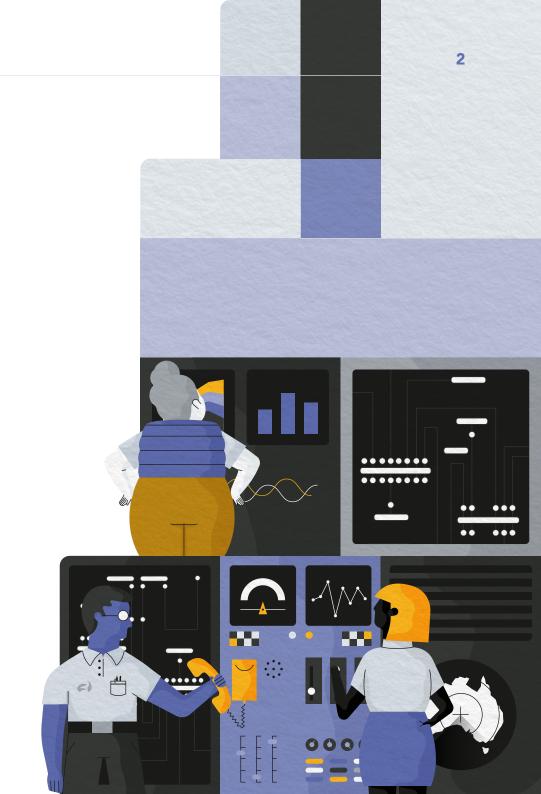




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AEMO acknowledges the Traditional Owners of country throughout Australia and recognises their continuing connection to land, waters and culture. We pay respect to Elders past and present.



## **Foreword**

## Change is underway in Australia's energy system.

This Strategic Corporate Plan continues the multi-year course for AEMO internally and externally to deliver wholesale energy safely, reliably and as affordably as possible for all Australians for the decades ahead.

Even casual observers of the Australian energy market will detect significant – indeed accelerating – change is underway in government policy, technological innovation, energy costs and consumer preferences.

By 2030, Australian Government policy is to reduce greenhouse emissions (carbon dioxide and/or equivalents) by 43% on 2005 levels, and have renewable energy sources supply the National Electricity Market with 82% of its power needs. The Federal, state and territory governments in Australia are aligned on reaching net-zero emissions by 2050.

This requires significantly different energy systems than the ones we have today, which were largely built around coal-fired generation. High-renewables systems will be more complex to operate, requiring a suite of new technologies and new ways of working.

A business-as-usual approach will not deliver the transformation required. New approaches are needed to ensure the benefits of the energy transition are maximised and the disruptions minimised. We must always remember people are at the centre of this energy transition.

Communities expect a voice in the discussions and decisions about how the introduction of new technologies and systems affect them.

Being proactive and maintaining open dialogue with local communities is crucial to build two-way understanding. In this energy transition, we are mindful that people matter most.

Given the accelerating pace of change, AEMO's Board and senior executives have sought to clarify how AEMO can best fulfill its purpose to operate today's systems and markets and design Australia's energy system of the future.

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The result is a refreshed mediumterm AEMO strategy looking ahead to 2030, which expresses our ambitions for the energy system, markets, stakeholders and our staff. It outlines our mid-to-long-term desired strategic outcomes.

This FY24 Strategic Corporate Plan brings the first year of AEMO's strategy to life. The strategies, initiatives and measures in this plan prioritise our efforts and guide our actions. It is our statement of corporate intent under AEMO's constitution.

This FY24 Strategic Corporate Plan also continues to support the delivery of AEMO's strategic priorities that are now well established: operating today's systems and markets; navigating the energy future; engaging our stakeholders; and evolving the way we work.

But within each of these four strategic priorities, new initiatives for the future are outlined and sit alongside our important core functions – for we will not take our eyes off operating the electricity and gas systems and markets of today while we plan for tomorrow.

Our refreshed corporate values – Character, Connection, Commitment – will further cultivate professionalism, collaboration and dedication in our workforce. Our values are our ethical compass when we face the uncertainties of the future. After all, it is people in AEMO who are working with governments, the wider energy sector and communities to deliver the benefits of the energy transition for all Australians.

Our cultural change in AEMO extends to the way we work with our stakeholders: to have a focus on customers at the heart of our work, to engage genuinely and to

be a trusted partner in the energy transition. Within AEMO, the challenges of the energy transition require an investment in our people's skills and capabilities.

We recognise that no one organisation can possibly handle all the complications in this energy transition. It requires a group effort between AEMO, governments,

industry, market bodies and communities. We all have a stake in an orderly transition, and the quest for cleaner, more affordable, reliable energy is upon us.

We invite you to read our Strategic Corporate Plan for FY24 and we look forward to delivering on our commitments as we enable Australia's energy future, together.



remember people

are at the centre

of this energy

transition

**Drew Clarke** AEMO Chairman

D~ CC



**Daniel Westerman**AEMO Chief Executive Officer



## **AEMO:** who we are and what we do

We are the independent energy market and system operator and system planner for the National Electricity Market (NEM) and the WA Wholesale Electricity Market (WEM). AEMO is a not-for-profit company limited by guarantee, with a membership of state and federal governments (60%) and energy industry members (40%).

#### Operate energy systems

AEMO operates Australia's electricity and gas systems around the clock to match energy supply and demand in real time. It does this for the east coast National Electricity Market and for the west coast Wholesale Electricity Market.

AEMO control rooms monitor the flow of electricity and gas in Australia minute to minute, every day. AEMO never stops. Our control room operators keep the system secure and match supply to energy consumption as, and where, it occurs.

#### Operate energy markets

AEMO operates wholesale markets, where electricity, gas and energy-related services are bought and sold in a competitive environment to keep the cost to consumers as affordable as possible. AEMO schedules the energy at the least wholesale cost, settles trades, and ensures data and information flows between market participants.

#### **Enable the energy transition**

As the national electricity system planner, AEMO's role is to map a development pathway through the complexity of the energy transition that ensures consumers' interests are paramount. AEMO collaborates with industry, government, regulators, academia and consumer groups, to harness insights, creative thinking, innovations and problem-solving abilities to tackle current and future challenges on the road to net-zero.

#### Operate energy systems

- Real-time operations
- System service and security management, monitoring and review
- Engineering analysis, support and modelling
- Power system operating reserves, gas supply adequacy and operational forecasting
- Emergency and outage management
- Cyber security



#### Operate energy markets

- Participant registrations and accreditation
- Retail market operations and procedures
- Metering
- Settlements, prudentials and payments
- Market monitoring, advice and analysis



#### **Enable the energy transition**

- Energy system forecasting, modelling and planning
- Network connection enablement
- Technical analysis and resource adequacy assessments
- Statutory and Government policy support and integration
- Energy system and market reform consultation and project delivery



On the east coast, AEMO operates the National Electricity Market (the 'NEM'). It is one of the world's longest continuous electricity networks, stretching about 5,000 kilometres from Port Douglas in far north Queensland to New South Wales, the Australian Capital Territory, Victoria, under Bass Strait to Tasmania in the south, and across to South Australia.

On the west coast, AEMO operates the South West Interconnected System (the 'SWIS') and its associated Wholesale Electricity Market (the 'WEM'). This is Western Australia's main power grid that supplies power to the more populated south-west of the state.

AEMO operates a range of gas markets in eastern Australia ranging from the Wallumbilla Gas Supply Hub (GSH) that facilitates gas trading with the Queensland LNG producers, Short Term Trading Market (STTM) hubs to balance gas supply in Sydney, Adelaide and Brisbane, and gas pipeline capacity trading and auction systems.

AEMO also controls the operation and security of supply for the Victorian Gas Declared Transmission System (DTS) and the operation of the Victorian Declared Wholesale Gas Market (DWGM).

AEMO has recently been empowered to manage the gas supply adequacy in the east coast, as well as act as both buyer and supplier of last resort in relation to the Dandenong Liquefied Natural Gas (DLNG) storage facility over 2023 to 2025.

With such complex, interconnected and commercially focused electricity and gas systems, it is vital all Australians can have confidence in the reliability and resilience of energy supply.

National
Electricity
Market (NEM)

Electricity

Wholesale
Electricity
Market (WEM)

Short Term Trading Market (STTM) and Gas Supply Hub (GSH)



Wholesale

Gas Market

(DWGM)

AEMO has established subsidiaries to carry out defined functions independently, as follows.

AEMO Services Ltd (AEMO Services) is a subsidiary of AEMO with an independent board, and a key partner in the implementation of the NSW Government's Electricity Infrastructure Roadmap (Roadmap). AEMO Services is trusted to plan, assess and guide long-term investment to help transform the energy sector.

AEMO SERVICES

In this capacity AEMO Services plans and co-ordinates SEKVI long-term investment in built energy infrastructure in NSW, conducting competitive tenders to bring forward projects with the greatest potential to help NSW meet its future energy needs.

AEMO Services incentivises these new investments in electricity generation, storage and firming infrastructure through Long-Term Energy Service Agreements and network access rights in Renewable Energy Zones.

Under the Roadmap, AEMO Services also authorises transmission infrastructure in Renewable Energy Zones and provides financial risk management and advice.

AEMO Services produces its own Corporate Plan and Annual Report.

In May 2023, AEMO established another subsidiary, the <u>Transmission Company Victoria</u> (TCV). TCV is a new company created by AEMO Victorian Planning.

TRANSMISSION COMPANY VICTORIA

TCV will discuss the VNI West transmission project with landholders, Traditional Owners and the community to understand local concerns as the project moves toward construction.

As AEMO is the system planner in Victoria, and will not physically construct or own the transmission lines, it established TCV to make sure that commitments made in the early stages are captured and honoured across the life of the project.

TCV will provide early project updates, and will work with the community on this important transmission line.

## **AEMO's strategy**

AEMO's vision of success is an ambitious one: a secure, reliable, low-cost pathway to a net-zero energy system that aligns with Australia's targets for renewable power generation, and in a way that maximises the benefits to all Australians

AEMO's new strategic framework positions it to pursue this vision. This framework outlines the guiding elements of AEMO's strategy – our purpose, vision, strategic priorities, and values.

Our purpose and vision describe our 'reason for being' and what we strive for, respectively. These are based on Australia's legislated energy objectives, which give AEMO its mandate, and recognise the recent move to include emissions reduction in these objectives.

Our strategic priorities remain relevant as ever, and are how we deliver on our purpose and vision: operating today's systems and markets; navigating the energy future; engaging our stakeholders; and evolving the way we work.

Our values articulate the core set of beliefs and behaviours that guide how we work. These values are central to delivering on our purpose, vision, and strategic priorities.

The strategic framework is embodied in this Strategic Corporate Plan, which lays out a longer-term view of success and how we will deliver on this in FY24.

Every person at AEMO has an important job to help us deliver on this strategy, whether it be through operating systems and markets; enabling the delivery of engineering, infrastructure, digital, and market changes; working with our stakeholders; running AEMO; or finding and adopting ways to work better every day, to achieve more with our resources.

#### **Purpose:**

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

#### Vision:

Enable net-zero

#### **Strategic priorities:**

Operating today's systems and markets

Navigating the energy future

Engaging our stakeholders

Evolving the way we work

#### Values:

Character Be our best

Connection Better together Commitment Make it happen















# How AEMO will deliver on its purpose and vision

#### **Purpose**

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

#### **Vision**

Enable net-zero

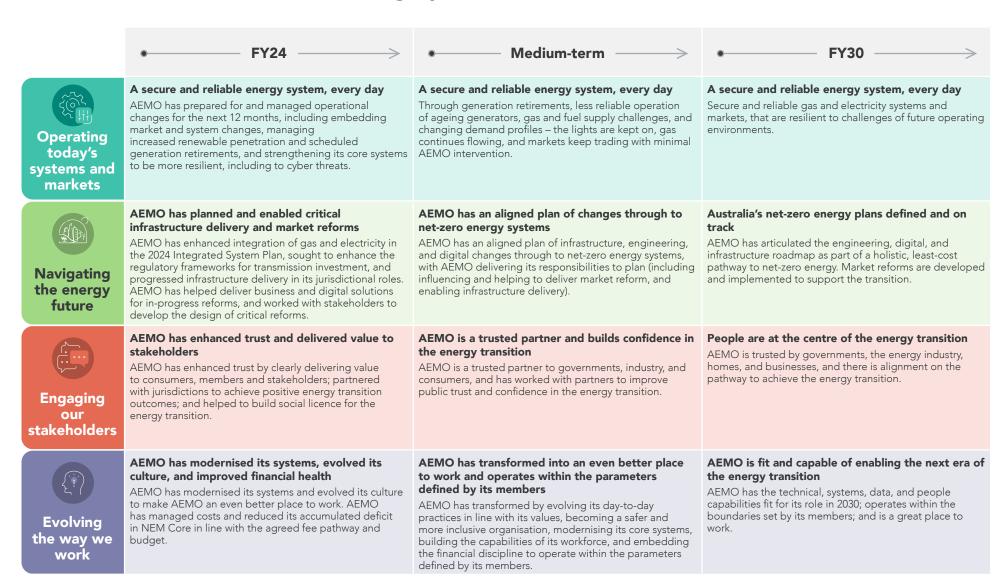
There are a multitude of potential net-zero futures, but AEMO's vision of "enable net-zero" is one that is people-centric and that defines an optimistic future for Australians. It recognises AEMO's role in enabling the energy transition towards net-zero energy systems, which underpins the decarbonisation of the broader economy. AEMO will deliver its purpose and vision through a set of short, medium, and long-term outcomes, aligned to its four strategic priorities.

AEMO's short-term FY24 outcomes and initiatives in this Strategic Corporate Plan are guided by longer-term FY30 outcomes, to ensure AEMO is effectively working towards this net-zero future. In FY24, AEMO will complete the foundations of its transformation while navigating ever changing market and operating conditions. This works towards meeting AEMO's longer-term outcomes of modernising AEMO and preparing for net-zero energy systems, while keeping the lights on and gas flowing every day.

#### 2025 instantaneous renewables goal

A key milestone for AEMO's vision are the first moments of instantaneous 100% renewables penetration, which AEMO analysis indicates could occur as early as 2025. Through AEMO's strategic outcomes, towards net-zero, AEMO aims to remove barriers to enable power systems to be capable of operating at times at 100% instantaneous renewable generation.

### **Outcomes across AEMO's four strategic priorities**



## **AEMO's role in the energy transition**

The way energy is produced and consumed is rapidly changing in Australia, in a once-in-ageneration, irreversible transition as the nation readies for a net-zero future.

The glint of rooftop PV solar systems on the roofs of homes and businesses across Australia is just one highly visible change in the way energy is generated and consumed. Rooftop solar installations now number more than 3.5 million and provide more than 15 gigawatts (GW) of renewable generation into the grid. That is a substantial addition to the 60 GW of generation in the east coast NEM and the 6 GW west coast WEM.

Rooftop PV solar has been the first wave of energy-focused consumer technology. Conversions to all-electric homes with batteries and rechargeable electric vehicles are gaining popularity among early adopters. Consumers are seeking to take control over energy costs impacting household budgets and seeking to reduce their emissions footprint.

Similarly, the energy industry is undergoing a metamorphosis. Combinations of variable renewable energy technologies such as grid-scale solar and wind farms, complemented with firming and storage solutions as diverse as large-scale batteries, pumped hydro and gas-peaking plants are replacing ageing coal-fired generators as they reach the end of their service life.

As Australia's independent system and market operator and system planner, AEMO's purpose is to ensure safe, reliable, and affordable energy, and enable the energy transition for the benefit of all Australians The Australian Government and the states are aligned on a target of net-zero emissions by 2050. By 2030, Australian Government policy is a 43% reduction in 2005-level emissions, aiming to have 82% of energy in the NEM supplied from renewable sources. The WA Government's plan for the development of the South West Interconnected System (SWIS) is expected to see over 90% of electricity in the WEM provided from renewable sources by 2042.

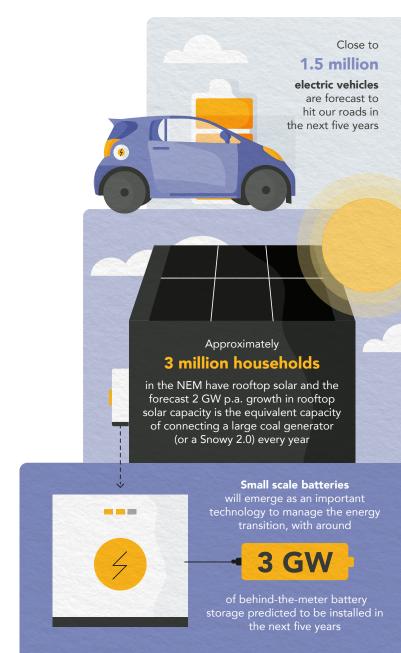
The pace of Australia's energy transition is accelerating due to a combination of technological innovation, government policies, market forces and consumer preferences.

Creating a net-zero electricity system is possible because the way Australia generates electricity is changing, from traditional spinning thermal generators to electricity sourced from the sun and wind, and injected into the grid by electronic inverters.

And not only is this possible, it is also inevitable. It is not a case of 'if', but 'when', coal-fired plants retire and a kaleidoscope of technologies replace them. By 2030, asset owners have already foreshadowed 5.4 GW of coal generation will exit the NEM, while in the WEM approximately 1.2 GW of state-owned coal generation will be retired.

But real-world experience shows they may be withdrawn earlier, as renewables increase commercial pressures on the future of these power stations. Our modelling indicates as much as 14 GW of coal could exit by 2030 – so about three times as much by decade's end. AEMO forecasts all will be gone by mid-century.

At the same time, more than 193 GW of new investments are being proposed for the market; almost all are wind, solar, battery and hydro technologies.



As Australia moves rapidly away from its traditional dependency on coal generation, our energy future will be built on four pillars:

- Low-cost renewable energy, taking advantage of the abundant wind, solar and hydro resources that Australia has to offer;
- Firming technology like pumped hydro, batteries, and gas generation, to smooth out the peaks and fill in the gaps from that variable renewable energy;
- New transmission and modernised distribution networks to connect these new and diverse low-cost sources of generation to our towns and cities; and
- Power systems capable of running, at times, entirely on renewable energy.

Australia is among the first in the world to confront the challenges this changing portfolio of technologies presents. If emissions are to reduce, behind-the-meter solar and battery systems will grow, and new transmission and modernised distribution networks are needed to connect zones of renewable energy with population centres. There are increasing interdependencies between our gas and electricity markets. Rising cost of living pressures, land use debates, and community expectations are influencing the transition.

Finding the right balance between all these factors is a challenge for governments, industry, business, households, communities and their representatives, including traditional owner groups.

AEMO is acutely aware of its central position in the energy transition. Not only does AEMO operate the electricity and gas systems and markets of today, but we collaborate with stakeholders to create a 30-year blueprint of the NEM – the Integrated System Plan (ISP). The plan's centrepiece is a least cost, least regret pathway through Australia's energy transition.

It is a plan to maximise the benefits from the new technologies portfolio: new transmission infrastructure to connect areas of renewable generation with population centres; renewable energy zones to supply the grid with decarbonised power; batteries, pumped hydro storage and gas firming to fill in the troughs and get the most out of the peaks of weather-dependent generation; smart distribution networks better able to handle the two-way flow of electrons from consumer devices to the grid and back again.

The level of renewable energy injected into the grid is now increasing to record levels, and soon AEMO will regularly face operating the power system at times supplied entirely by renewable energy. This presents a range of engineering challenges to solve, as high levels of renewable generation have implications for system security and strength. This is a key operational challenge and Australia is among the first in the world to confront ways to securely handle times of 100% renewable generation.

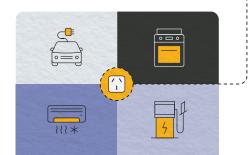
Maximising the inflow of renewable energy into the system does not just provide the environmental and emissions benefits that come from not needing to run on fossil fuels. There are significant economic benefits, too.

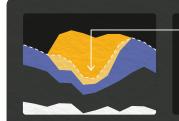
Our joint work with the CSIRO shows that even with integration costs, wind and solar are by far the cheapest forms of new-build generation. Running on renewables decouples the input cost of power generation from the international energy price shocks that affect gas, petroleum products and coal.

### The electrification of transport and gas will add

#### ~17 GWh

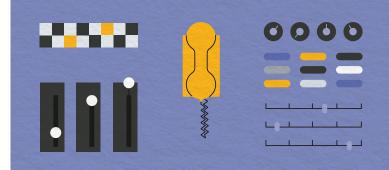
to annual NEM consumption in the next five years, which is around one-third of the electricity currently consumed by all households combined in the NEM





#### Rooftop solar pushes down electricity demand in the middle of the day

Whilst new loads will add to electricity demand, the abundance of solar generation is drastically cutting minimum demand in the middle of the day, prompting challenges and opportunities for managing excess generation



While uncertainties exist it is incumbent on AEMO to understand and prepare for the most likely future energy scenario. To this end, AEMO has a number of concurrent and intersecting streams of work underway for FY24, which can be represented under four strategic priorities:



#### Operating today's systems and markets

Our most fundamental task is to keep the lights on and the gas flowing, matching energy demand and supply in real time around the clock and settling trades between wholesale energy sellers and buyers.

In order to keep doing this dependably into the future, AEMO operating systems require modernising.



## Navigating the energy future

Using and sharing the intelligence gathered in preparing electricity and gas outlooks, quarterly market insights, technical reports, the ISP and Engineering Roadmap, AEMO's reports provide unique insights into market and system dynamics.

AEMO is also collaborating with regulatory bodies, participants and consumers on new and ongoing reforms to develop and deliver the least-cost and lowest-risk outcomes for consumers.



## Engaging our stakeholders

Building trusted relationships between AEMO and governments, industry, business, communities and consumers.

It is vital AEMO shares with its diverse range of stakeholders the challenges the energy transition presents and work together to find solutions.



## Evolving the way we work

Leading with our refreshed values of Character,
Connection, and
Commitment to harness
our expertise, build trusted
relationships and get what
needs to be done within
AEMO.

AEMO is reworking and streamlining processes, devolving financial delegations, and aiming to improve the ease with which people work with, and within, the organisation.

This FY24 Strategic Corporate Plan articulates AEMO's major initiatives under each of these strategic priorities. Some can be viewed as important core or business-asusual tasks – the essential actions we already undertake to keep the energy flowing and markets operating.

Others are new strategic initiatives as well as initiatives stemming from significant reform programs to both the east and west coast power systems to ensure they remain fit for purpose. Whether business-as-usual or new reforms, AEMO's purpose remains steadfast: to provide Australia with safe, reliable and affordable gas and electricity and enable the energy transition to net-zero.

AEMO will continually measure how effectively and efficiently we achieve our strategic priorities. We believe our FY24 outcomes and measures provide the right balance and focus for our day-to-day responsibilities while ensuring that AEMO delivers our contribution to Australia's future energy system and drives critical change in the way we operate. To demonstrate progress toward our priorities, we will track delivery against the four strategic priority areas articulated in this plan.



Deliver our core responsibilities in accordance with electricity, gas and other laws and regulations.

Australia's energy systems and markets are getting more complex to operate as the energy transition progresses, with thermal generation retirements and increasing penetration of renewable energy. Through this complexity and the operational challenges that come with it, AEMO aims to keep the lights on and the gas flowing.

This complexity brings risk, whether driven by cyber security or increasing volatility in the power system. AEMO must be prepared to manage these risks.

AEMO will prepare by building the visibility, tools, policies, and procedures, that help us to manage these risks and to operate the power system. Our <u>Operations Technology Program</u> is a key enabler to uplift our operational tools and power system applications.

AEMO will also deliver on its new cyber security obligations, including our responsibilities under the Security of Critical Infrastructure Act, to uplift our cyber resilience.

This will enable AEMO to deliver on its fundamental purpose, which includes ensuring safe, reliable, and affordable energy for the benefit of all Australians.

#### How we will achieve the outcomes of this priority:

### System and Market Operations

We ensure Australia's energy systems and markets are securely and reliably operated in accordance with obligations and standards and in the context of transitioning systems and markets.

- Manage real time operations of the systems and markets of the NEM and WEM to meet statutory standards of security and reliability.
- Monitor and improve AEMO's operational capability of the NEM and WEM to ensure system
  security and reliability through effective operational planning and forecasting, congestion and
  grid modelling, operator training, management of power system conditions (including interim
  reliability measures) and seasonal analysis and preparation.
- Effectively manage known and emerging power system risks by continuing to uplift confidence
  in modelling and information, reviewing actual and potential power system events and ensuring
  policies and procedures reflect our latest operational risks.
- Effectively manage the wholesale and retail market operation functions including settlement, billing, prudentials, metering and retail market operations to meet all obligations and standards.
- Manage real time operations of the Victorian Gas Declared Transmission System (DTS) and the Victorian Declared Wholesale Gas Market (DWGM) to maintain gas supply in Victoria, including demand forecasting, system security, safety and emergency response, gas quality, wholesale metering, gas supply adequacy, maintenance coordination and market intervention and incident reporting.
- Effectively manage and monitor wholesale, retail and secondary trading gas markets
  including the Wallumbilla Gas Supply Hub that facilitates gas trading with the Queensland
  Liquefied Natural Gas (LNG) producers, Short Term Trading Market hubs to balance gas supply in
  Sydney, Adelaide and Brisbane, gas pipeline capacity trading and auction systems and operate
  the Gas Market Bulletin Boards.
- Monitor energy system and market performance to provide high quality insights and analysis
  to inform and influence stakeholders through operational incident reports, market insight reports
  and the Quarterly Energy Dynamics reports.
- Effectively transition implemented reforms including the WEM Reform program, East Coast Gas system reforms and NEM reform into operations and successfully embed process, procedure and system changes for AEMO and industry.

## System and Market Technologies

We leverage technology and uplift systems to improve the operational efficiency and reliability of energy systems and markets.

- Modernise technology systems and tools to meet the evolving needs of Australia's energy
  markets and systems by planning and delivering prioritised projects under the Operations
  Technology Program for FY24.
- Ensure operational efficiency and reliability of IT systems operating the systems and markets by:
  - Introducing a new digital service management framework encompassing industry accepted processes in service design, service level management, service transition and a matured service operations practice; and
  - Optimising use of current state digital systems and technologies by introducing structured and repeatable processes while transitioning to new systems and technologies.

#### **Business Resilience**

We strengthen our core systems and processes to be more resilient, including to cyber threats.

- Ensure effective business continuity and emergency management arrangements and continue
  to uplift arrangements and capabilities, reviewing policies and procedures and undertaking
  emergency response preparation, training, and activities.
- Strengthen AEMO's resilience and recovery capabilities for security threats by delivering an uplift in protective security capability and the FY24 scope of AEMO's Cyber Strategy.
- Modernise AEMO's operational communications, network and infrastructure by delivering the FY24 scope of the security uplift and lifecycle replacement programs.
- Operationalise new roles and responsibilities across physical, personnel, supply-chain and cyber domains across participants in NEM, WEM and gas markets including new mandatory obligations and reporting under the Commonwealth Security of Critical Infrastructure Act 2018 (SOCI) Act in relation to security threats.

# Operating today's systems and markets (cont.)



AEN	/IO's	core functions by state	WA	SA	VIC	NSW & ACT	QLD	TAS	NT
	-	Real-time Operations NEM Power Systems		•	•	•	•	•	
>	₩	Real-time Operations WEM South West Interconnected System	•						
Operate energy systems	<b>"</b>	Victorian Transmission Network Service Provider			•				
rate ene	•	Real-time Operations Victorian Declared Transmission System			•				
rate	. 4	East Coast Gas Supply Adequacy		•	•	•	•	•	•
) pel	*	Operational Forecasting and Engineering Analysis and Modelling	•	•	•	•	•	•	
0	*	Operational Reserves and Emergency and Outage Management	•	•	•	•	•	•	
	<b>a</b>	Cyber Security	•	•	•	•	•	•	
	I #	NEM		•	•	•	•	•	
>	-	WEM	•						
Operate energy markets	4	Gas Bulletin Boards	•	•	•	•	•	•	•
rate ene markets	4	Gas Retail Markets	•	•	•	•	•		
rate	9	Day Ahead Auction		•	•	•	•		
led 	4	Short Term Trading Market		•		•	•		
	4	Gas Supply Hubs		•			•		
	6	Declared Wholesale Gas Market			•				
	*	System Planning and Planning Support	•	•	•	•	•	•	
rg)	*	Technical Support and Analysis	•	•	•	•	•	•	
Enable the energy transition	-	ESB's P2025 Program		•	•	•	•	•	
	-	ETS's WEM Reform Program	•						
ole i trar	-	NEM Reforms to Wholesale and Retail Markets		•	•	•	•	•	
nak	•	DWGM, STTM, Gas Bulletin Board, GSH and other gas reforms	•	•	•	•	•	•	•
ш		NSW Consumer Trustee (performed by AEMO Services Limited)				•			

#### Our key business and strategic measures against this priority:

Key measures for FY24	Target
No region-wide system black events	0
Maintain energy system security	99.9% of time systems remained within specific requirements
No preventable load shedding	0
Achieve operational forecast accuracy	80%
Achieve all material prudential supervision obligations	No more than  2 material breaches
Settlement statements issued and settled on time	99.9%
No loss of system and/or market suspension due to preventable cyber incidents impacting AEMO systems	0
Maintain high IT system availability (unplanned outages to critical system and market technologies)	<b>99.9%</b> of time AEMO's critical market and system technologies are available



Support and deliver mandated reforms and improvements to critical systems and markets efficiently, cooperatively and cost-effectively.

Government policy alignment on emissions has set a clear path for the energy future, one where the decarbonisation of energy underpins Australia's 2050 net-zero ambitions.

Australia is on a trajectory to net-zero energy, which presents myriad operational, technical, and market challenges.

To navigate the energy future, AEMO will plan future net-zero energy systems, remove barriers to, at times, operating power systems at 100% instantaneous penetration of renewables. AEMO will deliver the infrastructure, digital, and connections process changes needed to underpin this.

Critical reforms are in-progress, to modernise energy markets and prepare them for the next era of the transition. AEMO will continue influencing the design of these reforms, and help deliver business and digital solutions to progress these reforms.

We will continue working with our stakeholders and jurisdictions to enable their goals for the energy transition.

How we will achieve the outcomes of this priority:

#### **Energy system design**

We plan, consult and advise on future energy system needs and continually improve and streamline the planning processes.

- Deliver high quality, timely network planning advice and reliability outlooks through AEMO's
  publications including the 2024 ISP, Electricity Statement of Opportunities (ESOO), Gas Statement
  of Opportunities (GSOO), Victorian Gas Planning Report (VGPR), WEM ESOO and WA GSOO with
  an enhanced focus on social licence, gas and electricity interactions and emissions reduction (as
  proposed for inclusion in the National Electricity Objective and WA State Electricity Objective).
- Monitor progress relative to AEMO's planning advice by tracking outcomes and investment
  progress against forecasts and actions highlighted in our publications to inform industry,
  jurisdictions and other market participants.
- Deliver AEMO input and support for implementation of actionable ISP projects.
- Develop future power system modelling strategy for design horizons to ensure modelling capability is available and fit for-purpose for future needs to support the transition to renewables.
- Progress Engineering Roadmap to 100% Renewables to enable secure power systems capable
  of operating at times at 100% instantaneous penetration of renewables by delivering prioritised
  initiatives under the roadmap and developing and publishing a roadmap for the South-West
  Interconnected System (SWIS).

#### **Reform Delivery**

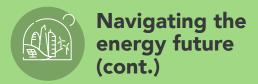
We efficiently and effectively deliver mandated and essential reform programs on time and on behalf of the industry as required, with a strong focus on efficiency and reducing costs to industry and consumers.

- Deliver and embed NEM reform (Medium Term Projected Assessment of System Adequacy, Fast Frequency Response, and Integrating Energy Storage Systems) and commence planning of next tranche reforms together with industry through Regulatory and IT Implementation Roadmap to proactively support cost-effective reform development and delivery, reducing implementation costs.
- Deliver and embed WEM reform including Security Constrained Economic Dispatch (SCED) and Essential System Services (ESS) by 1 October 2023, as confirmed by the WA State Government.
- Complete and action learnings arising from trials to enhance participation consumer Distributed Energy Resources (DER) including Project Edge in the NEM and Project Symphony trials in the WEM.
- Finalise Tranche 1 East Coast Gas System reforms, together with industry.

#### **Reform Collaboration**

We have worked with market bodies, industry and governments to develop and influence the design of critical reforms.

- Progress arrangements to ensure sufficient firming capacity (investment in dispatchable capacity required to complement non-dispatchable renewables) through working closely with the Commonwealth government on the design and evolution of the Capacity Investment Scheme and Energy Policy WA on the Reserve Capacity Mechanism review in the WEM.
- Support reforms to reliability settings to address tail-risk and more adequately meets
  consumer expectations through contributions to the Reliability Panel reviews of Reliability
  Settings, Australian Energy Market Commission (AEMC) reviews on the Interim Reliability Measure
  and Retailer Reliability Obligation and Energy Policy WA's review of the Reserve Capacity
  Mechanism review.
- Support timely and efficient transmission investment required to enable new investments in renewable and firming capacity through an enhanced framework for assessment under the ISP which better supports building social licence. Support Rewiring the Nation, Commonwealth and AEMC ISP Reviews, implementation of the Victorian Transmission Investment Framework and the 'enhanced information' project to deliver transmission access reform. In the WEM, continued engagement with Energy Policy WA and Western Power, with the opportunity to formalise new processes.
- Support the integration of DER with the power system and market such that its usage supports
  secure and reliable operation of the power system, and DER customers are enabled to access
  value from their investments through a nationally consistent framework for DER integration.
- Support the development of the Tranche 2 East Coast Gas System reforms that progress development of further supply adequacy and reliability measures.
- Collaborate with market bodies, governments, industry and consumer representatives
  on regulatory or rule change proposals and changes (e.g. Five Minute Settlement (5MS), Cost
  Allocation Review and Project Eagle in the WEM) to deliver other reforms.



How we will achieve the outcomes of this priority (cont.):

#### Connections

We transparently inform, cooperate and provide timely responses to all participants throughout the grid connection process while seeking improvements and streamlining.

- Continue to deliver timely, customer focused national onboarding and grid connection
  processes that progress the connection of new generation and improve transparency of the
  connections pipeline. Similarly in Victoria, execute AEMO's responsibilities for progressing
  connections to the Victorian transmission network.
- Deliver incremental and major improvement in the connection process to accelerate connections, including the interface with developers, original equipment manufacturers and network service providers in WEM, NEM and Victoria and continue to implement the prioritised key initiatives identified in the Connections Reform Initiative Roadmap jointly developed by AEMO and the Clean Energy Council (CEC), the Engineering Roadmap to 100% Renewables and WA Energy Transformation Strategy (ETS) initiatives.

#### **Victorian Transmission**

We deliver on our unique role of planning of the Victorian transmission network to effectively plan transmission network infrastructure.

- Progress Victorian major transmission projects in a timely, cost effective and community
  orientated manner (VNI West and Western Renewables Link) to ensure the transmission network
  meets future reliability and security requirements given the accelerating energy transition.
- Deliver AEMO's unique transmission network planning role by meeting all statutory obligations
  under the defined planning process and methodology, including the Victorian Annual Planning
  Report (VAPR) and regulatory investment tests for transmission, ensuring close engagement with
  stakeholders and consumers.
- Progress recommendations under the Victorian Transmission Investment Framework (VTIF)
  including interim process improvements and consolidation of functions.

#### **Jurisdictional Support**

We enable infrastructure delivery through our jurisdictional roles.

- AEMO Services Limited (ASL) delivers on core obligations and responsibilities as the NSW
   Consumer Trustee by providing best in class energy and advisory services in procurement,
   coordinated planning of network, generation and storage infrastructure and financial market risk
   management and advice, as outlined in the ASL FY24 Corporate Plan.
- Deliver support roles for jurisdictional plans, initiatives and roadmaps, providing advice and input as required.

#### Our key business and strategic measures against this priority:

Key measures for FY24	Target
High priority reform projects delivered to scope, on time and to budget	At least 8 priority projects
Achieve the FY24 initiatives to prepare for 100% instantaneous renewable penetration, at times, by 2025	<b>14</b> initiatives delivered
Improved connection process, transparency and satisfaction	75% of Connections Reform Initiatives delivered and proponent satisfaction score of 70
Effective delivery of jurisdictional support services	100% of agreed outcomes delivered
Effective delivery of AEMO's Victorian declared network and National Electricity (Victoria) Act 2005 (NEVA) functions	<b>85%</b> of agreed outcomes delivered



Be a trusted partner working with our stakeholders to deliver better energy outcomes for consumers and the community.

As the energy transition progresses, the stakeholder landscape is evolving and growing. Tackling the increasingly complex challenges of the transition requires genuine collaboration and cooperation with and between market bodies, industry participants, jurisdictions and consumers.

As a trusted source of technical expertise for our stakeholders and jurisdictions, we will continue engaging transparently, openly and collaboratively to deliver the best outcome for all Australians.

AEMO is committed to contributing to the social licence needed for the transition by ensuring that consumers and communities are heard and understood, and that the distribution of benefits and costs of the transition are kept front-of-mind.

#### How we will achieve the outcomes of this priority:

### Enhance trust in AEMO

We enhance trust by delivering value to consumers, members and stakeholders, and by working with jurisdictions and stakeholders to achieve positive energy transition outcomes.

- Improve openness and transparency for our stakeholders.
- Improve accessibility of AEMO information and publications.
- Seek timely stakeholder input and feedback, ensuring appropriate 'feedback loop'.
- Ensure AEMO stakeholder engagement forums are efficient, effective and inform AEMO's work and value.
- Increase collaboration with stakeholders to achieve better energy outcomes, including through industry and jurisdictional forums.
- Uplift AEMO's stakeholder engagement capability, including execution of the Stakeholder Engagement Maturity Roadmap.

### Embed a consumer and community focus

We enhance our focus on the energy consumer and the community.

- Develop and commence execution of AEMO's Consumer Engagement Plan.
- Seek to better understand consumer priorities, preferences and challenges, particularly in the
  context of the energy transition.
- Help build greater understanding and awareness of the energy transition with consumers and the community through our communications and publications.
- Work effectively with local communities to deliver the VNI West and Western Renewables Link transmission projects.

#### Our key business and strategic measures against this priority:

Key measures for FY24	Target
Improved stakeholder trust and confidence	Stakeholder satisfaction score of <b>60</b>

### **AEMO's major publications**

In addition to tracking the outcomes and measures documented in this plan, AEMO will publish the information necessary to fulfil our regulatory obligations and inform our members.

reports relating to Australia's energy systems. Please visit our website for our library of major publications.

AEMO produces a significant number of publications and

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

(Biennially at minimum, with annual updates of scenario inputs) Presents a range of credible future scenarios representing possible policy settings and technology uptake, which feed into AEMO's planning publications.

#### Gas Statement of **Opportunities** (GSOO)

#### (Annually)

Forecast of 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.

#### Victorian Gas **Planning Report** (VGPR)

#### (Annually)

Information relating to gas supply, demand, network capability and Victorian Declared Transmission System for the next five years.

#### **WEM Electricity** Statement of **Opportunities** (WEM ESOO)

#### (Annually)

Forecast and analysis of peak demand and energy use in the SWIS for a 10-year outlook.

#### WA Gas Statement of Opportunities (WA GSOO)

#### (Annually)

Forecast of gas supply and demand for the Western Australia gas industry, including overview of gas infrastructure and emerging issues for a 10-year outlook.

#### **Electricity** Statement of **Opportunities** (ESOO)

#### (Annually)

Forecast of electricity supply, demand and reliability, and impact of potential energy constraints in the NEM. including assessment against the reliability standard for a 10-year outlook. This forecast is used to inform decisions by market participants. investors and policy-makers.

#### **Integrated System** Plan (ISP)

#### (Biennially)

A whole of system plan for the efficient development of the NEM power system that achieves power system needs for a planning horizon of 30 years for the long term interests of the consumers of electricity.

#### Other key publications build off the ESOO and ISP analysis to further explore future system needs and ensure the operability and security of the grid.

#### **System Strength Report**

#### (Annually at minimum)

System strength requirements and shortfall assessments for a 5-year outlook for each NEM region. If shortfalls are identified then transmission planning bodies are responsible for ensuring that services are made available.

#### **General Power System Risk Review** (GPSRR)

#### (Annually at minimum)

The GPSRR is an integrated, annual review of major power system risks in the NEM, considering arrangements in place to mitigate the impact of priority risks that could lead to cascading outages or major supply disruptions.

#### Inertia Report

#### (Annually at minimum)

Inertia requirements and shortfall assessments for a 5-year outlook for each NEM region when islanded (or at risk of islanding). If shortfalls are identified then transmission planning bodies are responsible for ensuring that services are made available.

#### **Network Support and Control Ancillary Services (NSCAS) Review**

#### (Annually at minimum)

Assessment of the need for NSCAS for a 5-year outlook. These services are to maintain power system security and reliability. If gaps are identified then transmission planning bodies and AEMO are responsible for ensuring that services are made available.

#### **Victorian Annual Planning Report** (VAPR)

#### (Annually)

Forecast of electricity supply, demand and network capability in the Victorian Declared Shared Network in Victoria for the next five years.

#### **South Australian Electricity Report** (SAER)

#### (Annually)

Forecast of electricity supply and demand in South Australia prepared for the South Australia Minister for Energy and Mining.

#### **Engineering Roadmap to 100% Renewables**

#### (Periodic)

A map to inform and involve stakeholders in the technical actions needed to prepare the NEM power system to accommodate instances of 100% renewable energy. Includes an annual review of priorities and implementation progress.

#### Insights

#### **Quarterly Energy Dynamics (QED)**

#### (Quarterly)

Detailed market dynamics, trends and outcomes in Australia's electricity and gas markets.



Be an adaptive, effective, commercial and consumer-focused organisation.

As we operate today's energy systems and markets and navigate tomorrow's energy future, we are maturing our organisation and evolving the way we work. We aim to ensure we deliver against our priorities in a way that provides a positive environment for employees, earns and maintains the trust of our stakeholders and provides value to Australian consumers.

This evolution requires investment in our people, processes, governance and technologies as we work to ensure the economical, efficient and effective use of resources by streamlining our day-to-day practices and processes, modernising our core systems, and improving the ease with which people work with, and within, the organisation.

This includes maturing our financial discipline and risk management to ensure we operate within the parameters defined by our members.

The energy transition provides an opportunity for greater energy accessibility, as well as economic development, employment, self-determination, and environmental protection for First Nations peoples. AEMO is committed to incorporating actions of Reconciliation into our culture, commencing with the creation of our first Reconciliation Action Plan (RAP) – a multi-year process that will touch all parts of the organisation and shape the way we think about the work we do. Our unique position in the energy market provides us with a unique opportunity to enrich and benefit First Nations peoples.

#### How we will achieve the outcomes of this priority:

### Talent, capabilities, and culture

We strive to be an inclusive, adaptive and stakeholder-focused organisation, attracting, empowering, developing, and retaining, talent for AEMO's current and future business requirements.

- Formalise and commence implementation of AEMO's Strategic Workforce Plan so that AEMO has the right capacity, skills and experiences, for now and the future.
- Continue to uplift employee engagement and build alignment through enhanced employee
  engagement opportunities and leadership development, as evidenced by an uplift in employee
  engagement scores and action on focus areas.
- Embed AEMO's refreshed values and strategy alignment in key people processes, including recruitment and performance management, through ongoing planning, organisational development, and governance.
- Deliver the pillars of the Diversity, Equity and Inclusion strategy which positions AEMO as a leader in the energy sector.
- Develop AEMO's inaugural Reflect Reconciliation Action Plan (Reflect RAP) to be launched in FY24.
- Further evolve AEMO's safety settings to unlock the value of AEMO's Safety, Health and Wellbeing strategy, and deliver the regulatory and safety culture assurance that our people deserve.
- Complete the relocation of the Melbourne office, focusing on the cost-effective provision of workspaces which facilitate collaboration and high employee engagement.

#### **Process Improvement**

We modernise our systems and processes to reduce effort and costs, make AEMO easier to do business with and make AEMO an even better place to work.

- Continue to uplift and optimise enterprise portfolio program delivery, including quality
  assurance and governance, sequencing, forecasting, delivery and capabilities.
- Deliver phase 1 of an agreed business improvement program aimed at implementing enterprise systems and processes that can scale to meet AEMO's internal needs, to support delivery of our core functions.
- **Uplift capability for corporate functions enabled through modern technology** with the build out of the foundational elements of an Enterprise Resource Planning (ERP) solution.
- Further align our enterprise risk management approach and uplift the maturity and risk culture across AEMO.
- Deliver Year 2 of the Digital Evolve Strategic Action Plan priority initiatives to reduce cyber and operational risk, ensure successful delivery of programs and projects, define and deliver prudent digital services, and ensure continued investment in people and capabilities.
- Evolve the Future State Architecture (FSA) as a program to simplify our digital ecosystem
  and reduce technical debt by ensuing changes to systems and processes within programs are
  aligned with the FSA and implementing Tranche 1 of AEMO's Data Strategy.

#### **Financial Health**

We are prudent and efficient at delivering outcomes within agreed budgets, seeking to minimise the overall cost to consumers and building transparency.

- Deliver outcomes within the agreed budget, embedding efficiency improvements and in line
  with published fees.
- Clearly demonstrate the value AEMO provides to energy consumers and members with appropriate governance measures and risk management methodology including through the WA allowable revenue process.
- Review and finalise the fee methodologies in collaboration with industry, including for NEM reform, electricity market and gas market fees.



## Evolving the way we work (cont.)

#### The way we work

How we work in delivering our Strategic Corporate Plan is underpinned by our new values.

The first one is **Character**, which goes to the essence of our professionalism. We bring our professional expertise to make a difference, to strive to do better, to tackle tough challenges, to be honest and authentic, while we seek to juggle the sometimes difficult requirement to be both flexible and pragmatic.

The second is **Connection**, which describes the way we approach our collaborations with each other at AEMO, and also with the work we do with our counterparts and stakeholders outside of AEMO.

We want to work together as one united AEMO team to improve, learn and adapt. We want to cultivate an atmosphere of trust, between ourselves and with others. We can show support for the wellbeing of one another while challenging ideas and concepts in a respectful way.

The third is **Commitment**. The challenges of the energy transition means we have to find better ways to get things done. This reflects in the way we put consumers and communities at the heart of our thinking. It means listening empathetically and helping our work partners succeed. It means we are strategic and evidence-led, responding in a transparent way that fosters accountability.

**Character**. **Connection**. **Commitment**. These are our compass bearings in our day-to-day actions and to help guide us when we face the uncertainties of the future.



## Character Be our best

We bring our professional expertise to make a difference

We consistently strive to be better

We thrive on the tough challenges

We are **flexible** and **pragmatic** 

We are honest and authentic

We are **inclusive** and **value difference** 



## Connection Better together

We work as one team across the AEMO group

We actively engage with colleagues and stakeholders

We prioritise the safety and wellbeing of ourselves and others

We **build trust** and **trust others** 

We support and learn from each other

We challenge respectfully and constructively



## Commitment

Make it happen

We put the needs of consumers and communities at the core of our thinking

We balance evidence, timeliness, cost and risk

We set clear goals, take
ownership and do what we say
we will do

We find better ways to get things done

We are transparent and responsive

We invest in our people

Our key business and strategic measures against this priority:

Key measures for FY24	Target
No significant deterioration in AEMO's overall health and safety performance	0%
AEMO employee engagement	Score of 70%
Achieve FY24 Expenditure Budget (net of recoveries)	Meet Budget
AEMO programs and projects in accordance with the Future State Architecture policy	<b>95%</b> of programs and projects in accordance with policy
Achieve all material regulatory and reporting obligations	<b>100%</b> of material obligations not breached

## **Delivering our budget**

Funded by participants to support the delivery of the electricity and gas objectives, AEMO recognises that we invest resources to operate the energy markets and grid in the long-term interests of consumers with respect to price, quality, safety, reliability and security of supply and achieving the goal of net zero.

We recognise our responsibility to be prudent and to use resources efficiently and effectively, to be transparent and accountable. In particular, as we go about our work, we are mindful of our contribution to energy prices for consumers, especially at a time when many Australians and Australian businesses are dealing with the rising costs of living.

We acknowledge that stakeholders' trust and confidence in AEMO's financial processes, governance and transparency is still being rebuilt following the accumulation of a deficit over several years, which we are remedying with the support of market participants. We are taking steps to earn stakeholders' trust and across the organisation we are maturing our systems, processes and building the capabilities and culture we need to support the efficient and transparent delivery of outcomes in the dynamic environment we operate in. This is particularly important as we lead a wave of investment to support the industry's transition.

Our FY24 Budget and Fees was developed in consultation with stakeholders through the Financial Consultation Committee (FCC) and via a broader consultation in which we sought feedback from all stakeholders. The budget demonstrates our focus on cost management as we recover from a deficit position, contend with industry-wide cost pressures such as wage inflation and rising borrowing costs, and as our role evolves and expands.

AEMO is being asked to deliver more to support the energy transition, while continuing to invest in core operations and our people. AEMO's roles and responsibilities have been increasing as Australia's energy transition is accelerating. AEMO's core role is becoming more challenging - we are seeing challenging operational conditions in both gas and electricity, and a dynamic planning environment.

Major reform programs are continuing into FY24, including WEM reform and the NEM reform implementation, including the Energy Security Board's NEM2025 program. In addition to these capital intensive programs, there is additional work that AEMO is completing which is putting upward pressure on labour and consulting costs within operating expenses. A significant portion of these require input and collaboration with stakeholders. Examples include:

- Greater operational and planning responsibilities towards enabling at times 100% renewables by 2025;
- Operationalising the necessary procedures and system changes required from the extension of AEMO's functions and powers to manage the east coast gas supply adequacy and reliability reforms (Tranche 1 Gas Reform):
- Partnering with Government, market bodies and industry to influence Tranche 2 gas reforms and reforms in the electricity markets;
- Operationalising new settlement processes as a result of the Dandenong Liquefied Natural Gas (DLNG) Rule Change for AEMO to act as a buyer and supplier of last resort if storage capacity is not fully contracted;
- Operationalise new roles and responsibilities in cyber incident co-ordination across participants in NEM and WEM:

- Compliance to mandatory obligations and reporting under the Security of Critical Infrastructure (SOCI) Act 2018: and
- Progressing the Victoria New South Wales Interconnector (VNI West) initial work activities.

#### **AEMO's financial principles**



Efficient and cost-effective delivery



Balanced and sustainable cost recovery



Clear, ringfenced participant and member funds



Funding pathways for new



Very low tolerance for funding risk on contracted activities



Debt-to-assets ratio <100%



Liquidity ratio >50%



Timely provision of AEMO budgets to market participants To offset these upward cost pressures, AEMO is seeking to utilise the increased investment in central functions including finance, risk and enterprise project management to identify, quantify and deliver efficiencies to reduce costs and drive operational efficiencies. An example is the implementation of a Capital Management Roadmap to optimise the capital structure of AEMO and ensure competitive priced debt is available to AEMO for the benefit of participants.

AEMO will continue to use debt financing for capital projects, amortising the capital cost over the life of the particular asset. With a strong credit profile, this model allows participants to progressively contribute to necessary capital projects through tariffs and fees over the life of the assets

#### **FY24 Budget**

AEMO's annual budget and fees are developed through early engagement with representative groups, alongside a market consultation process with our members and industry participants via the FCC. In Western Australia, the fees and charges are approved by the Economic Regulation Authority (ERA).

For FY24, AEMO's revenue budget is \$507 million¹ and the total operating expenditure budget, including Depreciation & Amortisation (D&A) is \$531 million. AEMO's FY24 budget delivers a \$24 million in-year deficit overall. This reflects the return of accumulated surpluses (principally in the Victorian Transmission Network Service Provider (TNSP) segment), partially offset by the reduction in the accumulated deficit in NEM Core.

AEMO's budget is structured around the following market segments:

Figure 1: Segments that AEMO¹ operates in



#### **Operating expenses**

The operating expenditure in the FY24 budget includes:

- Costs of operating today's energy systems and markets for electricity and gas for all segments;
- Costs relating to enabling the energy transition, including development of a new engineering framework, strengthening of operational tools and capabilities, and enhanced reform planning, system design and digital support capabilities;
- Costs related to evolving the way we work, including engaging with stakeholders; and
- Depreciation and amortisation expenses related to the capital investment program.

A brief budget summary for each segment is presented in the sections that follow. Individual items and totals are rounded to the nearest appropriate number. Some totals may not add due to rounding of individual components. Full details can be obtained in the FY24 Budget and Fees.

<sup>1</sup> The Budget financials represented within this document are inclusive of the draft AEMO Services Ltd (AEMO Services) budget. AEMO Services is 70% owned by AEMO and 30% by NSW Government, and currently has the singular objective of acting as NSW Consumer Trustee in accordance with the NSW Electricity Infrastructure Roadmap. At the time of publication, the budget for AEMO Services is being agreed with its members, and all costs are funded by the Electricity Infrastructure Fund informed by an annual contribution determination process regulated by the Australian Energy Regulator. AEMO Services will publish a dedicated corporate plan and budget, and a comprehensive group-wide financial perspective will be covered in this year's AEMO Annual Report.

Table 1: AEMO's work is funded by these market participants

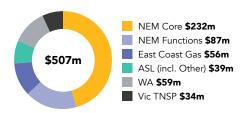
	Electricity fee allocation	Gas fee allocations
Generator/producer	<ul> <li>39% National Electricity Market</li> <li>50% WA Wholesale Electricity Market</li> <li>18% 5 Minute Settlement/ Global Settlement</li> <li>20% Distributed Energy Resources Integration Program</li> </ul>	<ul> <li>30% Gas Statement of Opportunity</li> <li>50% Gas Bulletin Board</li> <li>Declared Wholesale Gas Market</li> <li>Short Term Trading Market<sup>1</sup></li> <li>Gas Supply Hub</li> <li>Day Ahead Auction</li> <li>Gas Service Information</li> </ul>
Retailer	<ul> <li>49% National Electricity Market</li> <li>50% WA Wholesale Electricity Market</li> <li>82% 5 Minute Settlement/ Global Settlement</li> <li>80% Distributed Energy Resources Integration Program</li> <li>Electricity Retail</li> <li>Transmission Use of System</li> </ul>	<ul> <li>70% Gas Statement of Opportunity</li> <li>50% Gas Bulletin Board</li> <li>Declared Wholesale Gas Market¹</li> <li>Short Term Trading Market¹</li> <li>Gas Supply Hub</li> <li>Day Ahead Auction</li> <li>Gas Service Information</li> <li>Gas Retail</li> </ul>
Transmission Network Service Provider	<ul> <li>12% National Electricity Market</li> <li>National Transmission Planner</li> </ul>	
Other customer <sup>2</sup>	Transmission Use of System	<ul> <li>Declared Wholesale Gas Market¹</li> <li>Short Term Trading Market¹</li> <li>Gas Supply Hub</li> <li>Day Ahead Auction</li> <li>Gas Service Information</li> </ul>

<sup>1</sup> The percentage of allocation across these participants is based on withdrawal.

Chart 1: Operating expenditure by segment FY24 (\$M)



Chart 2: Revenue requirement by segment FY24 (\$M)



#### **Fees and Tariffs**

Operating costs are recovered through a range of different revenue sources, and in particular fees and tariffs levied to participants across the primary market segments. Other revenue sources include connections services and advisory services to market participants and jurisdictions.

The fees and tariffs for each segment relate only to the costs of that segment (including an appropriate allocation of the cost of central corporate functions) and are adjusted to reflect any accumulated surplus (or deficit) achieved in prior years.

#### **NEM Core**

**Purpose:** Keeping the National Energy Market (NEM) operating safely, reliably and securely is an essential part of AEMO's core work. This includes:

- ensuring power system security and reliability
- market operations and systems
- wholesale metering, settlements, and prudential supervision
- longer-term energy forecasting and planning services.

## Chart 3: Budgeted operating cost profile for NEM Core FY24 (\$M)



Operating costs are increasing 5.0% from the FY23 budget, with labour being both the largest cost in the segment and the largest driver of the year-on-year increase.

To meet the challenges of the energy transition, AEMO is employing more skilled and experienced people to build our capabilities and resource our highly complex programs of work. This resourcing is supported by independent benchmarking, which compared AEMO's operations against other system operators globally and found that AEMO's investment in support functions needed to increase if it was to ably support the energy transition.

<sup>2</sup> Other Customer includes larger industrial customers such as smelter, steel producers, gold mines, desalination plants, traders and brokers.

Recruitment is occurring across AEMO's Digital, Operations and System Design teams to deliver the energy transition. Wage inflation (reflecting a tight labour market) is also a challenge.

The FY24 budget contains a 4.5% increase in NEM Core benchmark fee to continue the recovery of the NEM Core accumulated deficit over 3 years (FY23 to FY25). The budget forecasts \$34 million of the accumulated deficit will be recouped in FY24, with the remainder over FY25.

#### **NEM Functions**

**Purpose:** AEMO performs a number of functions (or services) that support the core operation of the NEM, including:

- national transmission planning (NTP)
- management of five-minute settlements (5MS)
- trading in the Settlements Residue Auction (SRA)
- management of the NEM2025 Reform Program
- facilitation of retail market competition
- provision of a consumer data platform
- integrating Distributed Energy Resources (DER) into the NEM.

Chart 4: Budgeted operating cost profile for NEM Functions FY24 (\$M)



In FY24, segment costs increase by \$9.3 million (9.9%) compared to FY23, reflecting increased information technology and telecommunications (IT&T) costs, financing costs, depreciation and amortisation predominantly related to the NEM2025 program (\$6.0 million) and 5MS (\$3.6 million).

The majority of costs within NEM functions relates to amortisation of the capital spend and IT&T costs to run 5MS, which went live in October 2021, as well as the financing costs associated with the capital required for this program. National Transmission Planning accounts for 21% of the costs of the segment and includes additional investment relating to continued evolution and expansion of the Integrated System Plan (ISP). The 2024 ISP is currently being developed and is expected to deliver on all facets of the energy transition.

The segment also contains costs relating to the NEM2025 Reform Program, which will transition the NEM into a modern energy system fit to meet consumers' evolving wants and needs. Elements of this program are scheduled to go live in FY24, including Fast Frequency Response Ancillary Services, and Integrating Energy Storage Systems.

The segment budget captures the forecast operating costs for the NEM2025 Reform Program but has no corresponding forecast revenue for FY24. AEMO is consulting with industry participants on a <u>fee structure for NEM2025</u>, which is expected to be finalised in late 2023, subsequent to which costs incurred will be recovered.

#### East Coast Gas (ECG)

**Purpose:** AEMO performs a number of functions relating to the East Coast Gas markets, including:

- operating the Victorian Declared Wholesale Gas Market (DWGM)
- facilitating the Short-Term Trading Market (STTM) and day ahead auctions (DAA)
- facilitating retail market competition
- developing the Gas Statement of Opportunities (GSOO)
- operating the Gas Supply Hub (GSH) and Capacity Trading Platform (CTP)
- administering change proposals for the Operational Transportation Service (OTS) Code.

### Chart 5: Budgeted operating cost profile for East Coast Gas FY24 (\$M)



The functions drawing the largest costs in this segment (\$36 million or 62%) are AEMO's work on the DWGM, followed by the STTM (\$6.3 million or 11%). These are spread across the operating cost categories. Operating costs are increasing by 10.1% compared to the FY23 budget.

#### **East Coast Gas Reforms**

In August 2022, Energy Ministers agreed to make a <u>range of reforms</u> to support a more secure, resilient and flexible east coast gas market. These actions are designed to enable AEMO to better manage gas supply adequacy and reliability risks to minimise, as far as practicable, the hazards and risks to safety of the public and customers arising from a gas supply threat. Stage 1 of the changes are being delivered in FY23 and in FY24, AEMO will progress stage 2 of the changes. The extension of AEMO's regulatory functions and powers to manage east coast gas supply adequacy is reflected in our labour budget. AEMO will consult on a separate fee mechanism for the ongoing recovery of these costs to come into effect from 1 July 2024. In FY24 the costs are budgeted to be approximately \$1.7 million.

#### LNG capacity and storage

As part of securing the Victorian Declared Transmission System against the effects of an adverse event and demand shortages, AEMO is instructed to act as both buyer and supplier of last resort in relation to the Dandenong liquefied natural gas (DLNG) storage facility over 2023 to 2025. This means AEMO is required to secure all uncontracted gas (excluding operational and non-market LNG storage) and storage capacity. In FY24 the storage costs are budgeted to be \$10.8 million allocated to the other cost category.

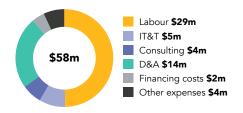
#### **WA Electricity and Gas**

**Purpose:** AEMO provides a range of functions for the Western Australia (WA) Wholesale Electricity Market (WEM):

- operating and settling the Reserve Capacity Mechanism and managing the buying and selling of electricity in the following markets:
  - the Short Term Energy Market
  - the Load Following Ancillary Service (LFAS)
     Market
  - the Balancing Market.
- maintaining the Southwest Interconnected System (SWIS) in a secure and reliable state, working alongside the network operator (Western Power) and generation facility owners.

AEMO operates the retail market scheme in WA, providing retail market services to gas industry participants, including procedures governing market operation. AEMO also has several functions under the Gas Services Information (GSI) Rules relevant to WA, which include operating and maintaining the Gas Bulletin Board, administering the registration process for gas market participants and publishing the Gas Statement of Opportunities (GSOO).

### Chart 6: Budgeted operating cost profile for WA FY24 (\$M)



As part of the <u>Energy Transformation Strategy</u>, extensive changes are being made to the WEM, many of which are planned to commence in October 2023. AEMO is implementing these changes through the <u>WEM Reform Program</u>. An updated <u>WEM Design Summary</u> has been prepared to provide a high-level understanding of the new design.

The WEM Reform program consists of 26 work packages grouped into 11 implementation projects across six workstreams. It includes market/regulatory design and technical/process design, reserve capacity mechanism reform, constraint management, generator performance standards, integration of DERs, and power systems operations.

The reform program drives the majority of the 25.2% increase in expenditure in the WA segment in FY24. Key areas of increased expenditure are:

- Increased labour required to manage the transition to new market design;
- Development, and deployment of IT systems and interfaces required to implement the WEM Reform Program; and
- Increased depreciation and amortisation associated with WFM reform

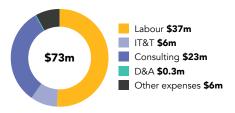
Fees and charges for the WA market are based on the Economic Regulation Authority (ERA) determination of Allowable Revenue (AR) and forecast capital expenditure for the three-year period covering FY23 to FY25. In WA, the FY24 budgeted revenue reflects 50% of the remainder of the allowable revenue for this regulatory period.

AEMO anticipates making an in-period submission to the ERA in relation to WEM reform, which could impact the FY24 budget for this segment.

## Victorian Transmission Network Service Provider (VIC TNSP)

**Purpose:** AEMO has a unique role in Victoria, as we are responsible for ensuring the Victorian transmission network is developed in an efficient manner that will ultimately benefit all Victorian electricity consumers.

### Chart 7: Budgeted operating cost profile for VIC TNSP FY24 (\$M)



Increased cost of \$23 million relates to higher costs of transmission activities, such as the Victoria to NSW Interconnector (VNI) West, and the Western Renewable Link project (WRL), and an uplift in AEMO's internal resources and capability to effectively deliver the key responsibilities of the function.

The VNI West project will provide a vital new transmission to deliver clean energy to consumers. This high-capacity transmission line will connect WRL in Victoria to EnergyConnect in New South Wales.

#### **Capital Investment Plan**

Australia's energy sector is transitioning rapidly to a renewables investment future. AEMO's investment program has been developed through a detailed multiyear forecasting process to determine capital priorities to support the strategic objectives in the Strategic Corporate Plan. Four capital programs are in progress:

- **NEM and gas reforms**, including the <u>NEM Reform</u>

  <u>Program</u>, <u>Project EDGE</u>, retail reforms and gas reforms
- WA market reforms, including the <u>WEM Reform</u>
   <u>Program</u> and the <u>WEM Distributed Energy Resources</u>

   <u>Program</u>
- Operations tools, including the Australian Energy Sector Cyber Security Framework (AESCSF), the forecasting roadmap, Victorian Gas Market dispatch system replacement, and the <u>Operations Technology</u> <u>Program</u>
- Business enablement to improve the efficiency of AEMO's core supporting systems. This includes a modern enterprise resource planning tool, cyber security systems and processes, and other systems to improve efficiencies, forecasting, planning, operations and security.

A full list of <u>AEMO's major programs and initiatives</u> is available on our website.

Our capital investment budget of \$175 million provides \$36 million towards the WEM Reform Program and \$70 million towards the NEM Reform implementation, including the NEM Reform Program.

Table 2: Investment profile for FY24 (\$M)

Capital Expenditure (\$M)	Budget FY23 (\$M)	Budget FY24 (\$M)	Variance (\$M)	Variance (\$M)
Reform (NEM and gas)	62.0	69.8	7.8	13%
WA market reform	32.9	36.2	3.3	10%
Modernising market operations systems	36.0	27.7	(8.3)	(23%)
Modernising business systems	44.4	41.2	(3.2)	(7%)
AEMO Capital Expenditure (\$M)	175.3	174.9	(0.4)	(0%)
VNI West <sup>#</sup> initial works (within VIC TNSP segment)	-	26.6	26.6	N/A
Capital Expenditure (\$M)*	175.3	201.5	26.2	15%

<sup>#</sup> VNI West capital expenditure is budgeted within Transmission Company Victoria (TCV), a wholly owned subsidiary of AEMO, and will be recovered through the VIC TNSP segment.

<sup>\*</sup> Gross of capital grants of \$1.13 million

#### Financing strategy and debt

AEMO's capital investments and short-term working capital requirements are facilitated through debt financing. By financing large capital projects with debt, this enables the 'smoothing' of capital costs to market participants over the life of the asset.

Due to extensive market reform driving increased capital investment, AEMO's debt has increased over recent years. AEMO is optimising the risk and cost of its capital structure by:

- ensuring adequate working capital and standby liquidity
- undertaking debt refinancing well in advance of maturity to provide optionality
- seeking to diversify tenor and funding sources
- seeking concessional debt facilities for specific initiatives.

#### **Profit & Loss Summary**

AEMO's FY24 financial summary presents an aggregate view of AEMO's revenue and operating expenditure.

Table 3: Financial summary for FY23B and FY24B\*

AEMO Financial Overview (\$M)	Budget FY23	Budget FY24
REVENUE		
Fees and Tariffs	379	391
Other Revenue	107	116
NET REVENUE	486	507

531
14
62
455

<sup>\*</sup> Revenue is presented net of network charges which are passed through within Transmission Use of System (TUOS) charges. Full details can be obtained in the  $\underline{FY24}$  Budget and Fees.

## Governing our organisation

#### Governance

AEMO is governed by a Board of Directors, who are supported by a robust and fit-for-purpose governance framework. The Board and its Committees balance oversight of AEMO's policies, budget, fee structures and long-term strategy with management's delivery of AEMO's key organisational objectives and responsibilities, including business performance, risk management, stakeholder engagement and compliance.

Our FY24 Strategic Corporate Plan reaffirms the priority the Board and leadership place on meeting AEMO's core obligations and evolving responsibilities. In collaboratively supporting energy transformation, fostering strong stakeholder relationships and delivering an efficient and cost-effective organisation, AEMO has uplifted its engagement and transparency with stakeholders to demonstrate responsible stewardship.

As AEMO's role and responsibilities have increased, integration of subsidiary entity governance at a group level has been a key focus. Initiatives to integrate governance policy, risk reporting and broader corporate governance are underway and are expected to deliver an enhanced standard of governance across the group. A sustained focus on cyber risk and resilience has continued to further strengthen digital oversight and investment.

During FY23, an independent external Board governance review confirmed that AEMO is committed to ongoing governance improvement. AEMO's Board Committee charters have been refreshed to more strongly align their roles and responsibilities with contemporary best practice and AEMO's specific corporate governance requirements.

#### **Risk statement**

AEMO and its subsidiaries are committed to maintaining a comprehensive and integrated risk management capability that is embedded into every business activity, decision, function, and process aligned to the international Risk Management Standard ISO 31000:2018 Risk Management – Guidelines, to create an effective risk culture.

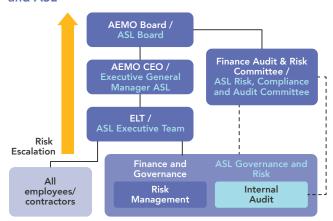
AEMO is investing in its risk management and assurance processes to minimise the impact of uncertainty on meeting our Strategic Corporate Plan objectives. The environment in which AEMO operates is ever changing and complex given the nature of our functions within the evolving energy markets. AEMO faces a variety of risks arising from the industry transformation, cyber security, regulatory, compliance, financial, prudential, reputational, people, and managing subsidiaries.

AEMO's risk framework includes the following Board and executive leadership approved artefacts:

- Group risk management policy
- Risk management framework
- Risk appetite statement
- Strategic risk register
- Operational risk register.

Starting with the Strategic Corporate Plan objectives, the Executive Leadership Team (ELT) has detailed the key strategic risks AEMO faces, and identified the current controls, and additional mitigations needed. Risk management is reported to the Board for the ultimate assessment of the control environment.

Figure 2: Risk Management Structure at AEMO and ASL



AEMO's risk appetite statement and risk tolerances for functions across the business provide guidance on the level of risk that is acceptable or appropriate to meet our Strategic Corporate Plan objectives. AEMO has zero tolerance of risks that may impact safety of employees or the public, and maintaining the power systems, but higher tolerance for encouraging innovation.

Throughout FY24, AEMO will further align the risk management approach across AEMO and its subsidiaries, and develop a roadmap to uplift the maturity and risk culture across the group. Key priorities include increasing the resourcing of the risk function and embedding processes to facilitate the reporting of risks from all levels to the Executive Leadership Team and the Board.

Key strategic risks for AEMO are set out below. Each key risk has mitigations and controls in place.

Table 4: AEMO's strategic risks

	Priority	Key risks
	Operating today's systems and markets	Inability to maintain secure and reliable operation of energy systems and market.
		Cyber or security incident(s).
C +1T		Failure to <b>restore following a cyber incident</b> .
	Navigating	Inability to <b>transition the energy system</b> .
画行列	the energy future	Inability to influence the <b>transition of the energy market</b> .
	Engaging our stakeholders	Loss of <b>stakeholder trust and confidence</b> significantly impacting AEMO carrying out its role.
		Inability to effectively <b>deliver agreed work programs</b> .
	Evolving the way we work	Inability to retain, develop, attract and/or utilise the required capabilities and talent.
E T		Inability to maintain a <b>healthy and safe workplace</b> for our people.
		Failure of <b>technology, systems, processes and data</b> that support AEMO's ability to maintain system operation and carry out it's role.
		Inadequate <b>financial governance and cost efficiency</b> .

### Australian Energy Market Operator Limited

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