

Corporate Plan

FY2023

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



Contents

Foreword	3
AEMO at a glance	4
Chapter 1 – Towards net zero 2050	5
Chapter 2 – The transition is underway	8
Chapter 3 – Optimising a net-zero future	11
Our priorities at a glance	15
Priority 1 – Operating today's systems and markets	16
Priority 2 – Navigating the energy future	17
Priority 3 – Engaging our stakeholders	18
Priority 4 – Evolving the way we work	19
Delivering our budget	20
Governing our organisation	23
Achieving corporate plan objectives	24

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

Australia's energy system is at the start of a new era.

Today, and since the COP26 international climate talks last November, an alignment exists between the federal, state and territory governments on achieving a net-zero emissions economy in Australia by 2050.

As the energy system accounts for a third of national greenhouse emissions, a net-zero energy system needs to be planned with engineering input to underpin a net-zero economy.

Beyond the transition to net zero, the energy transition is being driven by a kaleidoscope of factors, including declining new-technology costs, consumer preferences, investor priorities and government policy.

Society clearly expects the pace of change to accelerate.

This means the Australian Energy Market Operator (AEMO), faces the challenges of operating Australia's electricity grids at higher levels of renewable power sooner, and with greater urgency.

The challenges of maximising renewables in the system are multiple, complex, have interdependencies and will require collaborative spirit between governments, regulators, industry, and communities on a scale more accommodating than at any time in the past.

The power system needs to be readied for the progressive withdrawal of coal generation, which today makes up about two-thirds of all electricity generation.

At the same time, power system operability becomes a challenge with high levels of variable, renewable power.

As more solar, wind and hydro renewable power is connected to the grid over coming years our forecasts show that by 2025, there will be times when there will be enough renewable generation that the entire demand from the grid could be catered for by renewable power.

Because of this eventuality, AEMO is working towards the goal of being able to operate the power system at 100% instantaneous renewable generation by 2025.

A portfolio of technologies will be required to meet the challenges of the energy transition: utility-scale batteries, hydro storage, gas-fired generation, smart behind-the-meter batteries, energy efficiency measures, Virtual Power Plants and vehicle-to-grid services from electric vehicles, complemented by flexible loads and wholesale demand response to manage peaks and troughs.

And this will present novel challenges, which will require collaboration across government, industry and communities to solve.

In preparation for net zero by 2050, Australia's energy system needs more of these four broad elements:

- The energy itself – we expect that by 2050 the power system will double the amount of power it presently serves and will need a nine-fold increase in utility-scale variable renewable energy than is built today;
- Firming – the nation will need triple today's firming, or dispatchable capacity, to balance the peaks and fill in the troughs of variable renewable energy;
- New transmission – required to convey the electrons from new areas of renewable generation to energy consumers in population centres;
- New tools for grid operability – required to ready us for the increased complexities of operating the NEM at up to 100% instantaneous penetrations of renewable energy.

Society clearly expects the pace of change to accelerate

The need for these elements has been underlined by the recent event in June 2022, where tight supply of gas and electricity, coupled with extremely

volatile wholesale pricing, led to conditions where AEMO was forced to suspend the entire National Electricity Market. In managing these challenging conditions, AEMO put the security of the grid, and keeping the lights on, above all else.

There will be a number of responses to this event across governments, regulators, and the electricity and gas sectors. We look forward to working closely with governments and industry on these potential reforms.

There is much, much more for us to do, and we hope you will continue to make the journey alongside us as partners in this complex, yet essential and irreversible, energy transition.



Drew Clarke
AEMO Chairman

Drew Clarke



Daniel Westerman
AEMO Chief Executive Officer

Daniel Westerman

AEMO at a glance

Our role

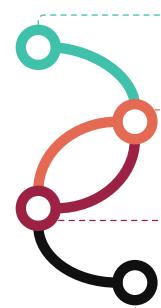
To ensure safe, reliable and affordable energy today and enable the energy transition for the benefit of all Australians.

The way we work

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

Living our values is central to our role. We will empower our people and stakeholders, we will approach each problem and solution with integrity, and ultimately, we will deliver excellence in our outcomes.

Our values



Inclusion

Strength through diversity and collaboration

Integrity

Courage to share knowledge and be evidence-based

Empowerment

Accountable and supported to achieve

Excellence

Passion to learn, grow and perform

AEMO's core functions and responsibilities

Operate energy systems

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



Operate energy markets

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



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



Chapter 1 – Towards net zero 2050

AEMO is Australia's independent operator of the nation's electricity and gas systems; ensuring safe, reliable and affordable energy today and enabling the energy transition for the benefit of all Australians.

AEMO has a central role in convening efforts to enable an orderly energy transition while keeping the lights on and the gas flowing in the process.

AEMO is a place for people motivated by innovation, curiosity, creativity and endeavour. From our day-to-day actions to our long-range vision, our people are united by the quest to make the Australia of tomorrow even better.

Our people are focused on serving our stakeholders and customers through AEMO's three main functions: operating energy systems, operating energy markets, and enabling the energy transition.

The dedication of AEMO staff to ensure the safe and secure operation of Australia's energy system around the clock is a demonstration of the values we hold dear as an organisation: inclusion, empowerment, integrity and excellence.

These values underpin the work AEMO is doing to respond to the accelerating energy transition in Australia, to a more sustainable, decarbonised energy future for the benefit of all Australians.

Taking a closer look at AEMO's functions reveals just how complex and interdependent Australia's energy systems are.

Operate energy systems

AEMO operates Australia's energy system day-to-day to match energy supply and demand on the east and west coasts.

AEMO does this in real time from control rooms that monitor the flow of electricity and gas in Australia around the clock, minute to minute, every day. AEMO never stops.

Our control room operators keep the system secure and ensure sufficient supply to meet energy consumption as, and where, it occurs.

AEMO's core functions by state

	WA	SA	VIC	NSW & ACT	QLD	TAS	NT
Operate energy systems							
Real-time Operations NEM Power Systems	•	•	•	•	•	•	•
Real-time Operations WEM South West Interconnected System	•						
Victorian Transmission Network Service Provider			•				
Real-time Operations Victorian Declared Transmission System			•				
Operational Forecasting and Engineering Analysis and Modelling	•	•	•	•	•	•	•
Operational Reserves and Emergency and Outage Management	•	•	•	•	•	•	•
Cyber Security	•	•	•	•	•	•	•

	WA	SA	VIC	NSW & ACT	QLD	TAS	NT
Operate energy markets							
NEM			•	•	•	•	•
WEM	•						
Gas Bulletin Boards	•	•	•	•	•	•	•
Gas Retail Markets	•	•	•	•	•	•	•
Day Ahead Auction		•	•	•	•	•	•
Short Term Trading Market		•		•	•	•	•
Gas Supply Hubs	•					•	
Declared Wholesale Gas Market					•		

	WA	SA	VIC	NSW & ACT	QLD	TAS	NT
Enable the energy transition							
System Planning and Planning Support	•	•	•	•	•	•	•
Technical Support and Analysis		•	•	•	•	•	•
ESB's P2025 Program		•	•	•	•	•	•
ETS's WEM Reform Program	•						
NEM Reforms to Wholesale and Retail Markets	•	•	•	•	•	•	•
DWGM, GBB, GSH and other gas reforms	•	•	•	•	•	•	•
NSW Consumer Trustee (performed by AEMO Services Limited)					•		



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 that facilitates gas trading with the Queensland LNG producers, Short Term Trading Market 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).

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.

To this end, AEMO dedicates significant resources to risk assessments and mitigation measures. These measures include protecting systems from the ever-present and growing threat of cyber intrusions.

We are actively supporting governments and the industry to strengthen system resilience by assisting with cyber preparedness and enabling collective and coordinated responses and recovery from cyber threats and incidents.

Operate energy markets

AEMO operates wholesale markets, where energy 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.

The magnitude of the east-coast NEM and the west-coast WEM commerce is substantial.

In a world first, AEMO now settles NEM energy trades at five-minute market intervals

Last year, the NEM saw approximately 180 terawatt-hours of electricity purchased worth more than \$11 billion; the WEM served more than 17 terawatt-hours of electricity worth \$1.6 billion.

In a world first, AEMO now settles NEM energy trades at five-minute market intervals to match with dispatch intervals, delivering least-cost supply and the most timely and accurate price signals for generators.

AEMO manages a number of wholesale gas markets including the Short Term Trading Market (STTM) in Sydney, Brisbane and Adelaide, and the Gas Supply Hubs (GSH) in Wallumbilla in Queensland and Moomba in South Australia.

AEMO also manages the Pipeline Capacity Trading (PCT) market for secondary trading to encourage the efficient use of gas and pipelines. AEMO also operates gas bulletin boards in the east and west, which provide up-to-date gas market and system information.



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 consumer 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.

Through sophisticated forecasting and modelling, coupled with deep industry, consumer, government and stakeholder engagement, AEMO creates a NEM electricity system blueprint, the Integrated System Plan, that will be resilient to future uncertainties and delivers in consumers' interests.

In the west, AEMO is deeply involved in the WA Government's broader Energy Transformation Strategy to deliver an improved WEM and SWIS design to shape the energy future for Western Australia.

With access to unique insights gained from operating Australia's complex energy systems and markets, AEMO plays a critical role in assisting Australia to ready its systems and markets to meet the energy challenges of the future.

Beyond these national remits are specific state electricity and gas responsibilities.

In Victoria, AEMO provides some of the Transmission Network Service Provider obligations with responsibility for planning augmentation of the state's future electricity transmission network and some aspects of network connections.

In New South Wales, AEMO acts as Energy Security Target Monitor.



An independent subsidiary, AEMO Services Ltd (ASL), has been established to carry out specific mandates of NEM jurisdictions (who want to solve their state-based energy challenges) without causing conflicts with other jurisdictions.

AEMO Services acts as the NSW Consumer Trustee, procuring generation and storage capacity in the interests of NSW consumers under the State Government's Electricity Infrastructure Roadmap. AEMO Services will be producing its own corporate plan and annual report.



2021 Infrastructure
Investment Objectives
Report



New South Wales
Development Pathways
Report

Since federation, individual states in Australia have been deeply involved in the provision of energy supplies to power their cities, towns and regions – owning and running public energy utilities before privatisation. States have continued to plan their energy future within their boundaries and embrace technological change.

Each jurisdiction has developed policies, plans and funding mechanisms to encourage new energy developments and projects to help reach emission-reduction targets and lower energy costs to consumers.



Chapter 2 – The transition is underway

AEMO's latest industry picture reveals solar, wind and battery storage make up 86% of proposed new energy projects for the NEM. There are 150 GW of proposed new generation and storage projects, compared with 67 GW of installed generating capacity today – so more than double.

At the same time, we are preparing for the progressive retirement of some of Australia's largest and most significant coal generators over the coming decades.

Approximately 23 GW of synchronous coal generation capacity exists in the system today. Asset owners tell us at least 8 GW of this will withdraw this decade. But AEMO modelling indicates this could be as much as 14 GW, a retirement rate twice as fast as anticipated.

Real world experience is bearing out accelerated closures, as renewables increase commercial pressures on the future of these power stations. The power system needs to be prepared for the withdrawal of coal generation and ways to replace the steady effect big rotating turbines have on the electrical attributes of voltage and frequency.

In the absence of alternatives, as they withdraw, system strength can be affected, reducing power quality and increasing the risk of power disturbances.

This is a significant issue for AEMO to manage, as the power system operator, to ensure that uninterrupted energy flow occurs between all users and the system can recover from disturbances.

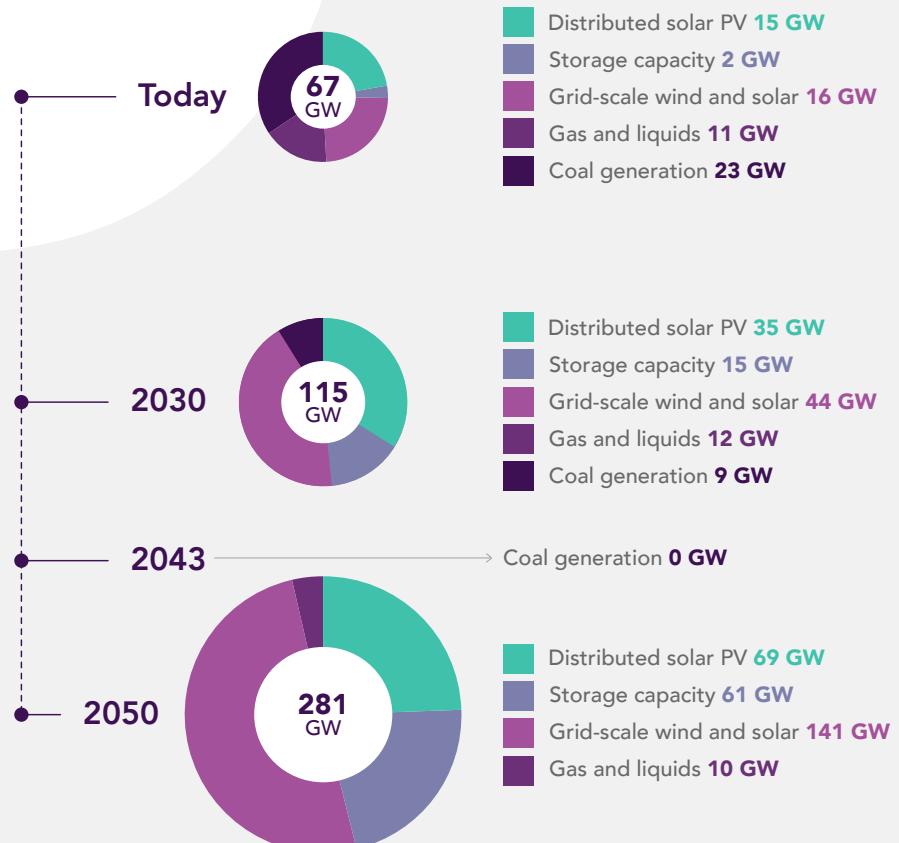
Replacing coal generation requires a portfolio of technologies. Because the output of solar and wind is as variable as the weather, dispatchable capacity in the form of batteries, pumped hydro and gas firming are essential components to ensure dependable supply.

Similarly, the deployment of technologies like synchronous condensers and grid-forming inverters can assist in maintaining a reliable and secure power system. All of this requires careful planning.

In order to conceive of a net-zero energy system by 2050, AEMO undertakes collaborative workstreams on three time horizons: long range, medium term and near term.

Replacing coal generation requires a portfolio of technologies

NEM generation changes forecast in the 2022 ISP



AEMO's 30-year roadmap of investment for the NEM is presented in the Integrated System Plan (ISP), to enable Australia's energy transition in an orderly and best value-for-money/least-regret way, for the ultimate benefit of all Australian energy consumers. The ISP also articulates a range of energy scenarios – or plausible energy futures – to map out the potential paths to a net-zero energy system.

Similarly, AEMO is working closely with the Western Australian Government on its Energy Transformation Strategy. One fundamental element of this is the Whole of System Plan (WoSP), a detailed study of how the SWIS may evolve over the next 20 years. The plan models how changes in demand, technology, and the economy may shape the use of electricity and guide the investments over the coming decades to achieve lowest-cost, lower-emissions electricity.

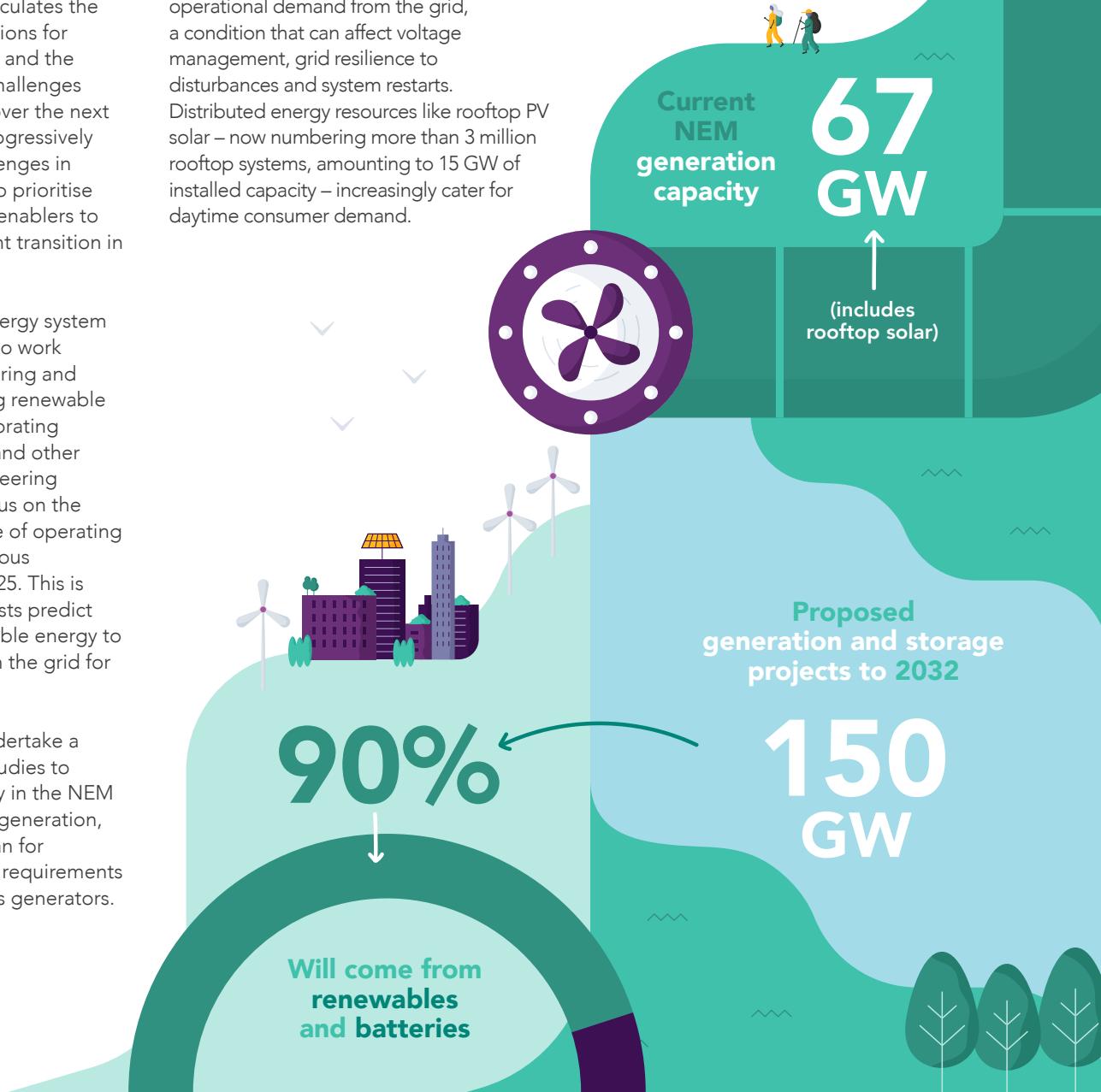
In the medium term, AEMO electricity and gas reliability outlooks – the Statements of Opportunities – provide 10 and 20-year outlooks for the supply and demand of electricity and gas as well as identifying trends, risks and development opportunities to help inform energy investment and public policy. Gas continues to play an important role in Australia's energy supply, not only for heating and cooking, but as a feedstock for industry and for fast and sustained dispatchable electricity generation.

In the near term, AEMO's forward planning publications, including the Engineering Framework, articulate the changing operational conditions for the east coast power system and the engineering and technical challenges that need to be addressed over the next five to 10 years. AEMO is progressively working through these challenges in collaboration with industry to prioritise actions that are seen as key enablers to support a secure and efficient transition in the NEM.

The rate of change in the energy system will require all stakeholders to work together to find the engineering and other solutions for increasing renewable generation. AEMO is collaborating with industry, governments and other stakeholders on these engineering challenges with an initial focus on the power system being capable of operating with 100 per cent instantaneous renewable generation by 2025. This is the year by which our forecasts predict there will be enough renewable energy to entirely supply demand from the grid for short periods in the year.

In the year ahead we will undertake a program of power-system studies to assess power-system security in the NEM at times of 100% renewable generation, and develop a long-term plan for assessment of future system requirements with fewer large synchronous generators.

The flipside of this influx of renewable generation is managing low minimum operational demand from the grid, a condition that can affect voltage management, grid resilience to disturbances and system restarts. Distributed energy resources like rooftop PV solar – now numbering more than 3 million rooftop systems, amounting to 15 GW of installed capacity – increasingly cater for daytime consumer demand.



A policy approach being adopted by some state governments to maximise the potential for new low-emissions generation and storage projects is to collocate them in designated Renewable Energy Zones.

New projects in areas of high solar, wind or hydro strength are, however, often in electrically weak areas of the grid. Grid augmentation, improvements to the connections process and new transmission infrastructure may be required to maximise renewable energy flow into the grid.

For Australia to transition to a net-zero energy system – as the foundation of a net-zero economy – all involved will need to work more effectively with the communities who host new infrastructure.

Communities should be involved closely, and early in the process. Community consultation is vital to earning the social licence to advance the energy transition.

In addition to overcoming the engineering challenges, AEMO has been tasked with implementing the Energy Security Board (ESB) reforms, supported by the Australian Energy Regulator and the Australian Energy Market Commission, to ensure the system and the energy market are fit for the operating conditions expected by 2025.

The ESB has identified four areas of reform:

- making sure we have the right mix of resources to keep the lights on;
- ensuring those services essential to maintain the system's secure operation are available when needed;
- improving access to the grid; and
- providing for the integration of distributed energy (or behind the meter) resources into the overall market.

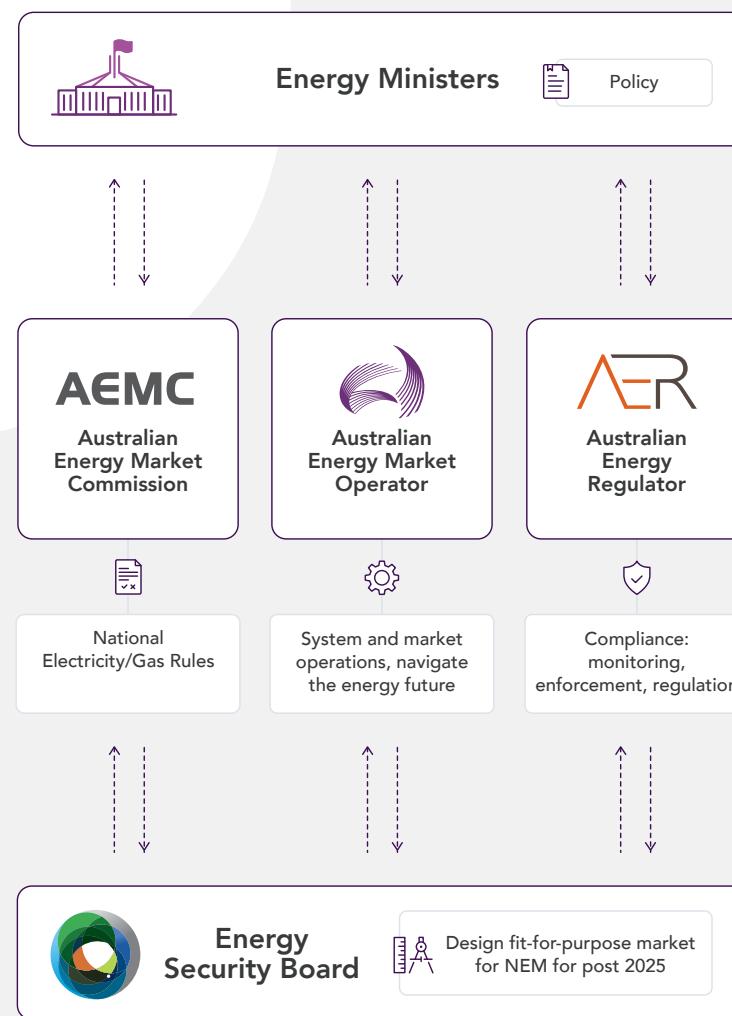
AEMO has a project underway to implement these reforms – called the NEM 2025 Implementation Roadmap – to ensure the system continues to serve Australia with safe, reliable and affordable energy.

And in Western Australia, AEMO has multiple workstreams underway to progress the Western Australian Government's Energy Transformation Strategy. These include crucial areas of market reform and regulations, data and digitisation, and grid engineering.

Project Symphony, for example, is orchestrating rooftop solar systems, batteries and appliances into a Virtual Power Plant (VPP) to participate in a future energy market. Harnessing innovation is key.

The energy transition is as exciting as it is complex. AEMO is united in grasping this once-in-a-generation opportunity to lay the groundwork for Australia's net-zero future, while looking after the energy needs of today.

Australian Energy Market Governance



Chapter 3 – Optimising a net-zero future

While Australia's energy transition gathers pace and ushers in unprecedented amounts of renewable energy, AEMO remains responsible for its fundamental role of ensuring safe, reliable and affordable energy for consumers.

What this means is in these changing times, AEMO must remain focused on delivering energy moment to moment, even as the organisation plans to accommodate the system transformations ahead.

Every day, AEMO orchestrates the supply of electricity and gas, which keep our factories, businesses, schools, homes, transport – indeed all sectors of the economy – going. The need for energy does not wait for the energy transition: the two occur simultaneously.

For AEMO that means our control rooms remain the heartbeat of the system, scheduling and dispatching power generation and gas in Australia's regulated wholesale energy markets. Our market staff in the NEM and WEM continue to settle about \$13 billion in electricity and \$2.6 billion in gas trades a year. The scale and constancy of operating the engineering and commercial sides of Australia's energy system is an essential, bedrock activity that occurs every day at AEMO.

AEMO is looking at ways to ensure this fundamental operational role is as robust, efficient and ready for the future as possible.

We are also working closely with governments and industry participants to ensure system resilience and business continuity not only at a time of introducing significant system changes, but also taking actions to prevent, detect and neutralise the threat of malicious cyber intrusions.

We recently released the biennial Integrated System Plan 2022, a 30-year optimal development plan for the NEM, both in terms of engineering and investment, based on rigorous and reviewed modelling of maximum return, least cost and least regret.

We know the proportion of renewable energy coming into the system is climbing, both moment to moment (measured as instantaneous penetration) and at average levels. In order to prepare for operational reliability at high levels, even momentarily at 100% renewable generation by 2025, we have a number of concurrent, aligned and complementary workstreams underway.

Some, like the Operations Technology Roadmap, focus on the upgrades to control rooms needed to give operators the right tools to run the system smoothly in high periods of variable renewable generation. The Operations Technology Roadmap will transparently guide the projects and investment required in AEMO's NEM and WEM operations technology.

Other projects like the joint AEMO-CSIRO Global Power System Transformation Roadmap highlights the research that is

needed to enable both the NEM and the WEM to continue their transition – and ultimately to become more secure and affordable electricity systems.

The project focuses on how Australia can lead the way in solving the global challenge of integrating renewable energy into electricity networks. This is an essential step locally, as we work towards the decarbonisation of the electricity system, which is a vital step towards a net-zero economy by 2050.

The joint Global Power System Transformation Roadmap complements AEMO's Engineering Framework and

its roadmap, which is getting the system ready for six emerging operational conditions: fewer synchronous generators online, ubiquitous rooftop solar, extensive grid-scale variable renewable energy, structural demand shifts, responsive demand and widespread energy storage.

Through collaboration with stakeholders, the Engineering Framework has identified the first tranche of priority projects to help ready the NEM power system for 100% instantaneous renewable generation by 2025 – through desktop studies, technology deployment, regulatory reform, operational tools and processes, and live system trials.



Goal

To be able to operate the power system at

100%

instantaneous
renewable generation
by 2025

The first periods of very high renewable generation are likely to be periods with high volumes of distributed energy resources generation (such as rooftop solar).

Establishing the critical foundations to ensure power system security can be maintained at these times will be a key enabler for reaching 100% instantaneous renewable generation. AEMO is therefore advancing a number of critical reforms to support the secure integration of distributed energy resources (DER), including:

- establishing minimum device-level requirements for cyber security for DER;
- establishing arrangements that ensure DER devices meet their stated performance standards; and
- establishing effective rooftop solar emergency backstop mechanisms.

Once we understand how to theoretically operate the future system, and have established the necessary infrastructure, systems, and processes to support the future system, AEMO will safely trial 'live operation' in these new configurations.

AEMO is in the early phase of scoping collaborative trials with industry to operate selected regions and sub-regions of the NEM with 100% renewable or inverter-based generation.

AEMO is a member of the Energy Security Board, which was established by the nation's energy ministers to provide whole-of-system oversight of the NEM for energy security and reliability to drive better outcomes for consumers.

Recent decisions by asset owners to accelerate coal-plant closures emphasise the need to reform the future electricity market to be ready for the post-2025 environment.

The ESB reforms revolve around a capacity mechanism for bolstering dispatchable capacity, transmission reform and a congestion management mechanism, DER integration and essential system services, and a data strategy.

Digitisation and data are critical foundations to establish Australia's future energy system. AEMO is adopting a multi-pronged approach to drive the ESB digital and data reforms, by:

- embedding digital governance and cyber security, planning and design into every aspect of the business;
- establishing capability-focused and holistic energy system architecture; and
- ensuring digital works as a trusted partner with the business and industry.

AEMO is already contributing to a range of complementary and related initiatives and rule changes to the ESB's reforms.

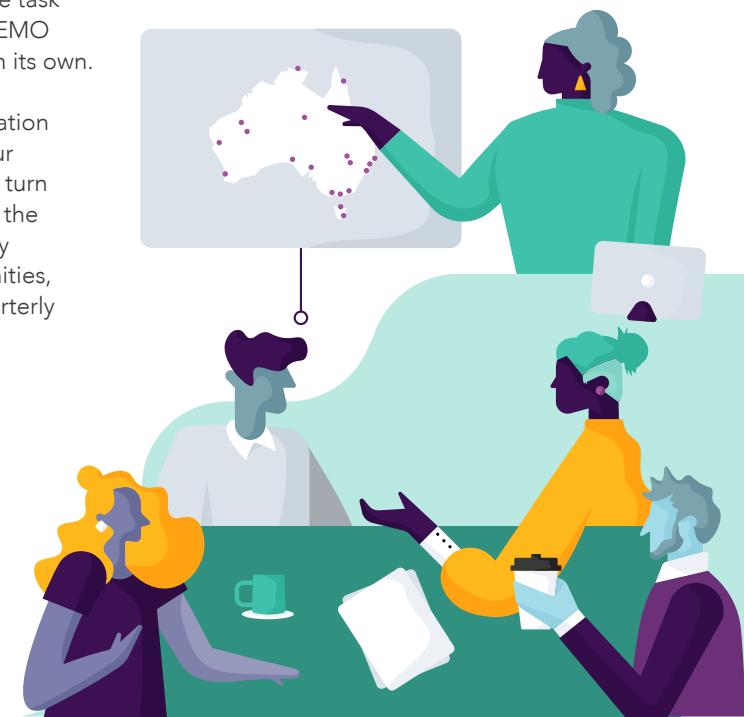
They include working with the Australian Energy Market Commission on its transmission planning and investment review, new market ancillary services to help control power system frequency with fast responding technologies, integrating energy storage systems, and planning arrangements for system strength.

AEMO is providing input into reform initiatives including data services, network visibility, bill transparency and data associated with electric vehicles.

AEMO has a central role in harnessing the power of collaboration among industry and other stakeholders to engineer a net-zero energy system. Collaboration and engagement with all our stakeholders are key to delivering the future energy system Australia needs and deserves. The task ahead is so large and complex AEMO could not possibly achieve this on its own.

Sharing our data and our consultation with stakeholders helps inform our forecasting and analysis, which in turn inform our major reports, such as the Integrated System Plan, Electricity and Gas Statements of Opportunities, Engineering Framework and Quarterly Energy Dynamics.

Collaboration and engagement with all our stakeholders are key to delivering the future energy system Australia needs and deserves



For example, the Integrated System Plan for 2022 was a collaborative effort between AEMO and industry, policy makers and consumer representatives.

Approximately 1500 stakeholders were involved in evaluating our work since September 2020 until publication, providing valuable feedback throughout the ISP development process.

Preparations for this draft 2022 ISP began with compiling the 2021 Input, Assumptions and Scenarios report, the IASR. The IASR, itself, was a product of wide industry consultation and submissions, and was reviewed by the ISP Consumer Panel and the Australian Energy Regulator.

In a rapidly evolving energy and market system, nurturing a culture of innovation at AEMO is key to finding new ways to approach problem solving.

The observations, analyses and learnings from projects, like those investigating consumer participation in two-sided markets, including experiments like Virtual Power Plants (VPPs), are spread via publicly released knowledge-sharing reports.

The Integrated System Plan for 2022 was a collaborative effort between AEMO and industry, policy makers and consumer representatives

Others, like the Engineering Framework or the Connections Reform Initiative, aim to harness the collective thinking in industry and AEMO, together, to discover new ways to overcome problems.

Federal and state governments regularly seek AEMO's advice and assistance, as a trusted source of energy expertise, on a range of policy, operational and network security matters. The assistance AEMO provides governments, incorporated as 'jurisdictional services', spans a range of support.

For example, AEMO produces the annual South Australia electricity report to provide information to the South Australian Minister for Energy and Mining about South Australia's electricity supply and demand. The report is produced in accordance with its additional advisory functions under the National Electricity Law.

Examples of the advice provided to Federal and state governments include the Victorian Renewable Energy Zone development plan Stage 1, NT Electricity Outlook, advisory support to the Commonwealth Government's National

Gas Infrastructure Plan, and analysis on hydrogen energy for various forums. AEMO furnishes governments with the analysis they need for their own policy development to support the energy transition.

This could take the form of up-to-date understanding of market dynamics that helps them to deliver policies that improve outcomes for consumers.

AEMO also responds to ad hoc government requests. This is mainly paid ad hoc work on policy issues or modelling scenarios, or requests for data and analysis to help manage, for example, minimum operational demand.

In some instances, confidential advice is delivered to governments to support policy-making. Further in-depth analysis can be tailored for specific states, answering questions of their choosing for new or unexpected market dynamics.

It is vital for the orderly operation of the system and markets that AEMO and governments understand in advance the implications and impacts of proposed policies, projects or decisions.

2022 ISP consultation

Over 1,500 individual stakeholders



Discussions convened through 31 webinars and 39 reports



Detailed feedback received through 198 submissions



To help individual states realise their own government's energy policies and plans, without conflicting with AEMO's core responsibilities and approved fee structures, AEMO recovers its costs separately for its jurisdictional services.

AEMO Services Limited, uniquely, was established as a subsidiary of AEMO in 2021. AEMO Services is governed by an independent Board of Directors and managed by an independently appointed and diverse Executive Leadership Team.

AEMO Services' role as the Consumer Trustee is to act independently and in the long-term financial interests of NSW electricity customers as the NSW Government implements its Electricity Infrastructure Roadmap.

In order to maximise the benefits of the energy transition, it is vital to include communities in the process about how the transition will materialise. It is a fact we are seeing more concerted community opposition to new infrastructure development projects, even if projects help usher in cleaner, lower-cost, decarbonised power.

AEMO believes it is critical to create social and community licence for this infrastructure, by working with communities, early on and collaboratively, to listen to and address their concerns.

Having a strong and stable system and market operator is a sensible investment in Australia's energy future. It enables AEMO to respond effectively and manage strategic and operational risks and deliver energy industry reforms.

AEMO believes it is critical to create social and community licence for this infrastructure

AEMO is now remedying its accumulated budget deficit and is taking the necessary actions to put the organisation on a sustainable financial footing for the future. To that end, AEMO has openly consulted with members on both costs and revenues to balance the books for the 2023 financial year.

In addition, we constantly work to drive efficiency and effectiveness across all aspects of our business and strengthen the way we operate with an increased customer and commercial focus. We are seeking to embed an increased customer focus that enables outcomes for the industry and consumers, but also ensures that we meet evolving system and market needs.

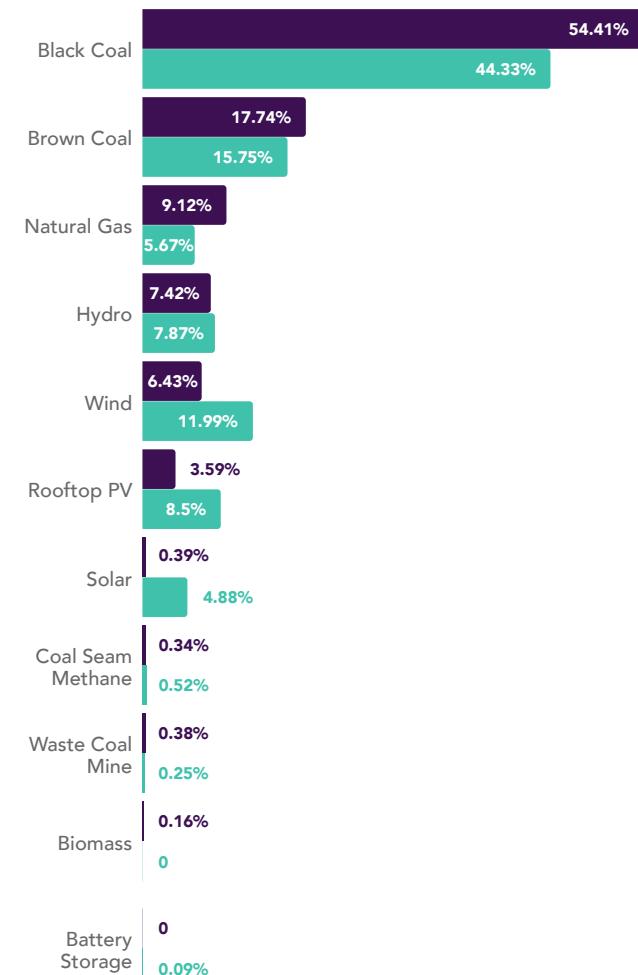
AEMO intends to advance cultural and workplace change to empower and develop staff, simplify decision making and make AEMO easy to do business with as "One AEMO".

Internally, AEMO is focused on attracting, empowering, developing, retaining, and transitioning talent for AEMO's current and future business requirements. It is a place for those who want to be at the forefront of solving Australia's energy challenges and shaping the future.

This corporate plan, and the strategic priorities that follow, represent AEMO's statement of corporate intent under AEMO's Constitution.

Historical generation by fuel type: 2017-18 compared to 2021-22

2017-18 2021-22



Our priorities at a glance

In FY2022, the AEMO Board and Executive identified four high-priority areas that would shape AEMO's strategic journey to deliver our core obligations, responsibilities and major workstreams.

In our FY2023 Corporate Plan, we reaffirm the importance of each of the four priority areas. AEMO remains unwavering in our pursuit of these priorities. They will ensure we deliver our core obligations and responsibilities to the Australian energy industry, while simultaneously preparing for the energy systems and markets of the future. These priorities will drive critical change in the way we operate.

The priorities are:



Priority 1

Operating today's systems and markets

Delivering electricity, gas and other statutory responsibilities that are fundamental to AEMO's role.

AEMO is committed to maintaining secure and reliable operation of energy systems and markets while maximising benefits in the interest of consumers.



Priority 2

Navigating the energy future

Collaborating with our members and stakeholders to identify emerging issues, provide technical and economic expertise and support new and ongoing reforms.

AEMO works to meet the physical and commercial challenges associated with the energy transition by collaborating with regulatory bodies, participants and consumers to develop and deliver the least-cost and lowest-risk outcomes for consumers.



Priority 3

Engaging our stakeholders

Being transparent, collaborative and stakeholder-focused. AEMO is committed to engaging with stakeholders for improved decision-making and outcomes.

We continue to strengthen our external engagement across all functions to enhance the stakeholder experience, deliver better value to our members – ultimately to support better outcomes for energy consumers.



Priority 4

Evolving the way we work

Being a transparent, efficient, stakeholder and customer-focused business with clear accountabilities, and a sustainable financial footing for the future.

This includes ongoing organisational efficiency, talent capability work, renewing our technology architecture, and embedding a consumer and stakeholder mindset in our culture and governance.



Priority 1 – Operating today's systems and markets

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

In an environment where day-to-day operation of the nation's energy systems and markets has never been more challenging, AEMO remains focused on its fundamental role of ensuring safe, reliable and affordable energy for consumers.

As we prepare to embrace the future, the daily operations of Australia's energy systems and markets must not be compromised.

We are working constantly to enhance our operational forecasting capabilities, our real-time system and market operations, system resilience, operational technologies, cyber security and market and system insights to ensure the scheduling, dispatching and trading of energy continues to power Australia's economy, businesses and households.

How we will achieve 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.

- **Undertake seasonal analysis and preparation, conduct emergency exercises, incident investigations and deliver training to plan.**
- **Prepare and share critical risk analysis,** and use system events (system operations, market operations and digital IT) and insights to identify vulnerabilities in controls.
- **Uplift confidence in modelling and information,** and through consultation with NSPs agree a modelling strategy for the industry that brings together technology to improve model accuracy and speed (as identified in the engineering framework).
- **Ensure policies and procedures reflect our latest operational risks** for each region to address normal and critical operational conditions, including forecasted minimum demand, and maximum asynchronous generation penetration.

System and market insights

We monitor energy system and market performance and share intelligence to improve day-to-day operations.

- **Monitor energy system and market performance,** and provide insights and analysis.

System and market technologies

We leverage technology, uplift systems and invest in advanced analytics and forecasting capabilities to improve the operational efficiency and reliability of energy systems and markets.

- **Commence implementation of the Digital IT Technology Roadmap, including the Operational Technology Roadmap,** to reduce operational risks through the modernisation of IT systems and the implementation of toolkits that meet the evolving needs of Australia's energy markets and systems.
- In the context of the Operational Technology Roadmap, **deliver the National Simulator** as highlighted by the Low Emission Technology Statement (LETS 2.0).

Business resilience

We strengthen the reliability and security of AEMO's systems through programs covering protection, detection, response, and recovery.

- **Implement a refreshed Business Continuity Plan (BCP) framework,** including IT Continuity Management, implement and track the action plans and seek pre-certification audit by June 2023.
- **Evolve operational communications, network and infrastructure** in line with the prescribed AEMO Future System Architecture.
- **Strengthen AEMO's resilience to security threats** across physical, personnel, supply-chain and cyber domains in compliance with the Security of Critical Infrastructure Act.
- At the request of the Federal Government, and in collaboration with industry, **assist to strengthen cyber-resilience and cyber preparedness** of Australia's energy grids and markets and in line with AEMO's expanded industry role and responsibilities.



Priority 2 – Navigating the energy future

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

Solving the complex operational and technical challenges associated with a decarbonised, decentralised, digital and democratised energy future requires the combined efforts of thought leaders, scientists, engineers, reformers and consumers across the industry.

Our approach is to be open and collaborative, to provide facts and advice, and co-design innovative and cost-effective solutions with network operators, market bodies and the wider industry.

The suite of wide-scale and complex reforms facing the Australian energy industry form a significant portion of AEMO's portfolio of work for FY2023. The majority of this work is mandated through the various decision-making bodies.

Increasingly AEMO is requested to undertake new functions by Australian governments. We work to provide high-quality services to individual jurisdictions without distraction from AEMO's core responsibilities.

Note: These deliverables have been updated to meet recent Energy Minister priorities. However, resources and funding in some cases are yet to be finalised, and will be determined with respective governments.

How we will achieve this priority:

Energy system design

We identify, communicate, and consult on critical operational issues, and plan and advise on future energy system needs.

- **Evolve and implement a roadmap to be able to operate power systems capable of 100% instantaneous renewable generation**, including the Engineering Framework.
- **Deliver network planning advice** (potentially a broader, national ISP and WA WoSP), reliability outlooks (e.g. ESOO, GSOO, WA ESOO, WA GSOO) and delivery quality, timely reports.
- **Deliver AEMO input and support for implementation of actionable ISP projects**

Reform delivery

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

- **Implement market reforms** agreed by Energy Ministers to improve electricity and gas reliability and security
- **Implement ETS Reforms to plan**, including commencing market trial for the new security-constrained economic dispatch in the WEM, Network Access Quantities (NAQ) in the Reserve Capacity Mechanism (RCM) and Project Symphony.
- **Implement ESB reforms to plan** for essential system services and distributed energy resources, including new arrangements for system strength, procedures for Fast Frequency Response and Phase 1 of Integrated Storage arrangements.

Reform collaboration

We proactively support the energy transition through collaboratively working with the industry, market bodies and governments on reform development to meet emerging challenges, lower costs, and capture opportunities.

- In partnership with the Reform Delivery Committee and other stakeholders, **develop and update** as required **a 3-5 year Regulatory and IT Implementation Roadmap** to proactively support cost-effective reform development and delivery.
- Work with ESB and industry to **design and implement a capacity mechanism and congestion management mechanism**.
- **Contribute to ongoing ETS reviews and reforms led by Energy Policy WA**, including the review of the Reserve Capacity Mechanism (RCM) and improvements to the power system security and reliability framework.

Future energy system connections

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

- **Develop and embed** processes to enhance the clarity of the **connection process** and transparency of progress through it, including REZ and for volume.
- **Deliver key initiatives identified in the CRI Roadmap** jointly developed by AEMO and the Clean Energy Council (CEC) to improve the connections process.

Jurisdictional service delivery

We provide advice and undertake functions as required by member jurisdictions, producing high-quality services at no cost to and minimal distraction from core obligations.

- **Finalise the establishment of ASL**, mature to full operations **and deliver agreed outcomes for NSW** (see ASL Corporate plan).
- **Deliver all functions and advice as agreed with jurisdictions** to support state-based energy policies and plans.
- **Constructively engage** with the Victorian Government **on the establishment of VicGrid**.
- **Formalise agreements where relevant to enable efficient fees for service**.



Priority 3 – Engaging our stakeholders

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

Harnessing the power of collaboration among industry and other stakeholders is the key to delivering the future energy system Australia needs and deserves. The task ahead is so large and complex that AEMO could not possibly act alone.

To deliver the infrastructure required for Australia's immediate and long-term energy future, it is vital to build social and community licence. AEMO will work with stakeholders, listening and engaging in a high-quality and meaningful way to support social licence.

In addition, as Australian governments shape and realise their own energy policies and plans, we will endeavour to be a trusted source of energy expertise on policy matters and work to capture synergies for the benefit of energy consumers.

How we will achieve this priority:

Meet and exceed stakeholder expectations

We actively engage, listen and respond to feedback from our members and stakeholders, motivated by a strong energy consumer focus and continually improve the stakeholder experience.

- Clearly and consistently consider stakeholder feedback and demonstrate feedback has been considered
- Co-design the ISP Engagement Strategy with the ISP Consumer Panel and other stakeholders.
- Develop capabilities to assist our members and stakeholders in building the social licence necessary to enable the future energy system.
- Actively engage and collaborate in solving industry participant needs via staff rotations and cross-industry project teams.
- Embed a stakeholder management system throughout AEMO and deliver consistent high-quality engagement experiences.

Accessibility and communications

We make AEMO's analysis and information accessible to a broader audience.

- Simplify communication to broaden the audience.
- Deliver a simple and clear access point to the AEMO website and ensure availability of and easy access to content that is value to stakeholders.

Government engagement and support models

Our engagement and support models appropriately service individual Governments and help to advance their energy objectives.

- Ensure our operating model and cost recovery mechanisms are appropriate.
- Support ASL with NEM jurisdictions to ensure efficient and economic outcomes.
- Provide tailored advice and insights to Governments to better inform and enable policy objectives.
- Embed in a consumer focus stakeholder-centric service mindset.



Priority 4 – Evolving the way we work

Be an adaptive, commercial and consumer-focused organisation.

It would not be possible for AEMO to fulfill our role in the Australian energy industry without the right people, processes, technology, governance and financial management.

As the complexity, speed and agility of tasks asked of AEMO evolve over time, we will build a strong platform to equip our workforce and our business. We will ensure cost-effective and efficient delivery of existing and new functions, and foster a workforce and culture aligned to Australia's energy future.

We will place AEMO on a sustainable financial footing to uplift AEMO's own business processes and systems and to efficiently operate and reform Australia's increasingly complex energy systems and markets.

How we will achieve this priority:

Role and values

We ensure our programs, investments, prioritised areas of focus and behaviours align with AEMO's role and values.

- Ensure all AEMO activities are aligned to our role and values, deliver on our obligations and priorities, and demonstrate our values in everyday actions and decisions.

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.

- Diagnose and start to build the capabilities, talent and resourcing required by AEMO to deliver on its obligations as the energy transition continues, underpinned by robust workforce planning processes and systems.
- Implement a strategy and roadmap to realise a step change in **AEMO's diversity, equity and inclusion practices and performance**, which positions AEMO as a leader in the energy sector.
- Deliver a culture roadmap that develops and maintains a great culture aligned to AEMO's vision and purpose and one which attracts and retains talent to work together for the benefit of AEMO's stakeholders and end consumers.
- Implement a safety, health and wellbeing strategy that delivers effective leadership, accountability, employee engagement, and visibility of safety within AEMO.

Efficiency and effectiveness

We constantly work to drive efficiency and effectiveness across all aspects of our business and operate with a customer and commercial focus.

- Embed post-COVID ways of working to modernise how we work together for the benefit of our stakeholders and end consumers and achieve mutually beneficial outcomes for AEMO and its employees.
- Embed the Enterprise Portfolio practices, and extend the frameworks to projects classified as operating expenditure.
- Identify and deliver additional opportunities for consistency, collaboration and integration across our functions.
- Roll out an enterprise governance, risk, compliance and audit system across AEMO to enable enhanced compliance and governance practices and support decision making.
- Finalise implementation of the property strategy.
- Continue to implement and refine the governance framework and embed delegations.
- Implement and utilise the Enterprise Resource Planning (ERP) system to drive efficiency and effectiveness.
- Deliver the FY23 Investment Portfolio to uplift critical business systems and business capability to improve efficiency, insight, collaboration and integration.
- Deliver Future State Architecture and corresponding roadmap, to enable technology modernisation across AEMO systems.

Financial health

We strengthen AEMO's financial health to effectively respond to and manage strategic and operational risks and deliver energy industry reforms.

- Implement and track fee outcomes that support the principle of full in-year cost recovery for FY2023 and beyond, for all entities (excluding jurisdictional services).
- Implement the fee pathway consulted on with participants to recover NEM Core accumulated deficit as of the end of FY22 by FY25 and commence a review of fee structures.
- Update funding models to reflect ESB principles around the structure of and accountability for cost-recovery payments, including NEM 2025.
- Refine AEMO's financing strategy to optimise the level and cost of funds to support capital investments not funded via specific grant or contribution funding.

Delivering our budget

A financially sustainable AEMO is critical to helping Australia navigate this once-in-a-generation energy transition – ensuring the delivery of safe, affordable and reliable energy today and into the future. As a not-for-profit company, it is essential AEMO operates effectively and efficiently. After all, AEMO's operations are designed to keep energy flowing to Australian consumers as affordably as possible.

Just as AEMO does not generate profit, it cannot sustain ongoing losses. Accumulated deficits must be recovered while AEMO continues to invest in core operations, and its people, to ensure the safe, reliable and affordable energy system Australians expect.

The Board has reviewed AEMO's financial position extensively throughout FY2022, and resolved to take action to ensure that AEMO has the financial footing to deliver on its objectives into the future. This review included the Boston Consulting Group (BCG) benchmarking AEMO's operations against other system operators globally. BCG found AEMO's costs were at the low end of international peers, and with some functions significantly underfunded.

The pace and extent of Australia's energy transition means that more is being asked of AEMO than ever before.

AEMO has an extensive reform implementation agenda to deliver to ensure Australia's systems and markets are fit for purpose in the changing, and more complex, energy future.

This agenda includes implementing the recommendations of the Energy Security Board, to countering the threat posed by nefarious cyber actors who seek to disrupt Australia's energy systems, to enabling a transition to low-cost renewable energy at one of the fastest rates in the world.

Building on last year, this Corporate Plan sets out the priorities that AEMO intends to undertake, so that members, participants and the public can be clear about the value AEMO brings to this once-in-a-generation energy transition.

Our stakeholders want us to simplify the way we work, become more efficient and effective, empower individuals to make the right decisions, and ensure we have clear lines of accountability.

We are implementing a broad package of improvements, including realigning our operating model to provide greater clarity and accountability; transforming the way AEMO governs, funds and executes reform delivery; investing in models, tools and processes to manage increased complexity in core activities; and reducing cost in digital 'run-the-business' activities.

To keep costs down, AEMO has taken, and is continuing to implement, actions to identify, quantify and reduce costs and drive operational efficiencies.

As part of AEMO's commitment to transparency, a new Finance Consultation Committee was established with members from market participants and jurisdictions. Within this committee, AEMO opened its books and provided the opportunity review its financial position and requirements going forward. The committee developed a set of financial principles.

These financial principles guide the development of AEMO's budget and forecast. Among the financial principles are demonstrating efficiency and cost-effective delivery, fully recovering operating expenditures across entities (ie, not for profit and not for loss), ensuring new investment programs have an accepted funding pathway prior to proceeding, and transparent allocation of funds by function.

As part of AEMO's commitment to transparency, a new Finance Consultation Committee was established



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

AEMO has been consulting with members regarding the NEM fee levels and deficit recovery scenarios. Notwithstanding the recovery of accumulated operating deficits, AEMO's overall debt is forecast to increase, reflecting the continued investment in assets to enable the energy transition. In delivering these projects, AEMO is performing mandated functions and implementing agreed reforms for the benefit of energy consumers.

We are conscious of our costs for end consumers as well as the companies who immediately pay AEMO's fees. We have worked hard to ensure that the projected fees include the three-year recovery trajectory of AEMO's operating deficit. A financially sustainable AEMO is critical.



Short-term goal

Achieve full in-year recovery in FY2023

(not including recovery of accumulated deficit)



Medium-term goal

Put AEMO on a sustainable footing by FY2025

FY2023 Budget

For FY2023, AEMO's revenue budget is \$456 million¹ and the total operating expenditure budget, including Depreciation & Amortisation (D&A) is \$434 million. This will cover all in-year costs and reduce the accumulated deficit by \$22 million.

Table 1: Financial summary for FY2022B and FY2023B

AEMO Financial Overview (\$M)	Budget FY2022	Budget FY2023
REVENUE		
Fees and Tariffs	255	379
Other Revenue	47	77
NET REVENUE	302	456
OPERATING EXPENDITURE		
Expenditure	268	355
Depreciation and Amortisation	44	69
Borrowing costs	2	10
OPERATING EXPENDITURE	314	434
ANNUAL SURPLUS/(DEFICIT)		
Annual Surplus / (Deficit)	(12)	22
Accumulated Surplus (Deficit)	(54)	(44)

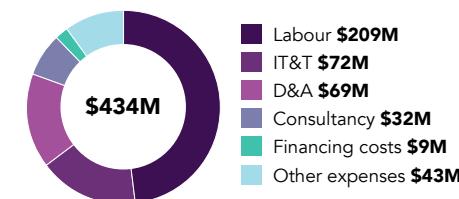
¹ The 2022-23 Budget financials represented within this document are pre-consolidation of AEMO Services Ltd (ASL). ASL is 70% owned by AEMO and 30% by NSW Government, and currently has the singular objective of acting as NSW Consumer Trustee in accordance with the NSW Electricity Infrastructure Roadmap. At the time of publication the budget for ASL is still being agreed with its members, and all costs are funded by the NSW Government. ASL 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.

Operating expenses

The operating expenditure in the Budget includes:

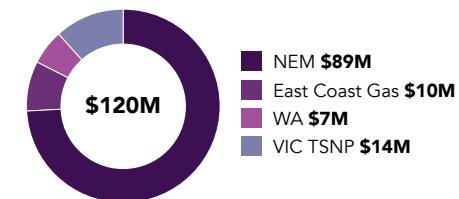
- Costs of operating today's energy systems and markets for electricity and gas for all segments
- Costs to design and build the capabilities needed to navigate the energy future
- Depreciation and Amortisation expenses related to the capital investment program.

Figure 1: Operating cost profile for FY2023 (\$M)



The \$89 million increase in operating costs in the NEM segment is driven by additional costs for 5 minute settlements, new connections, increased operational modelling and data management, support for new / upgraded IT systems, development of the Engineering Framework, and new NEM 2025 costs. These costs are detailed in the [FY2023 budget and fees consultation and document](#).

Figure 2: Increase in operating costs FY2022-23 (\$M)



Cost increases in other segments include gas purchase and storage costs (East Coast Gas), WEM Reform and DER projects in WA and critical transmission and interconnection projects in Vic TNSP.

Capital investments

During FY2023, AEMO will continue to invest in foundational platforms and systems to renew and uplift assets and deliver against regulated energy market reforms.

Our capital expenditure budget is \$180 million, of which \$38 million is supporting the WEM reform program and \$62 million is supporting the NEM reform implementation, including the Energy Security Board NEM 2025 program.

Due to the higher levels of investment since FY2019, D&A is also rising and in FY2023 is budgeted to be \$69 million.

Figure 3: Capital investment profile for FY2023



Only reform programs that are underway are captured in the FY2023 investment program. Energy reform programs that have not been confirmed are not captured in this budget investment program.

Financing strategy and debt

AEMO's financing model for capital investments involves upfront debt funding of investments, and repaid over the life of the asset through recovery of D&A costs. AEMO also seeks grant funding for some of its capital investments.

Fees and Tariffs

Operating costs are recovered through a range of different revenue sources, and in particular fees and tariffs levied to participants across four primary market segments:

- National Electricity Market (NEM)
- East Coast Gas
- WA Electricity & Gas (WA)
- Victorian TNSP

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 annually to reflect any accumulated surplus (or deficit) achieved in prior years. They do not include the costs of jurisdictional services (e.g. AEMO Services Limited) which are covered directly through arrangements with the relevant jurisdiction.

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 Finance Consultation Committee. In Western Australia, the fees and charges are approved by the Economic Regulation Authority.

For the FY2023 Budget, the following principles have been applied in relation to setting fee levels:

- Demonstrate efficiency & cost-effective delivery
- Full recovery of operating expenditures across entities – not-for-profit & not-for-loss
- New investment programs require accepted funding pathway prior to proceeding

- Debt to assets ratio to remain under 100 per cent
- Liquidity ratio to remain above 50 per cent
- Transparent allocation of funds by function
- No appetite or tolerance for financial/funding risk in relation to contracted activities.
- Where possible, facilitate the efficient pass through of AEMO costs to consumers (e.g. DMO, VDO, network pass throughs).

Consistent with these financial principles, the FY2023 Budget contains an increase in NEM fees and tariff revenue to:

- support energy transition-driven activities, including development of a new engineering framework, strengthening of operational tools and capabilities, and enhanced reform planning, system design and digital support capabilities. The FY2023 Budget includes additional operating costs for these activities of \$52 million.
- recover the NEM core accumulated deficit over 3 years. The budget assumes \$34 million of the forecast FY2022 accumulated deficit of \$104 million will be recouped in FY2023, with the remainder over FY2024-2025.

For further information see [AEMO's FY2023 budget and fees](#).

With this increase in fees, the revenue profile will be:

Figure 4: Revenue for FY2023



Governing our organisation

Governance

AEMO is governed by a Board of Directors, who are supported by a strong 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 FY2023 Corporate Plan reaffirms the priority the Board and leadership place on meeting AEMO's core obligations and responsibilities, collaboratively supporting energy transformation, fostering strong stakeholder relationships and delivering a fit-for-purpose, efficient and cost-effective organisation.

AEMO has recognised that the corporate environment and working landscape have become increasingly virtual and dynamic due to the COVID 19 pandemic. This has brought with it new governance challenges and opportunities. An increased focus on cyber risk and resilience has contributed to strengthened digital oversight and investment.

FY2023 will see an uplift in AEMO's corporate governance framework of charters and policies to align with best practice and respond to improvement opportunities.

Risk statement

AEMO faces a variety of strategic, operational and emerging risks given the nature of our functions. These include industry transformation, cyber security, regulatory, compliance, financial, prudential, reputational, people, operational and subsidiary risks.

Accountability for risk management, including guidance on the level of acceptable or appropriate to meet our corporate plan objectives and its implementation risk across AEMO, sits with the Board.

The Finance, Risk and Audit Committee, a sub-committee of the Board, assists the Board in the effective oversight of risk. The Managing Director has accountability for implementation of the Risk Management Policy and Framework and through the executive leadership team integrating risk management into key operational decision-making.

Our strategic risks have been reviewed and factored into the development of this Corporate Plan's four high-priority areas, and key risk controls have been incorporated into the goals, outcomes and performance measures throughout this plan.

In this way, the plan is aligned to identify and manage risks that could have material adverse impacts on:

- Operating today's systems and markets;
- Navigating the energy future;
- Engaging our stakeholders; and
- Evolving the way we work.

AEMO has in place a risk appetite statement and risk tolerances for functions across the business that provides guidance on the level of risk that is acceptable or appropriate to meet our Corporate Plan objectives.

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

Table 2: AEMO's strategic risks

Key risks
Inability to maintain power and gas system security and reliability due to disruption, energy system challenges or external events.
Cyber or security incident/s (internal, third party or external) result in interruption to the grid system and/or market suspension.
Inability to transition the energy system to meet society's future needs.
Failure to provide effective governance of and support to AEMO Services to enable its success.
Inability to retain, develop, attract and/or utilise the right capabilities and talent.
Inability to develop and maintain a high performing culture.
Inadequate technology, processes and data compromise our ability to enable transformation.
Ineffective program and portfolio management impacting energy industry reform.
Inability to maintain member confidence and support in AEMO's strategic direction and key initiatives in an environment of increasingly divergent member interests.
Failure to improve the financial health of AEMO to ensure adequate delivery of our role and activities.

Also see strategic risks within the AEMO Services Ltd FY2023 Corporate Plan.

Achieving corporate plan objectives

AEMO will continually measure how effectively we achieve our key business and strategic objectives.

To demonstrate progress toward our objectives, we will track delivery against the four priority areas articulated in this plan.

Our key strategic outcomes for FY2023 are detailed throughout this plan, and our key business and strategic measures are summarised on this page.

We believe our FY2023 outcomes and measures provide the right balance and focus for our day-to-day responsibilities while ensuring that AEMO is accountable for our commitments in enabling Australia's future energy system and driving critical change in the way we operate.

AEMO's key business and strategic measures against our four priorities

Priority	Key measures for FY2023	Target
Priority 1	No region-wide system black events	0
	Maintain energy system security	100%
	No preventable load shedding	0
	Achieve operational forecast accuracy	80%
	Achieve all material prudential supervision obligations	99%
	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
Priority 2	Maintain high IT system availability (unplanned outages to critical system and market technologies)	99.9%
	High priority reform projects delivered on time and to budget	85%
	Achieve the FY23 top Engineering Framework initiatives to prepare for 100% instantaneous renewable penetration by 2025	10 initiatives
	AEMO initiatives within the Connections Reform Roadmap delivered to agreed timeline	100%
	Jurisdictional outcomes delivered to plan (% outcomes delivered for each agreed jurisdictional role)	100%
Priority 3	Achieve improved weighted stakeholder perception	55
	Achieve stakeholder satisfaction with specific AEMO engagements	52
	Achieve proponent satisfaction with AEMO's connection and onboarding processes	70
Priority 4	No significant deterioration in AEMO's overall health and safety performance	0%
	Achieve year-on-year improvement in AEMO's employee engagement	69
	Achieve FY23 Expenditure (net of recoveries) Budget	Budget
	Capital portfolio completed on time, to scope and to approved budget in FY23	85%
	No negative impact to critical systems as a result of IT releases	90%
	Achieve all material legal and reporting obligations	100%

AEMO's major publications and consultation

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.

AEMO produces a significant number of publications and reports relating to Australia's energy systems. Please visit our website for our library of [major publications](#).

We will also undertake broader stakeholder consultation to discover additional information of value to participants seeking to remain well-informed on system and market performance.

For more information see our [schedule of consultations](#).

Interconnection between our major publications

Publications over the planning and forecasting horizon consider the credible future scenarios in line with the published methodologies.

	 Electricity	 Gas	 Whole of System
 NEM & East Australia	NEM Electricity Statement of Opportunities (ESOO) (Annually - August) Forecast of electricity supply, demand and reliability in the NEM, including assessment against the reliability standard for a 10-year outlook.	Gas Statement of Opportunities for East Australia (GSOO) (Annually - March) 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.	Integrated System Plan (ISP) (Biennial at minimum - July) A whole of system plan for the efficient development of the NEM power system that achieves power system needs for a planning horizon of at least 20 years (including transmission, generation, gas pipelines and distributed energy resources).
 WA	WEM Electricity Statement of Opportunities (WEM ESOO) (Annually - June) Forecast and analysis of peak demand and energy use in the South West Integrated System for a 10-year outlook.	WA Gas Statement of Opportunities (WA GSOO) (Annually - December) 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.	Contribution into the WA Whole of System Plan (WA WoSP) (As required by Energy Policy WA) A whole of system plan developed to meet demand at the lowest sustainable system cost over a 20-year outlook period by identifying the generation capacity mix and network investment.
 VIC	Victorian Annual Planning Report (VAPR) (Annually - June) Forecast of electricity supply, demand and network capability in Victorian Declared Shared Network in Victoria for the next five years.	Victorian Gas Planning Report (VGPR) (Annually - March) Information relating to electricity supply, demand, network capability and Victorian Declared Transmission System for the next five years.	

Forecasting and planning reports and frameworks that support our major publications

Inputs, Assumptions and Scenarios Report (IASR) (Annually at minimum) Presents a range of credible future scenarios representing possible policy settings and technology updates, which feed into AEMO's planning publications.	Engineering Framework (March 2021, ad hoc updates) A map to help stakeholders stay informed of the changing technical needs of the power system, the work underway to meet these changing needs, how the different pieces fit together, and how they can engage on topics of interest.	South Australian Electricity Report (SAER) (Annually - November) Forecast of electricity supply and demand in South Australia prepared for the South Australia Minister for Energy and Mining.	Energy Adequacy Assessment Projection (EAAP) (Annually at minimum - November) Quantifies the impact of potential energy constraints on expected levels of unserved energy in the NEM for the next two years.
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AEMO's approach to consultation

AEMO uses a forum approach to facilitate transparent and effective engagement with stakeholders.

A common forum structure is applied across the organisation:

Committees: are generally small groups with closed membership that enable close collaboration and discussion at a senior level. Some committees have statutory standing with decision-making responsibilities.

Consultative forums: are generally larger and open for interested participants from specific stakeholder groups that are impacted or have a legitimate interest in a program, project or issue.

Reference groups and panels: are specialist groups that are established to share expertise and insights thereby improving AEMO's understanding and the outcomes of a particular activity or initiative.

Working groups: are generally open to nominations from interested stakeholders to work collaboratively on a particular problem or activity.

Key committees, forums, panels, reference groups and working groups

	AEMO Budget, Fees and Organisation	Energy System and Market Operations	Energy System Planning	Energy Reform
Key committees	<p>Finance Consultation Committee</p> <ul style="list-style-type: none"> • Early engagement to improve the transparency and rigour of AEMO budget and corporate plan • Participants include industry nominations from peak bodies including AEC, ENA, CEC and ECA 	<p>NEM Operations Committee</p> <ul style="list-style-type: none"> • A forum for stakeholders to discuss routine operations and improvements to current network practices • Focused membership including ENA, AEC, CEC • A number of related working groups 	<p>Executive Joint Planning Delivery Committee</p> <ul style="list-style-type: none"> • Holds specific joint planning functions outlined in the rules • AEMO, Jurisdictional Planning Bodies and TNPs • Supported by the working Joint Planning Committee • A number of related working groups 	<p>Reform Delivery Committee</p> <ul style="list-style-type: none"> • Collaboration across the industry to develop a Regulatory and IT implementation Roadmap • Membership includes market bodies, and nominations from ENA, AEC, CEC, EEC and consumer groups
Open forums and targeted working groups	<p>Stakeholder Forums and Meetings</p>	<p>Technical Working Groups e.g.</p> <ul style="list-style-type: none"> • Operations Planning Working Group • Power System Security Working Group 	<p>Technical Working Groups e.g.</p> <ul style="list-style-type: none"> • Gas Forecasting Reference Group • Power System Modelling Reference Group 	<p>Regulatory Implementation Roadmap Forum</p>
	<p>WA Electricity and Gas Consultation forums (ongoing key forums for WEM/GSI industry participants).</p>	<p>Emergency Management Forums</p>	<p>ISP Consumer Panel</p>	<p>P2025 Consultative Forum and working groups</p>
		<p>WEM Forecasting Reference Group Forum</p>	<p>CEC's Connections Reform Initiative Group</p>	<p>IT forums and working groups</p>
				<p>DER forums and working groups</p>
				<p>WA WEM Reform Implementation Group (WRIG)</p>
				<p>WA DER Market Implementation Forum</p>
		Consumer Forum		
Project Consultation		<p>Cyber Security</p>	<p>Engineering Framework</p>	<p>NEM 2025 Program</p>
			<p>ISP 2024</p>	<p>WEM Reform</p>

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