2025 INFORMATION TOOLKIT

The Integrated System Plan

A roadmap for the energy transition

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Acknowledgement of Country

We acknowledge the Traditional Custodians of the lands, seas and waters across Australia. We honour the wisdom of Aboriginal and Torres Strait Islander Elders past and present and embrace future generations.

We acknowledge that, wherever we work, we do so on Aboriginal and Torres Strait Islander lands. We pay respect to the world's oldest continuing culture and First Nations peoples' deep and continuing connection to Country; and hope that our work can benefit both people and Country.

'Journey of unity: AEMO's Reconciliation Path' by Lani Balzan

AEMO is proud to have launched its first Reconciliation Action Plan in May 2024. 'Journey of unity: AEMO's Reconciliation Path' was created by Wiradjuri artist Lani Balzan to visually narrate our ongoing journey towards reconciliation - a collaborative endeavour that honours First Nations cultures, fosters mutual understanding, and paves the way for a brighter, more inclusive future.

READ OUR RECONCILIATION ACTION PLAN

As Australia's independent system and market operator and system planner, AEMO's purpose is to ensure secure, reliable, and affordable energy and enable the energy transition in the long-term interests of consumers.

Our functions are set under national and Western Australian electricity and gas laws.

Welcome

Help us develop our energy plan for the future

AEMO is committed to ensuring Australia has safe, reliable and affordable energy today and in the future.

Australia's energy system is rapidly changing, and the transition is well underway. Australia is leading the world in the uptake of inverter-based generation, dominated by the solar panels that are now more common across Australian suburbs than backyard swimming pools.

The implications of this shift, from big industrial-scale spinning machines to household investments that are spread across cities, suburbs, and towns, dominates the work that happens in AEMO's offices across the country. This transition is not linear.

As ageing coal power stations close after decades of service and emissions reduction targets are progressed, an important part of AEMO's role is to collaborate extensively with industry, governments, consumers and other stakeholders to identify the essential infrastructure that will meet future energy needs.

One of the ways we do this is through the Integrated System Plan (ISP), which AEMO is required to develop under the National Electricity Rules.

This information pack is intended to build a common understanding about what the ISP is, how it contributes to Australia's energy transition, and opportunities for stakeholders to get involved.

Published every two years, the ISP is a roadmap for the transition of the National Electricity Market (NEM) power system (Queensland, New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory) over at least the next 20 years.

It outlines the least-cost way to supply secure and reliable electricity to consumers as coal plants retire, while meeting government policies through to 2050.

People are at the heart of the energy transition and meeting energy consumers and community advocates' evolving needs underpins everything we do. We recognise that we need to listen to and understand our stakeholders' diverse perspectives so we can develop a plan that supports households, businesses and communities now and into the future.

We encourage all interested stakeholders to learn about our work and help us develop the best-possible plan to meet Australia's energy needs.

We look forward to working with you.

Mary O'Kane
AEMO Chair

Daniel Westerman
AEMO Chief Executive Officer

About this toolkit

This toolkit provides essential information about the Integrated System Plan (ISP) to help energy consumers and community advocates understand it more and learn how they can contribute to its development.

Who is it for?

We all have a stake in Australia's energy future.

Households, businesses, industry and governments rely on safe, secure and reliable energy every day.

The ISP outlines the optimal pathway to transition our energy system, presenting the plan for essential infrastructure that outlines the least-cost way to supply secure and reliable electricity to consumers as coal plants retire, while meeting government policies through to 2050.

This toolkit is for anybody who wants to learn more about the ISP and how it is developed.

What's in it?

How to use it

This toolkit has been designed to provide readers with simple information about the ISP.

Read this document cover to cover or click on the links throughout for more details about the topics that interest you.

Connect with us

AEMO is committed to developing the best-possible roadmap for Australia's energy future. To do that, we need your input.

Connect with us
Email: ISP@aemo.com.au

AEMO on Air Podcast

GET IT ON Google Play

Download on the App Store

About AEMO

AEMO is the Australian Energy Market Operator. As Australia's independent system and market operator and system planner, AEMO's purpose is to ensure secure, reliable, and affordable energy and enable the energy transition in the long-term interests of consumers.

We contribute to shaping Australia's energy future by designing an energy system that meets future demand through a world-leading approach.

AEMO's roles and responsibilities

Click the video icon to watch[1]

AEMO is an independent, not-for-profit company. We operate on a full cost-recovery basis and our costs are paid by organisations that generate, produce, distribute and sell energy, or organisations that AEMO provides a service to. AEMO is a member-based company; its members are government and industry.

[1] www.youtube.com/watch?v=_Pj2VmXvCD0

Managing electricity and gas markets and systems

Australia's electricity and gas markets allow energy to be bought and sold in a competitive environment. These markets provide a platform for electricity generators to sell their wholesale electricity to retailers, and for gas suppliers and distributors to schedule their deliveries.

AEMO is responsible for scheduling energy to be dispatched into the power system at the lowest-available prices, settling trades, and ensuring data and information flows between market participants.

Our people monitor the reliability and security of the electricity and gas systems and their infrastructure 24/7. However, as an independent, not-for-profit operator, we do not own any physical energy infrastructure such as power stations, pipes or powerlines.

AEMO does not set or regulate retail energy prices. Retailers set energy prices for Australian households and businesses. In some states, the government can set a regulated contract.

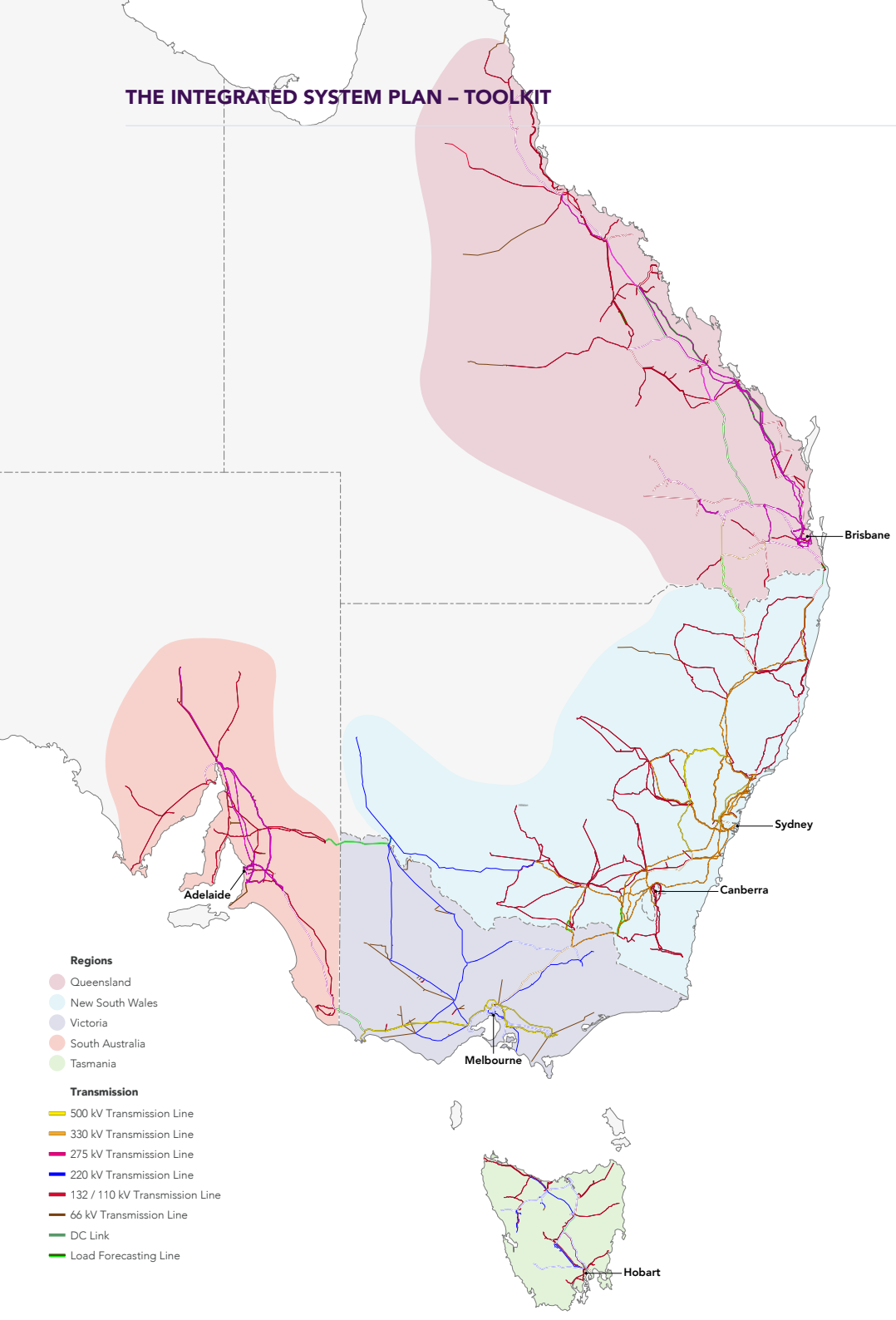
Planning for the future

Our responsibilities go beyond day-to-day operations as we shape Australia's energy future.

With Australia's energy landscape undergoing significant transformation, designing an energy system that harnesses these changes while maintaining a secure, reliable system is a key focus for our organisation.

Our independent planning, forecasting and modelling supports efficient investment and informs government policy decisions, while our programs, initiatives and trials help us learn from the changing environment and support energy system development.

This toolkit focuses on one of our key planning documents, the Integrated System Plan (ISP).



About energy markets

The National Electricity Market (NEM)

The National Electricity Market (NEM) refers to the wholesale electricity market and the physical power system infrastructure which operates in the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania and Victoria.

The NEM is just one of the markets AEMO manages.

It is one of the world's longest interconnected systems, covering about 44,000 km of transmission lines and undersea cables.

Electricity from NEM power plants is transported through these transmission lines to local electricity distributors that then deliver it to homes and businesses. Electricity is also directly transported to large industrial energy users. More recently, electricity generated or stored at homes and small businesses is flowing back into the grid, supporting electricity reliability.

Western Australia and the Northern Territory are not connected to the NEM. Each has its own electricity system and management arrangements.

For more information: AEMO | National Electricity Market (NEM) | Wholesale Electricity Market (WEM)

The East Coast Gas Market (ECGM)

The East Coast Gas Market is the wholesale gas market in the East Coast Gas System; an interconnected grid of gas pipelines connecting all of Australia's eastern and southern states and territories.

The system's interconnected transmission pipelines transport gas from basins and storage facilities across eastern Australia, representing about one third of Australia's gas reserves.

Gas is delivered to large industrial customers and major population centres for domestic use, and to liquefied natural gas (LNG) facilities for export.

For more information: AEMO | About the East Coast Gas System (ECGS)

Australia's energy sector

Governance

Australia's energy system is governed by a number of bodies and agencies, including three market bodies: AEMO, the Australian Energy Market Commission (AEMC) and the Australian Energy Regulator (AER).

Overseen by the Energy and Climate Change Ministerial Council (ECMC), which consists of the Federal Government and all States and Territories, this governance framework separates decision making on government policy, energy regulation and energy system operation.

While the market bodies work closely together to support efficient investment in, and operation of, Australia's energy system – including collaborating as part of the Energy Advisory Panel (EAP) – each of the bodies is an independent decision maker with clear functions, accountabilities and powers.

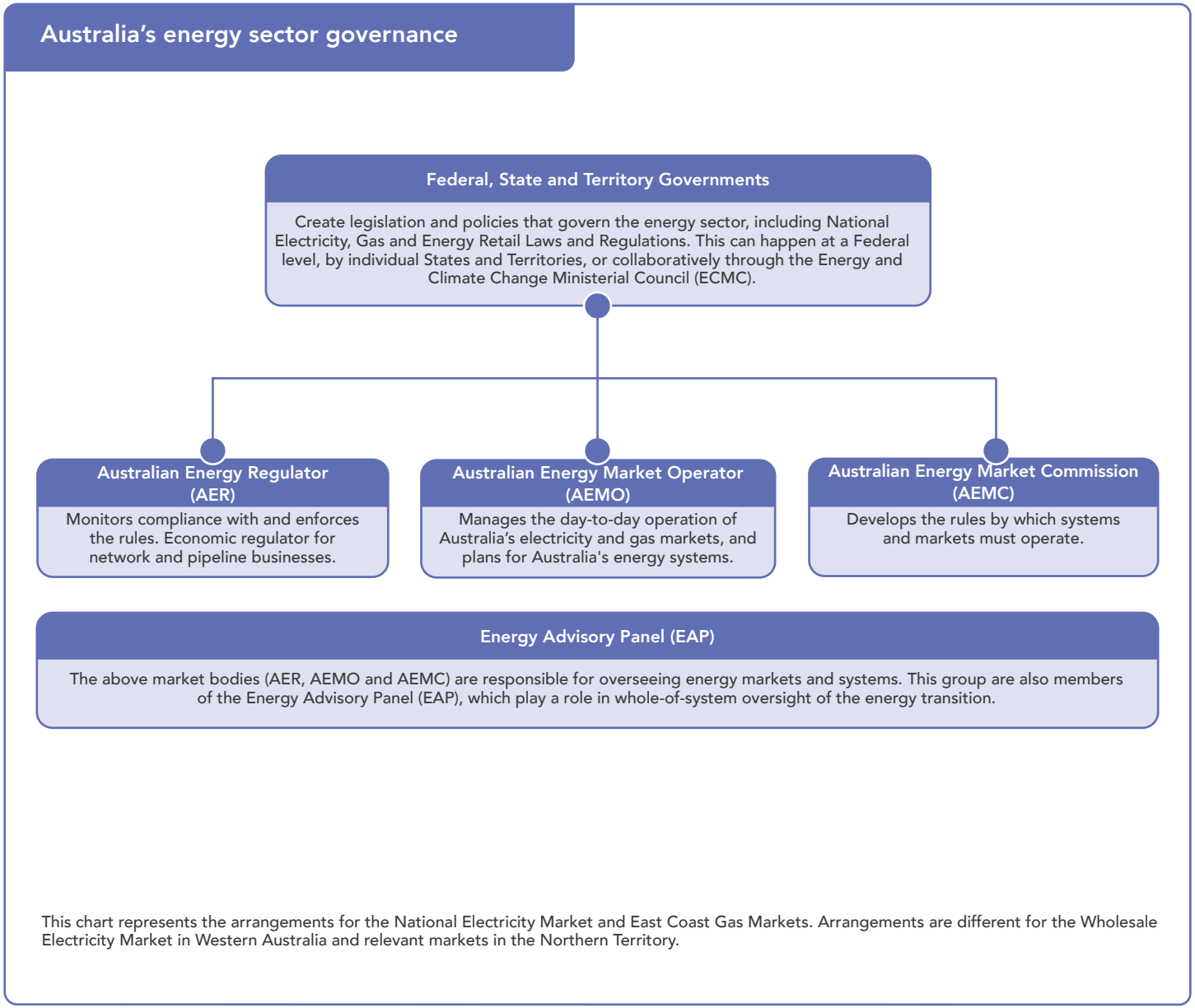


Figure 1: Key energy organisation roles and responsibilities

The National Electricity Market

The National Electricity Market (NEM) operates on one of the world's longest interconnected power systems. It covers around 44,000 km of transmission lines and cables, supplying a population exceeding 23 million.

The NEM involves wholesale generation that is transported via high-voltage transmission lines from generators to large industrial energy users and to local electricity distributors in each region, which deliver it to homes and businesses.

The transport of electricity from generators to consumers is facilitated through a 'pool', or spot market, where the output from all generators is aggregated and scheduled at five-minute intervals to meet demand and to provide a better price signal for investment in faster response technologies, such as batteries and gas peaking generators.

Western Australia and the Northern Territory are not connected to the NEM. They have their own electricity systems.

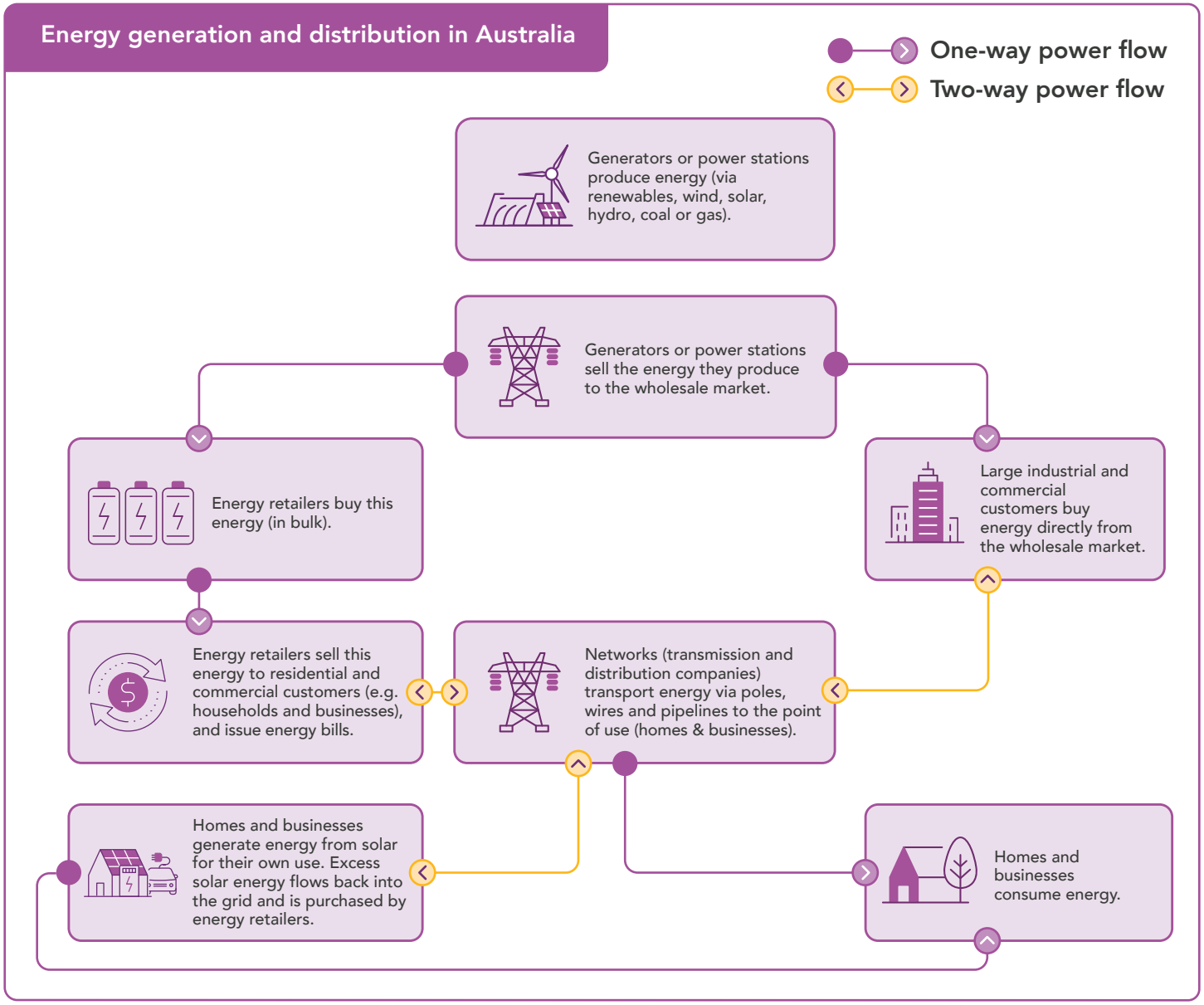


Figure 2: One-way and two-way power flow in Australia.

The energy transition is well underway

Australia's energy sector is changing

Energy demand

As each Integrated System Plan (ISP) is developed, with input from stakeholders, AEMO forecast how demand for energy is expected to change over time to effectively and efficiently support power system needs, and the policies that direct the overall pace and scale of the energy transition.

Consumption of electricity is forecast to nearly double, as more and more Australian households, businesses and industry use more electricity in future and less of other forms of energy (for example, petrol, diesel, gas and coal), as a result of broader decarbonisation of the economy.

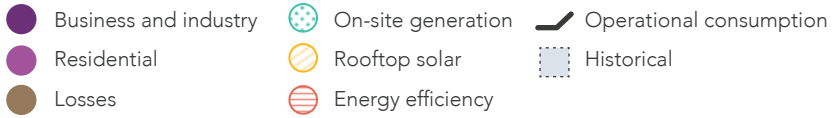
Recent ISPs confirm that renewable energy, connected by transmission and distribution, firmed with storage and backed up by gas is the least-cost way to supply secure and reliable electricity to consumers as coal plants retire, while meeting government policies through to 2050.

Keeping the lights on in the future

Click the video icon to watch[2]

[2] http://www.youtube.com/watch?v=tykkuqKHEKI&t=1s

Electricity consumption, NEM



Energy supply

The energy transition is transforming the way we produce, store, deliver and use energy.

Australia, along with most other countries, has set emission reduction targets through to 2050. Historically, electricity, gas, and transport fuels used in the energy sector have been major sources of emissions across the economy. However, these can be substituted or replaced by low or no emissions fuels and technologies.

This process, referred to as the 'energy transition', also involves decarbonising energy demand outside the energy sector to achieve comprehensive emissions reductions.

In 2010, renewable energy in Australia accounted for less than 9% of all energy generated, with coal supplying over 80%. Now, approximately 43% of Australia's total electricity generation is from renewable energy sources and 55.5% from coal.

This pace of change is expected to continue, with half the remaining coal plants projected to retire by 2035, and all by 2050. Significant new renewable energy and storage is needed to replace them.

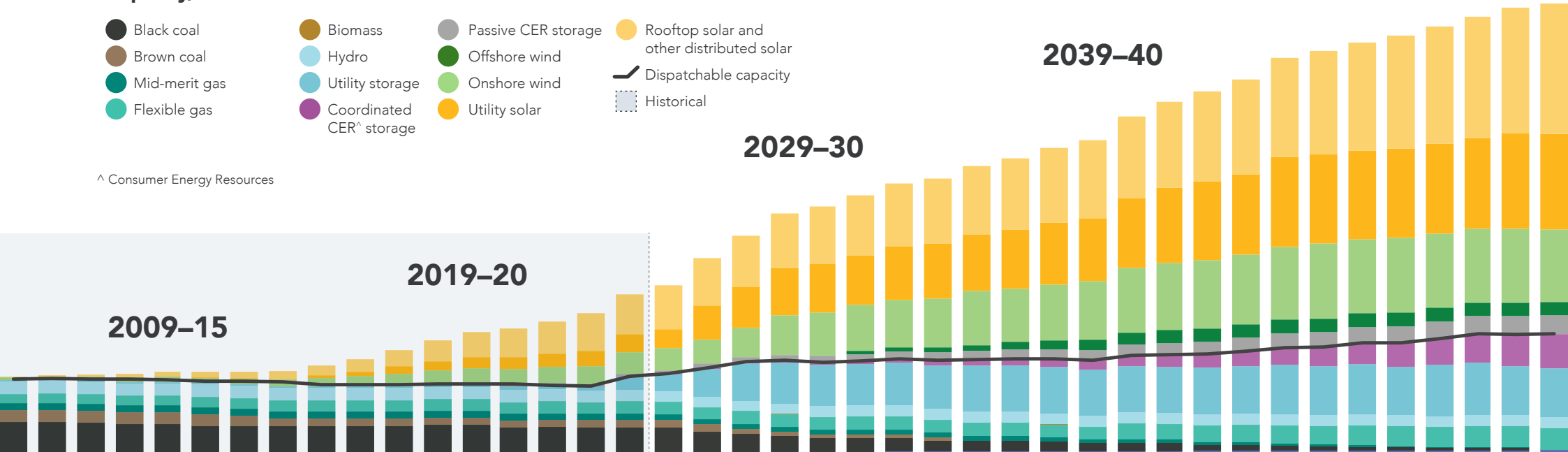
To meet rising demand for electricity, AEMO estimates that the NEM will need to almost triple its total generation and storage capacity, requiring more generation to be built. This is because variable renewable generation sources, such as wind and solar, typically operate at less than their full capacity.

The tripling of capacity also includes from Consumer Energy Resources (CER), with consumers continuing to play a major part in the Australia's energy transition by leading investment in small-scale solar, behind-the-meter batteries and electric vehicles.

NEM energy facts

- Renewables now supply on average approximately 43% of electricity, with a peak contribution of more than 78%.
- 38% of Australia's coal power stations have closed since 2012.
- As of September 2025, the pipeline of new generation and storage connecting to the NEM exceeded 56 GW.
- Grid-scale batteries make up about half of all new capacity in the investment pipeline, increasing 79% year-on-year from 14.6 GW to 26.1 GW.
- About 2,800 km of new and upgraded transmission lines are currently being delivered in five projects.

Capacity, NEM



^ Consumer Energy Resources

What the transition means for energy consumers

As Australia's power system transforms, the way people think about, use and experience energy will transform too.

Many households and businesses are taking steps to be more aware and in control of their energy use.

They are adopting innovative ways to reduce and manage how much and when they consume energy by investing in 'consumer energy resources' (CER) such as roof-top solar systems, batteries and electric vehicles (EVs).

This growth in consumer resources presents an opportunity for the system to be planned and operated in a more flexible and two-sided manner, and reduce the scale of grid-scale investments. When CER is bundled and coordinated either through as virtual power plants (VPPs) or vehicle-to-grid (V2G) charging of electric vehicles, it can respond to market signals, and contribute to system reliability and system security.

Rooftop solar systems are now three times as common in Australia as backyard pools.

Social licence

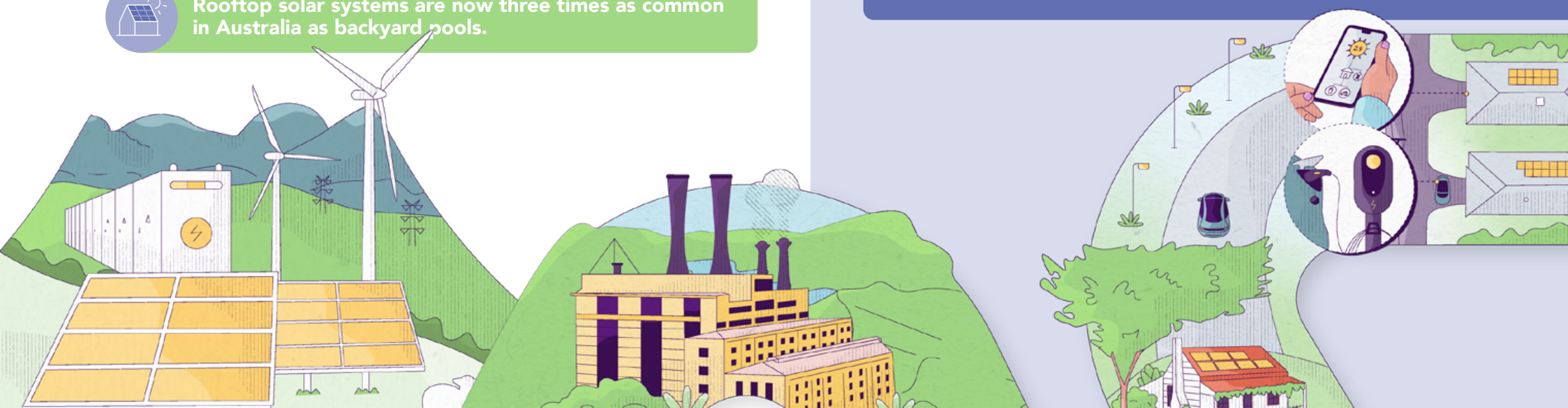
Critical to the energy transition's success is building and maintaining social licence.

Social licence – the ongoing acceptance and trust of communities – is essential for the development of new infrastructure, the integration of CER with grid operations, and broader public support for national investment in the transition.

All governments and organisations contributing to the energy transition have an important role to play to engage and build trust with their communities.

Cost of living, including electricity prices, is a key concern for many families and businesses.

The ISP identifies the least-cost way to supply secure and reliable electricity to consumers through to 2050, as coal plants retire and while meeting government policies.



AEMO's role in the transmission planning process

The ISP focuses on broad power system planning and its consideration of social licence is at a high level. Integrating an issue as complex as social licence within the ISP is a difficult task.

Much of the responsibility to understand and engage with local communities sits with relevant project developers (generation developers, network service providers or others), as development of infrastructure for the energy transition progresses.

In reports such as the *Electricity Network Options Report*, AEMO explores options to develop new transmission infrastructure as an input to the ISP's development. Where possible, AEMO considers community sentiment and analysis provided by networks, investors and governments, but these options are often highly conceptual and require further exploration by these organisations.

Networks, investors and developers have a responsibility to conduct detailed research and engage with communities to understand local conditions, impacts and refine routes. It is in this part of the process, developing new infrastructure, that building social licence is particularly critical.

Figure 3 on the following page illustrates the transmission lifecycle and AEMO's role in the consideration of social licence for transmission planning.

The energy transition is front of mind for people living in rural and regional areas who are asked to host energy infrastructure.

New infrastructure on or near your own property can be a big adjustment but it can also offer new opportunities for the local community and bring about new regional development and economic growth.

Developers and networks must engage with communities hosting new infrastructure from the early stages of project planning to address concerns and ensure benefits are shared.

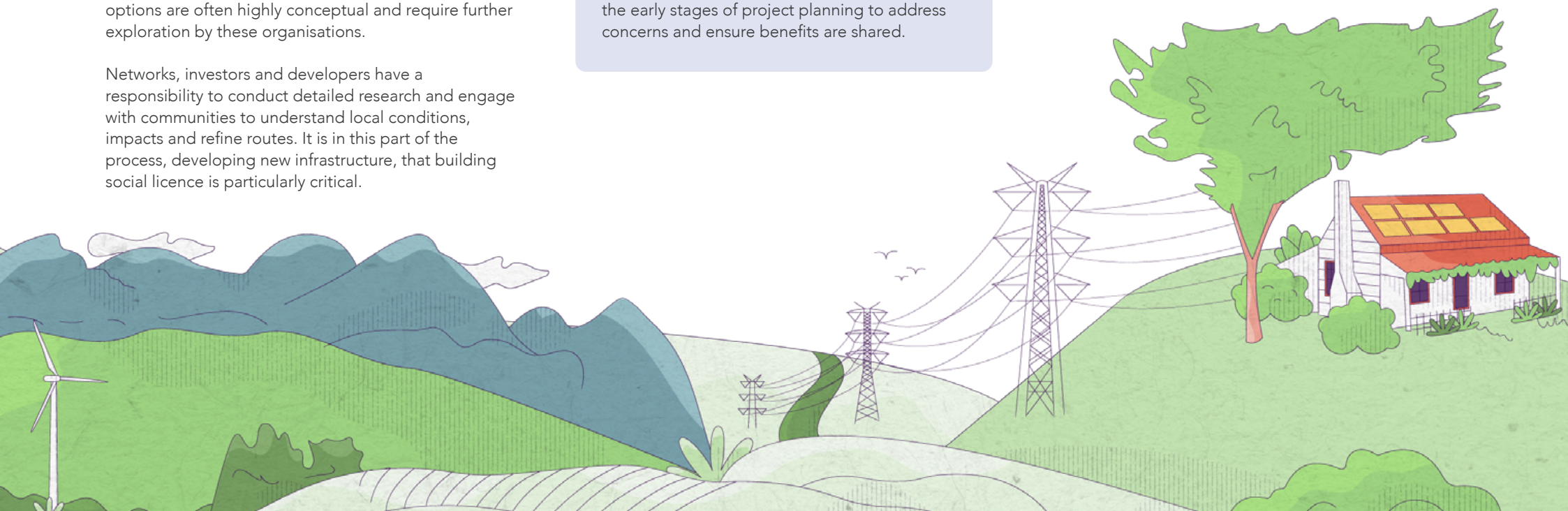
Got a question?

Read our FAQs
or you can contact us directly

AEMO Energy Education

AEMO is pleased to have expanded its range of free learning courses to support knowledge and capacity building. For more information visit the:

AEMO Learning Academy



The transmission planning process

AEMO as national transmission planner

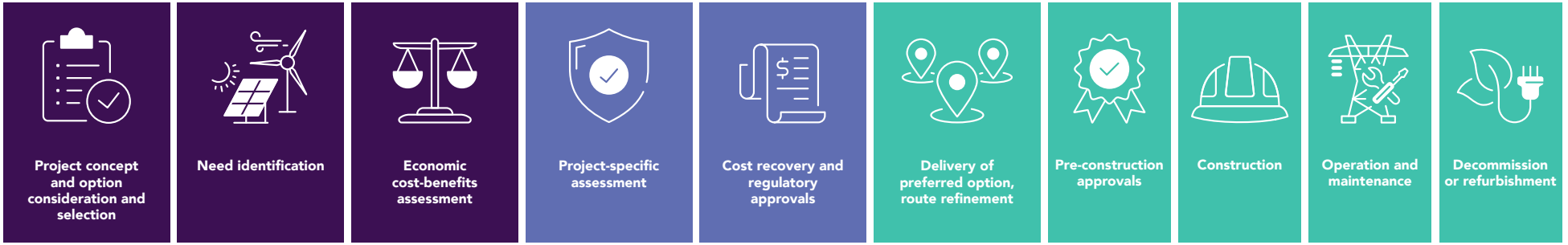
As part of the Integrated System Plan (ISP), AEMO identifies conceptual options via joint planning with network service providers and jurisdictional bodies, identifies network needs and conducts market modelling and economic cost-benefits assessment.

Project-specific assessment: Transmission Network Service Providers (TNSPs) and jurisdictional bodies

AEMO's ISP triggers the Regulatory Investment Test for Transmission (RIT-T) by TNSPs for actionable ISP projects which assess an individual project at a more granular level than the ISP. Actionable projects that do not undergo the RIT-T are progressed under a jurisdictional framework.

Project delivery, operations, maintenance and decommissioning by TNSPs

TNSPs undertake the delivery of the project, from pre-construction approvals, to construction, operation and maintenance, decommissioning and renewal. They are responsible for obtaining, building and maintaining local community acceptance for the project.



High-level consideration of social licence → **Early engagement by networks with communities** → **Detailed and localised engagement with communities and landholders**

Social licence is considered at a high level in the ISP, including through the identification and refinement of conceptual options, and preparatory activities for actionable and future ISP projects.

AEMO does not undertake project-specific or localised engagement as this sits with TNSPs, project developers, and jurisdictional bodies, but does take into account data on localised community sentiment at this early stage if advised.

Examples of high-level considerations:

- Land use mapping
- Location selection of renewable energy zones (REZs)

RIT-T proponents must consider social licence issues when identifying options, publish and report against a stakeholder engagement plan and meet community engagement expectations defined in the National Electricity Rules.

The AER considers the prudent and efficient costs of network projects, including social licence costs. Non RIT-T assessments or projects assessed under jurisdictional frameworks must also consider detailed cost-benefit analyses and social licence.

Examples of social licence considerations:

- Re-routing of lines due to community concerns

TNSPs are responsible for obtaining, building and maintaining social licence during the construction, maintenance and decommissioning of transmission lines.

Examples of social licence considerations:

- Community benefit sharing arrangements
- Easement and payment arrangements with landholders

Figure 3: AEMO's consideration of social licence is limited to the very early stage of the transmission lifecycle (marked in dark purple).
This diagram builds upon the one in The Energy Charter's 2024 Factsheet on Community Engagement in Decision-Making for Transmission Projects.

The Integrated System Plan (ISP)

What is the ISP?

A roadmap for the energy transition

Australia's National Electricity Rules (NER) require AEMO to produce a plan every two years for essential infrastructure that will meet future energy needs. This is known as the Integrated System Plan (ISP).

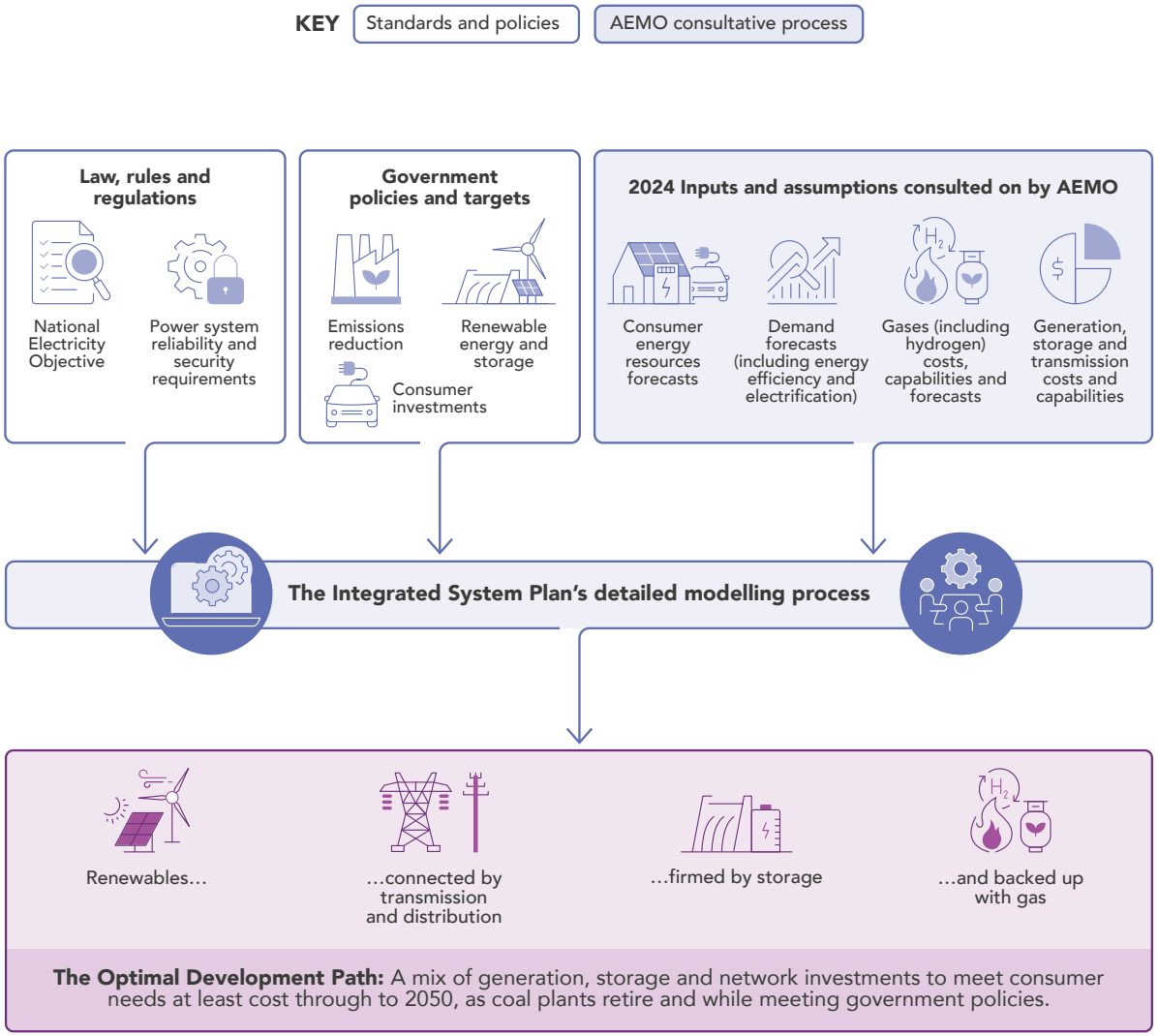
The ISP is a roadmap for the transition of the National Electricity Market (NEM) power system (Queensland, New South Wales, Victoria, South Australia, Tasmania and the Australian Capital Territory) over at least the next 20 years. It outlines the mix of generation, storage and network investments required to supply secure and reliable electricity to consumers, as coal plants retire, while meeting government policies through to 2050.

The ISP plays a crucial role in providing projections about where and when investments in new electricity infrastructure will be required to support the energy transition.

The video below explains how the 2026 ISP was developed and what the energy future looks like for consumers in the NEM.

Click the video icon to watch*

* https://youtu.be/uEZRzhW9G7I



The planning process

Why do we produce the ISP?

In 2016, severe thunderstorms and tornadoes in South Australia resulted in a widespread blackout.

This event prompted federal and state energy ministers to commission then Chief Scientist Dr Alan Finkel AO to conduct an 'Independent Review into the Future Security of the National Electricity Market', also known as the Finkel Review.

The review aimed to address the issues that contributed to the South Australia blackout and ensure a more reliable, secure, and sustainable National Electricity Market.

During the review, the idea of an integrated plan emerged as a necessity to develop Renewable Energy Zones and guide the energy transition in the National Electricity Market (NEM), in acknowledgement of the complex and rapid transformation towards net zero emissions.

(Continues on page 18)

Developed in collaboration

Each ISP is developed in collaboration with a range of organisations, including:

Governments

Federal, state and territory governments create energy policies and set targets that guide energy investment and development and which AEMO considers in preparing the ISP. They also assess and provide planning approvals for new energy infrastructure.

Energy market bodies

The Australian Energy Market Commission (AEMC) and Australian Energy Regulator (AER) work alongside AEMO.

The AEMC develops the rules that govern the energy market, the AER enforces the rules and monitors compliance (including AEMO's compliance with requirements for the ISP in the National Electricity Rule), while AEMO oversees the day-to-day operation of energy markets and systems, and plans for the future.

Developers and market participants

These are companies which develop technology and build infrastructure to generate energy or that connects generation and storage facilities. For example, developers may own solar or wind farms, coal-fired power stations or gas generators.

Electricity networks (TNSPs and DNSPs)

Electricity Transmission Network Service Providers (TNSPs) are responsible for building, maintaining and operating high-voltage infrastructure such as transmission lines, towers, and substations. These businesses transport electricity from where it is generated to where it is used. TNSPs collaborate with AEMO to plan their networks and participate in joint planning for the ISP. TNSPs are required to undertake detailed assessments for new network development and seek funding approval from the AER.

Electricity Distribution Network Service Providers (DNSPs) are responsible for building, maintaining and operating lower-voltage infrastructure such as power poles, wires, transformers and substations. They transport electricity from transmission networks at lower voltages to end users such as households and businesses, and from households and businesses that generate electricity back into the grid. DNSPs provide essential information about their networks to AEMO as an input to the ISP and, similar to TNSPs, are required to undertake detailed assessments for new network development and seek funding approval from the AER.

Retailers

Energy retailers connect wholesale electricity markets and end-use energy consumers (homes and businesses).

They buy energy (electricity, gas or energy services) from Distributed Network Service Providers (DNSPs) to sell to consumers in a retail market, offering product choice and competitive pricing. (Regulated prices are set by state-based regulators in some jurisdictions.)

Retailers must adhere to the National Electricity Retail Rules, which detail consumer protection measures and include rules relating to customer connections and competition, allowing customers to choose between competing retailers and to switch their retailer.

Why do we produce the ISP? (continued)

AEMO was tasked with leveraging its extensive stakeholder engagement and power system expertise to develop the ISP, with the first ISP published in 2018.

The scope of the ISP continues to develop as the ISP framework in energy legislation evolves.

Gas pipeline operators

Gas transmission pipeline operators are responsible for building, maintaining and operating the large, high-pressure pipelines that form the backbone of the gas network. They are responsible for moving gas long distances from sources like gas fields or storage facilities to major distribution centres.

Gas distribution pipeline operators are responsible for building, maintaining and operating pipelines that take the gas from high-pressure transmission pipelines and distribute it through a network of smaller, lower-pressure pipelines to homes, businesses, and industrial sites within a local area.

Gas operators provide information about their infrastructure planning to AEMO as an input to the ISP.

Academics

Academics — university lecturers and researchers — with a specific interest in energy, climate change and the environment engage with AEMO as part of the ISP development process. They contribute ideas, give feedback on analysis and reports, and can also advocate in the public's interest.

Consumer and community advocates

These are individuals and organisations who represent the interests of consumers and communities in the ISP's development by providing advice, participating in consultations that shape the ISP, and advocating for outcomes that meet consumer and community expectations.

Environment and climate groups

These are groups who advocate for environmental protections and climate change mitigation in relation to energy infrastructure. They may be not-for-profit groups or have a cultural focus (such as First Nations, environmental and climate groups) or be a large operation with an extended network and formal organisational structure. AEMO engages with these groups and encourages them to make written or verbal submissions as part of ISP consultations.

More detailed information about key stakeholders involved in the ISP's development is in Section 4.3 of the 2026 ISP Stakeholder Engagement Strategy; Key stakeholder groups.

Changes to the 2026 ISP

In April 2025, Australia's energy ministers published a review of the ISP, recognising its critical role in guiding the transformation of the NEM towards a net-zero emissions future.

The review set out several recommendations to ensure the ISP continues to evolve in step with the changing energy landscape and remains fit for purpose as Australia accelerates its transition.

The 2026 ISP scope has expanded to implement recommendations from the ISP Review, as endorsed by the Energy and Climate Change Ministerial Council.

This includes identifying, in addition to transmission options:

- opportunities for investment to facilitate the operation of forecast uptake of consumer energy resources and other distributed resources; and
- opportunities for better integration of the capability of the east coast gas market.

These recommendations require AEMO to expand the technical scope of the ISP, and consider broader inputs and assumptions, affecting both the ISP Methodology and the IASR.

Implementing the ISP

What the ISP does

The National Electricity Rules (NER) set out prescriptive requirements for how AEMO must prepare the Integrated System Plan (ISP), its related documents and the contents of those documents, while the (Australian Energy Regulator (AER) monitors AEMO's compliance against these requirements.

Identifies the 'Optimal Development Path' and guides investment
A key requirement of each ISP is the Optimal Development Path (ODP) which outlines the mix of generation, storage and network investments that would supply secure and reliable electricity to consumers as coal plants retire, at least cost, while meeting government policies through to 2050.

AEMO uses detailed modelling to determine the ODP and identifies specific projects within that path as 'actionable projects'. It assesses the options available and identifies the lowest-cost, resilient, pragmatic path to the NEM's energy future of net zero by 2050. The ODP is then used by governments and industry to progress investment in energy infrastructure and to inform policy.

Identifying the ODP for each ISP is the outcome of two years of consultation and engagement with stakeholders to develop a range of development options for assessment.

Learn more about actionable projects on the next page.

Contributes to achieving National Electricity Objectives
The ISP takes into account committed government policies and targets, and contributes to achieving the National Electricity Objective (NEO) which aims to promote efficient investment, operation and use of electricity with respect to electricity price, quality, safety, reliability, security and emissions reduction.
Read more about the National Energy Objectives

More information

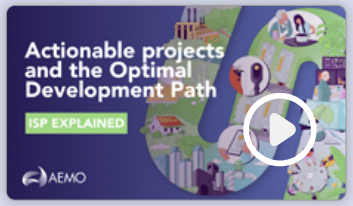
- Visit the website
- Read the ISP fact sheet
- Join our mailing list for updates

The optimal development path

The optimal development path (ODP) has the least-cost combination of generation, storage, transmission and consumer energy resources to supply secure and reliable electricity to consumers as coal plants retire, while meeting government policies through to 2050.

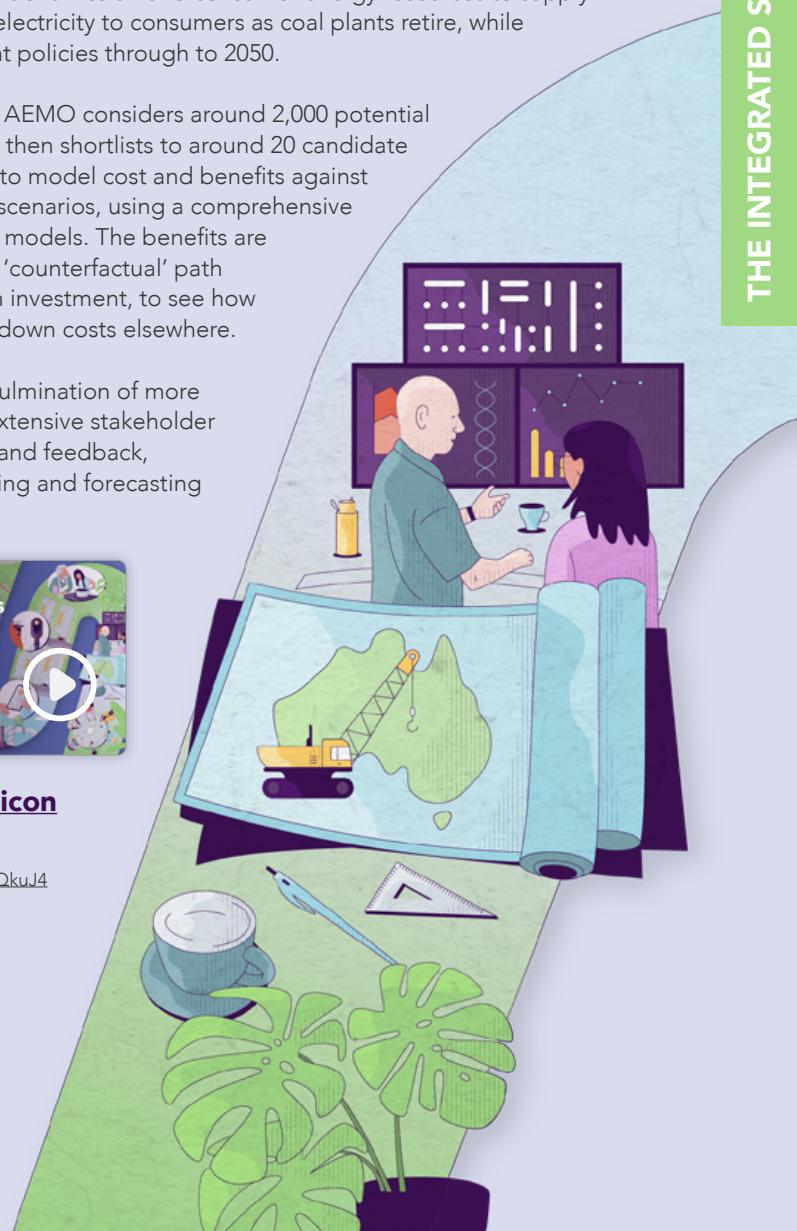
To identify the ODP, AEMO considers around 2,000 potential development paths, then shortlists to around 20 candidate development paths to model cost and benefits against three development scenarios, using a comprehensive set of power system models. The benefits are compared against a 'counterfactual' path without transmission investment, to see how transmission brings down costs elsewhere.

This process is the culmination of more than 12 months of extensive stakeholder engagement, input and feedback, informing key planning and forecasting reports.



Click the video icon to watch*

* https://youtu.be/NzLP5IQkuJ4



Types of network projects

AEMO classifies three different types of network projects as part of the ODP: committed and anticipated, actionable, and future.

Committed and anticipated: network projects that meet all five commitment criteria (site acquisition, components ordered, planning approvals, finance completion and set construction timing). Anticipated network projects are in the process of meeting at least three of the above criteria.

Actionable: network projects that should progress as urgently as possible. ISP actionability is a trigger point for the states that rely on the NER approvals pathway (Tasmania and South Australia) as well as for states that have their own approval pathways (Queensland, New South Wales and Victoria).

Future: projects that will deliver net market benefits to consumers and are forecast to be actionable in the future.

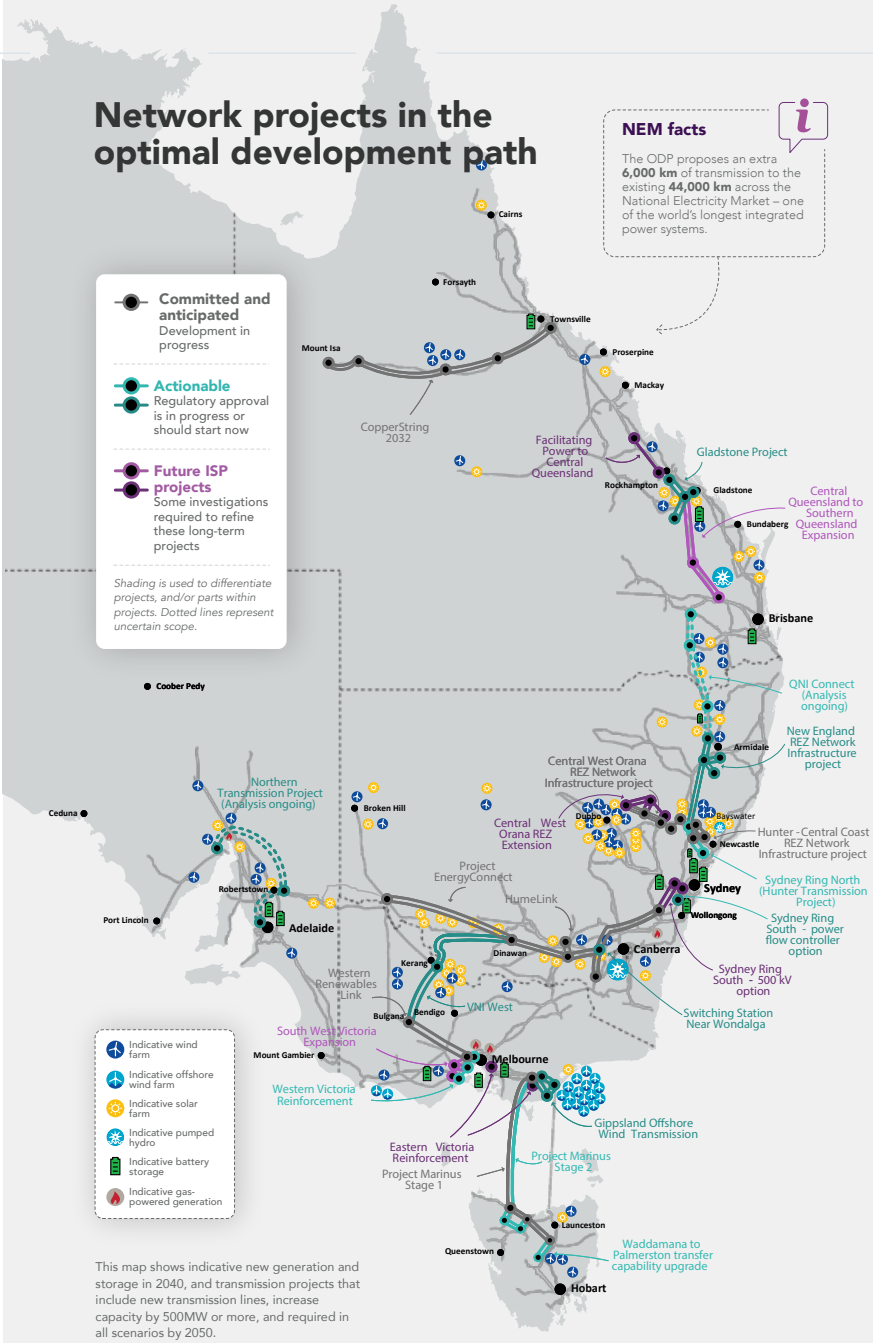
Regulatory Investment Test for Transmission (RIT-T)

After a project is identified in the ISP, a Regulatory Investment Test for Transmission (RIT-T) for actionable ISP projects is triggered and the relevant Transmission Network Service Provider who will be the RIT-T proponent for each actionable ISP project is identified. RIT-T proponents must consult with stakeholders and consider the option identified as actionable in the ISP and other relevant network and non-network options. They must also identify the option that maximises net market benefits as the preferred option.

After the RIT-T, TNSPs may seek confirmation from AEMO that the preferred option still aligns with the ISP's optimal development path before proceeding.

The ISP does not include all projects. It focuses on essential, large-scale infrastructure, while accounting broadly for consumer energy resources (such as rooftop solar or home batteries) and distribution network upgrades.

Learn more about RIT-Ts: AER What is the regulatory investment test?



Engaging on the ISP

Why we engage

We put Australian households, businesses and communities at the centre of our planning

Stakeholder engagement is essential to developing each ISP.

We recognise that the work we do to plan for the energy transition will impact everyday Australian households, businesses and communities.

Throughout each stage of ISP development, we engage extensively with stakeholders and technical experts. This collaboration ensures the exchange of information and ideas that is required to understand stakeholder needs and expectations.

As the energy transition progresses, AEMO is committed to enhancing our focus on consumers and communities, providing opportunities to get involved and help shape Australia's energy future.

We know that by working together we can deliver better energy outcomes for everyone.

All interested energy consumers and consumer advocates are encouraged to get involved in the ISP's development by:

- Learning about the planning process
- Providing feedback on our draft data and information
- Participating in planning discussions to inform our decisions
- Sharing your knowledge about what consumers and communities value.

Read more about how we engage with consumers, community and stakeholders at the 2026 ISP Opportunities for engagement web page.

We want interested stakeholders to get involved and shape our planning for the development of an energy system that benefits all Australians.

The ISP Consumer Panel's role

AEMO recognises that many consumer and community advocates cannot engage in the ISP's development in detail.

To bring a broad consumer perspective to the planning process, AEMO has established the ISP Consumer Panel which is comprised of four members who are highly informed about energy matters.

The ISP Consumer Panel connects AEMO with consumers and ensures that a diverse range of consumer interests, needs and expectations are considered throughout the ISP's development.

Members advise AEMO on a range of matters throughout the ISP's development, and must prepare a report providing feedback on AEMO's Inputs, Assumptions and Scenarios Report and Draft ISP.

The Panel operates under Terms of Reference which outline their roles and responsibilities in detail. Find out more about the ISP Consumer Panel at the 2026 ISP Consumer Panel webpage.

Message from the 2026 ISP Consumer Panel

The ISP is one of the most-significant planning processes for Australia's energy transition and engagement with stakeholders is crucial to its success.

The ISP Consumer Panel (the Panel) brings a consumer focus to the ISP development process, providing advice and input on a variety of matters. We represent a range of energy users including households, businesses, and communities across Australia, including those who are disadvantaged or often underrepresented.

The Panel recognises AEMO's commitment to engaging regularly and meaningfully with stakeholders throughout the planning process, including with us.

AEMO makes every effort to listen to stakeholders and seek input from communities and we encourage you to voice your opinions and share your suggestions about Australia's energy transition.

Craig Memery, Bev Hughson, Jarra Hicks and Mark Henley (Chair)

The Consumer and Community Reference Group's role

AEMO's Consumer and Community Reference Group (CCRG) provides consumer-focused insights and advice to AEMO on a range of energy issues, including ISP development.

Acting in parallel to the ISP Consumer Panel, the CCRG's members represent a diverse range of stakeholders, from households and businesses to First Nations people, regional communities and agricultural and environmental groups.

The CCRG operates under Terms of Reference which outline their roles and responsibilities in detail.

Find out more about the CCRG here.

Shaping the ISP

Stakeholder engagement on the ISP is a two-year process.
The 2026 ISP Stakeholder Engagement Plan outlines AEMO's current approach for engaging with stakeholders in the development of the 2026 ISP. It guides how we deliver consultations to a high standard, and ensures stakeholders have as many opportunities as possible to get involved.

The scope of engagement on the 2026 ISP includes:

- Informing stakeholders about the processes and outcomes of the seven key stages of the ISP's two-year development
- Consulting stakeholders, seeking their input on proposed modelling, methodology analysis, inputs, assumptions, scenarios, sensitivities, expansion options and alternatives
- Involving the ISP Consumer Panel and other stakeholders on key topics such as scenario design, transmission cost, consumer sentiment and consideration of the treatment of consumer energy resources CER)
- Collaborating with expert stakeholders to identify and plan for network augmentation design (joint planning).

Have your say

The Integrated System Plan (ISP) is shaped by a series of reports which are developed and released in three stages over two years.

Each report involves extensive consultation with a wide range of stakeholders and, together, they build a body of work that is modelled to develop the ISP.

AEMO is committed to providing an accessible engagement program for stakeholders, including consultations, webinars, forums, stakeholder surveys, and submissions.

Here is a step-by-step way to engage with AEMO across each stage of the ISP's development.

STAGE 1

Inputs, Assumptions & Scenarios Report (IASR)

Scenario development
Consultation on the ISP begins in July (every two years) generally with the publication of a consultation paper which provides early consideration of how existing planning scenarios could evolve to best fit the purpose of modelling Australia's energy future.

Stakeholders are invited to provide feedback and their responses help shape the scenarios outlined in the *Inputs, Assumptions and Scenarios Report* (IASR).

Draft inputs, assumptions and scenarios
The *Draft Inputs Assumptions and Scenarios Report* (IASR) iis a preliminary document that identifies the key information that AEMO plans to use to develop the ISP.

The Draft IASR, published between December and February every two years, gives stakeholders an opportunity to consider and provide feedback at the early development stage of the ISP.

Once all feedback has been reviewed and considered, the final IASR is published in July (every two years).

Electricity Network Options Report and Gas Infrastructure Options Report
The *Electricity Network Options Report* and *Gas Infrastructure Options Report* outline conceptual transmission and distribution expansion options to inform the ISP's development and include updates to existing options. Consultation commences with the publication of draft reports in April-May (every two years).

AEMO hosts a public webinar for stakeholders to ask questions or seek clarification on the report content prior to making a written or verbal submission.

Once all feedback has been reviewed and incorporated, where appropriate, the final *Electricity Network Options Report* and *Gas Infrastructure Options Report* are published in July (every two years).

Want to get involved?

If you would like to get involved and have your say on the ISP's development, the best place to start is the 2026 ISP Engagement opportunities webpage. This includes information about different engagement opportunities that you might like to participate in, including active consultations with links to register to attend webinars and forums.

In addition to the 2026 ISP Engagement opportunities webpage, Section 4.4 Engagement and communication methods, and Section 5 Engagement schedule of the 2026 ISP Stakeholder Engagement Plan include more detailed information about the different ways you can get involved in the development of the 2026 ISP.

If you need further information about how toget involved, please get in contact using the details on the following page.

STAGE 2

ISP Methodology (every four years, smaller updates as needed)

Periodically, AEMO is required to review its planning methodology by publishing a consultation paper which proposes any changes to the methodology.

Stakeholders are invited to comment on the proposed changes via written submissions or by engaging in a public webinar. Further consultation occurs once the *Draft ISP Methodology* is published in March (every two years as required).

This document is a more-detailed explanation of how AEMO proposes to prepare the ISP.

Stakeholders are invited to make written submissions about the proposed methodology or, if unable to engage otherwise, may participate in a verbal submission session hosted by AEMO. A post-publication webinar is also held to ensure stakeholders are fully consulted on changes to the methodology.

When all feedback is considered and adopted, as appropriate, AEMO publishes a final *ISP Methodology* in June (every two years, as required).

STAGE 3

Integrated System Plan

Informed by consultation on the *Inputs, Assumptions and Scenarios Report* and *ISP Methodology*, AEMO conducts extensive modelling to develop a *Draft Integrated System Plan* which is published in December (every two years). This draft ISP applies the ISP Methodology to model data and information from Stage 1.

Stakeholders have the opportunity to provide feedback on the *Draft ISP*, either via written or verbal submissions, and they may also participate in a public webinar where they may ask questions and seek clarification on Draft ISP content.

When all feedback is reviewed and considered, AEMO publishes a final ISP in June (every two years).

Engagement opportunities across the energy sector

If you are more interested in other aspects of energy planning and markets, such as energy policy development or energy project development in your local area, we have included a list of engagement opportunities below.

Energy policy, rules and legislation development

Energy policies, rules and legislation are developed through a process that includes identifying a need, designing policies, implementing them, monitoring their effectiveness, and making necessary adjustments.

Depending on your interests, a good first step is having a look at relevant policies, rules and legislation through the Australian Government Department of Climate Change, Energy Efficiency and Water, your state government energy department, or the Australian Energy Market Commission. Reaching out to the relevant government department, agency or market body around policy development is also a way to get more directly involved.

Energy infrastructure projects in your area

New energy infrastructure is being built on a range of scales across most states and territories, and there are often several ways to get involved and have your say.

Most new infrastructure developments offer a range of engagement opportunities such as public consultations and forums, public meetings, surveys, workshops, and online forums to share your opinions and advocate for your interests.

Other options to get involved in the energy sector

- Join energy groups: become a member of organisations that focus on energy issues, such as environmental groups or industry associations.
- Connect with experts: network with energy experts, researchers, and policymakers to learn about the latest developments and trends.
- Seek information: stay informed about energy policies, projects, and technologies through reputable sources such as AEMO's industry courses.

Connect with us

ISP team: ISP@aemo.com.au

Forecasting and Planning teams: Forecasting.Planning@aemo.com.au

ISP Consumer Panel: ISP@aemo.com.au

Subscribe: Quarterly ISP Newsletter

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Glossary of terms

Glossary of terms

The following glossary defines terms used in this toolkit. For other terms, visit AEMO's Industry terminology web page.

Actionable project – a transmission project identified in AEMO's Integrated System Plan (ISP) that is ready to progress through regulatory approval and delivery.

AEMO – Australian Energy Market Operator. AEMO manages Australia's electricity and gas systems and markets, helping ensure that all Australians have access to reliable, secure and affordable energy.

Committed – a generation, storage or transmission project that has fully met all five commitment criteria (planning, construction, land, contracts, finance), in accordance with the AER's Cost Benefit Analysis Guidelines. Committed projects are included in all ISP scenarios

Consumer – an end-use customer of energy. A consumer could be a member of a household, a small business, a government service or a major industrial business.

Consumer energy resources (CER) – generation or storage assets owned by consumers. These can include rooftop solar, batteries and electric vehicles (EVs). CER may include demand flexibility. CERs, such as rooftop solar and battery storage, are forecast to become more affordable and, if well-coordinated, will be more effective, allowing people to support their own energy needs while contributing to the NEM.

Consumer and Community Reference Group (CCRG) – a diverse cohort of consumer and community advocates who provide strategic insights and advice to AEMO about a range of energy issues.

Development path – a set of projects (actionable projects, future projects and ISP development opportunities) in an ISP that together address power system needs.

Distributed network service provider (DNSP) – businesses that build, maintain, own and control hardware such as power poles, wires, transformers and substations. They transport electricity from transmission networks at lower voltages to end users such as households and businesses.

Electric vehicles – residential and business battery-powered vehicles, such as motor bikes, cars, and large commercial trucks.

Energy transition – the move away from traditional fossil-fuel electricity generation (oil, gas and coal) towards sustainable and low-carbon energy sources (solar, wind, biomass, hydrogen, and water). It is occurring worldwide, driven by changes to energy supply, demand, and prices, and the need to reduce energy-related greenhouse gas emissions. While the transition will require significant investment and change, it will also provide opportunities for employment, economic development and social investment.

Firming technologies – grid-connected infrastructure that can provide dispatchable capacity when variable renewable energy generation is limited by weather, for example storage (pumped hydro and batteries) and gas-powered generation.

Future ISP project – is a transmission project (or non-network option) that addresses an identified need in the ISP, that is part of the ODP and is forecast to be actionable in the future.

Home energy management systems (HEMS) – digital systems for households to monitor and control their individual energy generation, storage and use.

Hydro power – water is stored in reservoirs or dams at a higher elevation than a power station. The water is released into pipes and the flowing water spins large turbines connected to generators. The turbines convert the kinetic energy of the moving water into mechanical energy which then generates electricity.

ISP Consumer Panel – a group of informed stakeholders who bring a consumer-focused perspective to the ISP development process, having regard to the long-term interests of electricity consumers.

Least cost – in the ISP refers to the development path that delivers the highest net market benefit across scenarios, not just the cheapest upfront investment. It's a holistic measure considering system-wide costs, benefits, and resilience.

Net zero – the balance between emissions produced and emissions taken out of the atmosphere. To have an overall (net) balance of zero, one must not exceed the other.

National Electricity Market (NEM) – one of the world's longest interconnected power systems covering about 44,000km of transmission lines and cables and supplying the Australian Capital Territory, New South Wales, Queensland, South Australia, Tasmania, and Victoria.

National Electricity Rules – the National Electricity Rules govern the operation of the National Electricity Market (NEM). The Rules are made by the Australian Energy Market Commission (AEMC) under the National Electricity Law and have the force of law. They govern the day-to-day operations of the National Electricity Market (NEM) and provide the framework for network regulation.

National Electricity Objective (NEO) – as stated in the National Electricity Law (NEL) is "to promote efficient investment in, and efficient operation and use of, electricity services for the long-term interests of consumers". See: National Energy Objectives | AEMC

National Gas Objective (NGO) – as stated in the National Gas Law (NGL) is "to promote efficient investment in, and efficient operation and use of, covered gas services for the long term interests of consumers". See: National Energy Objectives | AEMC

Optimal Development Path (ODP) – developed by AEMO, it outlines the mix of generation, storage and network investments that would supply secure and reliable electricity to consumers as coal plants retire, at least cost, while meeting government policies through to 2050.

Regulatory Investment Test for Transmission (RIT-T) – a cost benefit analysis test that TNSPs must apply to prescribed regulated investments in their network. The purpose of the RIT-T is to identify the credible network or non-network options to address the identified network need that maximise net market benefits to the NEM. RIT-Ts are required for some but not all transmission investments.

Reliable (power system) – the power system's ability to supply adequate power to satisfy consumer demand, allowing for a defined set of power system interruptions.

Renewable energy – for ISP purposes, the following technologies are referred to under the grouping of renewable energy: "solar, wind, biomass, hydro, and hydrogen turbines".

Renewable energy zone (REZ) – an area identified in the ISP as a high-quality resource area where clusters of large-scale renewable energy projects can be developed using economies of scale.

Transmission network service provider (TNSP) – a business responsible for owning, controlling or operating a transmission network. Transmission networks transport electricity at high voltages from a range of generators to major demand centres.

Virtual power plant (VPP) – an aggregation of resources coordinated using software and communications technology to deliver services that have traditionally been performed by a conventional power plant. In Australia, grid-connected VPPs are focused on coordinating rooftop photovoltaic (PV) systems and battery storage.

AEMO
AUSTRALIAN ENERGY MARKET OPERATOR

Australian Energy Market Operator Limited

ABN 94 072 010 327

www.aemo.com.au