Australian Energy Council Statement of Strategic Intent 2022

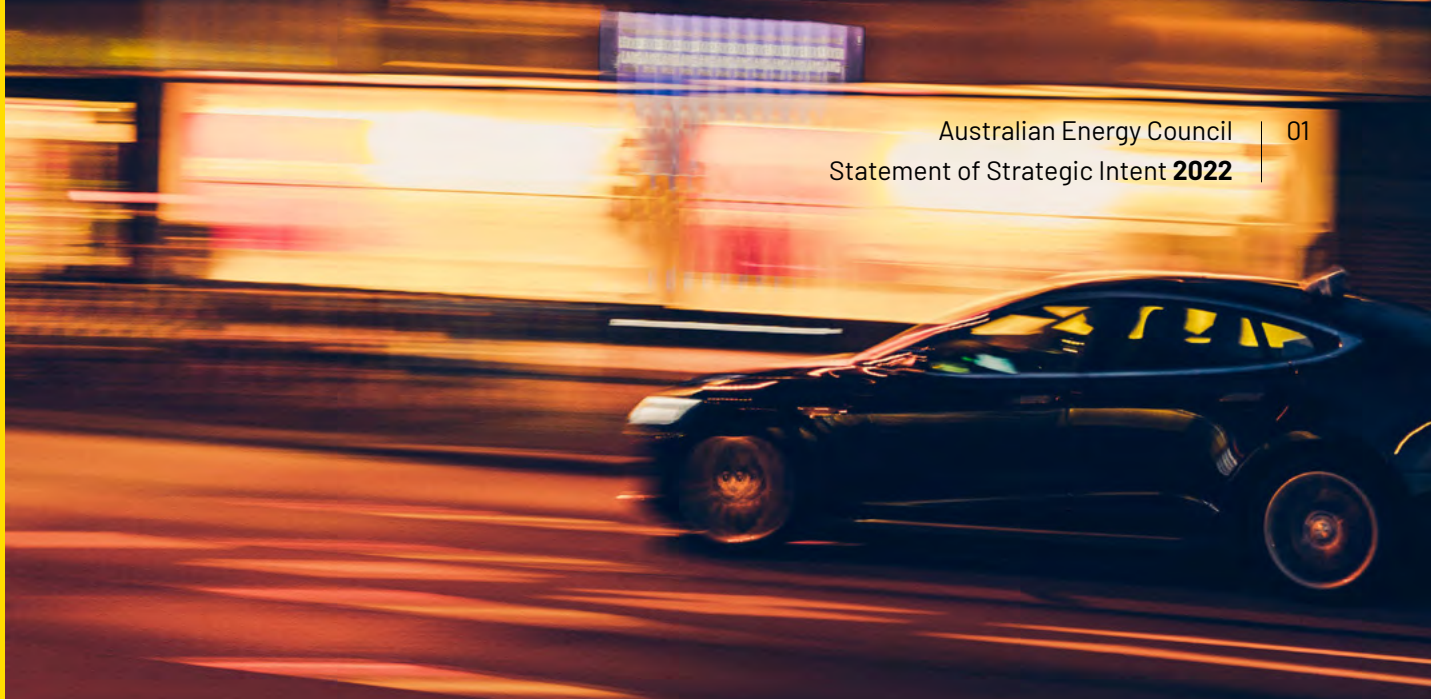
AUSTRALIAN ENERGY COUNCIL

Section 1: Strategic Intent

The Australian Energy Council represents major energy businesses operating in the competitive wholesale and retail energy markets. These businesses collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to over 10 million homes and businesses, and are major investors in renewable energy generation.

Mission statement

"To represent our industry to deliver the energy transition for the long-term benefit of consumers and the community."



A lower emissions future

The AEC is committed to action which enables Australia's achievement of Net Zero emissions by 2050, and supports the adoption of an interim emissions reduction target of 55 per cent on 2005 levels by 2035.

Electricity will play a major role in assisting sectors outside energy to reduce their emissions. The AEC will collaborate with other sector representatives to further the electrification of more sectors of the economy.

The energy sector recognises the central role it plays in supporting the jobs and livelihoods of Australians. It is critical to the health of Australia's economy that it can draw on reliable, sustainable and affordable energy to operate for the benefit of the nation and its homes and businesses.

The AEC supports sensible, staged policy frameworks which enable all sectors of the economy to contribute to a lower emissions future.

Strong policy frameworks

Between now and 2050 the energy sector, represented by the AEC, will support the development of policy frameworks at all levels of government which enable:

The retirement of baseload generation plant to be proactively managed through the lenses of reliability, sustainability and affordability.

Educating the community that all generation sources come with costs, benefits and system implications.

Reliability, sustainability and affordability to be maintained in balance for the benefit of Australian consumers.

The expansion of networks, where required, to deliver the transition.

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The AEC will support and advocate for policy frameworks that enable Australia to move towards its emissions reduction goals while preserving low-cost and reliability benefits for consumers and the community.

Where possible, a national and consistent approach to these policy challenges to enable efficient, least cost solutions to be implemented.

A technology neutral approach to energy market solutions to be adopted along with ongoing investment in the technologies which will assist Australia in achieving its emissions reduction goals into the future.

Investor confidence to be maintained for those exiting and proposing to enter Australia's energy industry.

The AEC and its members are aware of the challenges ahead and are committed to advocate for policies and decisions that will deal with these challenges in a way which supports progress towards Net Zero by 2050, without compromising on reliability, sustainability and affordability.

Energy market transition

Australia's energy system is undergoing a rapid transformation to a lower emissions future. This is a positive journey, but our electricity system is complex and fragile, which presents challenges.

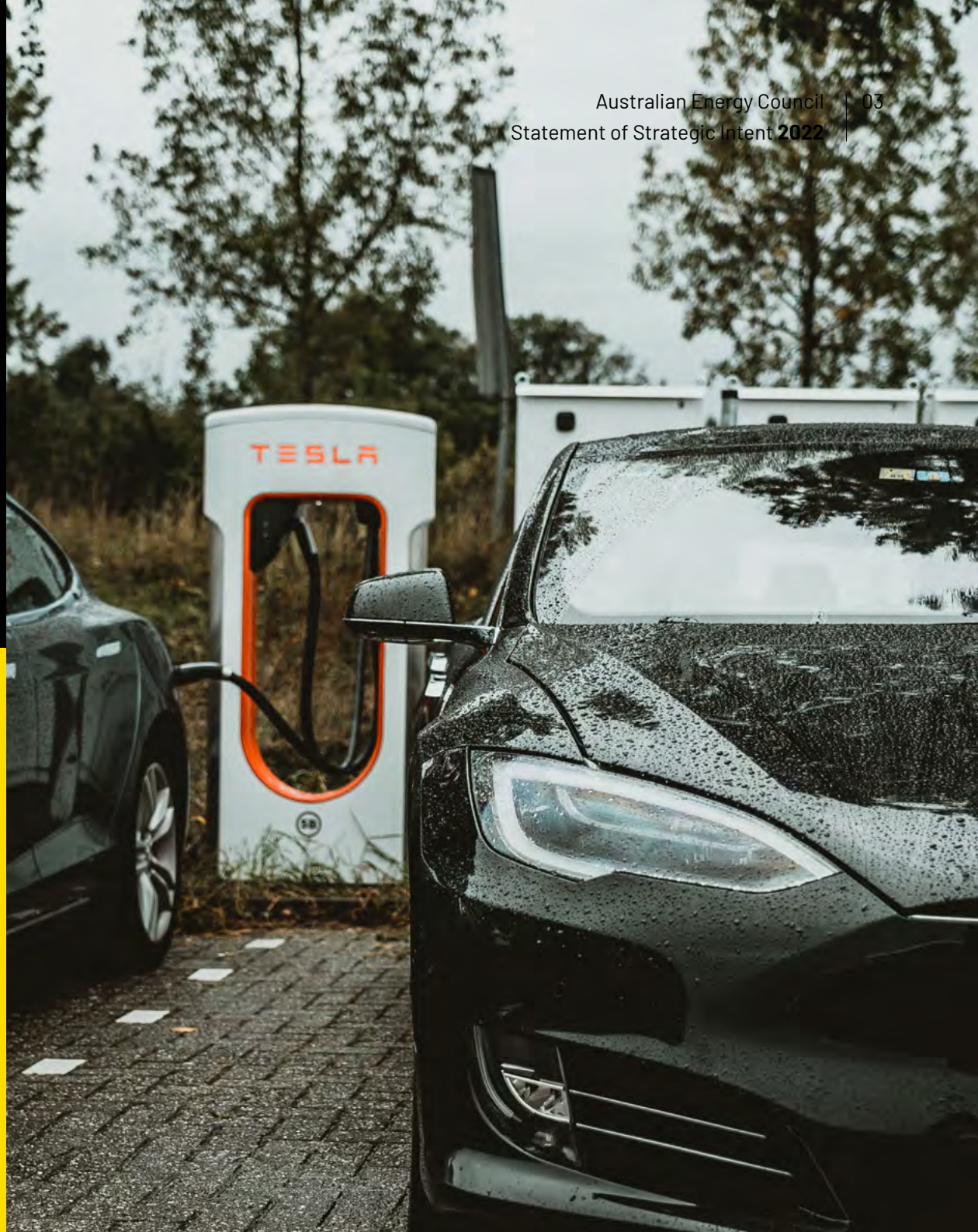
The AEC has developed a Dashboard which illustrates the elements of the energy market's ecosystem that are at play in the transition.

The Dashboard has reliability, affordability and sustainability as the core pillars of the industry that require support. This reflects the fact that these are the critical focal points of the industry and its stakeholders as we seek to deliver an energy market that results in the best outcomes for consumers.

These three pillars on the Dashboard are surrounded by identified policy areas and challenges that are evolving and in play, which also require consideration and policy focus during the transition.

The AEC will use its expertise to:

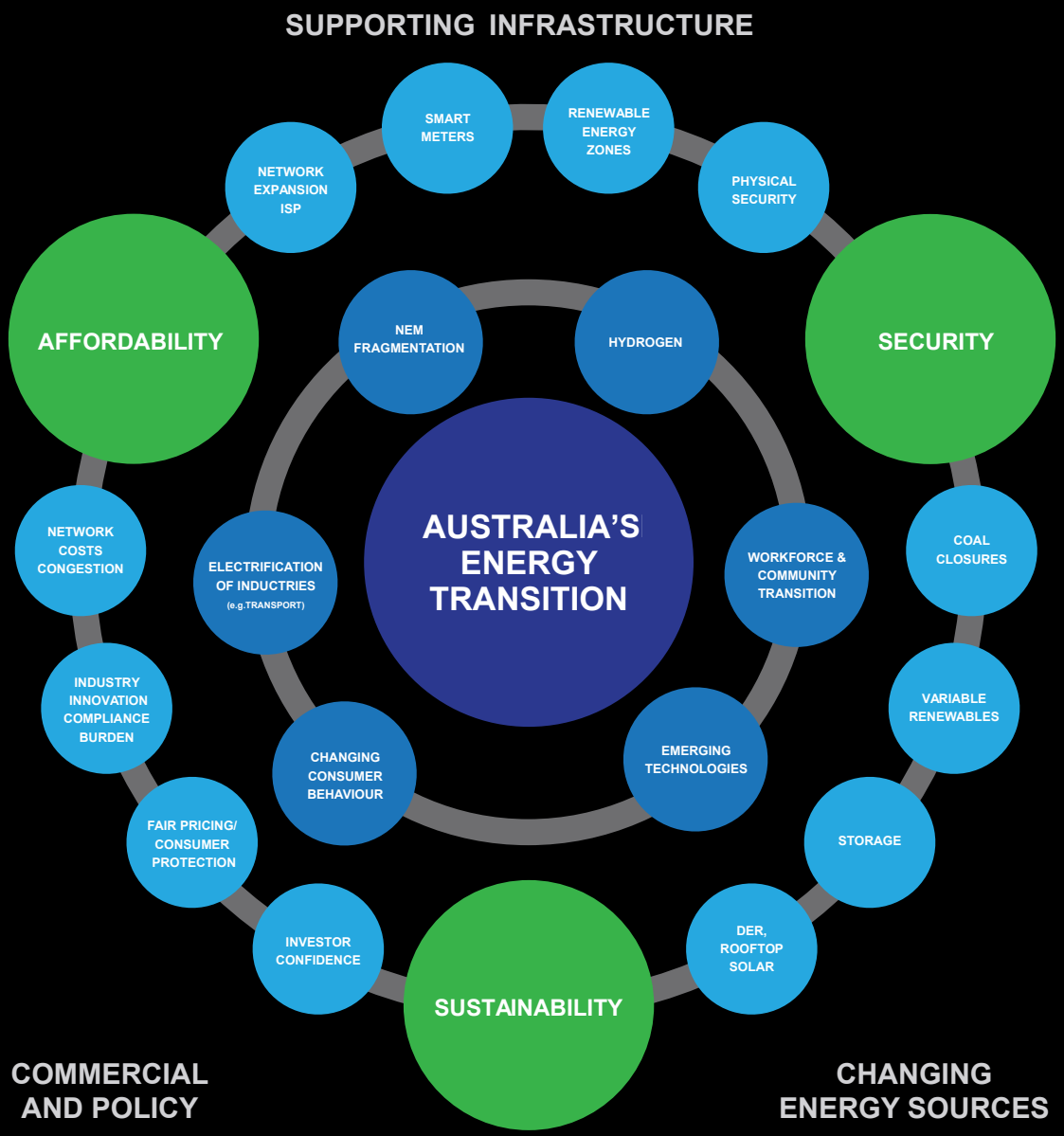
- Anticipate the challenges ahead.
- Educate stakeholders and the public about the implications of different decisions regarding Australia's energy future.
- Collaborate with stakeholders across energy and the economy to support broader contributions to emissions reduction and promote the role electricity can play in achieving these goals.
- Clearly communicate the work AEC members are doing to reach Australia's low emissions future and boost Australia's economic resilience.



An Interconnected Sector

This Dashboard illustrates the interconnectedness of the energy market.

While no aspect is more important than another, it shows that massive and rapid changes to generation sources have implications – a change will impact other parts of the energy system.



Section 2 : Dashboard Elements

Changing Consumer Behaviour

Summary

Consumers are central to the energy market transition. Opportunities will exist for residential and business consumers who wish to participate more actively in the energy market to do so, with distributed energy resources (DER), demand side management and technological advancements enabling consumers to both buy and sell services in the energy market.

For other consumers unable or unwilling to actively participate, a more passive transition will occur. Retailers and others will offer services that enable a hands-off approach to managing energy costs, allowing customers to enter into contracts with market participants to engage on their behalf with the changing energy market.

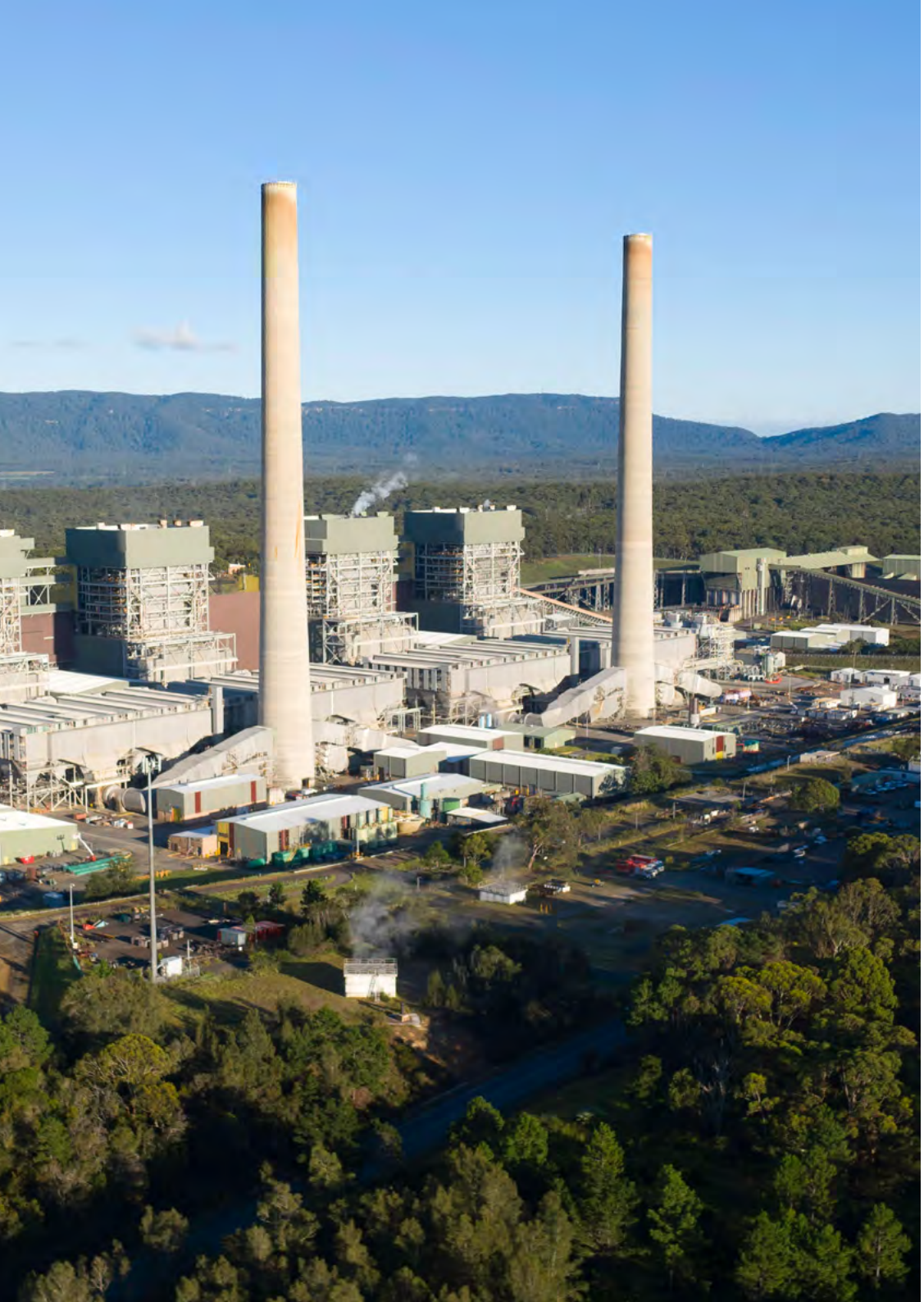
Industry Focus

Facilitating customer choice in a highly regulated energy market is challenging. There will need to be many changes to the existing energy structures to ensure customers are appropriately protected yet can make decisions that allow them to participate and benefit from participation. Industry is focused on developing products and services that consumers value, while complementing these offerings with digital solutions that deliver real time information to enable consumers and their representatives to make the decisions needed for active participation with the future energy market.

Government Focus

There are many processes underway seeking to develop the structures necessary to ensure adequate consumer protections, robust and flexible technical standards, and data sharing tools that will enable customers to effectively participate in a future energy market.

These processes include the Energy Security Board's (ESB) DER and Demand Side Participation work program that seeks to enable end user participation in energy markets, the Australian Energy Regulator's Better Bills that seeks to enable greater customer understanding of their energy costs and product, and the Consumer Data Right which will allow customers to authorise trusted third parties to access their energy data.



Coal Closures

Summary

Increasing renewable generation in the National Electricity Market (NEM) and an increasingly fragmented market have challenged the viability of coal plants in the system. Closure dates for major plants will continue to shift but many are now expected to close well before their expected end-of-life date.

Industry Focus

The AEC and its members seek policy frameworks that assist in delivering confidence and an orderly exit of plant, so reliability, affordability and security are not adversely impacted. Coal and gas will continue to provide capacity to manage the risk of high wholesale prices over the medium term. Disorderly and early exit of baseload coal-fired generators is possible, absent clear policy.

Government Focus

Governments are focused on delivering renewable generation there are concerns about the impact of coal closures on reliability, affordability, and security. Governments are additionally concerned about whether there will be sufficient dispatchable power generation in the NEM to maintain the system's reliability and security, and impacts on affordability.

Distributed Energy Resources, Rooftop Solar

Summary

Customers are driving a distributed energy revolution in Australia through the uptake of technologies such as rooftop solar and household batteries. DER contributes to dynamic two-way flows of energy which must be effectively coordinated. DER projects are currently underway in most jurisdictions looking at how it can contribute to enhanced load flexibility, efficient integration, consumer choice, and to address the potential technical, commercial, and regulatory barriers to these.

Industry Focus

Broadly speaking, DER assets in which AEC members are engaged in include rooftop solar, electric vehicles, virtual power plants, and battery energy storage systems. The core industry work streams for DER in 2022 are:

- Interoperability (the ability of different IT systems, devices and software applications to leverage two-way communication and to use, and exchange data accurately);
- Dynamic Operating Envelopes (the limits that an electricity customer can import and export to the electricity grid); and,
- Electric vehicle grid integration.

Government Focus

The integration of DER, and more renewables, is likely the biggest challenge the energy system will face in a generation. Most governments have estimated that households and small businesses will pay less for electricity in a DER integrated system and maximising the net benefits for all customers and shareholders is an imperative. This imperative includes the safe and efficient management of local electricity infrastructure along with the equity considerations for households that have a one-way electricity flow.

Emerging Technologies

Summary

This focuses on digitisation, and the emerging protection, control, automation and communication systems. Digitised energy systems in the future may be able to identify who needs energy and deliver it at the right time and at the lowest cost.

People, home appliances and vehicles are being connected to communication networks that provide a range of services and applications, such as smart electricity grids and home automation.

Industry Focus

Digitisation enables smart buildings, vehicles, and industrial facilities to provide new sources of flexible load to the energy system which can help to both reduce renewables curtailment on the supply side and to support customers to both export and consume the energy produced themselves behind the meter. For industry, digitisation raises new security and privacy risks, and challenges existing markets and business models. The DER interoperability initiative is about providing the rules framework, cyber security and the platform design for these various emerging technologies.

Government Focus

Governments are aware that in the electricity sector digitisation is blurring the lines between generation and consumption, and enabling household opportunities to control their energy costs.

From a government perspective the focus is on harnessing the advantages of demand response in order to provide the flexibility needed to integrate more generation from variable renewables.

Electrification of Industries

Summary

As decarbonisation efforts intensify, there is growing recognition that electricity cannot do all the heavy lifting and other sectors must contribute. The electrification of some sectors, particularly transport and residential buildings, is increasingly seen as the most economic and environmentally efficient way to reduce carbon emissions. Importantly, electrification is a technology that is readily available, so it can achieve actual emissions reductions now.

Industry Focus

Electrification provides new demand opportunities for electricity generation. These opportunities are consistent with a low carbon future and are available now. In the case of residential heating, electricity offers customers a more affordable alternative compared to gas, while electric vehicles are quickly reaching price parity with combustion engines. There are no serious policy concerns that electrification could harm the reliability or security of the electricity sector.

Government Focus

The Federal Government has committed to an electric vehicle strategy, which promises funding to establish more charging stations across Australia but does not include subsidies or tax incentives to increase the uptake of electric vehicles.

Residential electrification is being led by Victoria, where gas is most widely used for residential heating and cooking. The Victorian Government has identified ‘degasification’ or ‘gas substitution’ as a policy focus. While electrification is one option, it is also considering alternatives and gas networks are pushing for hydrogen-blended gas.

Fair Pricing and Consumer Protection

Summary

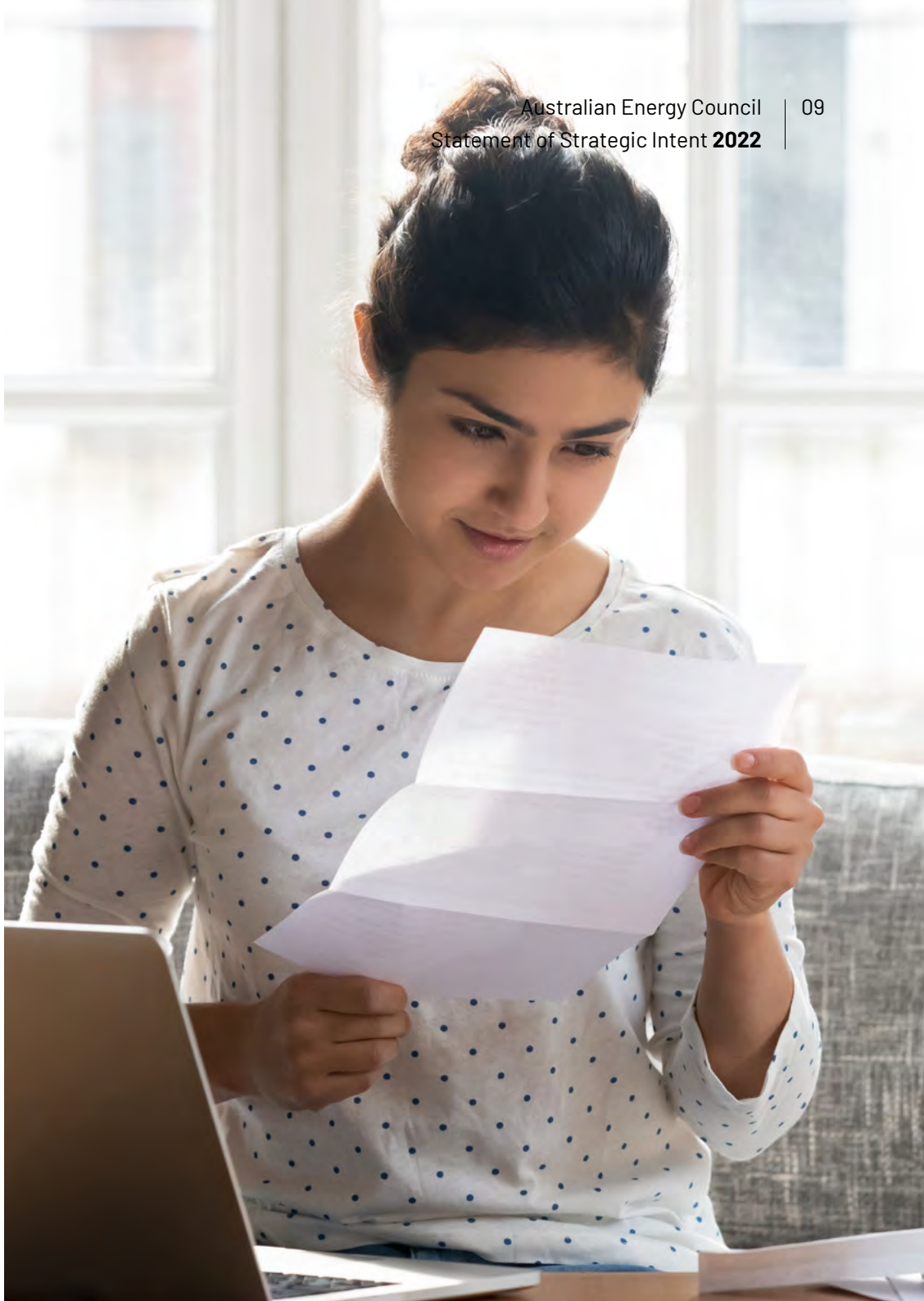
Since the Thwaites Review in Victoria and ACCC's Retail Pricing Inquiry, politicians and regulators have intervened in and increased regulation of the electricity retail market. Federally, this has come through the Default Market Offer and Better Bills reforms, while Victoria has introduced its own Victorian Default Offer along with a suite of additional measures.

Industry Focus

Retailers continue to advocate for regulatory frameworks that support innovation and competition within the retail market. Distorting market signals through excessive regulation can lead to poorer customer outcomes if those customers who engage in the retail market are not rewarded for doing so. Retailers are also concerned about the potential for excessive, duplicative and expensive regulatory reforms which do not benefit the customers they are designed to protect.

Government Focus

Governments at all levels are now concerned to keep downward pressure on retail prices as a key cost of living metric. This has meant interventionist approaches by regulators are likely to continue.



Hydrogen

Summary

Hydrogen is promoted as an emerging decarbonisation opportunity and export market. Its proposed potential uses are:

- displacing gas for power generation and high heat industrial applications;
- heavy transportation; and,
- low level blends in gas distribution networks.

Industry Focus

Hydrogen is a promising fuel and generation source, but much work needs to be done to realise its potential and enable to it to be produced commercially, at-scale and safely. Its benefits are unlikely to be realised in the current decade.

Government Focus

Governments are making substantial investments in the research and development of hydrogen projects with the aim of establishing a viable hydrogen industry.

Industry Innovation / Compliance Burden

Summary

Energy is one of the most heavily regulated sectors in the economy – these frameworks are essential to provide consumer protection, workplace safety and confidence overall.

Industry Focus

Industry is focused on understanding and complying with all applicable regulatory frameworks. It will continue to advocate for those frameworks to put the health and safety of workforces as their highest priority, along with the protection of consumers. It is also important that regulations do not stifle the ability for market participants to innovate and be flexible in responding to customer needs.

Government focus

The energy market transition introduces new challenges for governments and regulators alike in order to meet consumer expectations and allow market participants to operate in a healthy competitive environment. There are a number of initiatives underway to trial new products and services to deliver greater choice and cheaper energy options for consumers.

The Federal Government is also committed to its iterative Technology Investment Roadmap to assist would be investors in bringing products to the market.

Investor Confidence

Summary

To achieve a low carbon energy system, huge capital investment will be required in the electricity system. This is particularly the case for generation. AEMO predicts huge investment will be required in generation, transmission and storage by 2050, but would be investors report that the Australian market lacks the predictability they seek to make those financial commitments. This investor hesitation has implications for the stability of the market generally.

Industry Focus

Federal and state governments are energy market participants, formulate policy and have responsibility for the regulatory regime. Industry's advocacy focus is on the development of policy using evidence and data points as its base and following a cost-benefit analysis of potential approaches. Careful consideration of interventions in the market and reform will guard against unintended consequences.

Government Focus

Governments are focused on maintaining the sustainability, affordability and reliability of the national market. Cost of living pressures are also front of mind and so interventions considered necessary to deal to these concerns will be ongoing.

NEM Fragmentation

Summary

The NEM has operated successfully as one market on the east coast of Australia since its inception in 1998.

However, jurisdictionally specific approaches to issues in the NEM are now becoming more common, which threatens its overall efficiency and can impact the business case for investments.

Industry Focus

The industry will continue to advocate the benefits of competitive national markets designed and regulated by national institutions. However, recognising existing and almost certain future fragmentation, the industry will work constructively with state initiatives within the NEM framework.

Government Focus

The Energy Ministers Meeting (formerly COAG) and the work of the Energy Security Board on its 2025 market design project provide opportunities for the development of positive and efficient policy outcomes which benefit consumers. However, governments are likely to continue to support jurisdictionally unique approaches to investment and policy where consensus is unable to be achieved.

Network Costs and Congestion

Summary

Network costs represent approximately 45 per cent of a household electricity bill. Committed and proposed transmission investments are likely to see this percentage rise higher as the energy market transition requires the expansion of the transmission and distribution network.

Network congestion is a challenge in the market as renewable generators are connecting in relatively thin parts of the grid and impacting each other, traditional generators and interconnector flows.

Industry Focus

The AEC supports careful consideration of network investments before commitments are made to ensure costs are able to be managed and to avoid gold plating.

Work is underway on the issues presented by the NEM's weak locational incentives on new generators and lack of protection from congestion. There is not yet a consensus on the best approach to avoid excess cost and complexity.

Government Focus

All levels of government are supportive of new network and transmission investment and tend to be focused on the investments required to support their own jurisdiction's requirements.

Mechanisms to encourage the efficient location of new generation and reduce risks of congestion include REZs.

Network Expansions/ISP

Summary

Decarbonisation of the economy may lead to increased support for network expansion and upgrades to accommodate greater electrification, two-way energy use and increase in renewables.

Industry Focus

The AEC supports electrification as an efficient means to decarbonisation but any network expansion needs to continue to occur based on detailed cost-benefit analysis.

Government Focus

Government decarbonisation policies will have a direct and large impact on electricity distribution network expansion. Support for network expansion to support lower emissions electricity.

Renewable Energy Zones

Summary

REZs seek to increase renewables investment by enabling timely, affordable and reliable network access for renewable generation and storage. The ESB's REZ planning aims to improve coordination between the different state based REZ development frameworks, and to ensure alignment with the Integrated System Plan developed by AEMO.

Industry Focus

AEC members are focused on working within the consultation processes that are currently underway.

Government Focus

The Victorian, Queensland and NSW Governments implemented their own REZ plans and are at various stages of progress. NSW has the most comprehensive and prescriptive approach. Each state is also considering the incorporation of social and non electricity related economic policies into the assessment and development of REZs.

Physical Security

Summary

To protect Australia's essential services, since 2020 the Department of Home Affairs has been working on legislation to uplift the security and resilience of critical infrastructure across a range of sectors, including the electricity sector.

Industry Focus

The industry is working closely with the Federal Government on this important issue and is supportive of measures which will have a material and positive impact on cyber security resilience in the sector.

Government Focus

The Federal Government is focused on improving the security and resilience of critical infrastructure assets.

Smart Meters

Summary

Smart meters more accurately measure electricity usage and can share information wirelessly with energy consumers, retailers, and distributors. Smart meters enable a more dynamic and flexible market incorporating DER like rooftop solar, batteries and electric vehicles. The voluntary uptake of smart meters has been slower than anticipated, despite apparent customer benefits.

Industry Focus

Enhanced load flexibility, efficient DER integration, and consumer choice all face technical, commercial and regulatory barriers. Solving these should be the method to driving greater smart meter rollout and the industry is committed to working to solve these challenges with governments and regulators.

Government Focus

Governments support the voluntary and competitive rollout of smart meters with an emphasis on highlighting their benefits to consumers.

Storage

Summary

One of the biggest challenges of the energy market transition is whether there will be enough sources of firm supply to replace plant leaving the market and support renewable generation.

Energy storage, including pumped hydro, batteries and hydrogen are considered key to a reliable decarbonised system.

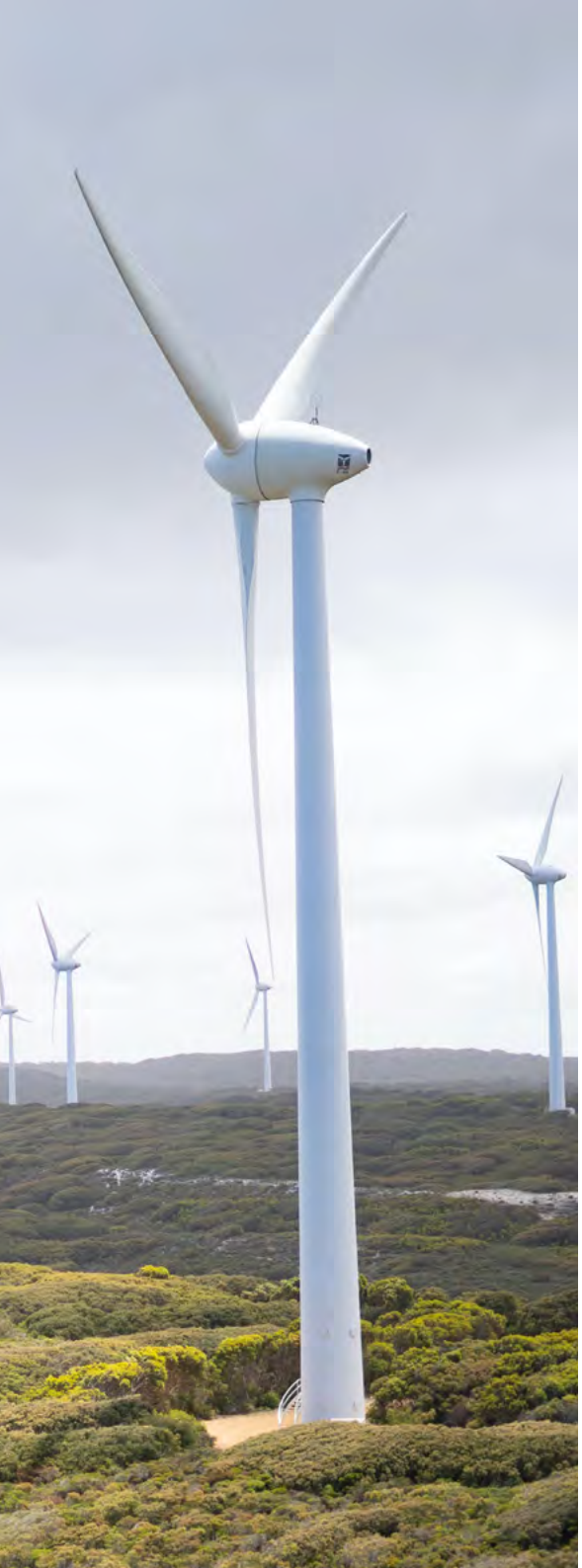
Technological advancement will bring reduced costs but will need to move at pace in order to match the speed of the energy market transition.

Industry Focus

The industry supports public involvement in research and development of the more novel storage technologies. It also supports market mechanisms to reflect the value of services delivered by storage technologies, including Essential System Services.

Government Focus

Governments are supporting research and development in novel technologies and underwriting batteries and other storage technologies. There is recognition of the importance of storage technologies to the energy market transition. Policy challenges remain regarding whether storage investments are developed through competitive or monopoly processes.



Variable Renewables

Summary

With falls in capital costs, wind and solar PV are the cheapest new sources of bulk energy and are materially displacing existing plant, particularly coal. As a result the NEM's historically dominant fuel will phase out over the next two decades. This change creates challenges such as the loss of firm capacity, impacts on Essential System Services and whether the grid's transmission and distribution network remains fit for purpose and able to support a more fragmented and lower emissions grid.

Industry Focus

Industry is focused on managing a transition to a world where most energy will be derived from variable renewables and where customers will have access to on-demand power. This transition requires changes to be made to ensure the power system adapts, including market designs and settings that provide the right incentives for investments.

Government Focus

Governments are supporting further development of renewables via targets, REZs, underwriting of investment and expansion of transmission and distribution networks.

Workforce and Community Transition

Summary

Management of any impact on workforces and local communities will be important in ensuring a smooth transition to a lower emissions grid.

Industry Focus

Industry is focused on planning, consulting and working with government, regulators, workforces and communities on a responsible transition and a managed shift away from traditional generation.

Government Focus

There is currently no national framework in place. State governments have different approaches depending on dates for coal closures in their jurisdictions. At a local level there are regional authorities devoted to the issue of transition (i.e. Hunter Valley and Latrobe Valley).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