



# APA Submission

## AEMO Inputs Assumptions and Scenarios Report 2025

*August 2024*





Mr Daniel Westerman  
Chair  
Australian Energy Market Operator

**Lodged by email: [forecasting.planning@aemo.com.au](mailto:forecasting.planning@aemo.com.au)**

13 August 2024

**RE: APA Submission to the Inputs Assumptions and Scenarios Report 2025**

Dear Mr Westerman,

Thank you for the opportunity to comment on the 2025 Inputs, Assumptions and Scenarios Report (IASR) Consultation paper (Consultation Paper) published by AEMO in July 2024.

APA is an ASX listed owner, operator, and developer of energy infrastructure assets across Australia. Through a diverse portfolio of assets, we provide energy to customers in every state and territory. As well as an extensive network of natural gas pipelines, we own or have interests in gas storage and generation facilities, electricity transmission networks, and 692 MW of renewable generation and battery storage infrastructure.

The purpose of the IASR is to inform AEMO's forecasting and planning activities, including the Integrated System Plan (ISP). The scenarios developed as part of the IASR are used in executing AEMO's electricity and gas functions across the National Electricity Market (NEM). These scenarios are also relied on by a much wider group of stakeholders, including governments, who make decisions based on the scenarios in the IASR.

For this reason, it is essential that the scenarios in the IASR are well informed and use the most accurate and timely information possible. In our submission below, we provide views on some of the issues raised in the Consultation Paper, including the challenging timeframes associated with delivering the ISP and the importance of accurate gas forecasts to support a smooth energy transition.

Should you have any questions or queries, please contact John Skinner on 02 9693 0009 or [john.skinner2@apa.com.au](mailto:john.skinner2@apa.com.au).

Regards,

A handwritten signature in black ink, appearing to read 'Beth Griggs'.

**Beth Griggs**  
**General Manager Economic Regulatory and External Policy**

# 1 Submission

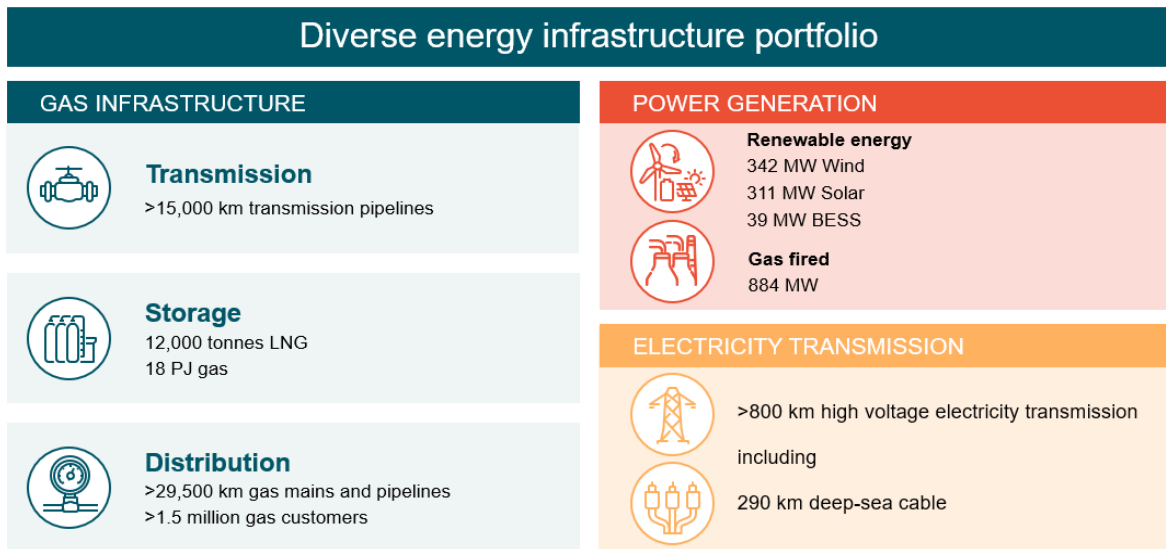
## Key points

- The Future Gas Strategy, released by the Federal Government in May 2024, confirms that gas is essential to supporting Australia’s decarbonisation as well as ensuring affordable, reliable and secure energy for all users.
- Energy Ministers’ rule change on better integrating gas into the ISP provides more opportunities for AEMO to model, and plan for, the least cost pathway to net zero. Therefore, it is critical that Energy Ministers’ rule change, if made by the Australian Energy Market Commission, informs future iterations of the ISP and IASR.
- Policy support for renewable fuels is expected to bring down costs and highlight alternative decarbonisation pathways, particularly for industrial customers.

## 1.1 APA as a partner of choice in Australia’s energy transition

APA is a leading Australian Securities Exchange (ASX) listed energy infrastructure business. Consistent with our purpose to strengthen communities through responsible energy, our diverse portfolio of energy infrastructure delivers energy to customers in every Australian state and territory.

Figure 1: APA’s portfolio



Our 15,000 kilometres of natural gas pipelines connect sources of supply and markets across mainland Australia. We operate and maintain networks connecting 1.5 million Australian homes and businesses to the benefits of natural gas. We also own or have interests in gas storage facilities and GPG.

We operate and have interests in 692 MW of renewable generation and battery storage infrastructure, while our high voltage electricity transmission assets connect Victoria with South Australia, New South Wales with Queensland and Tasmania with Victoria.



APA actively supports the transition to a lower carbon future. In August 2022, we published our inaugural Climate Transition Plan which outlines our commitments to support Australia's energy transition and pathway to achieve net zero operations emissions by 2050. In September 2023 we released our first Climate Report disclosing our progress against our Climate Transition Plan.

In early 2023, APA established an Electricity Transmission business unit with a focus on electricity transmission infrastructure across Australia. We have recruited a team of established industry professionals to lead APA in playing a pivotal role in the energy transition. In line with our strategic focus, we have also announced a partnership with leading global infrastructure organisation EDF Group. This partnership synergises EDF's global experience in electricity transmission delivery and operations, with APA's strong local experience in the construction and operation of linear energy infrastructure.

Since the 2023 IASR was published, there have been significant policy developments in the energy space, particularly relating to renewables and the future of gas. In our submission below, we outline some of the key policy developments that have occurred over the past two years, as well as some of the challenges being experienced in the energy space.

**Our submission below addresses the following question in the Consultation Paper:**  
Since the 2023 IASR publication, what changes (such as environment, social, policy) do you consider most impact scenario development for the 2025 IASR scenarios?

## 1.2 **The 2024 ISP highlights that delivery of the optimal development path is happening much slower than anticipated and at much greater cost**

The 2024 ISP, published at the end of June 2024, highlights the challenges and risks associated with delivery of the optimal development path (ODP) and transition to net zero. The investment required to deliver the ODP requires the construction and installation of thousands of energy assets, and the people to build, install and operate them.

Many of the actionable ISP projects have already experienced significant delays, and the 2024 ISP acknowledges that these slippages are likely to continue.<sup>1</sup> Social licence and supply chain risks are two of the key reasons for delays in project delivery:

- **Social licence is needed to ensure a timely transition:** Community opposition to the development of new transmission infrastructure is one of the key reasons why many projects are delayed. Approval and planning processes can inadvertently hinder a project's ability to develop strong relationships with local communities. Engaging communities through early regional development processes can help to ensure that projects ensure they are designed to contribute to long term and sustainable beneficial outcomes.
- **Accessing reliable and cost-effective supply chains:** Australia is currently in deficit when it comes to the skilled labour capacity required to deliver high voltage substation and transmission line projects at the scale required. And these challenges are more acute given skills and resources will be needed in regional areas. Similarly, Australia

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<sup>1</sup> AEMO, 2024 ISP, June 2024, p83

may not be able to access reliable and cost-effective supply chains for critical energy assets as global demand rises, causing delays to actionable projects in the ISP.

The likelihood of further delays and increased costs for ISP projects should be reflected in the sensitivity analysis that informs the scenarios in the IASR. It is becoming increasingly clear that delivering the ODP will not occur on the timetable or cost being conveyed to stakeholders and energy consumers.

### 1.3 **The Commonwealth's Future Gas Strategy outlines the important role of gas in the energy transition**

Gas will play a crucial role in the energy transition. On 9 May 2024, the Commonwealth Government released the Future Gas Strategy, which clarified the important role of gas in the transition to net zero.

Unveiling the new Future Gas Strategy, The Hon Madeleine King MP, the Minister for Resources and the Minister for Northern Australia confirmed that:

*"It is clear we will need continued exploration, investment and development in the sector to support the path to net zero for Australia and for our export partners, and to avoid a shortfall in gas supplies".*

As ageing coal power stations retire and become less reliable, gas powered generation (GPG) will have an increasingly important role in supporting the security and reliability of the energy system while helping Australia meet its net zero targets.

In its 2024 ISP, AEMO expects the NEM will require 15GW of GPG by 2050 to ensure the NEM remains resilient as coal exits the system. It is therefore critical that the IASR accurately reflects how much investment the market needs across the gas value chain throughout the transition.

The Future Gas Strategy also recognised that the current infrastructure linking up northern supply to the southern markets is limited – and that more investment in pipelines and storage capacity is needed. This is because gas demand is likely to become increasingly 'peaky', particularly during periods of renewable energy 'drought'.

Since May 2021, APA has announced and delivered two expansions of the East Coast Grid (ECG) which transports gas across eastern Australia. Over the last four years, APA has invested approximately \$700m in expanding the ECG and Victorian Transmission System ahead of actual demand.<sup>2</sup> These investments were undertaken for the specific purpose of ensuring there is sufficient capacity to manage increases in gas demand.

APA's ECG expansions have helped to shore up gas supply to NSW as Victorian gas supplies decline, allowing remaining Victorian production to be directed to meeting Victorian peak gas demand.

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<sup>2</sup> APA, 'APA delivers capacity boost to the east coast gas grid' (Media Release, 3 July 2023): <https://www.apa.com.au/globalassets/asx-releases/2023/apa-group---media-release---apa-delivers-capacity-boost-to-the-east-coast-gas-grid.pdf>

However, even with APA completing Stage 1 and 2 of our ECG expansion project, more is needed. As forecast previously by AEMO, this north-south transportation of gas will be increasingly relied on to meet southern gas demand, including for GPG.

#### 1.4 **Energy Ministers rule change to bring gas into the ISP should inform the IASR**

We recognise that the proposed rule change on better integrating gas into the ISP ('proposed rule change') provides more opportunities for AEMO to model, and plan for, the least cost pathway to net zero. Therefore, it is critical that this proposed rule change, if made by the Australian Energy Market Commission, informs AEMO's future iterations of the ISP and the current IASR.

As stated in APA's submission to the proposed rule change, gas infrastructure and GPG will continue to be critical in ensuring Australia's safe, secure and timely transition to net zero.

This is why AEMO should consider gas/GPG demand at greater granularity, to the extent it impacts factors relating to servicing energy supply under the ISP scenarios. This includes the impact of renewable droughts on both hourly and daily gas quantities (MHQ and MDQ) and aggregated demand for GPG over extended periods, thereby understanding how this might change the gas demand profile for GPG and essentially "stress testing" the system.

Aligning the ISP with the Gas Statement of Opportunities (GSOO) can help AEMO and market participants achieve the above, and ensure greater accuracy in forecasting. The current ISP under-estimates the importance of gas in the transition and consistently under forecasts the amount of GPG that is required in the NEM. Additionally, the ISP only looks at demand for GPG, not overall gas demand, which significantly underestimates future gas volumes.

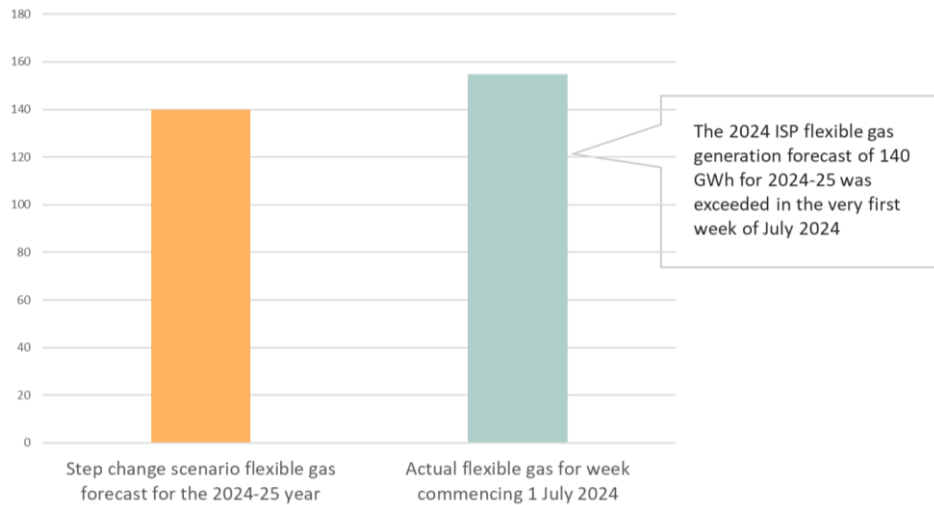
We only need to look at the first few weeks of 2024-25 to see the importance of accurate GPG forecasts. The *step change* scenario of the 2024 ISP forecasts 140 GWh of flexible gas in 2024-25.<sup>3</sup> As shown in Figure 2 below, this forecast was exceeded in just the first week of the 2024-25 financial year, with the week commencing 1 July 2024 seeing 154 GWh of flexible gas supplied in the NEM.<sup>4</sup>

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<sup>3</sup> AEMO, '2024 ISP Results Workbook, CDP3 – Step Change least cost scenario' (Report, June 2024)

<sup>4</sup> OpenNEM, NEM generation week commencing 1 July 2024 data.

Figure 2: Flexible gas generation: ISP forecasts v actuals



The proposed rule change also provides opportunities to better recognise the interaction between gas and electricity markets and ensure more realistic outcomes. Given the ISP's role, this can support and enable project proponents in both markets find the most efficient location for their energy projects.

However, the proposed rule change should be careful not to characterise the gas value chain as an 'alternative' or a 'tradeoff' for electrification, or for other storage solutions. As recognised by both the ISP and Future Gas Strategy, GPG will provide an essential backup to renewables in the transition to a net zero economy.

It is important to note that greater granularity and visibility of the gas value chain should not extend to dictating where the market should invest in the east coast gas market. This is especially because governments may rely on AEMO's 'gas development projections' to 'pick winners', as opposed to letting the market determine the best outcomes including the technology solutions and risk, market participants are prepared to take.

As informed by AEMO ruling out developing an optimal development path for gas, the proposed rule change should not entail a specific design of gas infrastructure projects considered most likely under different scenarios. Instead, developing 'gas development projections' should have the aim of better understanding expected gas demand to realise the scale of investment required across the gas value chain. Following, the market will be expected to solve challenges in meeting any generation and infrastructure gaps, as it has successfully done in the past.

Aligning the ISP with the GSOO will not only ensure there is greater accuracy in gas supply and demand forecasting, but will also ensure AEMO can obtain information from market participants efficiently.

## 1.5 Policy to support renewable fuels is developing rapidly

The first ISP was published in 2022 as a comprehensive plan for the future electricity needs of the NEM. Until recently, policy support in the energy sector has focused mainly on renewable electricity, with little focus on gas.

As well as being critical in supporting the electricity system through GPG, gas is the primary energy source for Australian industry. Electrification is often not technically feasible or economical for industrial end-uses like medium to high grade industrial head and chemical production.

For this reason, most jurisdictions across Australia are starting to introduce policy mechanisms that will encourage the development of renewable fuels such as hydrogen and biomethane. For example:

- The Commonwealth Government has announced various policy initiatives to support the development of renewable fuels, including the Hydrogen Headstart program<sup>5</sup> and Future Made in Australia, which includes the Hydrogen Production Tax Incentive.<sup>6</sup> Both of these mechanisms are expected to support hydrogen production across Australia.
- The NSW Government has established a Renewable Fuel Scheme (RFS) under the Energy Security Safeguard to encourage the production of green hydrogen in NSW. The NSW Government is currently consulting on the development of a new renewable fuels strategy, including whether the RFS should be expanded to bring other renewable fuels, such as biomethane, into the scheme.<sup>7</sup>
- In September 2023 the Victorian Government published a renewable gas consultation paper and intends on publishing a directions paper later in 2024 with a preferred way forward.<sup>8</sup>

These policy initiatives are expected to bring down the cost of renewable gases, and it is important that updated cost estimates are included in the modelling that informs the IASR. More accurate cost estimates will highlight alternative and potentially more cost effective decarbonisation pathways, particularly for industrial customers.

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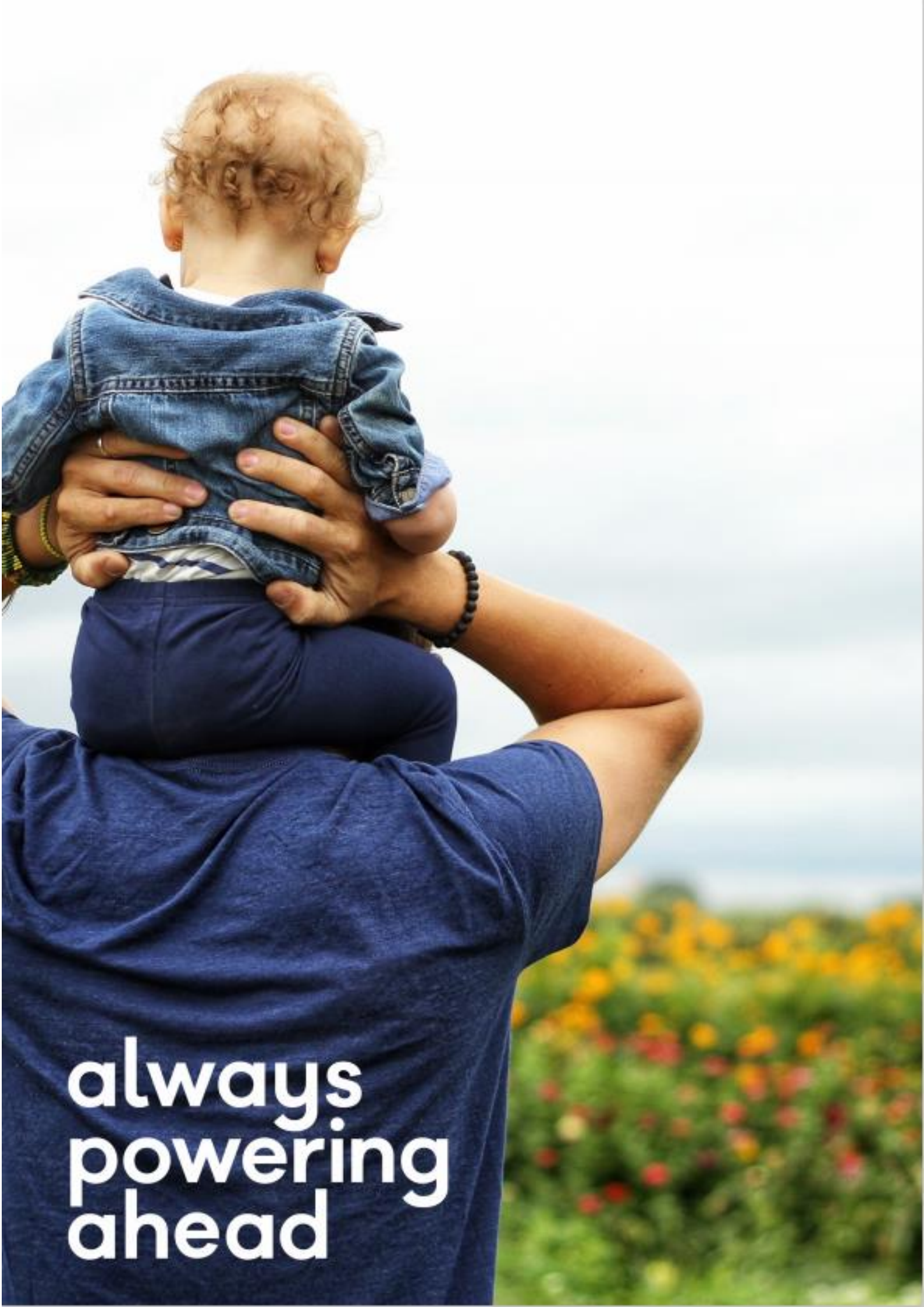
<sup>5</sup> Commonwealth Government, Hydrogen Headstart Program, Accessed 9 August 2024: <https://www.dcceew.gov.au/energy/hydrogen/hydrogen-headstart-program>

<sup>6</sup> Commonwealth Government, Hydrogen Production Tax Incentive, Accessed 9 August 2024, <https://treasury.gov.au/consultation/c2024-541265>

<sup>7</sup> NSW Government, *Renewable Fuel Scheme*, Accessed 9 August 2023: <https://www.energy.nsw.gov.au/nsw-plans-and-progress/regulation-and-policy/energy-security-safeguard/renewable-fuel-scheme>

<sup>8</sup> Victorian Government, *Renewable Gas Consultation Paper*, Accessed 9 August 2023, <https://engage.vic.gov.au/victorias-renewable-gas-consultation-paper>





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