

Climate Transition Action Plan 2024



EnergyAustralia
LIGHT THE WAY

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1. Acknowledgment of Country

EnergyAustralia acknowledges the Traditional Owners and Custodians of Country throughout Australia. We recognise their continuing connection to lands, waterways and community. We pay our respects to all Aboriginal and Torres Strait Islander Peoples and acknowledge Elders past and present.

We support the Uluru statement from the Heart in its entirety and the important work of its contributors in creating a vision for change.

Artwork – 'Under One Sun' by Montana McStay, 2024



2. About this Climate Transition Action Plan

2.1 About its development

EnergyAustralia first published its Climate Change Statement in early 2020, outlining our ambition to reach Net Zero Greenhouse Gas Emissions by 2050, in which we provided information about our ambitions and investments. The Climate Change Statement was updated on a regular basis until July 2023. Our inaugural Climate Transition Action Plan was published in August 2023 (CTAP 2023). CTAP 2023 was in a similar detailed format to this second iteration of the Climate Transition Action Plan, CTAP 2024. CTAP 2024 provides updated information on our progress towards addressing our Net Zero targets and ambitions, in particular, in Section 5.2 and Section 6.1. Section 10.4 provides more detail in relation to the review and update cycle for our Climate Transition Action Plan.

CTAP 2023 outlined our Scope 1 and 2 emissions reduction targets, and CTAP 2024 provides our decarbonisation pathway for Scope 3 emissions, including associated emission reduction ambitions. Our emissions data for Scope 1 and 2 are subject to external third party verification as part of our reporting requirements under the NGER Act. Our Scope 3 data has also been subject to comprehensive auditing provided by third party assurance providers with expertise in sustainability assurance and verification.

From 1 January 2025, mandatory reporting obligations under the Federal Government's climate-related financial disclosure framework (the Australia Sustainability Reporting Standards) will commence. We are required to publish our first sustainability report in accordance with these obligations in February 2026, which will include an update on our CTAP 2024 ambitions and targets.

2.2 About its assumptions

CTAP 2024 necessarily relies on assumptions, expectations and best estimates of uncertain future events, as more fully explained in Section 10.1 and Section 10.2. It sets out our ambition and approach to decarbonisation. It supersedes CTAP 2023 and has been prepared referencing guidance from the United Nations High-Level Expert Group on the Net Zero Commitments of Non-State Entities, the Transition Plan Taskforce, the Investor Group on Climate Change and the incoming Australian Sustainability Reporting Standards (see Section 11 – Glossary for further information about these reference documents). CTAP 2024 also relies on energy system analysis and scenarios from the 2024 AEMO ISP. Comprehensive EnergyAustralia Scope 1 and Scope 2 emissions data are reported under the NGER Act while the Scope 3 emissions referenced in CTAP 2024 have been calculated using the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and associated guidance documents. Given the early stage of the evolution of specific Scope 3 calculation guidance for the energy sector, we have specifically taken a conservative approach in our Scope 3 methodology, using approaches outlined in the NGER Act and associated determinations. Further information on our operations can be found on the [EnergyAustralia website](#).

3. A message from the Chair and Managing Director

As Australia's energy market decarbonises, we aim to make the energy transition simple and predictable for households and businesses, fulfilling our purpose: to lead and accelerate the clean energy transformation for all.



Jane McAloon AM (Chair) and Mark Collette (Managing Director)

We are pleased to share our CTAP 2024, which now includes our decarbonisation pathway for Scope 3 emissions. This builds on our existing commitments, as outlined in our CTAP 2023, released in August 2023.

Over the past 15 months, we have made significant progress. We have been awarded support for the Wooreen and Hallett battery projects under the Federal Government's Capacity Investment Scheme. We have secured 230 MW of renewable energy through Power Purchase Agreements and commissioned Australia's first peaking power station with direct emissions offset, Tallawarra B. Our plan to close the Yallourn power station in mid-2028 continues to move forward. We have more to do, but we are proud of the recent progress we have been able to achieve and will continue to focus on delivery amid the market challenges.

Our Update: Pathway to Net Zero Scope 3 Emissions

We know affordability is a key concern, so our actions must support affordable outcomes. Simplifying energy for our 1.6 million customers and integrating their energy assets into our portfolio will help. At the same time, we will work to deliver high quality investment to attract durable debt and equity commitments.

Most of our Scope 3 emissions come from our customers' use of energy, so supporting them with products that meet their energy needs and taking actions to decarbonise the energy we provide is critical for their decarbonisation. We have put considerable effort into preparing for this journey, using our energy data to calculate possible emissions reduction pathways. We have also designed and tested commercial products with our customers.

We have introduced products such as Battery Ease, where customers can bring their own battery, and Community Battery Ease, offering shared energy storage for neighbourhoods. These innovations help our customers and support our Net Zero ambitions. Our Sun Soaked Water

program helps optimise the use of renewable energy, which is often more prevalent during daylight hours, and takes pressure off the grid during peak times. These innovations help our customers and support our Net Zero ambitions.

Supporting a Smooth Transition Away from Coal-Fired Generation

Reducing Scope 3 emissions is just one part of our journey to Net Zero. Our challenge is to maintain the pace of change to meet Australia's Net Zero commitments, despite uncertainties. We must keep moving forward to help limit global warming to well below 2°, acknowledging the 1.5° target is challenging.

The 20th-century coal-based power system is nearing its end. In 2021, we announced the accelerated closure of the Yallourn power station by mid-2028, providing seven years' notice. Yallourn's retirement is key to reducing our Scope 1 emissions before 2030. We are also planning for the future operations of Mount Piper power station – New South Wales' most flexible coal-fired generator – preparing it for a reserve role in the early to mid-2030s to support system stability, with retirement by 2040. The way in which we run Mount Piper will significantly impact our decarbonisation pathway and influence the way in which our gas assets are operated to provide cost-effective backup.

Decarbonising Australia's energy system is complex, requiring a balance between reducing emissions and ensuring a stable energy supply. Currently, renewables alone can't fully meet our needs, so we need investments in technologies like batteries for stability and security. We acknowledge the significant role of the Federal Government in supporting the energy transition, with two of our proposed Battery Energy Storage System (BESS) projects securing support under the Capacity Investment Scheme. We are also progressing with the battery project at our Mount Piper site in New South Wales and have secured a virtual toll agreement with Akaysha Energy's Orana battery in New South Wales.

To provide energy stability and security at the lowest cost, gas will play a key role in transitioning from coal-fired generation to a renewable energy system. Gas has lower emissions (based on combustion) than coal, helping us reach our decarbonisation targets faster. Gas will mainly support renewables by providing backup when renewable sources and storage can't meet demand, especially as Australia moves away from coal as a fuel source. For example, our Tallawarra B gas-fired power station is an asset that will play a vital role in supporting the market's transition to renewables.

Building a Clean Energy Portfolio

We continue to work hard to add new renewable energy sources and storage to our portfolio. We have secured an offtake agreement from the Golden Plains Wind Farm for 230 MW, progressing towards our up to 3 GW by 2030 renewables ambition. We continue to seek such opportunities, which are critical for supplying our customers in the future.

EnergyAustralia will keep working with customers, industry and governments to accelerate investment in the energy transition in a manner that emphasises affordability and predictability for customers. Market dynamics will continue to influence the pace of the transition, but EnergyAustralia's progress over the past 15 months gives us optimism. We look forward to sharing further progress as we work towards our CTAP commitments.

Jane McAloon AM
Chair

Mark Collette
Managing Director

4. Our transition ambition



EnergyAustralia is committed to achieving Net Zero greenhouse gas emissions across Scopes 1 and 2 by 2050, and it is our ambition for this commitment to extend to Scope 3.



2030

Target: Scope 1 absolute emissions reduction by over 60%
The closure of the Yallourn power station will result in the reduction of our Scope 1 absolute emissions by over 60% on 2019–20 levels in 2028–29.

Target: Continue to facilitate a just transition
We will continue to work closely with stakeholders to facilitate a just transition.

Ambition: Portfolio expansion
We aim to expand our portfolio to up to 3 GW of renewable energy, with a focus on large-scale wind generation assets. Our ambition is for it to be committed or operational by 2030.

Ambition: Scope 3 reductions
Achieving our portfolio expansion ambition will see up to a 60% reduction in Scope 3 emissions from 2019 levels by 2030.

2040

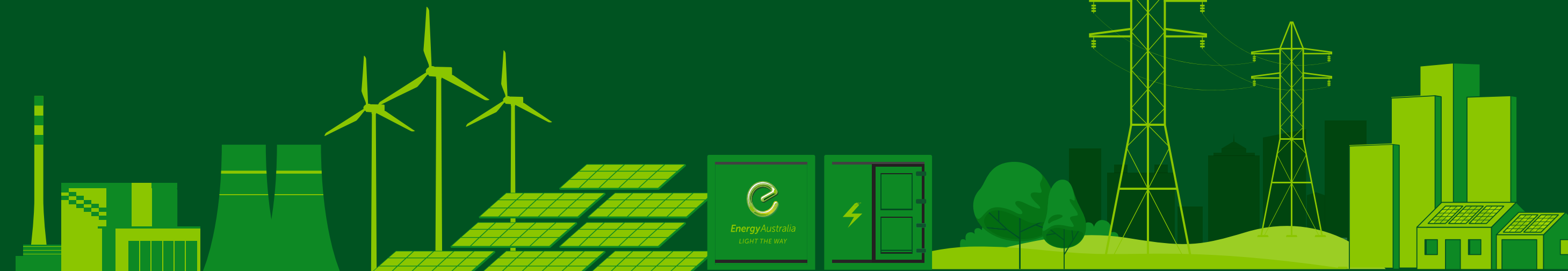
Target: Transition to Retirement
We will seek to move Mount Piper power station into a reserve role in the 2030s. This will support system reliability as renewables penetration grows quickly before retirement by 2040.

Target: Scope 1 emissions reduction of ~75%
Scope 1 emissions intensity will be reduced by approximately 65% relative to 2019–20 levels. Based on the lower emissions intensity, this reduction has the potential to cut our absolute Scope 1 emissions by approximately 75%.

2050

Achieved Commitment
Target:
Net Zero across Scopes 1 and 2.

Ambition:
Net Zero for Scope 3.



Key terms used in CTAP 2024

Greenhouse Gas (GHG) Emissions includes all greenhouse gases reported under the NGER Act. Our greenhouse gas emissions include Scope 1, 2 and 3 emissions arising from our entire operations.

Scope 1 emissions means direct GHG Emissions arising from activities over which we have operational control as defined by the NGER Act.

Scope 2 emissions means indirect GHG Emissions arising from the consumption of purchased electricity, heat or steam from activities over which we have operational control as defined by the NGER Act.

Scope 3 emissions comprise other indirect GHG Emissions upstream and downstream of our operations, and are estimated using the Greenhouse Gas Protocol's Corporate Value Chain (Scope 3) Accounting and Reporting Standard and associated guidance documents.

Ambition refers to an outcome that we aim to achieve where the pathway to be pursued is subject to elements which have a higher degree of uncertainty or are outside of our direct control or influence.

Target refers to an outcome that we plan to achieve where the pathway is subject to elements which are more certain and that are wholly or mostly within our means to influence or control.

5. Background

5.1 About EnergyAustralia

We are one of Australia’s largest energy retailers and generators, operating in the east-coast NEM.

Our head office is located in Melbourne, and we have operational assets in Victoria, New South Wales and South Australia.

We are wholly owned by CLP Holdings Limited which is listed on the Stock Exchange of Hong Kong. CLP’s Climate Vision 2050 sets out the blueprint for the CLP group’s transition to Net Zero Greenhouse Gas Emissions leading up to the middle of the century. EnergyAustralia’s financial results and other disclosures are reported in conjunction with CLP.

We have approximately 1.6 million electricity and gas customers across a mix of household, small business and Commercial and Industrial customers. As well as supplying centralised energy, we operate a solar and battery sales and installation business.

We currently have around 4,800 MW of electricity generation capacity. In addition, EnergyAustralia currently has the rights to more than 859 MW of solar and wind farm PPAs and owns 50% of the Cathedral Rocks Wind Farm. While some PPAs have rolled off in the last 15 months, the capacity in our portfolio will always fluctuate depending on the duration of each agreement; and therefore the activity to secure sufficient capacity to meet our renewables ambition remains ongoing and a core focus.

We have a pipeline of development projects, profiled under Sections 6.1.2 and 6.1.3 of CTAP 2024.

Our business employs more than 2,300 people to serve customers, operate and manage our assets and oversee energy projects, PPAs and other business functions. We also partner with a range of vendors providing services critical to our operations.

We are proud of the contribution our assets and our workforce continue to make to the economic prosperity of local communities and our nation.

Since 2015, our purpose has been to “lead and accelerate the clean energy transformation for all”. Our strategic intent is to make energy simple for our customers, meeting their needs by combining their assets into our flexible energy portfolio. To fulfil these ambitions, our portfolio, services and business activities are evolving, growing and changing and we will look distinctly different in the future.

Our Scope 1 emissions currently contribute approximately 5% of Australia’s annual electricity sector Scope emissions. These emissions result primarily from the combustion of coal, gas, fuel oil and diesel at our electricity generation assets, and vary by year. In 2023, our Scope 1 emissions totalled 16.6 million tonnes of CO₂ equivalent.

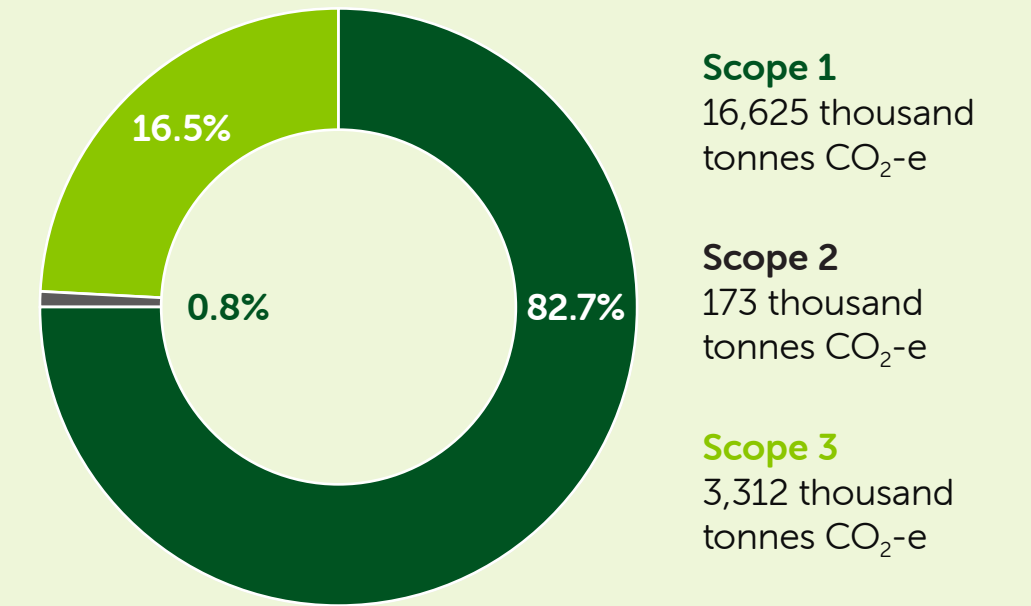
Generation and Storage assets				
Name of power station	Location	Fuel	Registered capacity*	Expected closure date
Yallourn	Victoria	Brown Coal	1480 MW	mid-2028
Mount Piper	New South Wales	Black Coal	1430 MW	by 2040
Newport	Victoria	Gas	500 MW	2039
Jeeralang	Victoria	Gas	432 MW	2039
Hallett	South Australia	Gas	217 MW	2050
Tallawarra A	New South Wales	Gas	440 MW**	2043
Tallawarra B	New South Wales	Gas	320 MW	2053
Cathedral Rocks	South Australia	Wind	33 MW equity	2030
Wooreen BESS	Victoria	Battery	350 MW (Agreed Capacity)***	N/A

* Registered capacity can differ from maximum capacity or scheduled capacity for these assets.

** A scheduled upgrade is underway to increase the registered capacity to 480 MW.

*** Wooreen BESS is not yet registered.

Figure 1: Approximate emissions for Scopes 1, 2 and 3 in 2023



Scopes 1 and 2 emissions calculated in accordance with the NGER Act requirements and reported to the Federal Government Clean Energy Regulator. Scope 3 emissions referenced in the chart above have been estimated using the Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and associated guidance documents.

5.2 Our part in the transition of the energy system

The most difficult part of the transition for the energy sector is making clean electricity reliably available when it is needed, for all energy customers. We are invested in the challenge.

The energy system is being remade. As one of Australia's largest energy companies, we recognise our role in the transition and understand the need to manage the impacts on customers and the Australian community as well as the opportunities that come with the transition.

We share the national vision of a renewables-dominant energy system harnessing Australia's sun and wind. To achieve this, Australia needs to solve two significant complexities involved in providing round-the-clock energy supply and reliability at an affordable price.

The first complexity is to address the variability of supply from renewable assets. Traditionally, power stations have been fuelled by coal (of different types) and gas, with some power stations engineered for scale without flexibility (generally large coal-fired power stations), and others set up to respond quickly to peaks in demand or a reduction in adjacent supply (generally medium-sized gas-fired power stations). These assets contribute differently to technical grid strength and reliability but provide a predictable source of supply.

Increasingly, with supply from fossil fuel power stations displaced by solar and wind energy, the supply of energy is subject to significantly greater variability. Solar energy is abundant on sunny days, drops when it is overcast and provides no output at night. Wind is subject to natural, seasonal variability and periods of wind drought. This matching of variable supply and demand needs to be achieved while the backbone of the energy system's reliability – coal – is retiring. The task of matching this supply with customers' demand, which is itself highly variable, is the first significant complexity.

The second complexity is to ensure that the energy system can operate reliably with assets that can operate for long durations. Australia will need energy sources that quickly ramp up and down, regardless of the weather, to maintain system reliability. Batteries, long-term storage and zero carbon forms of generation are required in order for Australia to move beyond, first, coal, then gas; they will be the key technologies to facilitate an affordable and reliable Net Zero energy system.

However, it is becoming increasingly evident that the longer the energy supply duration of the asset, the more challenging its technical and commercial development¹.

In this complex environment, demand for electricity will increase, driven by electrification, including as a result of the shift to Electric Vehicles, with a corresponding increase in associated emissions from electricity generation. At the same time, there will be a reduction in fossil fuel use in the transport sector. Given such market dynamism, we know our Scope 3 ambitions will continue to evolve and change and ambitions will become commitments over time; but we are prepared to take meaningful steps forward.

In the current environment, we continue to invest in assets to firm renewables with a range of durations in electricity storage. In addition, we are working with partners to deliver on our ambition to expand our renewable portfolio to include up to 3 GW of renewable energy, committed or operational by 2030. The fulfilment of these ambitions will see the nature of our portfolio shift materially. This shift is already underway.

We invest in and operate assets that help build a reliable, stable, decarbonised electricity system that can withstand demand surges and supply shocks.

We have continued to progress a number of key storage firming projects including the Wooreen battery in the Latrobe Valley in Victoria, the battery project at our Hallett power station in South Australia, and a battery project at our Mount Piper site in New South Wales. We have also secured an innovative virtual tolling agreement at the Akaysha Energy Orana battery in New South Wales. Further detail is outlined in Section 6.1.

In the 15 months since CTAP 2023, we have commissioned our Tallawarra B gas-fired power station near Wollongong. This is an important addition to our gas-fired fleet across New South Wales, Victoria and South Australia, underpinning the vital role the gas fleet will play in the coming years supporting the market's transition to renewables. Flexible fast-start 'peaking' gas-fired power stations offer certainty of output when it is needed and can ramp down when output is not required and get out of the way of renewable generation.

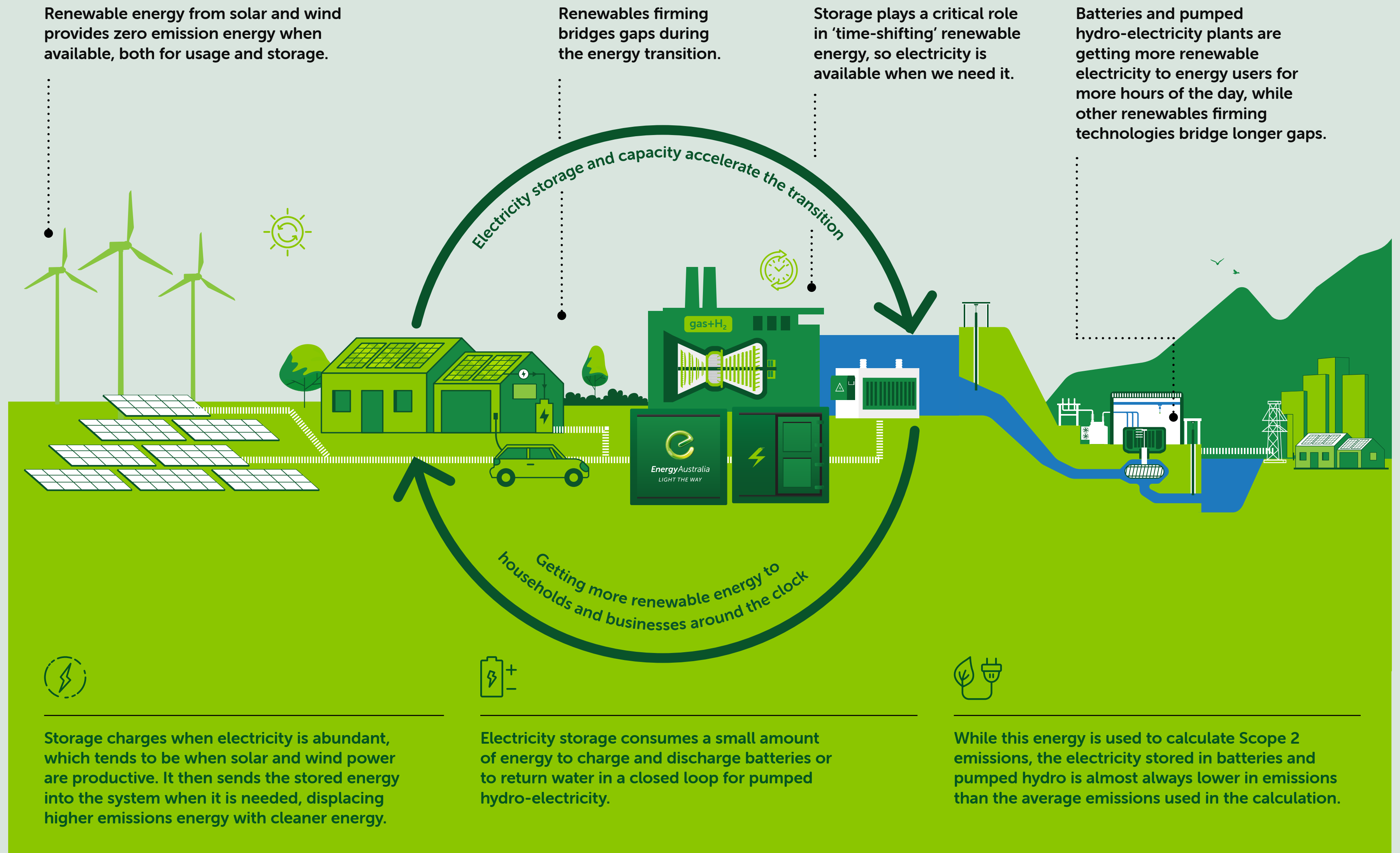
The energy system is being remade. As one of Australia's largest energy companies, we recognise our role in the transition and understand the need to manage the impacts on customers and the Australian community as well as the opportunities that come with the transition.



How the energy system will transition to renewable energy

Electricity storage brings more wind and solar energy into more hours of the day, while renewables firming output spans supply gaps and then steps back when renewable energy is plentiful. Investments in these assets also support energy system reliability and security as renewables continue to increase.

Our investment in flexible gas remains important in supporting the transition, and it is our ambition for some of our gas assets to use a proportion of renewable fuels in the future. We are also supporting pumped hydro-electricity and utility-scale batteries, providing affordable options for customers behind the meter and supporting our Commercial and Industrial customers on their decarbonisation journeys.



6. Our targets and ambitions

Recent guidance from the Australian Institute of Company Directors suggests the term ‘climate target’ may be applied to any time-based decarbonisation commitment which is underpinned by an evidence-based transition plan. This would apply to all the commitments listed below, given the supporting CTAP 2024 analysis and documentation. However, we have taken a more conservative approach to more clearly articulate the degree of uncertainty associated with each commitment. We use the terms ‘target’ and ‘ambition’ as outlined in Section 4.

6.1 Scope 1

6.1.1 The target to decrease our Scope 1 emissions

Our Scope 1 emissions represent approximately 74% of our overall Greenhouse Gas Emissions across Scopes 1, 2 and 3.

We remain on track to reduce our absolute Scope 1 Greenhouse Gas Emissions by over 60% on 2019–20 levels in 2028–29 underpinned by our closure of the Yallourn power station and brown coal mine. Further, we reaffirm the retirement of our remaining coal-fired power station, Mount Piper, by 2040.

We are working with stakeholders to contribute to a vibrant and diversified economic future for impacted communities in Victoria’s Latrobe Valley and the Central West Region of New South Wales before and beyond the retirement of these assets. Our goal is to ensure a just transition – a fair, inclusive, and equitable transition towards decarbonisation, supporting people, communities and other stakeholders in the communities and regions in which we operate. Our planning is focused on the closure of Yallourn in mid-2028, and our progress is

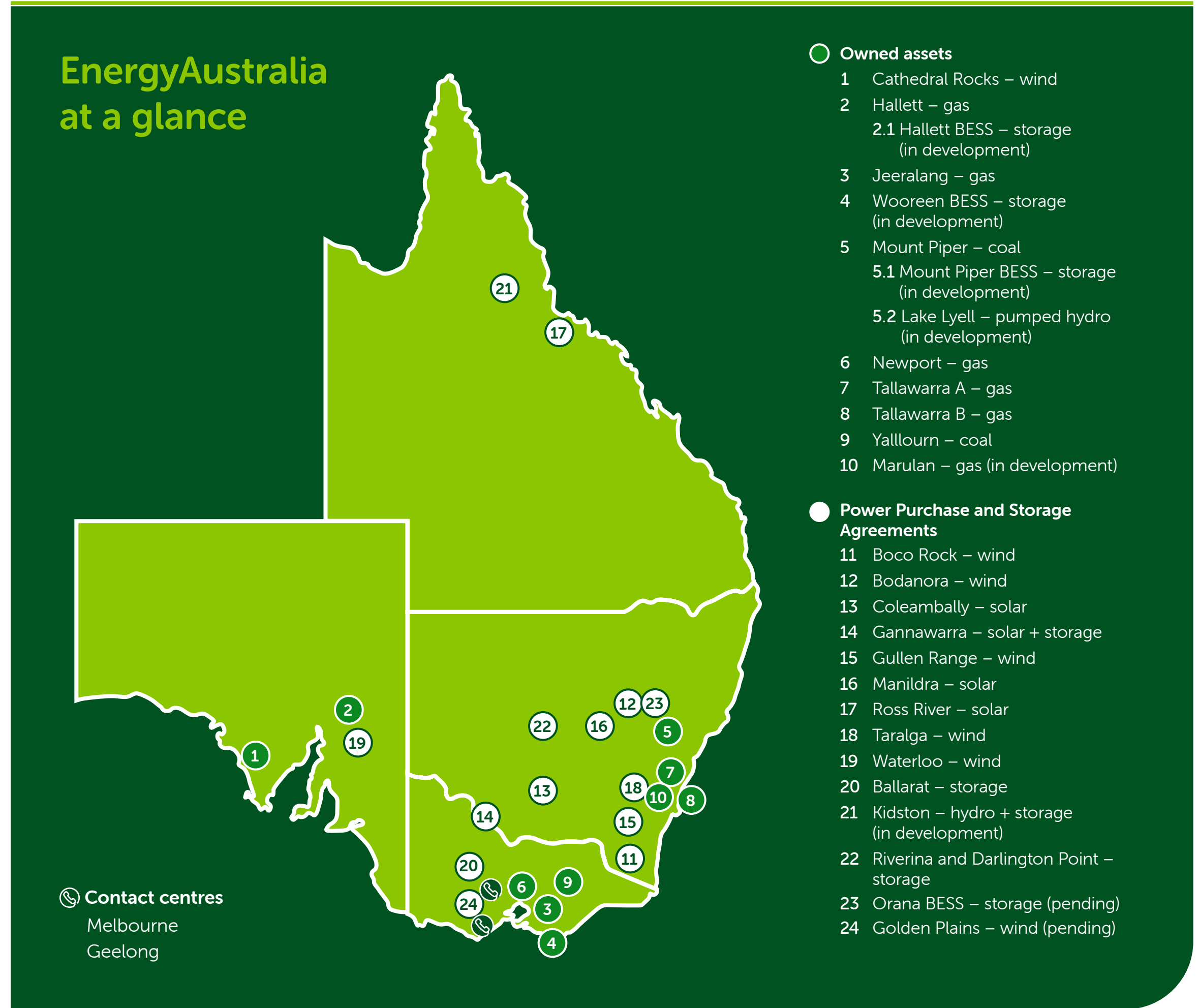
described below in Section 8.1. Our future planning for decarbonisation of our portfolio will be consistent with our approach to the Yallourn transition.

6.1.2 Scope 1 ambition – Partnering to expand our renewable portfolio to include up to 3 GW of renewable energy by 2030

We maintain our ambition to have our portfolio include up to 3 GW of renewable energy, committed or operational by 2030, through partnering activities such as foundation PPAs, with a focus on large-scale wind generation assets. This year, we have secured a PPA to commence in the late 2020s from the Golden Plains Wind Farm for 230 MW. Securing this energy affordably will be critical to meet the needs of our customers into the future. The influence of the up to 3 GW ambition on our Scope 3 emissions is further detailed in Section 6.3 and Section 7.

Purchasing output from new renewable energy projects will further underpin the development of the renewable energy industry more broadly. While we anticipate that our portfolio will largely consist of PPAs, we may also consider direct investment in projects to support our ambition where we can be competitive and where they meet our capital allocation requirements (see Section 7.8). We expect, with the support of our customers as part of this process (see Section 10.1 – Assumptions), to accelerate the development of renewable projects and help bring forward the investment in the energy transition.

Our renewable energy purchasing strategy complements our existing strategy to deliver a pipeline of new assets to firm renewables which are needed to support and best utilise renewable generation. It will help provide our 1.6 million customers with firmed renewable energy.



6.1.3 Scope 1 – Current electricity storage and firming assets pipeline

We are continuing to develop our pipeline of electricity storage and other initiatives to firm renewables. This comprises over 2 GW of projects under development or construction.

In May 2021, construction commenced (and is continuing) on the 250 MW Kidston pumped hydro-electricity storage facility, the first in the NEM in nearly 40 years. We will be the market operator of the plant under a Storage Agreement.

In March 2021, we committed to building the 350 MW 4-hour Wooreen battery at our Jeeralang power station. In September 2024, this project secured support under the Federal Government's Capacity Investment Scheme, underlining its importance to the energy transition, especially in Victoria. This project continues to progress well, with the Final Investment Decision made in November 2024.

In addition, development activity for a pumped hydro-electricity storage facility at Lake Lyell near Lithgow, New South Wales continues to progress with the preliminary design complete for the concept. The project will be capable of generating up to 440 MW (or 335 MW for 8 hours). The project also secured Critical State Significant Infrastructure (CSSI) designation in June 2024. We will continue to work towards securing a commercial pathway for the project.

We have entered into a new and innovative 'virtual toll' with Akaysha Energy in relation to 50% of the capacity of its 400 MW 4-hour Orana battery, due to commence commercial operation in 2026. Under the virtual toll, Akaysha Energy controls the physical operation of the battery. We pay a fixed fee to Akaysha Energy and are entitled to the net energy market outcomes of nominations (charge/discharge of the battery) provided to Akaysha Energy.

We are continuing to progress the development of the Hallett battery located alongside our Hallett gas-fired power station, in Canowie, 210km north of Adelaide. The project has its development approval in place including Crown Sponsorship, and will have an initial storage capacity of 50 MW with a 4-hour duration (Stage 1), with plans to add another 150 MW capacity with a 4-hour duration in the future. Final Investment Decision for Stage 1 is targeted for mid-2025. This project has also secured support under the Federal Government's Capacity Investment Scheme, a further welcome development.

Development approval has been received for an up to 500 MW 4-hour battery at our Mount Piper site. The Environmental Impact Statement includes the option of developing the project in two stages (250 MW for each stage) and we are also progressing grid connection studies to firm up our preferred connection option.

We hold development approval for 700 MW of gas-fired generation at Marulan in New South Wales, and will consider further developments as required for renewables firming purposes.

6.1.4 Scope 1 – Reducing emissions from coal-fired electricity generation

Emissions from coal-fired power stations must be reduced if Australia is to meet its decarbonisation goals. We recognise the importance of reducing our own direct emissions while contributing to system-wide reliability. Acknowledging this balance, the seven years' notice EnergyAustralia provided regarding the closure of Yallourn in mid-2028 was important.

Reducing our emissions does not happen in isolation from the broader energy system – the impact of the transition on customers, markets and the system needs to be taken into consideration.

Uncertainty remains about the delivery dates for transmission, renewable and firming projects to facilitate the transition across the NEM. In that context, in the lead-up to its retirement by 2040, our ambition remains to manage the requirements to allow for Mount Piper to transition to flexible and intermittent operation which will progressively reduce Mount Piper's emissions, contributing to grid stability in the NEM when required. This means seeking to reduce the power station's output by shifting the basis of its operation from the continuous supply of electricity to the NEM, to a role, with the appropriate market, regulatory and workplace settings, providing firming for renewables and technical system services (that are necessary to keep the grid system secure), on a commercial basis, so that it is available to operate when needed. In this context, the proposed Orderly Exit Management (OEM) framework for thermal generators is noted. The OEM framework is intended to accommodate accelerated thermal generator retirement while maintaining reliable electricity supply.

Mount Piper was originally designed as a large-scale, base load generator which operated typically at high-capacity factors with extended durations between shutdowns with a limited need for operational flexibility. We have undertaken a series of initiatives which target short-duration flexibility, as well as the ability to remove units from service for a longer duration. This could be from a few hours on a given day, to weekend shutdowns, up to a number of months for seasonal firming of renewables and finally to a reserve or backup role for longer-duration intermittency such as wind droughts. We anticipate that all necessary modifications to Mount Piper to operate in this way will be completed by the end of 2025.

Combined, the implementation of our renewable energy ambition and our portfolio transition, including the operation of Mount Piper in a reserve role, would build on the absolute emissions reduction from the closure of Yallourn and would facilitate a reduction in our total Scope 1 emissions intensity of approximately 65% before Mount Piper's retirement by 2040, relative to 2019–20 levels.



Based on the lower emissions intensity, this reduction has the potential to cut our absolute Scope 1 emissions by approximately 75%.

Our outlook suggests that, while the delivery of this pipeline will reduce dependence on Mount Piper, the wider energy system is likely to still require capacity in reserve to provide output that is responsive during key periods of demand in the NEM until such time that long-duration zero carbon electricity storage or weather-independent generation is available at scale. This reserve capacity cannot only be provided by existing gas-fired power stations. Additional firming for renewables is forecast to be required beyond today's installed gas – the 2024 AEMO ISP modelling suggests that the NEM will require 15 GW of gas-fired generation for peak loads and firming by 2050² – and could include existing coal-fired generation operating at a lower output and/or in a reserve capacity as Australia awaits the deployment of long-duration storage. The carefully calibrated use of Mount Piper in this capacity could make an important contribution to system resilience until its retirement by 2040.

6.1.5 Scope 1 – Our approach to gas-fired generation

Our current portfolio of four gas-fired power stations has typically represented around 5% of the company's Scope 1 emissions over the past five years.

These assets provide capacity that complements renewable output by operating in periods of low renewable production, periods of peak demand or otherwise in periods where there are market needs. They make an important contribution to energy system reliability and resilience, and we currently expect to operate them for their technical lives to support a Net Zero grid, consistent with dates shown in Section 5.1.

As a result of the need to provide stability and security in the system and provide supply at the lowest cost, gas is expected to play a key role in supporting the transition from coal-fired generation to a system reliant on renewable energy. Gas has a lower combustion emissions intensity than coal, which will contribute to reaching decarbonisation targets sooner than if coal were to remain in the market. Gas will primarily perform a firming role (along with storage) for renewables. In addition, it will be brought on-line during the seasonal periods when there is insufficient output from renewable sources and perform a more fundamental role in supply, which has been typically performed by coal-fired assets, as Australia transitions to a Net Zero economy.

Adding to our portfolio, the Tallawarra B gas-fired asset was commissioned in 2024.

6.2 Our approach to Scope 2, electricity-use emissions

Our Scope 2 emissions are relatively small, totalling less than 1% of company emissions.

They primarily result from maintenance works at our power stations while they are offline and are not producing their own power. With the closure of the Yallourn power station and mine in mid-2028, over 68% of our Scope 2 emissions on 2019–20 levels will cease.

In the future, we expect that our Scope 2 emissions will fluctuate with the changes in the sources of our energy supply. Information on our Scope 2 emissions and the factors that will influence the level of our Scope 2 emissions is outlined in Section 7.6.



Tallawarra B Commissioning

We delivered Tallawarra B Power Station into commercial operation in 2024. Despite a number of unforeseen challenges associated with the construction and commissioning process through 2023, Tallawarra B is now operating as a key part of the NEM and generating in response to market conditions, such as the wind drought which persisted for several weeks in mid-2024.

Tallawarra B is Australia's first peaking power station with direct emissions offset. Its fast-start gas turbine can come online to full load within 30 minutes, demonstrating how renewables and other generation assets with lower emissions intensity than coal can work together to support the broader energy transition.

Tallawarra B has been designed to be a hydrogen-capable, gas-fired power station and it is our ambition that in future it, and Tallawarra A, will operate using a proportion of renewable hydrogen³. However, renewable hydrogen manufacturing and

production in Australia is not yet available, and Tallawarra B is not expected to use hydrogen for generation in the foreseeable future.

This is consistent with international experience. The International Energy Agency recently reported that equipment and financing costs are increasing. Along with slow implementation of support schemes, this is putting hydrogen projects at risk and delaying investment decisions⁴. Despite this, we remain committed to working with all levels of government and supply partners to create the right technical and market conditions for this to occur in future. On this front, we are also undertaking a High Efficiency Upgrade to the neighbouring Tallawarra A Power Station to allow it to incorporate up to 35% renewable hydrogen as part of its future fuel mix.

In addressing the Scope 1 emissions from the asset's operation, we have committed, under our funding arrangements, to purchase offsets over the asset's life, with a commitment to using Australian Carbon Credit Units to do so until at least the end of 2030.

6.3 An ambition to decrease our Scope 3 emissions

Both the decarbonisation of our Scope 3 emissions, and assisting customers with their own decarbonisation ambitions, are important to us. These emissions do not fall within our direct control; rather, they are in our value chain over which we have a degree of influence, particularly in the context of the energy we sell, where we can indirectly influence demand for this energy.

Decarbonisation of our Scope 3 emissions is occurring in the context that the decarbonisation of the NEM itself continues to gather pace. Decarbonisation of the NEM represents one of the most significant contributing factors to the reduction in Scope 3 emissions in the economy and, by extension, for customers, for us and for other fossil fuel generators. Our ambition to deliver up to 3 GW of renewable energy, committed or operational by 2030 is important both for our Scope 1 and Scope 3 ambitions. This energy is ultimately used by our customers, and, as such, is a very significant driver of our pathway to Scope 3 reductions, along with offering innovative products to customers to reduce their emissions.

While we remain at the beginning of our journey to decarbonise our Scope 3 emissions, over the past year we have gained a deep understanding of the sources of our Scope 3 emissions, how to most accurately calculate energy-related emissions and what will be the most effective ways to assist customers to reduce their emissions. For example, we have undertaken Marginal Abatement Cost Curve (MACC) analysis across a range of prospective customer initiatives to prioritise future product offerings that have the greatest potential for both financial and emissions savings for customers (which will be able to be utilised to focus product offerings).

Our ambition remains to reach Net Zero for Scope 3 by 2050; recognising a 25-year time horizon makes certainty challenging. Ongoing policy change, technological development and the manifestation of the physical impacts of climate changes will all influence the Scope 3 trajectory and are subject to the assumptions and uncertainties outlined in Section 10.1. Despite this, we are well on our way to achieving this ambition with modelled scenarios indicating that an up to 60% reduction in absolute Scope 3 emissions by 2030 will follow from achievement of the up to 3 GW renewable energy ambition, coupled with the broader system changes (primarily decarbonisation of the NEM). Further details in relation to our preferred Scope 3 decarbonisation pathway and the scenarios used to substantiate it are described in Section 7.7.

6.3.1 Overview

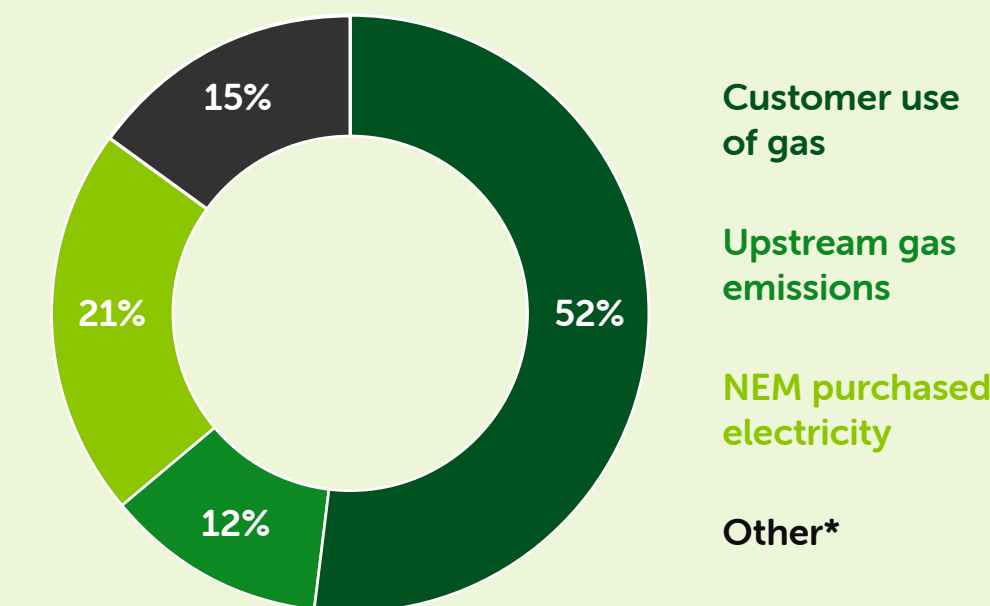
Our Scope 3 emissions fluctuate year on year but for 2023 comprise less than a quarter of the company’s combined total Scope 1, 2 and 3 emissions. Around 85% of these Scope 3 emissions relate to the use of gas and electricity sold to our household, business and Commercial and Industrial customers as illustrated in Figure 2 below. These Scope 3 emissions from the use of gas and electricity by our customers represent a customer’s Scope 1 and 2 emissions respectively, and therefore our decarbonisation ambition and that of our customers is linked. Our Scope 3 emissions based on the 2023 data are mostly dispersed across our 1.6 million customers. Emissions associated with the purchase of electricity from the NEM (classified under the Greenhouse Gas Protocol as Category 3d emissions) comprised 21% of the Scope 3 total while customer use of gas represents 52% of Scope 3 emissions from the combustion of this gas, as illustrated in Figure 2 on the right, plus another 12% from upstream production.

As noted above, the decarbonisation of the NEM itself will be the most significant contributor to driving down of Scope 3 emissions in the near term, and EnergyAustralia is playing its part. The progress of the NEM decarbonisation also contributes to determining the pivot point at which retail customers switching from gas to electricity will actually drive down emissions. Our analysis indicates this is likely to occur around the early 2030s. Before this time, electrification would increase overall emissions in some State grids. We expect efforts to ‘get customers off gas’ will need to balance ramping up capability in the market to achieve the fuel switching ambition with the pace of increases to emissions that result from fuel switching where it occurs before 2030.

In the meantime, we will continue to encourage customers to reduce their energy-use emissions. While the market is still in the early stages of promoting electrification, we can help add to customers’ knowledge base on this front.

As we pursue our own strategy, we know Scope 3 emissions will fluctuate over time. This is particularly true with respect to the interplay between our Scope 1 and Scope 3 emissions. For example, for Scope 1 emissions, the closure of Yallourn which will take effect in mid-2028 will see a reduction in over 60% of these emissions; however, resulting from this will be a shortfall between the energy generated from our direct assets and contracted PPAs to meet our customer energy demand. We will need to purchase electricity from the NEM, with associated emissions captured as Scope 3 (Category 3d emissions). It is important to recognise that, while there will be an increase in our Scope 3, this recalibration in the sources of energy supplied by us will represent an overall reduction in the emissions associated with delivering energy to our customers.

Figure 2: Breakdown of EnergyAustralia’s Scope 3 emissions in 2023



* Includes Upstream emissions from fossil fuels used in power generation, upstream emissions from goods and services and downstream emissions associated with waste.

Further, in future projections of our expected emissions, we expect there will be increasing electricity demand in the NEM beyond simply household electrification due to Electric Vehicle uptake. This could come from growth in data centres in Australia. Although the emissions intensity of this purchased energy will continue to fall as the NEM decarbonises, the factors outlined will increase demand and the quantity of NEM purchased electricity, impacting our ability to eliminate reported Scope 3, Category 3d emissions. This demand increase must be seen in the context of overall decarbonisation where electrification and Electric Vehicle uptake moves energy demand away from fossil fuels such as gas and petrochemicals, to electricity. The reduction in the emissions intensity of the NEM will help to offset the increase in demand.

Our most likely decarbonisation pathway is shown in Section 7.4.

We estimate that around 15% of our Scope 3 emissions occur in categories outside of customer usage, with the majority relating to the supply of coal for Mount Piper, gas purchased for use across our gas-fired power stations, and the treatment and recycling of ash from Yallourn and Mount Piper. Where these emissions relate to Mount Piper and Yallourn, they will reduce over time as output reduces and the assets are retired. This includes approximately 5% of our Scope 3 emissions which relate to the upstream activities associated with capital and operational expenditure for goods and services purchased for EnergyAustralia's business operations and projects.

6.3.2 Scope 3 – GreenPower

We offer customers access to renewable energy certificates under the Federal Government-accredited GreenPower program. Customers can elect to fund the purchase of certificates equivalent to their energy consumption, or a nominated share of it, and we ensure that the corresponding volume of renewable energy certificates are purchased and surrendered in accordance with the GreenPower program rules.

6.3.3 Scope 3 – Carbon offsets

As at the end of 2024, we have commenced the process of discontinuing our carbon offset product, Go Neutral, for mass market customers. This will occur progressively in accordance with the terms that apply to customers. Go Neutral provided an opportunity for customers on the program to offset their energy usage. Our focus is now on helping our customers to directly reduce their emissions, as outlined in Section 6.1.4.

We, however, continue to recognise that high integrity carbon offsets have an important role to play in the energy transition and the achievement of Net Zero. While our focus is firmly on direct decarbonisation measures, EnergyAustralia will require offsets for the abatement of residual emissions to ultimately reach Net Zero, (i.e. those emissions that remain after all other viable emission reduction steps are completed), noting that there is likely to be significant evolution in the development of voluntary carbon markets and also on-going technological developments in Greenhouse Gas Emissions removal.

We note that the use of high integrity offsets having regard to best practice guidance will be required to mitigate residual emissions associated with achieving Net Zero for Scope 3 by 2050 for the decarbonisation pathway shown in Figure 4 in Section 7.4.

We note that in the context of our Tallawarra B project (see Section 6.1.5) we are currently using Australian Carbon Credit Units to offset its Scope 1 emissions.

6.3.4 Scope 3 – Helping our household and small business customers decarbonise

We are helping Australians who are getting on with the renewable energy transition, empowering them to reduce their energy emissions by expanding existing solutions and piloting innovative new approaches.

This is what we've been focusing on:

- We grew our Virtual Power Plant (VPP) from around 5 MW to around 142 MW since the publication of CTAP 2023, integrating a greater number of home energy assets, which include household solar, batteries and home energy appliances. We then use these assets to help balance supply and demand, providing space for more renewables to enter the grid.
- Battery Ease was launched in May 2024, allowing customers with home solar and battery to earn credits on their excess energy which is shared with us. By linking these individual home solar and battery systems to our VPP, we can better utilise this energy and reduce reliance on fossil fuels.



While we remain at the beginning of our journey to decarbonise our Scope 3 emissions, over the past year we have gained a deep understanding of the sources of our Scope 3 emissions, how to most accurately calculate energy-related emissions and what will be the most effective ways to assist customers to reduce their emissions.

- The Sun Soaked Water program has been established, building on a successful 2023 trial to integrate electric hot water systems into the VPP. This program shifts the operating window of the controlled load of a customer's system to optimise the use of renewable energy, which is often more prevalent during daylight hours, and reduces demand on the grid during periods in which there is less potential for energy abundance (i.e. because there is no solar energy generated at night).
- Access to 20 MW of community batteries was secured from the New South Wales Distributed Network Services Provider, Ausgrid. While owned and maintained by Ausgrid, we operate and orchestrate these batteries through our VPP. These mid-sized neighbourhood systems capture and store solar energy generated by the community. The use of this stored energy can mean renewable energy is accessible to more people, such as renters, apartment dwellers or those unable to afford solar and battery installation. In October 2024, we launched our new Community Battery Ease product to 13 locations in the Ausgrid area for consumers with and without solar.
- Project Edith is an 18-month dynamic network pricing trial led by Ausgrid. This project will help unlock better VPPs, allowing consumers to maximise the value of their home energy assets. It is also better for the community by giving more homes access to renewable energy, and better for the network with smarter management of capacity.
- We joined the Energy Masters program, a federally funded pilot by the Australian Renewable Energy Agency through the South Australia Power Networks. Focused on finding ways to help households manage appliances to optimise energy use and network efficiency, insights from this program will guide our approach to electrification for customers.

6.3.5 Scope 3 – Helping our Commercial and Industrial customers decarbonise and move towards electrification

Electric Vehicles

We are in the early stages of rolling out to market a commercial green transport package, supporting business and C&I customers (primarily fleet customers such as bus depots) with the installation of Electric Vehicle charging systems to power their fleets. Our ambition is an offering which is able to help customers further decarbonise over time, by powering a portion of their vehicle charging from solar and battery systems and participating in our VPP. We have made some good progress in the last year including our project with Tropic Wings, described further on page 14, which will see some of these elements put into practice.

Our approach represents the next horizon for emissions reduction in the broader market which is addressing 'Scope 4 emissions'. This is where the efforts of and products from a company such as EnergyAustralia can help to avoid or reduce emissions in other market segments or parts of the value chain. Electric Vehicles themselves are a good example of avoided emissions – while the production process generates emissions (as would be the case for all vehicles), compared to vehicles with traditional internal combustion engines, the Electric Vehicles will generate lower emissions over their lifetime. As an energy company, we hold a unique position which allows it to help facilitate greater efficiency, electrification and Electric Vehicle infrastructure to help contribute to lower emissions throughout the whole economy.

Revolutionising battery storage: Battery Ease and community batteries drive sustainability in Australia

We are at the forefront of helping to transform battery storage and usage across Australia, paving the way to a more sustainable future for all. This is driven by two key initiatives.

The first is Battery Ease, which enables customers to integrate their home batteries into our VPP. Battery Ease provides financial benefits for customers that share a portion of their energy with us, while we help them optimise the timing of their battery charging. This allows battery owners to not only earn money from their excess energy, but also save money as their batteries will be charged when more financially advantageous for them. By aggregating home batteries, we can provide significant amounts of electricity to the grid when needed, optimising the use of renewable energy that is often more prevalent during the day when the batteries are most often charged, and to support grid stability.

The second is our community battery program, based on mid-sized neighbourhood batteries that store electricity generated by the community and orchestrated by our VPP. We launched our Community Battery Ease product, which widens the access to renewables. This product offers access to energy in shared storage to those without home batteries or solar panels, or to those with solar panels but no battery storage. Excitingly, this initiative features Ausgrid's Australian-first

community battery network tariff. This represents a reduced local network tariff for the surrounding area, important amidst on-going cost of living challenges. This is due to reduced investment required in the network – the upstream effect of community batteries is that local peak demand is reduced, peak demand being the key driver for investment in new networks.

Together, Battery Ease and community batteries play a useful role in our commitment to reducing emissions and advancing sustainable energy solutions. We're working towards expanding these programs and continue to pursue our purpose of leading and accelerating the clean energy transformation for all.



Community battery, Bondi



Tropic Wings, Cairns' depot

Tropic Wings

In an exciting development for electric transport, we have been working to electrify three sites for Tropic Wings, Cairns' leading bus tour operator. This will result in Tropic Wings introducing 12 new electric buses into its fleet, resulting in carbon emissions reduction benefits for its business, while also sending a strong message about the feasibility and value of sustainable transport solutions. We are helping to drive this change, facilitating the provision of the necessary charging infrastructure and overseeing the project to ensure seamless execution. Tropic Wings has a budget of \$10.2 million for this project, which includes \$4.75 million support from the Australian Renewable Energy Agency (ARENA). With a completion date of mid-2025, this initiative is a testament to a collaborative effort and shared vision for decarbonisation.

We are designing the layout of the Electric Vehicle infrastructure at the three depot sites for scalability and leading in the design and installation of critical components, including a new transformer, new main switchboards, battery storage systems for supply security and resilience, Electric Vehicle chargers; as well as providing a customised energy tariff.

This collaborative work between us and Tropic Wings demonstrates a shared commitment to a positive impact on our communities and the environment. The journey towards decarbonising transport is an important one for Australia to reach its decarbonisation goals, and we are proud to be a part of it – offering our expertise and support to those ready to take the next step.

In parallel, operators of electrified fleets of vehicles will continue to benefit from the continuing decarbonisation of the electricity they access for charging from the grid as the NEM continues to decarbonise, with decreasing electricity consumption as vehicle efficiency continues to improve, and from lower emissions where they invest in growing the deployment of behind the meter solar and battery systems.

C&I Customers

Commercial and Industrial customers have diverse operational requirements, but share a common dependence on high volumes of energy for their businesses. EnergyAustralia offers these customers bespoke guidance and product offerings that support their decarbonisation ambitions.

Connecting C&I Customers to Grid Scale Renewable Generation:

We support our C&I customers to source renewable energy either from our portfolio of PPAs or via their own market-sourced PPAs, or a combination of the two. We have developed a progressive purchasing product, PurchasePro Plus, for large C&I customers which enables them to match renewable energy with their needs. We have a diverse portfolio of flexible-capacity assets. This enables us to provide firming for C&I customers when their contracted renewables are not generating and hence reduces their exposure to high spot-market energy prices.

Adaptation with on-site 'Behind the Meter' Initiatives:

We also work with C&I customers to define and evaluate business cases for commercial-scale solar and battery installation. Customers are referred to our fully owned specialist commercial-scale installation business for delivery of these systems.

Energy efficiency and electrification: Our dedicated C&I Energy Solutions team engages directly with C&I customers to help formulate end-to-end customer bespoke energy efficiency and electrification opportunities. We understand the upstream arrangements that feed into the customer's energy supply, from generation, distribution and retail contracts, and we engage directly with customers to understand the specific end-use needs. Ultimately, we aim to facilitate change through the development of innovative contracting models which better align how customers use energy with renewables generation patterns. For example, we are looking to facilitate the option for customers to switch between the use of gas and electricity for industrial heat applications, to take advantage of low electricity prices that typically occur during the middle of the day when generation from renewable sources is plentiful.

Keeping the lights on and demand response:

Ultimately, a more intermittent supply side will increasingly require commercial end-users to be more responsive to market signals. We have two levels of demand response, which provide all our C&I customers the opportunity to be rewarded for contributing to keeping the lights on. For customers who consume up to 5 GWh/year, we have ResponsePro, which, via automated text messages, invites customers to reduce their load and earn bill credits relative to their contribution to reducing demand. For our larger energy consumers, we provide access to AEMO's Reliability and Emergency Reserve Trader (RERT) and other programs, which potentially offer substantial rewards to these customers if they curtail their load when AEMO deems the system to be under extreme stress.

Decarbonisation is increasingly a key driver for C&I and we are assisting these customers with a variety of approaches to reduce their carbon emissions while simultaneously delivering their energy needs.

EnergyAustralia and Sydney Zoo: Solar for precious creatures

To date in 2024, we have completed 50 commercial installations with a total capacity of 5 MW, which includes some significant sized projects. We have also completed 532 residential installations.

For one of our large recent projects, we teamed up with Sydney Zoo – based in Eastern Creek – to install 602 solar panels across eight buildings on the site. We estimate that the 271 kW system generates up to half of the zoo's peak electricity needs on a sunny summer's day and will prevent the production of over 200 tonnes of CO₂ associated with the zoo's electricity consumption in the first year alone⁵.

We want to make the renewable energy transformation as simple as possible for all of our customers. Partnering with Sydney Zoo has been an excellent way to demonstrate how we can support our customers to easily adopt renewable energy solutions such as solar – whether it's a home of four people, a business of 40 people, or a zoo of 4,000 animals.

Sydney Zoo was founded in 2015 and the team at the Zoo create a wide range of experiences for the community by introducing them to a range of animal species from all over the world, while also educating on animal welfare and conservation.

It takes a significant volume of energy to power a 41-acre zoo that is home to over 4,000 animals. In partnership with ourselves, Sydney Zoo can do so with the help of the sun, which marks a significant step forward on its conservation journey.

One example of the use of solar energy at the Zoo is the pump-powered elephant pool, now partially powered by the sun. Solar energy also helps drive innovative auto feeders for some of the animals including meerkats and otters.



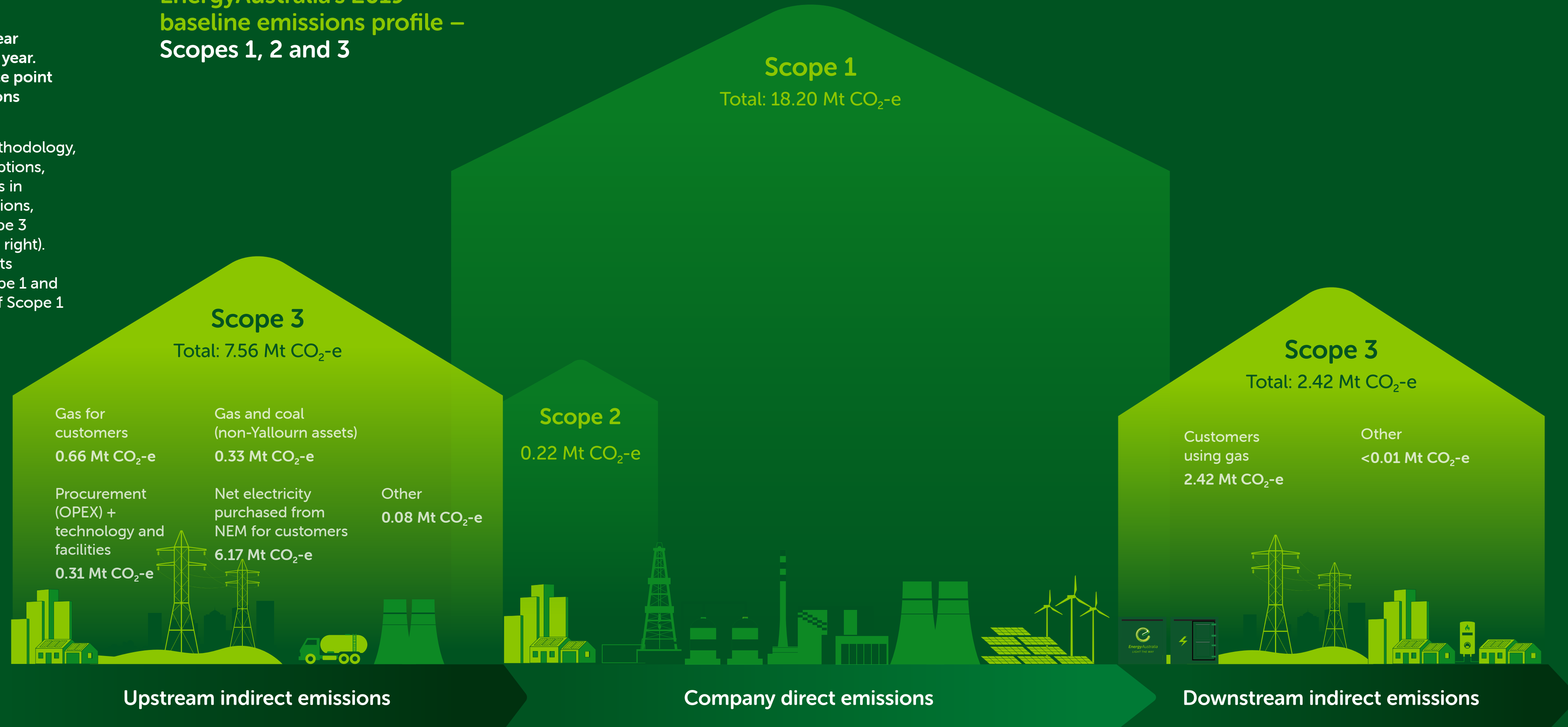
7. Scenario Analysis and Decarbonisation Pathway

7.1 Overview

CTAP 2024 references a baseline year emissions inventory from the 2019 year. This baseline year sets the reference point against which our targets and actions are measured.

Based on our current emissions methodology, which includes conservative assumptions, our total Greenhouse Gas Emissions in 2019 comprised 64% Scope 1 emissions, 1% Scope 2 emissions and 35% Scope 3 emissions (refer to the figure on the right). Our thermal power generation assets account for the majority of our Scope 1 and 2 emissions, and decarbonisation of Scope 1 emissions remains our priority.

EnergyAustralia's 2019 baseline emissions profile – Scopes 1, 2 and 3



7.2 Scenario Analysis

To quantify future portfolio emissions and determine the most likely pathways to Net Zero, we have undertaken extensive scenario analysis over the course of 2024. Scenarios modelled cover a wide range of climate change and energy transition outcomes. High, medium and low emissions case versions of four base scenarios were each modelled under two business growth profiles. Key assumptions and scenario details are shown in the table on the right.

At this point in time, and while acknowledging the inherent uncertainty with many energy market, policy, climate and customer variables, we consider that Scenarios 1 and 2 are more likely than Scenarios 3 and 4 as a result of current uncertainties and social and investment constraints limiting transition speed. Similarly, a Slow or Medium Transition is considered more probable than a Fast Transition as electrification initiatives are progressing slower than anticipated. Our higher growth strategy means the Accelerated Business Profile is considered more likely than the Current Business Profile. Accordingly, Scenario 2 under Medium Transition speed using the Accelerated Business Profile is our best estimate of a high ambition, credible decarbonisation pathway at this time.

As shown in the table on the right, this aligns on the 2024 AEMO ISP Scenario 'Step Change'. This scenario reflects a pace of energy transition that supports Australia's contribution to limit global temperature rise to well below 2°, consistent with fulfillment of current domestic and international obligations. The rate of change anticipated by this scenario is significant and its success is not

assured. However, it is rated much more likely than the the 2024 AEMO ISP Scenario 'Green Energy Exports' that aligns with 1.5° Paris Agreement ambitions. This scenario requires all NEM coal-fired power stations to be closed by the 2031–32 financial year and is considered a low likelihood by AEMO.

The retirement of coal-fired power stations in this timeframe would require replacement-level volumes of renewable energy and capacity for firming of renewables to be operating in the NEM and is dependent on the construction of twice as much new transmission infrastructure than the Step Change Scenario. Higher technology and construction costs and supply chain constraints continue to impact the roll-out of infrastructure and projects. Unfortunately, and as highlighted recently by the International Energy Agency⁶, while the pace of Australian and global installation of renewables has increased from pandemic era levels, it is still well short of the levels required in models that meet the 1.5°, or even 1.8°, trajectories under Scenarios 3 and 4. For these reasons, the Scenario 2, Medium Transition, Accelerated Business Profile case represents our best estimate of a high ambition yet credible decarbonisation pathway at this time.

In the table, the 2024 GSOO refers to the 2024 AEMO Gas Statement of Opportunities which forecasts the adequacy of gas supply in central and eastern Australia.

Key assumptions and scenario details				
	Scenario 1	Scenario 2	Scenario 3	Scenario 4
Description	Current Australian climate and energy commitments are challenged by social licence, supply chain, policy uncertainty and investment constraints with lower investment in Customer Energy Resources (CER) and slower than expected coal exits.	Fewer constraints than Scenario 1 but slower than anticipated CER uptake and coal exits means not all Australian climate and energy commitments are met.	As for Scenario 2 but with more positive CER uptake and coal exits in line with AEMO predictions.	Rapid decarbonisation reflecting earlier coal closures, strong electrification, high CER uptake, green energy exports, more ambitious climate policy and supportive energy investment environment.
Model Basis	2024 AEMO ISP Progressive Change Scenario and 2024 GSOO	2024 AEMO ISP Step Change Scenario and 2024 GSOO	2024 AEMO ISP Step Change Scenario and 2024 GSOO	2024 AEMO ISP Green Energy Exports Scenario and 2024 GSOO
Implied Global Temperature Rise	> 2°	< 2°	~ 1.8°	1.5°
Slow Transition	Up to 3 GW renewable energy ambition not met with only existing PPAs maintained, lower EA gas customer attrition and electrification, low CER uptake and engagement by our customers.			
Medium Transition	Up to 3 GW ambition met, low gas customer attrition and electrification along with low CER uptake and engagement by our customers.			
Fast Transition	Up to 3 GW ambition met, higher gas customer attrition and electrification, high CER uptake and engagement by our customers.			
Current Business Profile	Market share maintained in most market segments with steady growth in selected products and markets.			
Accelerated Business Profile	As for Current Business Profile but with higher growth assumptions in selected products and markets.			

7.3 Emissions Intensity

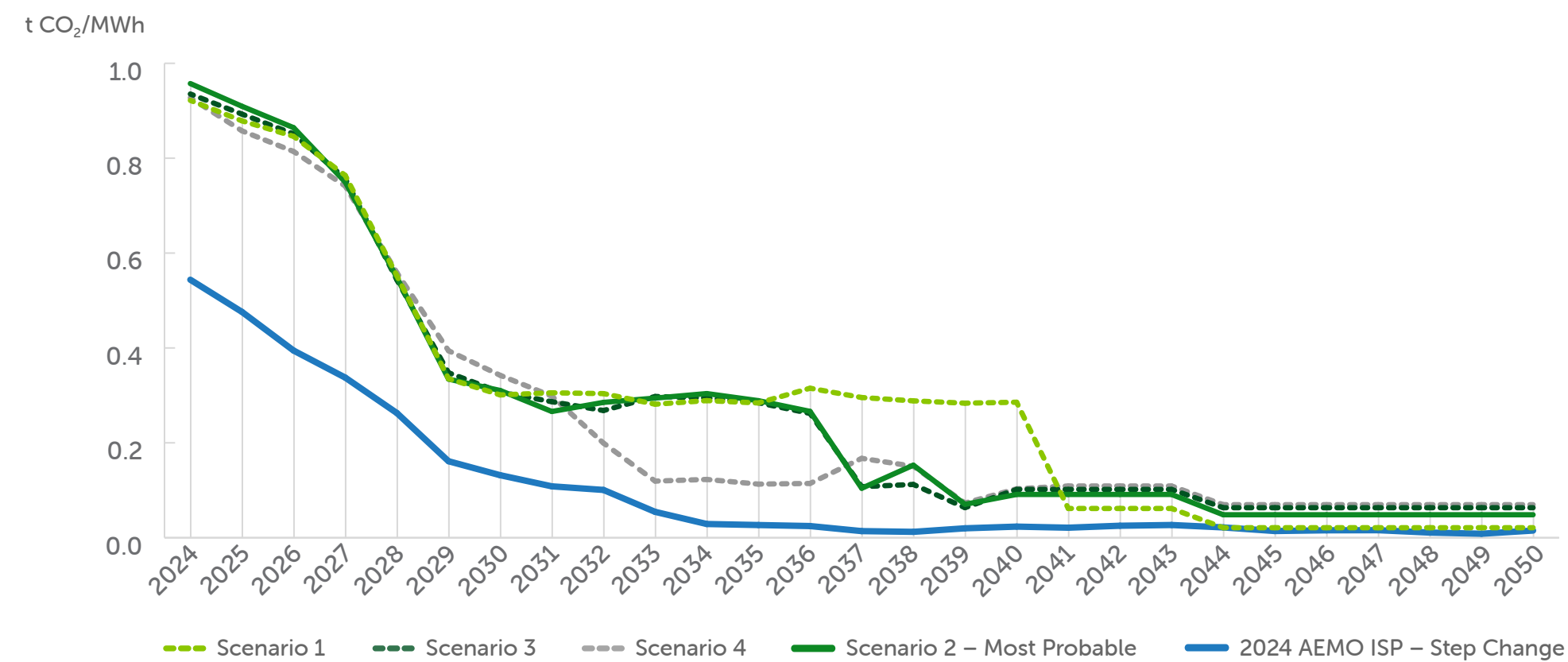
To quantify our portfolio emissions and determine our pathway to Net Zero, we track our performance using an emissions intensity for our Scope 1 direct emissions. The Scope 1 portfolio decarbonisation pathway, as shown in Figure 3, presents four indicative scenarios which show different rates of our emissions intensity decarbonisation, reflecting different probable outcomes, based on current information.

In that context, the trajectory of the reduction in our portfolio emissions is heavily dependent on the timing of the planned retirements of our coal-fired assets; and in the 2030s, is particularly influenced by the extent to which Mount Piper will be relied

upon to operate to support grid strength and system reliability, noting the current uncertainties in this regard. The scenarios reflect the entry of capacity for firming for renewables and up to 3 GW of renewable energy into our portfolio, and the transition of Mount Piper to a reserve role.

The timing in which Mount Piper will be in a position to transition to a reserve role is dependent on the speed of the NEM decarbonisation, including all its contingent elements (the timing of transmission infrastructure roll-out, renewables and capacity for firming of renewables being added to the system and the availability of commercial long-duration storage).

Figure 3: EnergyAustralia’s forecast emissions intensity

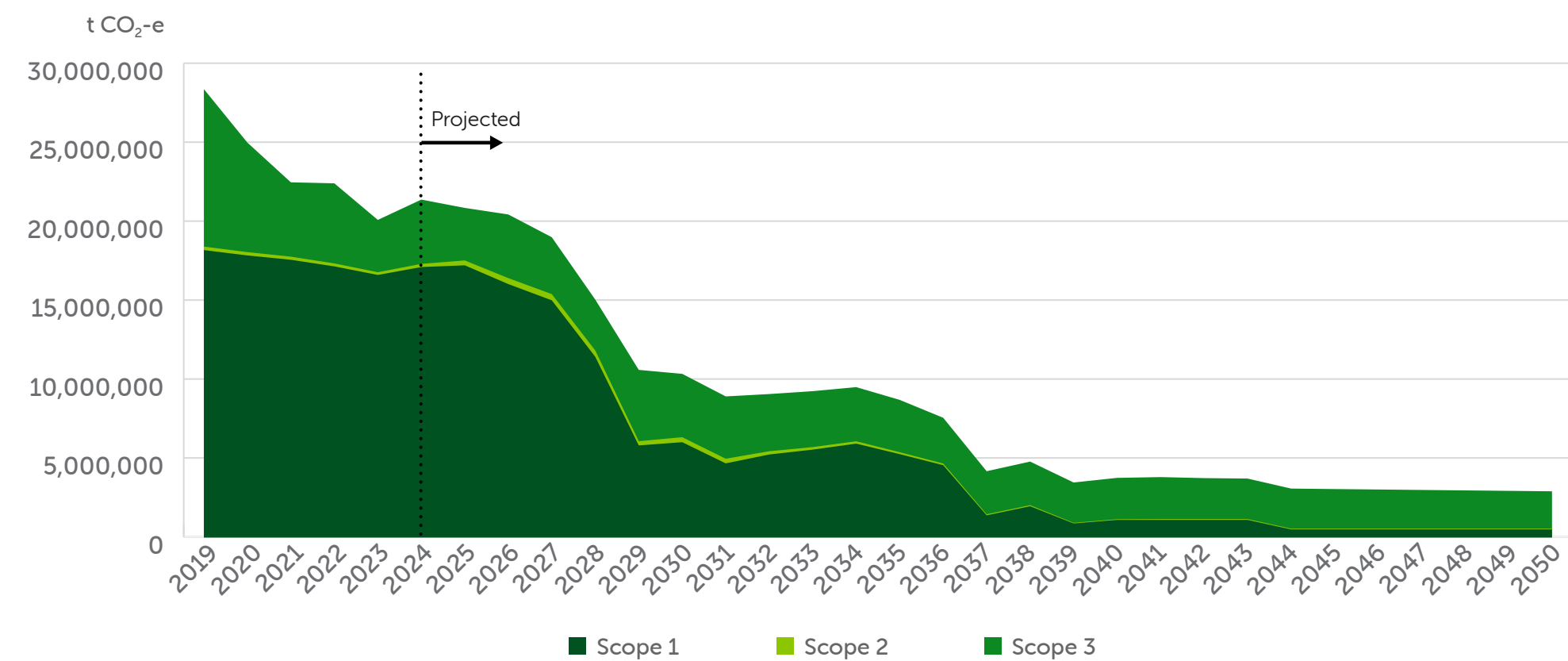


7.4 Absolute emissions

In addition to emissions intensity, we have modelled projections of absolute GHG Emissions across Scopes 1, 2 and 3. These projections are based on our business plan which reflects closely the assumptions in the 2024 AEMO ISP, and AEMO’s Gas Statement of Opportunities and Electricity Statement of Opportunities which forecast the adequacy of supply.

This emissions forecast reflects our view of the most likely scenario across all emission scopes. This provides a value chain view of our decarbonisation journey, not one solely based on our direct (Scope 1) emissions; but also considers both the upstream and downstream emissions in our business. Our approach to the analysis of each of the Scope 1, 2 and 3 emissions forecasts, which are reflected in Figure 4, is outlined below.

Figure 4: Absolute GHG Emissions across reporting Scopes 1, 2, and 3 – Medium Transition, Accelerated Business Profile case



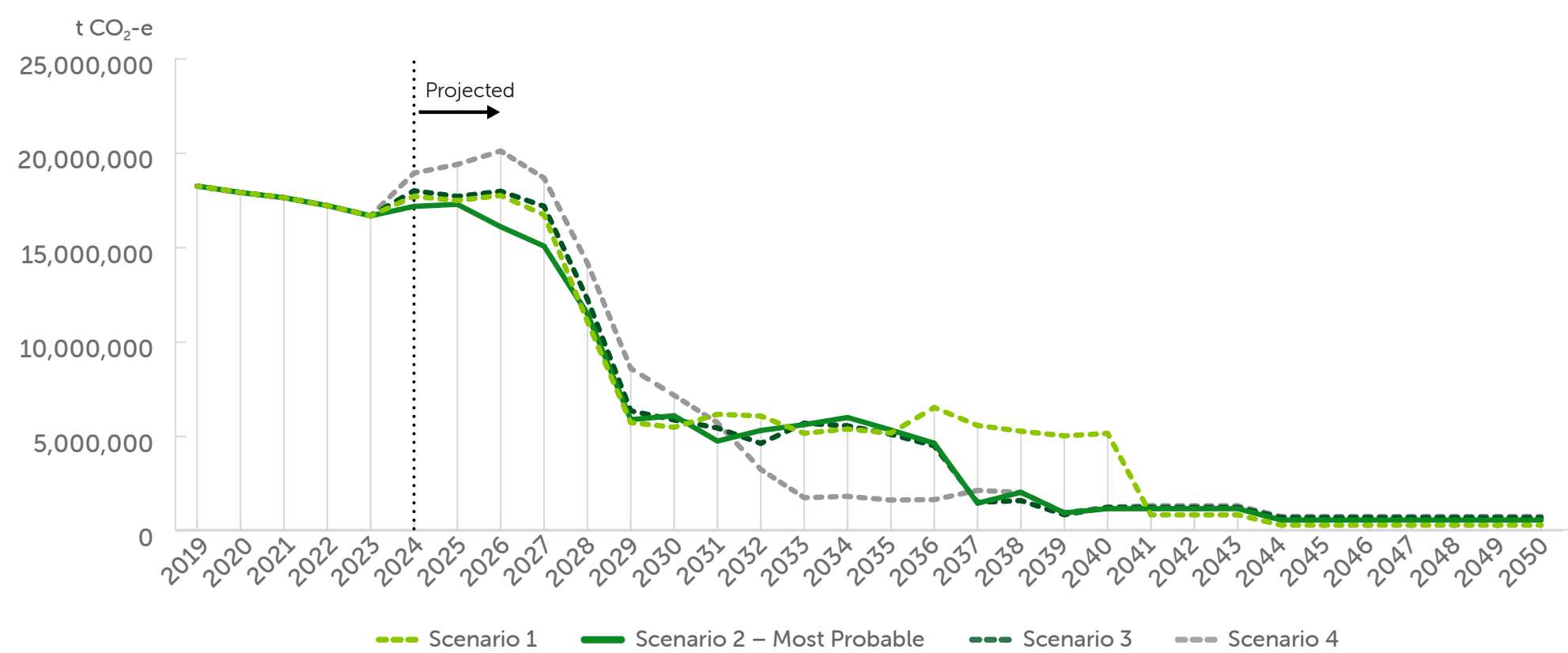
7.5 EnergyAustralia's Scope 1 emissions

As described in detail in Section 6.1, our plans to close Yallourn in mid-2028, to build out our future portfolio of assets to firm renewables, and to reduce the overall volume of electricity produced at Mount Piper in the lead-up to its retirement by 2040, results in significant reductions in forecast absolute Scope 1 emissions.

The extent to which Mount Piper will be required to operate and provide essential generation and system services during the 2030s remains uncertain, and is dependent on the availability of renewables

and assets to firm renewables in the NEM, allowing Mount Piper to increasingly play a reserve role. This uncertainty impacts the forecast of our portfolio emissions intensity and given that, four scenarios for probable emissions pathway scenarios are shown in Figure 5. Scope 1 emissions reduction of >60% or greater than 10 Mt CO₂-e per annum by 2029 relative to our baseline year follow the closure of Yallourn in mid-2028.

Figure 5: EnergyAustralia's forecast Scope 1 GHG Emissions

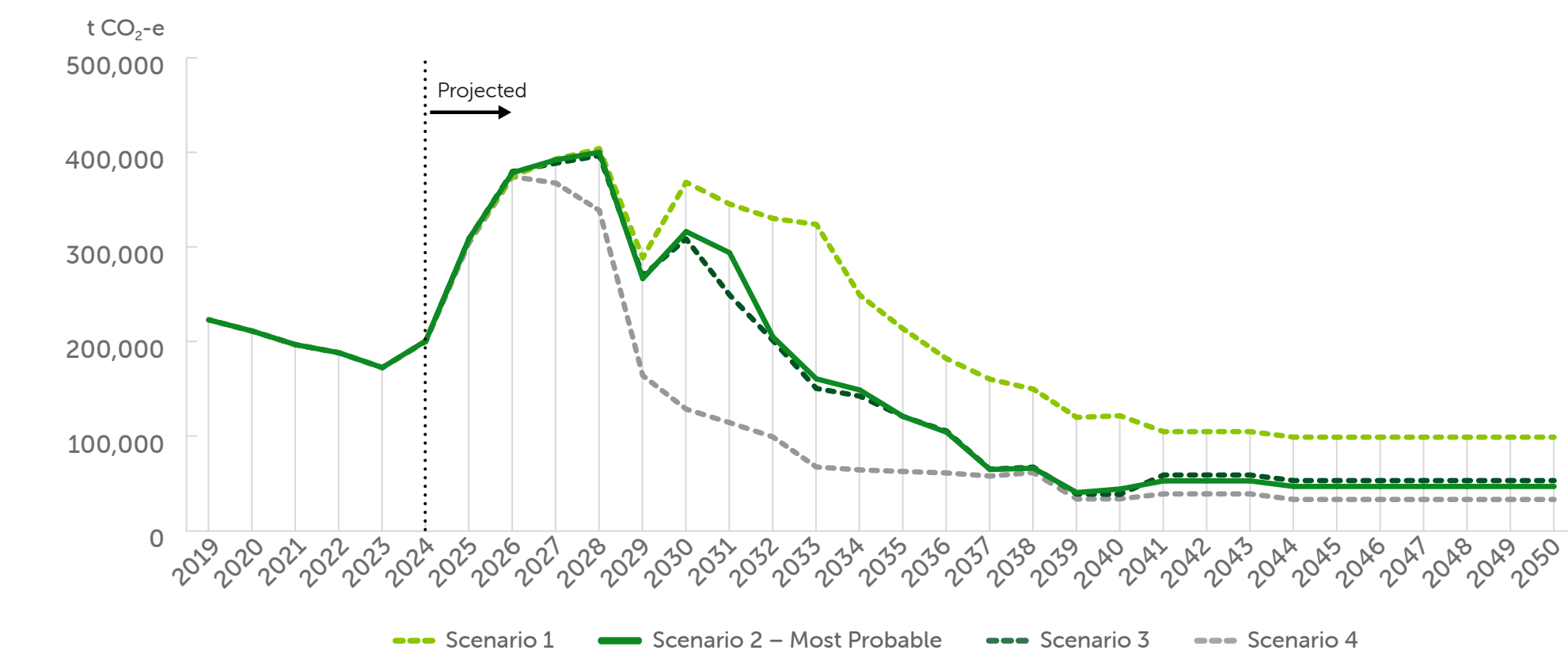


7.6 EnergyAustralia's Scope 2 emissions

Our Scope 2 emissions relate to emissions associated with purchased energy used by our owned assets. As an energy generator, Scope 2 emissions represent a minor overall contribution (approximately 1%) to our total GHG emissions. Scope 2 emissions are however forecast to rise in the medium term due to the increase in energy storage assets within our portfolio. This is due to the fact that charging of battery energy storage systems or pumped hydro-electricity storage facilities incur Scope 2 emissions on any round trip losses (energy lost as a result of their charging). Our Scope 2 emissions are then forecast

to decrease in line with the reduction in overall grid emissions intensity as the NEM further decarbonises. It is important to note that the increased emissions come from a very low base, and in fact the increased emissions in this context are beneficial as we expect they will contribute to a reduction in overall system emissions as batteries can help 'time shift' the use of renewable energy produced when overall grid intensity is low (during the middle of the day) to peak periods when emissions intensity is generally higher.

Figure 6: EnergyAustralia's forecast Scope 2 GHG Emissions



7.7 EnergyAustralia's Scope 3 emissions

Forecasts for our Scope 3 emissions have been modelled using the same scenarios and input assumptions as for Scopes 1 and 2. The graphs below highlight the differences between Scope 3 outcomes based on the more likely scenarios (Accelerated Business Profile, Scenarios 1 and 2 under Slow and Medium Transition cases).

A full Scope 3 category breakdown is also provided for the Scenario 2, Medium Transition, Accelerated Business Profile Case for illustrative purposes. Our contribution to the Scope 3 reduction resulting from our up to 3 GW of renewables ambition is illustrated in Figure 7.

Figure 7: Comparison between the Slow and Medium Transition cases for Scenarios 1 and 2, Accelerated Business Profile case

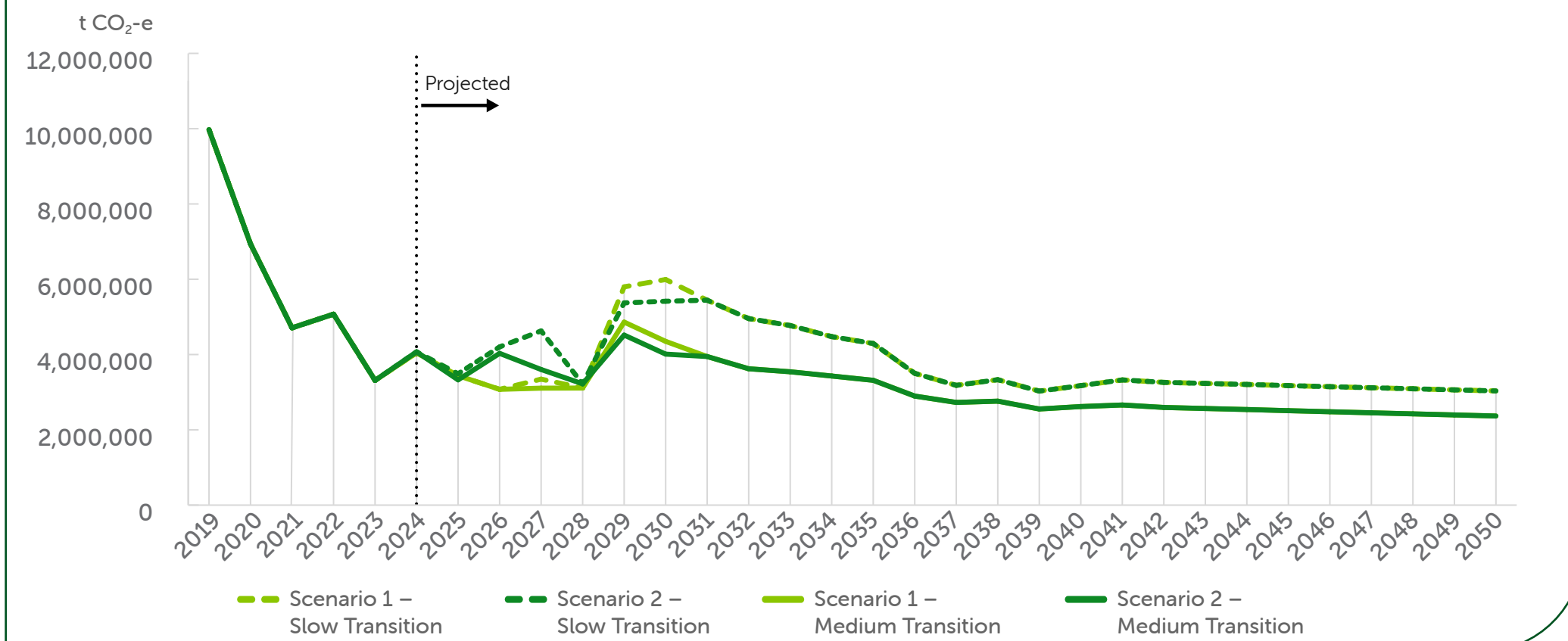


Figure 8: Modelled Scope 3 absolute GHG Emissions under Medium Transition, Accelerated Business Profile cases for Scenarios 1 to 4

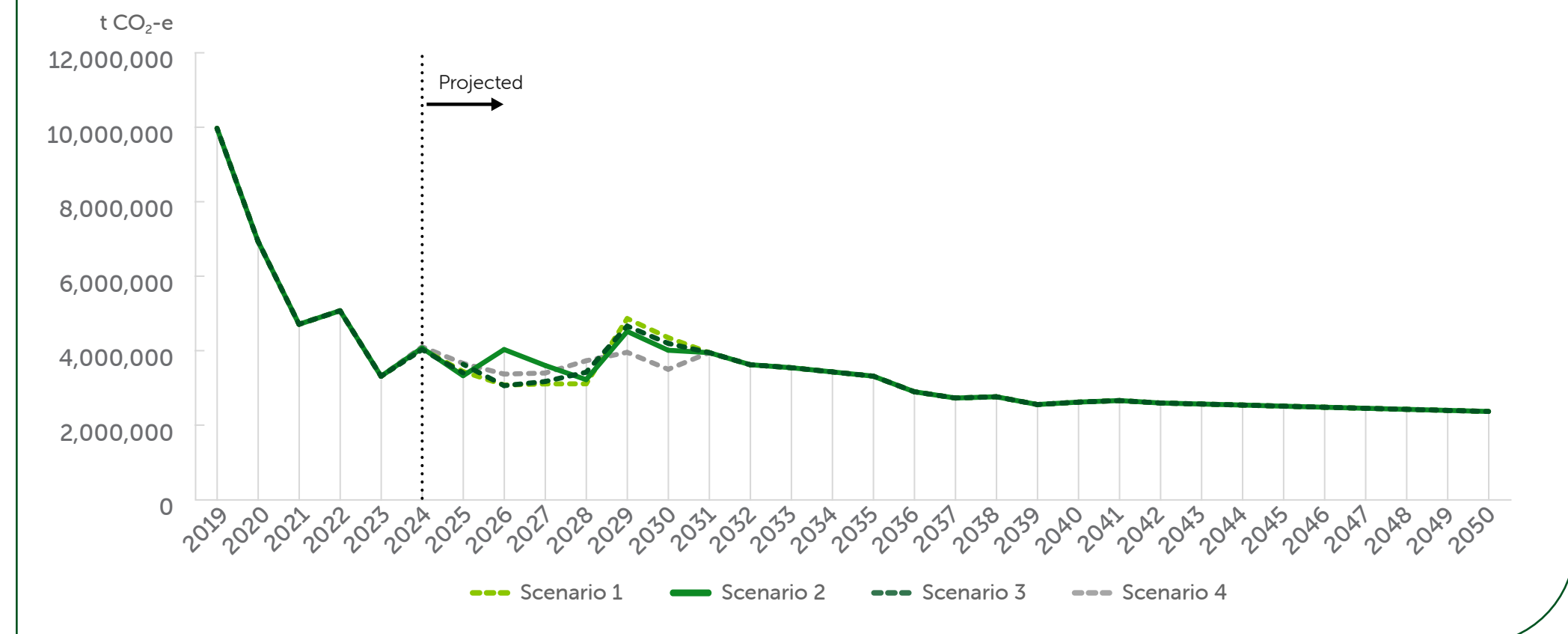


Figure 9: Emissions reductions under Scenarios 1 and 2 and Slow and Medium Transitions for Accelerated Business Profile case to 2030

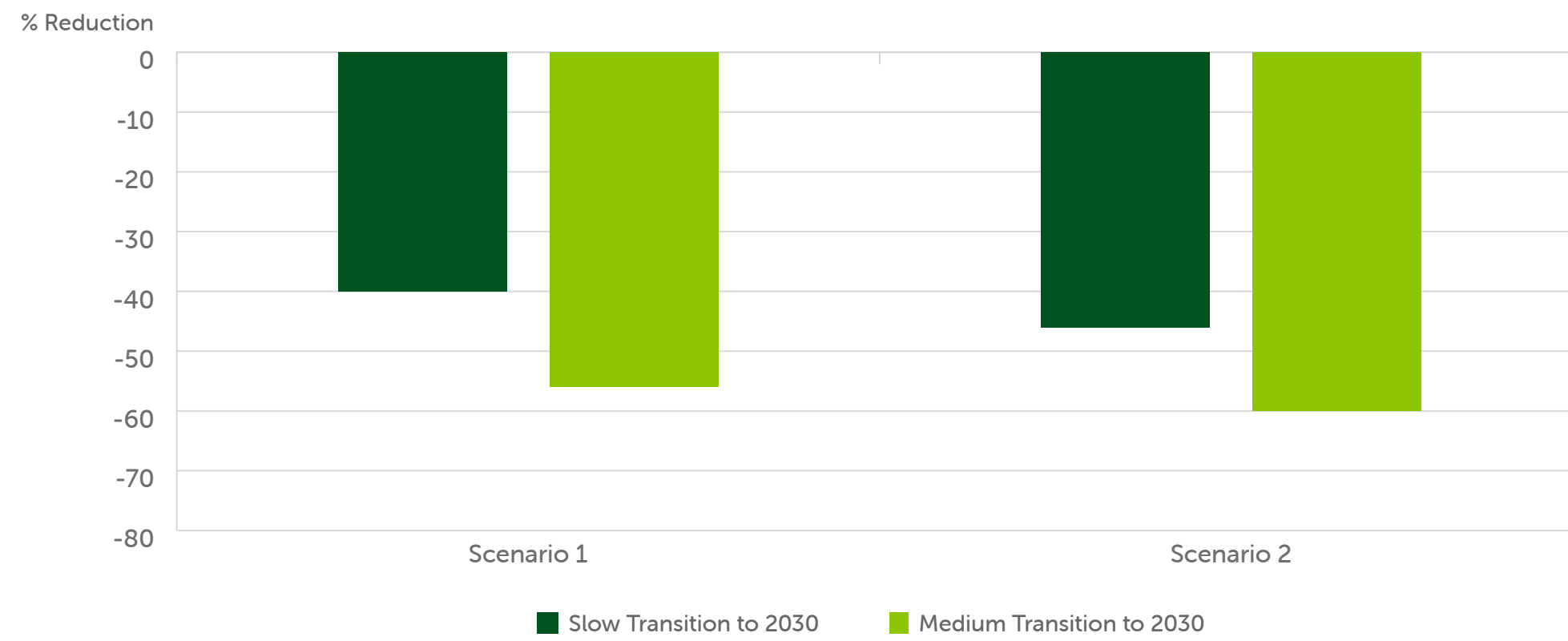


Figure 10 on the right shows that emissions have fallen significantly since 2019 and will continue to fall until the late 2020s, noting Category 3d emissions were high in 2019 due to production issues associated with coal availability at Mount Piper in New South Wales necessitating higher energy purchases from the NEM. Emissions are then forecast to rise in FY2028-29 post the closure of Yallourn in mid-2028. While the Yallourn closure significantly reduces our Scope 1 GHG footprint, the portfolio has been modelled as being

generationally short relative to our customer demand in Victoria, necessitating purchases of electricity from the NEM. The upstream emissions associated with the purchase of this energy must be accounted for under Scope 3, Category 3d. After this time, Scope 3 emissions are forecast to continue falling in line with the decarbonisation levers outlined above.

Figure 10: Scope 3 category emissions for Scenario 2, Medium Transition, Accelerated Business Profile case

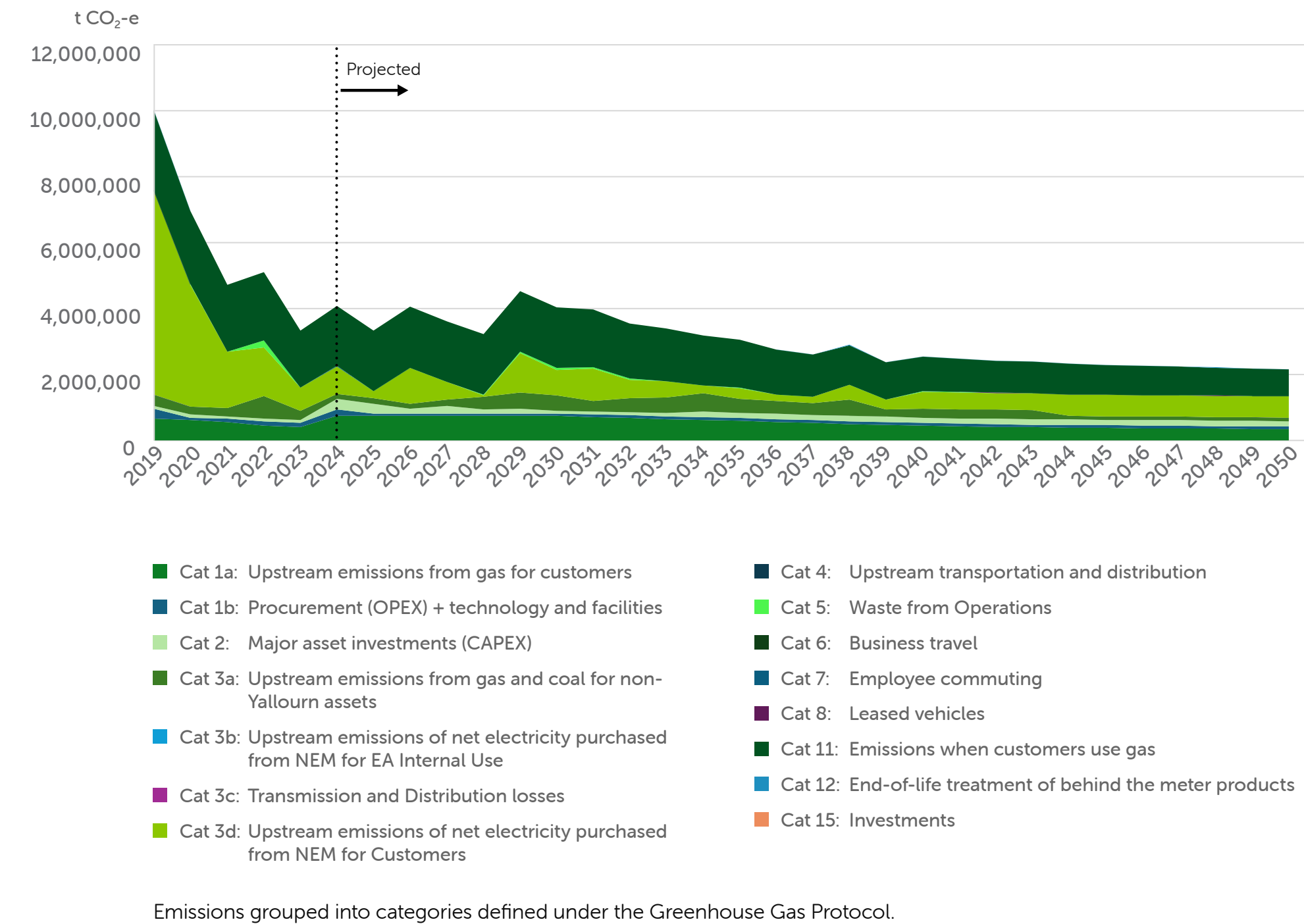
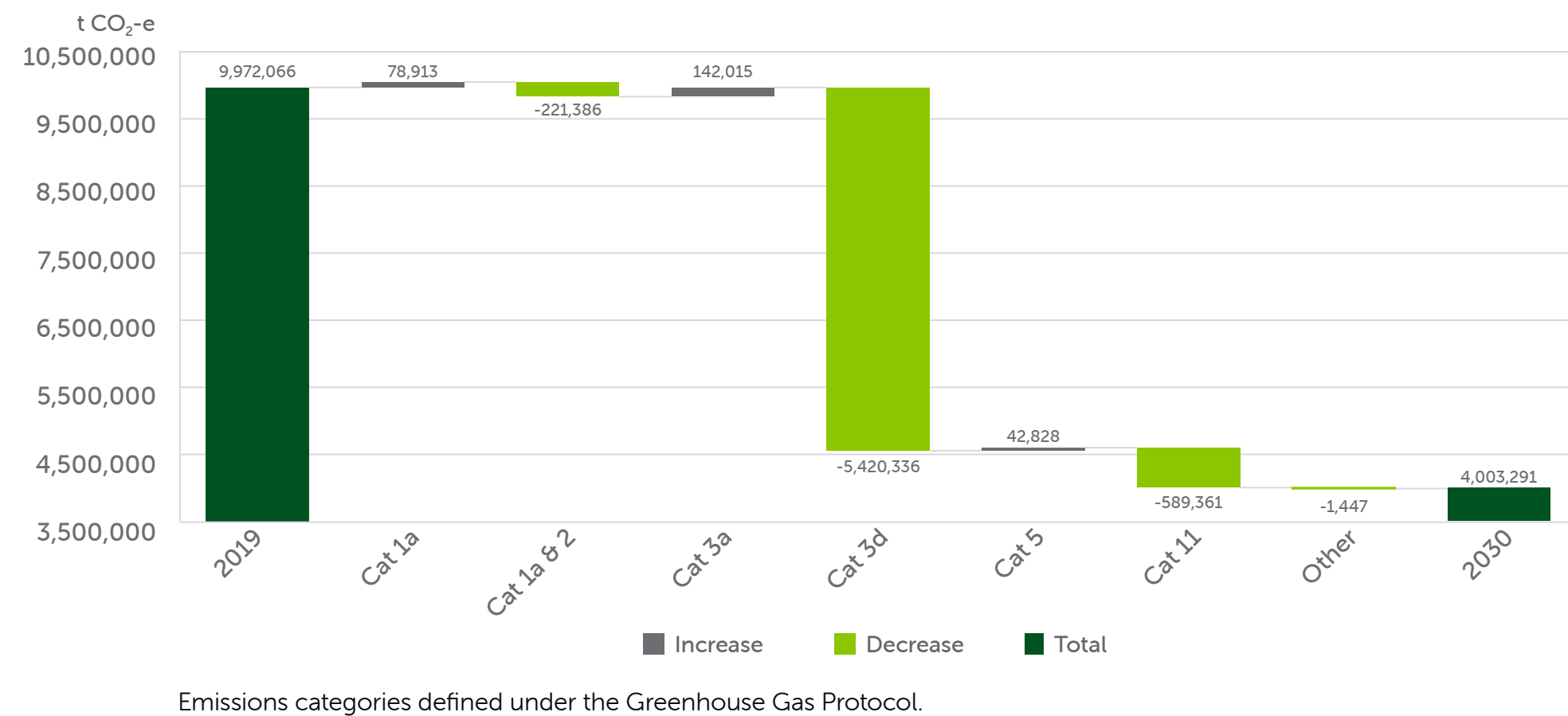


Figure 11: Change from 2019 to 2030 in key Scope 3 categories for Scenario 2, Medium Transition, Accelerated Business Profile case



The graph above shows that the majority of the reductions to 2030 will stem from a reduction in emissions associated with the upstream emissions from NEM purchases for customers (Cat 3d). These reductions are highly uncertain and depend on a number of business, market and energy system factors.

While some of these factors are within our direct control, our influence on other factors will be limited. For example, the closure of Yallourn will lower the Victorian grid carbon intensity, which will in turn lower the emissions of any Scope 3d purchases of electricity for customers. Exactly how much the grid decarbonises, however, depends upon the actions

of other market participants in delivering their own generation and firming assets, customer demand and State and Federal Government policy settings and actions; amongst other factors.

In turn, these factors will influence when State emissions intensities are likely to fall below that of gas combustion. Our internal analysis indicates this will not occur in either Victoria or New South Wales until the 2030s. Until then, household electrification measures, perversely, have the potential to increase Scope 3 emissions depending on the electrification measures undertaken and the household demand characteristics.

To mitigate these decarbonisation uncertainties, a conservative modelling approach has been taken for NEM energy purchases. We have assumed we will be short when emissions are highest, i.e. in the evening and early morning periods. As shown below for New South Wales, this sees an almost 30% higher emissions intensity than if whole day estimates were used.

Intra-day GHG Emissions Intensity (New South Wales 2030 est.)	
Period	Annual Average Emissions Intensity (t CO ₂ -e/MWh)
Whole day	0.364
Hours 0100–0600 and 1800–2400	0.471
Hours 0600–1800	0.237

Looking out to 2050, further forecast uncertainty exists with regard to business initiatives, technological advancements and NEM decarbonisation that will support Net Zero attainment. The political, investment, regulatory and environmental outcomes that might support or challenge such market norms and developments are largely unknown, adding a further range of significant uncertainties to any projected outcomes. We also note that the use of offsets in line with best practice guidance will be required to mitigate residual emissions associated with achieving Net Zero for Scope 3 by 2050 for the decarbonisation pathway shown in Figure 4 in Section 7.4.

All care has been taken to ensure accuracy of the information presented and weighing the likelihood of projections, including alignment with Scope 3 Greenhouse Gas Protocol methodologies; and where these are uncertain, a conservative approach has been applied. Despite this, the scenarios presented should be read as only several of a large number of possible decarbonisation outcomes and subject to all the assumptions and uncertainties outlined in Section 10.1. We will continue to refine modelling, assumptions and projections in future Climate Transition Action Plans in line with the ambition to reduce Scope 3 emissions presented in Section 6.3.

7.8 Capital Allocation

EnergyAustralia has implemented a new Capital Allocation Framework (CAF) that prioritises capital investment and underpins CTAP commitments while maintaining investment grade credit metrics and ensuring a resilient balance sheet.

A three-tiered approach will see capital first prioritised (1st Order) for sustaining existing business assets (in line with their role outlined in CTAP 2024) and small opportunistic projects with quick payback periods and high returns. After those requirements are addressed, capital (2nd Order) will be directed toward investments to support our energy transition. This includes flexible capacity investments to replace Yallourn after its closure and later Mount Piper, along with indirect renewables investments such as PPAs where appropriate. Any surplus funds beyond those required to meet these two tiers (3rd Order) will be used to reduce debt or returned to our shareholder, CLP.

All 2nd Order investments will be required to align with our strategy, CTAP 2024 targets and ambitions and the need to create long-term value for the business. This includes meeting internal hurdle rate criteria that is at or above the company's cost of capital, depending on the investment.

We have already invested in several projects that accord with this CAF in advance of its formalisation such as the Wooreen battery project and the Golden Plains Wind Farm PPA. However, there are also a range of other pre-Final Investment Decision activities we have supported to underpin delivery of our CTAP 2024 targets and ambitions. These include project feasibility, advanced development and market trials for initiatives such as the Lake Lyell Pumped Hydro project and the Hallett battery project.

As a result of this new CAF, we expect that the capital deployed to service our coal assets will reduce markedly by 2030, falling almost 50% relative to 2024 levels. In addition, new renewables, flexible capacity and storage investment will increase commensurately to achieve the up to 3 GW renewable energy ambition and associated decarbonisation pathway shown in Section 7.3 and Section 7.4. As noted in those sections, however, significant uncertainties exist and decarbonisation outcomes, including investment outcomes, will be subject to all the assumptions, limitations and risks outlined in Section 10.

We expect to provide further information on capital allocation as part of our disclosures, prepared in accordance with the Australian Sustainability Reporting Standards, to be published in February 2026.



8. Sustainability at EnergyAustralia

8.1 Responsible Yallourn transition

In 2021, we announced our commitment to retire Yallourn in mid-2028, with a plan for closure, including investment in new capacity, agreed with the Victorian Government.

We are proud that the plan included a \$10 million commitment to fund the Yallourn Transition Program to support its workforce.

By providing seven years' advance notice of the retirement of the Yallourn power station, we are able to collaborate with the Yallourn workforce, the community, Traditional Owners, unions, and other stakeholders, towards a just transition. We are working with the Net Zero Economy Agency, to provide input on matters including best-practice just transition.

The Yallourn Transition Program (Program) supports workers with long-standing ties to Yallourn with access to services to plan, prepare and, where desired by our people, upskill for the future. Since the Program was launched in November 2022, we have seen employees act to prepare for their future with over 600 individual career coaching sessions taking place, nearly 350 individual transition plans developed, over 100 training activities initiated, 25 financial advice sessions provided and over 50 financial plans developed.

About 60% of the Yallourn workforce has indicated a desire to continue residing in the region beyond the closure of the Yallourn power station. Recognising this, EnergyAustralia is exploring partnerships with potential future employers in Gippsland to create transition pathways for secondments and employment. An example is a Careers Fair held at Yallourn with over 20 suppliers from across Gippsland attending, all interested in speaking to the workforce about potential training and career opportunities after the retirement of Yallourn.

In parallel, the construction of the Wooreen utility-scale battery by 2027 will enable more renewable energy to enter the grid and will continue the Latrobe Valley's history of powering business, industry and communities.

With the launch of the Program in late 2022, many Yallourn workers have had the opportunity to carefully consider their future employment prospects and career transition. The Program has allowed workers from Yallourn who wish to commence retraining to start their studies. See some of their stories on this page.

The Program supports each worker, whether that be to retrain, reskill, seek support or prepare for life after Yallourn's closure in mid-2028. It is tailored to an individual's interests and stage of life, offering support to those who are looking to retire, and also provides financial services and planning. This flexibility enables individuals to take control of their employment future.

The Yallourn Transition Program is helping individuals retrain for a new career

The Program has seen several Yallourn workers commence retraining in a variety of fields. Here are some stories from our people:

A unit controller studying a Master of Arts (Writing and Literature):

"I started in the energy sector as a power station chemist in 2005, and moved into Operations seven years ago, so a career pivot isn't new to me.

"In preparing for the closure of Yallourn, I have started studying a Master of Arts in Writing and Literature, with a specialisation in professional writing. This includes all types of writing from social media and content creation, public relations and marketing communications, through to technical and creative writing.

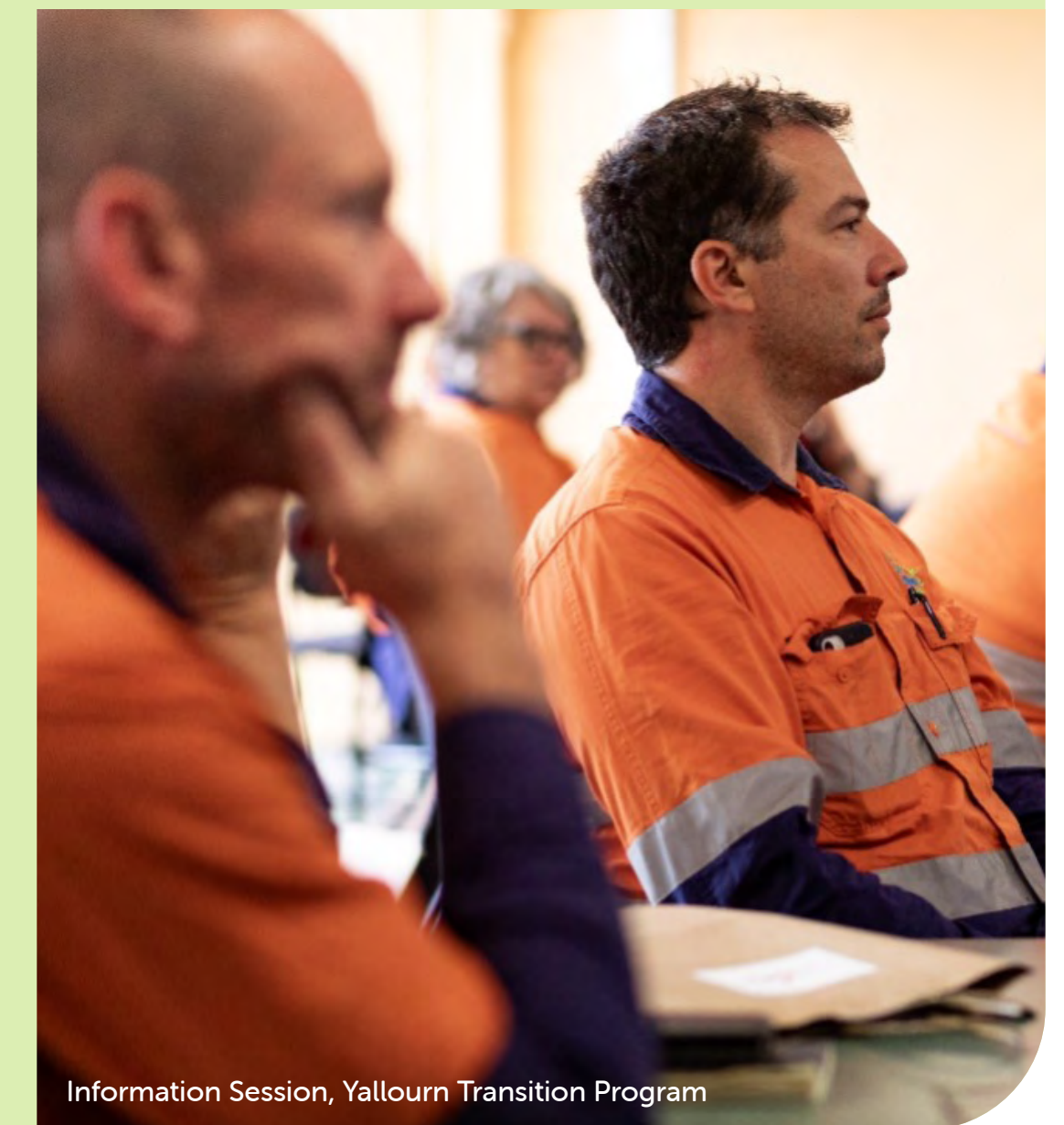
"This will enable me to offer freelance services and work from anywhere (preferably somewhere warm and sunny!) once the station closes."

A warehousing/spare parts worker completing a Bachelor of Nursing and Midwifery:

"Nursing is a position that will give me employment into the future and enable me to work anywhere, whether I choose to relocate or stay in the valley. I can choose what path I want to take and specialise in whatever field I choose."

A unit controller studying an airbrushing course:

"The way in which my airbrushing course fits in with my transition, is that it adds an additional option to customers who may be purchasing one of my custom-made bike frames in that it can be ordered with a lot more variation with regards to the paint work. Also, since starting the course, it has opened my eyes up to the many other areas in which airbrushing can be utilised, which can be personally, very rewarding."



Information Session, Yallourn Transition Program

8.2 Supporting our local communities

We value being an active member of the communities in which we live and work.

The energy transition brings about opportunities for social investment, to ensure all Australians can participate in, and benefit from, the shift to renewables. Research indicates that the energy divide is growing, including from an affordability and energy efficiency perspective (including access to new energy solutions that provide the opportunity to lower bills), as well as between communities where some are more directly impacted by the energy transition than others. These circumstances often disproportionately affect those who already face the highest barriers to inclusion in our society.

In 2024, our portfolio of workplace giving, community grants, volunteering and community investment has been refreshed to align with our purpose. Through targeted social investment in the areas of STEM education, sustainability and localised social issues, we will continue to help to build resilient and vibrant communities as we transition our business and contribute to the industry transition.

Through our workplace giving program, we have now donated approximately \$2.5 million to charity and volunteered over 16,000 hours since 2018. Our Community Grants program continues to support local projects around our power stations and Geelong Contact Centre with funding of up to \$10,000 each. In addition, the workplace giving program facilitates meaningful volunteering in our local community including the People’s Kitchen program in Morwell, which sees our staff volunteer each month to produce around 150 meals which are then distributed to local community members who are experiencing hardship.

In June 2024, we celebrated 100 years of Yallourn power station and its continuing contribution to Victoria’s energy system. There are more than 500 permanent workers living in the region around the power station and 240 small businesses from which Yallourn procures goods and services. We maintain relationships with the Gunaikurnai Land and Waters Aboriginal Corporation, the local Traditional Owner organisation, on a range of initiatives including employment outcomes for local First Nations Peoples. In the past decade, Yallourn and its workers have contributed around \$3 million to a wide range of charities and organisations that support local families, community groups and businesses.

As part of the development of new projects to support the energy transition, we have opened local community hubs. We opened a community hub in Morwell, Victoria, in August 2024 where the community can come to learn more about the Wooreen battery, our local assets and plans for Yallourn’s closure.

A similar community hub also opened in Lithgow, New South Wales, in December 2023. Known as Project HQ, it is a community engagement space created by us for the Lithgow community to learn more about the proposed Lake Lyell Pumped Hydro project. It also includes information on the Mount Piper utility-scale battery project.

Our Lake Lyell Pumped Hydro project has initiated a community benefit sharing program, which aims to deliver tangible benefits to the Lithgow community throughout the project’s life. The program will fund projects and address issues that resonate with the local community. The program aims to ensure that the community hosting this major energy infrastructure project gets to share in the benefits it brings.

Through our workplace giving program, we have now donated approximately \$2.5 million to charity and volunteered over 16,000 hours since 2018. Our Community Grants program continues to support local projects around our power stations and Geelong Contact Centre with funding of up to \$10,000 each. In addition, the workplace giving program facilitates meaningful volunteering in our local community.



8.3 Supporting our customers

All customers need to be able to access energy and related services fairly, equally and reliably. Through our continued participation in the industry's voluntary Energy Charter, we commit to working with other energy-sector participants and bodies to improve support for customers experiencing economic vulnerability.

Increases in the cost of living remain challenging for many Australians. To support households facing short-term financial difficulties, we continue to offer payment plans and payment extensions, and provide information on government assistance that is available to customers. For customers experiencing financial hardship, assistance is available under our EnergyAssist hardship program. The program helps customers by offering additional tailored solutions which can include tailored payment plans, ensuring they are on the best plan for their circumstances, information on Government assistance that is available and payment matching, as well as energy-efficiency education to ensure that customers are well informed in making decisions that impact their energy consumption. Since May 2022, we have increased the number of staff working to support our vulnerable customers by approximately 68% and increased the financial support to those customers by approximately 160%.

We have also partnered with various organisations to work directly with customers in financial hardship and improve their energy efficiency:

- We are a member of the One Stop One Story Hub Partnership, which offers a single entry point for individuals facing family and domestic violence or financial hardship. This initiative allows customers to share their story once and gain access to comprehensive, wraparound support from multiple service providers.
- We have partnered with Uniting to provide customers with energy-efficiency information via a home or phone audit, to lower energy consumption and bills. These visits also provide customers with other support options available to them.
- We have also partnered with The Good Guys to assist with the delivery of new appliances and the removal of old as part of our appliance swap program.

8.4 Reconciliation

We continue our commitment to progress reconciliation through the delivery of our Innovate #2 Reconciliation Action Plan, launched in 2023.

Following the lifting of awareness in relation to reconciliation in the business, our focus is now on making progress on cultural understanding and safety, First Nations employment and supplier engagement.

Mob Jobs, a First Nations' owned and operated business that supports organisations to improve their ability to employ, develop and retain Aboriginal and Torres Strait Islander employees, has been engaged to support us with our revised First Nations employment strategy and implementation.

In addition, all staff now have access to Cultural eLearning training, and some of our Board and senior leaders participated in a specialist session to better understand the value of First Nations supplier engagement.

We continue our work and engage with our local Traditional Owners and Custodians to grow our understanding of the sites on which we live and work.

On-going and consistent Traditional Owner engagement is an important commitment across our development projects. For example, our close working partnership with the Illawarra Local Aboriginal Land Council throughout the construction and commissioning of our Tallawarra B Power Station resulted in respectful and appropriate handling and cultural celebrations in relation to an artifact that was uncovered at the site, which was understood to be a hand axe, in line with our Aboriginal Cultural Heritage Management Plan.

We also have a longstanding relationship with Aunty Sharon Riley, a respected Traditional Owner and Wiradjuri Elder, who has played an important role in the Lake Lyell Pumped Hydro project. Her perspectives and knowledge on Aboriginal heritage and participation in the platypus (biladurang) study have been invaluable in the preparation of the project's Environmental Impact Statement.

8.5 Biodiversity and environmental impacts

Our Tallawarra B project had an Environment Management Strategy that included commitments in relation to vegetation offset planting as part of the approval to remove a number of native trees for the construction of the project. We partnered with Wollongong Botanical Gardens and the Illawarra Local Aboriginal Land Council (ILALC) for the identification and germination of native species. ILALC provided the expertise and labour for ground preparation, fencing, planting and irrigation for the 1,800 native trees that were planted between the power station at Mount Brown Reserve. We have also installed signs designed by the Coomaditchie United Aboriginal Corporation to provide information on the flora, fauna and heritage aspects of the area. The vegetation offset area is now well established and we look forward to seeing this offset become part of the local habitat.

We made a public commitment to be an adopter of the Taskforce on Nature-related Financial Disclosures (TNFD). The TNFD is a market-led and science-based initiative supported by national governments, businesses and financial institutions worldwide. It has developed a set of disclosure recommendations that encourage and enable businesses to assess, report and act on their nature-related dependencies, impacts, risks and opportunities.

We are currently trialling a TNFD pilot project to better assess nature-related dependencies, impacts, risks and opportunities. The outcomes of this trial will assist in the development of our pathway toward aligning with TNFD disclosure recommendations.

8.6 Our approach to asset development

As we invest in new assets, working collaboratively with local communities is vital to our success.

We are a signatory to the Clean Energy Council's Best Practice Charter for Renewable Energy Projects, which outlines commitments that communicate the standards to be upheld in the development of current and prospective firming for renewables and renewable development projects. Consistent with this Charter, we expect to share the benefits of our projects with host communities.

The following principles for benefit-sharing, reflecting the Charter, will be applied to all of our large-scale projects:

- **Aligned** – Benefit-sharing should be clearly linked to the project's business case and objectives and tailored to reflect known social needs and risks.
- **Proportionate** – The value of allocated shared benefits is proportionate to known direct and indirect community and individual impacts.
- **Sustainable** – Benefit-sharing initiatives are structured to deliver positive, quantifiable impacts for the host community that are self-sustaining in the long term (equivalent to the lifespan of the asset).
- **Collaborative** – Multiple community stakeholders are actively consulted when considering options for benefit-sharing to ensure that chosen projects accurately reflect and respond to host-community interests, expectations and needs.

Collaboration is currently underway as part of the design and planning for the Lake Lyell project. To date, a range of avenues to involve community stakeholders in the development of the project have been provided, seeking stakeholder feedback on limiting the impacts of the project. This feedback has directly informed changes to the project's design, including locations for key infrastructure and biodiversity considerations. This active consultation will continue to ensure that benefit-sharing is consistent with the Charter.

Community engagement is a cornerstone of EnergyAustralia's large-scale battery projects, Wooreen in the Latrobe Valley in Victoria and Hallett in South Australia's mid-north, with on the ground and traditional owner engagement forming a key part of engagement.

The Wooreen project was announced in 2021, forming part of our announcement on a well-planned closure of the Yallourn Power Station site which has proudly powered Victoria and Australia since 1924.

The name Wooreen was gifted by Gunaikurnai Elders and means 'Light' in local language. This follows on from our well-developed relationship with the Traditional Owners representative body, Gunaikurnai Land and Waters Aboriginal Corporation (GLaWAC) which has resulted in real outcomes including a targeted Apprenticeship program for local Indigenous community members which has been in place since 2019. On the ground engagement has occurred with local representative community groups, Latrobe City Council, the Hazelwood North Community and Country Fire Authority through meetings, drop-in sessions, community markets and direct mailings to residents. The opening of the community hub in Morwell will also assist with direct community engagement.

The Hallett battery project was announced in late 2023 and is located on the site of the existing Hallett power station in South Australia. During the first half of the year, engagement has occurred with the Traditional Owners, the Ngadjuri People Aboriginal Corporation, Goyder Council and Northern Areas Council. In addition, during May 2024, information sessions were held in the towns of Hallett, Burra and Jamestown with a subsequent social media survey campaign all designed to introduce the community to the project, and importantly seek their initial feedback on the project.

8.7 Supply chains

Fairness through the clean energy transition extends to our suppliers as part of the commitment to ethical, just and responsible procurement. Suppliers are assessed on multiple Environment, Social and Governance criteria to identify both risks and opportunities. One of our core objectives is ensuring we continue to uplift our regulatory compliance in key areas. In 2024 we implemented a third party risk management tool with blockchain technology. The tool delivers monitoring and provides historical, predicative and prescriptive risk insights combining internal data, supplier data and independent third party data, providing a wholistic view of a supplier's current risks, and the ability to provide alerts and trend data changes over time. Our fourth Modern Slavery statement, produced in accordance with the *Modern Slavery Act 2018* (Cth), was submitted to the Federal Government in June 2024. We continue to work with our suppliers to support First Nations employment and business development.

9. Operational alignment to CTAP 2024

9.1 Governance

Sustainability, including our response to climate change, is integrated into our corporate governance structure and, as stated, is a core pillar of our purpose.

The EnergyAustralia Board has overall responsibility for the governance of the organisation and provides leadership and strategic guidance relating to the development and implementation of the corporate strategy.

The Board is made up of 10 Directors, including four Directors from our parent company, CLP Holdings Limited. The Board members bring experience from a wide range of industries and backgrounds, including utilities, oil and gas, construction, industrials, retail, marketing, finance, insurance and government and policy. The Board further develops its skills through seeking input from members of management and regularly invites independent advisers and relevant industry and subject-matter experts to inform them of the latest market and industry developments, including climate risk. The CLP-nominated Directors on the Board also ensure that our shareholder’s views and approach to climate transition, set out in CLP’s Climate Vision 2050, are taken into account and an aligned approach is reached.

The Board Sustainability Committee assists the Board in overseeing our role in the broader CLP climate change, decarbonisation and energy system transformation performance and governance responsibilities.

Figure 12 on the right illustrates how our response to climate-change considerations is integrated into our corporate governance structure.

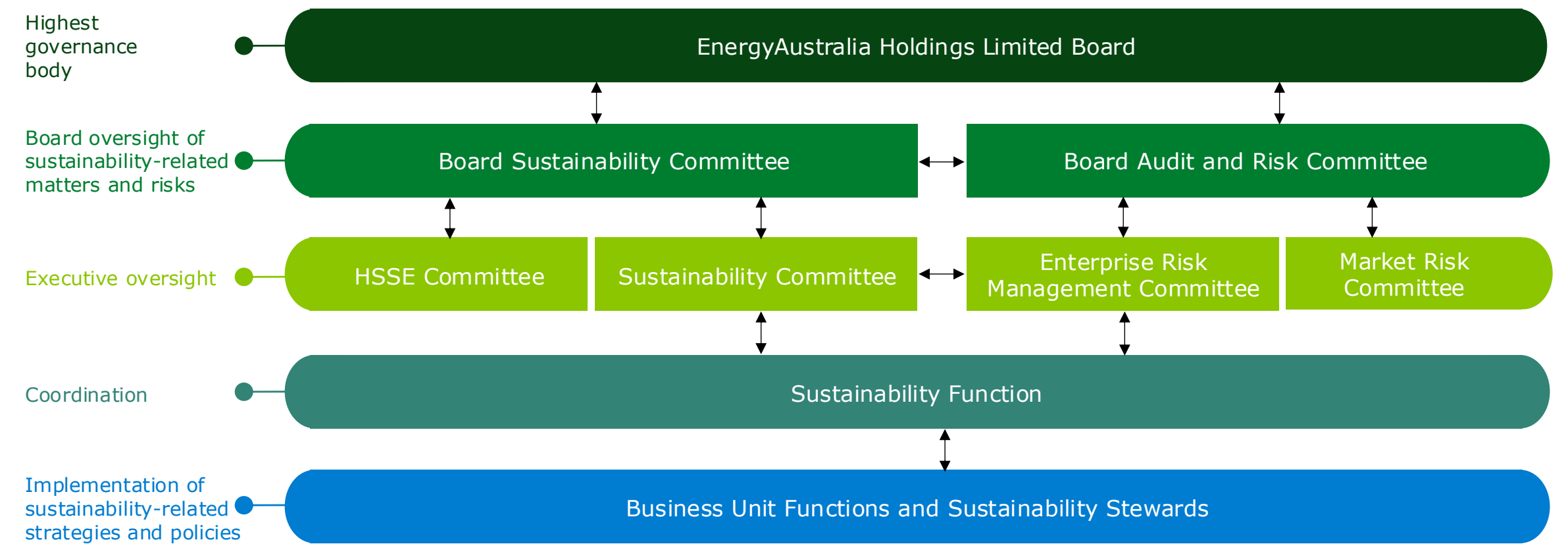
As at the date of CTAP 2024, we are undertaking preparations to make first year mandatory disclosures under the Australian Sustainability Reporting Standards arrangements. As part of this process, it is augmenting its climate risks, developing its climate-related opportunities and considering its governance arrangements to confirm alignment with the requirements of the reporting under the ASRS. We will publish these disclosures in early 2026, based on 31 December year-end financial year data from 2025.

Climate risks are and will continue to be managed through our enterprise risk-management process. This process is aligned with the international standard ISO 31000 which provides guidance on risk-management methodologies. This includes defining the controls and mitigations to manage and treat the risks.

Regular reviews of climate risks are conducted by the Enterprise Risk Management Committee and the Board Sustainability Committee. These risks are also considered by the Audit and Risk Committee as part of its consideration of Enterprise risks. Our parent company, CLP Holdings Limited, integrates our most material risks into its own risk scenarios and reporting.

Our purpose is to “lead and accelerate the clean energy transformation for all” recognising the role we play in the transition of Australia’s energy system to Net Zero. This purpose is important to our corporate strategy which is overseen by the Board. The corporate strategy ensures that the Board and management routinely consider the external context, risks and opportunities which shape and drive our strategic and business plans.

Figure 12: EnergyAustralia’s corporate governance structure



9.2 Remuneration and incentives

We are committed to aligning executive remuneration with positive climate, community and customer outcomes.

Current executive remuneration includes two incentive elements: a short-term and a long-term incentive. The short-term incentive is subject to the achievement of both individual objectives and the annual company Balanced Scorecard, both defined each year. Under the Balanced Scorecard, an element relates to the delivery of the development pipeline that is central to the decarbonisation of our portfolio, including the installation of batteries at customers' premises. The scorecard measures and targets are reviewed annually and subject to change based on company strategy.

The current long-term incentive spans three years and one element is reserved for strategic execution, which includes delivering projects required for CTAP 2024 (for example, the storage and firming capacity).

9.3 Organisational Culture

In order to support the strategic ambition of CTAP our People and Culture Strategy includes a focus on enabling the organisation and our workforce to be 'future ready' for the transition and the change in our asset base. This includes identifying and prioritising the capabilities of the future to ensure we can retrain or deploy our people or acquire new skills and capabilities into the organisation.

Our organisational behaviours collectively known as 'The EA Way' have been in place since 2021 and continue to be embedded in the organisation. These behaviours ensure our customers, community stakeholders and employees are considered in the work we do every day:

- **Be purposeful** – align the purpose of our organisation to lead and accelerate the clean energy transition for all with the work that each of us do every day and to constantly look for ways to improve and do better
- **Make a difference** – doing the right thing for our customers, stakeholders and the environment
- **Be bold and move fast** – having the courage to change and recognise the pace required to transition the energy system and achieve benefits for customers
- **Play more, together** – using teamwork and diverse perspectives to get better outcomes

9.4 External advocacy

A list of our recent, major external advocacy submissions is available at [Submissions and advocacy | EnergyAustralia](#). Looking forward, we expect reliability, security, safety, affordability and sustainability issues to form the focus of our advocacy efforts and these are prioritised in line with our CTAP 2024 objectives.

We support this advocacy through collaboration across many forums. This includes through various industry groups including the Clean Energy Council, the Australian Energy Council and Business Council of Australia. We have been involved in the Climate Leaders Coalition as both a general participant and member of the project team tasked with delivering the [Nature Starter Playbook](#). We will continue to support and prioritise collaborative endeavours consistent with CTAP aspirations and objectives into the future.

9.5 Memberships

We hold a variety of memberships to support our advocacy aims and CTAP objectives. Since publication of CTAP 2023 in August 2023, we have become a member of the Electric Vehicle Council. All other memberships remain the same as shown below.

- Australian Energy Council
- Australian Industry Group
- Business Council of Australia
- Carbon Market Institute
- Champions of Change Energy
- Clean Energy Council
- Climate Leaders' Coalition
- Committee for Gippsland
- Electric Vehicle Council
- Energy Users Association of Australia
- Minerals Council of Australia (asset level membership for Yallourn mine ceasing in 2028)
- Signatory to the Energy Charter

10. Assumptions, risks, limitations and reviews

While all care has been taken to ensure the strategies and decarbonisation pathway in CTAP 2024 are robust, it necessarily relies on assumptions, expectations and best estimates of uncertain future events. The most material of these and the risks they present to CTAP 2024 achievement expected over the next three years are detailed below. Any potential impacts, including financial impacts, will be detailed in the forthcoming Australian Sustainability Reporting Standards reporting. Regardless, ongoing monitoring of risks and uncertainties will continue to occur to gauge and respond proactively to maintain the Net Zero trajectory.

10.1 Assumptions

Forecast asset retirement and new project build schedules:

Our ability to decarbonise is dependent on the delivery of new capacity, and the continued supply from other energy suppliers until their scheduled retirements. For example, AEMO modelling suggests that 15 GW of gas-fired generation will be required for peak load and firming by 2050. Should this be deployed in time, this will mean Mount Piper is able to operate in a reserve role and will not need to operate beyond expectations or supply a greater volume of electricity than forecast for the purposes of reliability and grid security.

Conducive policy and market settings: Investment in renewable energy will depend significantly on the extent to which the market is able to generate sufficient revenue from investments and supporting mechanisms such as the Federal Government's Capacity Investment Scheme. This will in turn impact the speed and scale of long-term electricity storage asset deployment and the construction of renewables. If policy and market settings are supportive, firming will not lag behind what is needed to support the increasing volumes of renewable energy and facilitate the closure of coal-fired assets.

Customer support for the energy transition: Sufficient C&I and mass-market customer appetite for contracts bundled with renewable Power Purchase Agreements (at affordable rates) or GreenPower are important to our intention to procure long-term renewable energy supply at the volumes targeted.

Access to capital and credit rating: Access to competitive debt, equity, insurance and tradable instruments such as carbon offsets is important to timely investment and our resulting transition timeframes. For example, our credit rating is important for competitive access to capital and for its capacity to enter into Power Purchase Agreements for offtake from renewable projects. However, any other external financial shocks that limit credit, or competition for credit, may undermine project viability or impede delivery timeframes.

Forecast rate of technological development and associated costs: For power system emissions to decline as fast as forecast it requires the effectiveness and reduction in cost of new technologies to eventuate as forecast, for example long-duration electricity storage. The capacity for generation assets such as our Tallawarra B power station to use significant quantities of renewable hydrogen⁷ requires hydrogen technology and production to be commercially viable within anticipated timeframes. Additionally, if technology costs do not decline as forecast, this may see the continued operation of existing assets beyond currently scheduled closure dates.

System reliability and security: The ability for existing dispatchable plant to operate up to its scheduled closure date or change patterns of operation to address system reliability and system security concerns is dependent upon sufficient grid capacity and technical grid services. Without these, there may be variations in power station emissions between years and higher overall emissions and higher emissions intensity for longer.

Mount Piper commercial operation and coal supply:

Our ability to continue to operate Mount Piper, including in a reserve role to contribute to energy system reliability and security, is based on the assumptions that it will be commercially viable; a sufficient, cost-effective supply of coal can be procured; and doing so meets all environmental obligations and responsibilities.

10.2 Risks

Examples of some risks that EnergyAustralia considers material to meeting its commitments include:

Failure to obtain appropriate social licence and access to land to host infrastructure: Existing capacity (such as Mount Piper) may need to continue operating for longer than forecast if sufficient social licence, access to land (including for transmission lines) and stakeholder endorsement are not obtained to build or connect new sources of renewable electricity and capacity asset supply.

Delayed delivery of infrastructure to support the clean energy transition: The clean energy transition will require significant upgrades to and expansion of electricity transmission and distribution infrastructure. Delays to infrastructure delivery may result in the entry of new generation projects to the market being delayed, distributed Consumer Energy Resources being sub-optimal, and existing generation being required to remain in operation to ensure grid stability.

Uncertainty in emissions intensity: An increase in the speed of or, alternatively, continuing delays to the energy transition will result in variations to our forecast Scope 1 and Scope 3 emissions reductions. For example, the timing at which the emissions from NEM purchases fall below that of combusted gas and thereby speed or inhibit lower emissions electrification outcomes. Similarly, increased variability of renewables generation than seen historically may lead to increased operation of emissive assets and thereby higher emissions than forecast.

Supply chain, critical skills shortages and data access: International competition for skills, materials and resources, and challenges in procuring these transparently and ethically, may result in increased costs or delays to new projects contributing to slower-than-expected decarbonisation. Similarly, access to and reliability of counterparty data along with the success of upstream and downstream value chain decarbonisation efforts may compromise the speed at which Scope 3 emissions can be reduced.

Changes in government policy, market settings, environmental regulation or climate methodology: The speed and orderliness of the energy transition may be impacted by conflicting or misaligned legislative/regulatory settings, which for example, between State and Federal Government policies; will undermine confidence or incentives for new investments. Changes to carbon accounting rules, measurement methodologies for emissions or government policy may alter asset valuations, require the resetting of emissions targets, extend closure dates and change decarbonisation trajectories. Other wholesale changes to government policy, such as the reintroduction of a carbon price, or incentives to extend asset life, would also impact the approach outlined in CTAP 2024.

Gas asset reliance: The role to be performed by EnergyAustralia's gas-fired power stations in its portfolio will be impacted by the availability of gas, the ability to procure gas supply in a timely manner and the ability for those assets to run at significant levels of output over longer periods.

Changes in energy demand, network tariffs and customer preferences: Material changes in electricity demand as a result of the uptake of new energy products, coupled with shifts in how and when customers use energy (as a result, for example, of pricing structures that reward electricity use during periods of abundant renewable electricity supply), will change the nature of the investment required in generation assets. For example, our gas-fired power stations might be required to run at a higher output more often to meet demand peaks as a result of, for example, increased Electric Vehicle charging.

Geopolitical developments: Geopolitical tensions, slower international or sectoral decarbonisation trajectories and related policies may disrupt global supply chains, impact access to capital, reduce investment or drive international and domestic price divergence that results in more emissive capacity in the NEM continuing to operate.

Climate change and extreme weather impacts: Physical climate change impacts on assets within our portfolio, the NEM infrastructure, storage facilities and fuel supplies, and may result in changes to forecast operation, potentially resulting in increased emissions. Similarly, the effectiveness of regional and national adaptation efforts may also hinder a speedy transition and decarbonisation outcomes. Second order impacts on energy markets and related supply chains could also result in decarbonisation outcomes deviating from those forecast in CTAP 2024.

10.3 Limitations on forward-looking statements

CTAP 2024 has not been prepared as financial or investment advice or to provide any guidance in relation to our future performance or the performance of another entity. CTAP 2024 contains climate-related and other forward-looking statements which are based on the expectations, best estimates and assumptions of our management as at the date of preparation of CTAP 2024. However, these may be affected by a range of factors which could cause actual results to differ materially. These include, but are not limited to, actual energy demand; market, regulatory and policy changes; technological development; and general economic conditions.

Forward-looking statements are not statements of fact, guarantees, predictions or forecasts of future performance or outcomes, and are subject to both known and unknown risks, other uncertainties and may involve elements of subjective judgement and assumptions. These statements may be affected by limitations in data or methodologies, inaccurate assumptions or known and unknown risks, many of which may lie beyond EnergyAustralia's control. As such, you are cautioned not to place undue reliance on these statements, particularly considering the high degree of uncertainty around the nature, timing and magnitude of climate-related risks, and the uncertainty as to how the energy transition will evolve, which makes it difficult to determine their potential impacts with precision.

Specifically, scenario analysis has inherent limitations and relies on assumptions that may or may not be, or prove to be, correct and that may or may not eventuate which may cause actual results to differ materially from those expressed or implied by any forward-looking statements.

As part of our analysis, we have relied on climate scenarios from the 2024 AEMO ISP and we strongly advise caution is applied to understanding the additional limitations and uncertainties associated with this analysis. See [AEMO | 2024 Integrated System Plan \(ISP\)](#).

These statements are considered to be made on, and are applicable as at, the date of publication and no representation is made as to their accuracy, completeness or reliability after this date. Other than as required by applicable regulations or law, we do not undertake any obligation to publicly update, release or review any revisions whether as a result of new information or future events, after this date.

Past performance cannot be relied on as a guide to future performance. No representation or warranty, express or implied, is given as to the accuracy, completeness or correctness, likelihood of achievement or reasonableness of any forward-looking information contained in CTAP 2024.

CTAP 2024 may contain climate- and sustainability-related disclosures that have been prepared on the basis of publicly available information, internally developed data and other third party sources believed to be reliable. We have not sought to independently verify information obtained from public and third party sources and make no representations or warranties as to the accuracy, completeness, reasonableness or reliability of such information.

EnergyAustralia, its affiliates, Directors, officers, employees, or agents expressly disclaim any liability and responsibility for any decisions or actions which you may take and for any damage or losses you may suffer as a result of your use of or reliance on this material.

CTAP 2024 does not contain or comprise profit forecasts, investment, accounting, legal, regulatory or tax advice nor is it an invitation for any party to enter into any transaction.

10.4 Climate Transition Action Plan review cycle and updates

Our intention is to report progress against our Climate Transition Action Plan annually, noting the next report on progress will occur in February 2026 in alignment with our reporting obligations under the Australian Sustainability Reporting Standards. A full Climate Transition Action Plan review and release cycle will be completed every three years, with any material changes resulting in a revised Climate Transition Action Plan being released within the three-year period where necessary. We do, however, recognise that energy, climate and sustainability policy development and reporting are rapidly evolving. As international best-practice Climate Transition Action Plan reporting evolves, we commit to evolving with it. This may result in more regular and detailed reporting and additional iterations of the Climate Transition Action Plan.

As noted, reporting in accordance with mandated standards, the Australian Sustainability Reporting Standards, will commence for an initial tranche of companies in Australia that meet specific criteria (which will include EnergyAustralia) from 1 January 2025. Any implications for Climate Transition Action Plan ambitions and targets arising from these reporting requirements will be communicated in future iterations of our Climate Transition Action Plan.

11. Glossary

11.1 Defined terms

Absolute emissions: Absolute emissions refers to the total amount of greenhouse gases emitted into the atmosphere over a specific period, typically a year, reported as a total mass of carbon dioxide equivalence (CO₂-e). It is calculated against defined reporting scopes and includes other greenhouse gases such as methane, which are converted to an equivalent amount of CO₂ based on their potency as a greenhouse gas.

AEMO or Australian Energy Market Operator: Refers to the organisation that manages the electricity and gas systems and markets across Australia, helping to ensure that Australians have access to affordable, secure and reliable energy.

AEMO ISP: The AEMO ISP (Integrated System Plan) is a whole-of-system plan that provides an integrated roadmap for the efficient development of the NEM over the next 20 years and beyond. The most recent version of the AEMO ISP was published in 2024 and can be accessed here: [AEMO | 2024 Integrated System Plan \(ISP\)](#).

Ambition: Refers to an outcome that EnergyAustralia aims to achieve where the pathway to be pursued is subject to elements which have a higher degree of uncertainty or are outside of its direct control or influence.

ASRS or Australian Sustainability Reporting Standards: Australia's sustainability reporting framework will shortly commence, following legislative amendments which passed Federal Parliament, and the issuing of the ASRS by the Australian Accounting Standards Board (AASB) in September 2024. The first sustainability report in accordance with the ASRS will be required to be issued for annual reporting periods starting 1 January 2025 (or 31 December 2025 year-end). The ASRS are based on the International Sustainability Standards Board's IFRS S1 General Requirements for Disclosure of Sustainability-related Financial Information and IFRS S2 Climate-related Disclosures. The ASRS can be access at the AASB website: www.aasb.gov.au.

Base load: Generating units that typically run at all times throughout the year except during maintenance outages. Coal-fired generating units are a typical example of base load generating units.

Behind the meter assets: These are renewable energy units or systems that are commonly located at houses or businesses to provide them with power.

Carbon dioxide equivalent (CO₂-e): A metric measure used to compare the emissions from various greenhouse gases on the basis of their global-warming potential (GWP), by converting amounts of other gases to the equivalent amount of carbon dioxide with the same global warming potential.

Carbon offset: A carbon offset is a removal or avoidance of emissions, which adheres to an internationally recognised standard and is sourced from projects such as reforestation or renewable energy, in order to compensate for emissions made elsewhere.

Clean Energy Council: [Clean Energy Council](#) is a not-for-profit membership-based organisation representing and working with Australia's leading renewable energy and storage businesses to further develop clean energy in Australia.

CLP or CLP Holdings Limited: Refers to [CLP Holdings Limited](#) which is a power company listed on the Stock Exchange of Hong Kong and is the parent company of EnergyAustralia.

Commercial and Industrial or C&I customer: Refers to a customer which consumes greater amounts of energy than a small customer (being either a residential (household) customer or a business customer which consumes energy at or below a level determined under the energy laws applicable in Australian jurisdictions).

CER or Consumer Energy Resources: Consumer energy resources are electricity production or storage assets that are located behind the meter, within the property of energy users. They include rooftop solar panels, batteries and Electric Vehicles connection points.

Electric Vehicles: These are battery-powered vehicles, such as motor bikes, cars, buses and trucks.

Emissions intensity: Emissions intensity is the tonnes of CO₂-equivalent Scope 1 emissions per MWh of electricity sent out from defined assets.

Expected Unserved Energy: A measure of the expected amount of electricity not delivered to customers, as a result of inadequate capacity to meet the anticipated demand.

Firming: Capacity or assets for firming of renewables refers to energy that is not base load and can be switched on or off depending on demand. It can refer to gas-fired generation, battery energy storage systems, long-term duration storage assets and other flexible capacity technologies.

Greenhouse Gas (GHG) Emissions: Refers to and includes all greenhouse gases reported under the NGER Act. EnergyAustralia's greenhouse gas emissions include all Scope 1, 2 and 3 emissions arising from our entire operations.

Greenhouse Gas Protocol: [Greenhouse Gas Protocol](#) establishes comprehensive global standardised frameworks to measure and manage GHG Emissions from private and public sector operations, value chains and mitigation actions.

Greenhouse Gas Protocol Corporate Value Chain Scope 3 Standard: A supplement to the Greenhouse Gas Protocol that is the international benchmark for companies to assess their entire value chain emissions impacts and identify where to focus reduction activities.

Investor Group on Climate Change: The leading network for Australian and New Zealand investors to understand and respond to the risks and opportunities of climate change.

ISP Scenario(s): Three AEMO ISP scenarios that run to 2050 against which candidate development paths are tested. These include the Step Change Scenario which fulfils Australia's emission reduction commitments in a growing economy; the Progressive Change Scenario, which reflects slower economic growth and energy investment with economic and international factors placing industrial demands at greater risk and slower decarbonisation action beyond current commitments; and the Green Energy Exports Scenario, which sees very strong industrial decarbonisation and low-emission energy exports.

Just transition: Just transition is a principle, a process and a practice. The principle of just transition is that a healthy economy and a clean environment can and should co-exist. The process for achieving this vision should be a fair one that should not cost workers or community residents their health, environment, jobs or economic assets.

12. Endnotes

NEM or National Electricity Market: The National Electricity Market is a wholesale market through which generators and retailers trade electricity across Australia, with the exception of Western Australia and the Northern Territory.

Net Zero: Net Zero is defined in the ISO Net Zero Guidelines (IWA 42:2022) as “a condition in which human-caused residual greenhouse gas (GHG) emissions are balanced by human-led removals over a specified period and within specified boundaries”. For EnergyAustralia this means achieving Net Zero across our value chain. This will require a combination of emissions reductions, technological developments and offsets, which are required to address residual emissions that remain unfeasible to be eliminated permanently.

NGER Act: This refers to the *National Greenhouse and Energy Reporting Act 2007* (Cth).

Paris Agreement: References to the Paris Agreement mean the agreement of parties to terms of Article 2, Part 1(a) which reads, “Holding the increase in the global average temperature to well below 2°C above pre-industrial levels and pursuing efforts to limit the temperature increase to 1.5°C above pre-industrial levels, recognizing that this would significantly reduce the risks and impacts of climate change”.

PPA or Power Purchase Agreement: This is an arrangement in which a provider pays for and owns the renewable energy system but sells the energy it produces to businesses at a lower rate than energy from the grid. This allows businesses to obtain renewable energy at rates cheaper than retail without the need to purchase a system themselves.

Scope 1 emissions: These are direct GHG Emissions arising from activities over which we have operational control as defined by the NGER Act.

Scope 2 emissions: These are indirect GHG Emissions arising from the consumption of purchased electricity, heat or steam from activities over which EnergyAustralia has operational control as defined by the NGER Act.

Scope 3 emissions: These comprise other indirect GHG Emissions upstream and downstream of EnergyAustralia’s operations, and are estimated using the Greenhouse Gas Protocol’s Corporate Value Chain (Scope 3) Accounting and Reporting Standard and associated guidance documents.

Storage Agreements: Storage Agreements are agreements that are different to Power Purchase Agreements and under which EnergyAustralia becomes the registered market participant with AEMO and is responsible for the market operations of the asset.

Target: Refers to an outcome that EnergyAustralia plans to achieve where the pathway is subject to elements which are more certain and that are wholly or mostly within its means to influence or control.

Transition Plan Taskforce: A United Kingdom-based expert group established at COP26 to develop and publish a ‘gold standard’ for climate transition plans.

United Nations High-Level Expert Group on the Net Zero Commitments of Non-State Entities: The principal United Nations group responsible for developing stronger and clearer standards for Net Zero emissions pledges by non-State entities including businesses, investors, cities and regions, along with speeding up their implementation.

11.2 Units of measurement

Watt (W) Standard measure of electrical power when one ampere of current flows under one volt of pressure.

Kilowatt (kW) 1 kW = 1,000 watts.

Kilowatt hour (kWh) Standard unit of electrical energy representing consumption of one kilowatt per hour.

Megawatt (MW) 1 MW = 1,000 kW.

Megawatt hour (MWh) 1 MWh = 1,000 kW hours.

Gigawatt (GW) 1 GW = 1,000 MW.

Tonne (t) Standard measure of weight in the metric system, equal to 1,000 kilograms.

Kilotonne (kt) 1 kt = 1,000 tonnes.

Megatonne (Mt) 1 Mt = 1,000,000 tonnes or 1,000 kt.

11.3 Version control

This version produced on 4 December 2024.

- 1 CSIRO (2023), *Renewable Energy Storage Roadmap*, p. 116.
- 2 AEMO (2024), *2024 Integrated System Plan – overview*.
- 3 Renewable hydrogen is hydrogen produced through electrolysis powered solely by electricity supplied from an “eligible renewable energy source”, or with equivalent “large-scale generation certificates” as defined in the *Renewable Energy (Electricity) Act 2000* (Cth) or, in the future, Renewable Electricity Guarantee of Origin certificates.
- 4 International Energy Agency (2023), *Global Hydrogen Review 2023*, p. 12.
- 5 Based on DCCEE (2023), *Australia’s emissions projections 2023*, Department of Climate Change, Energy, the Environment and Water, Canberra, November. CC BY 4.0, and EnergyAustralia’s performance guarantee to Sydney Zoo on generation.
- 6 International Energy Agency (2024), *World Energy Outlook 2024*, p. 65.
- 7 Renewable hydrogen is hydrogen produced as defined in note 3.