

# Climate Related Disclosures

For the year ended 30 June 2024

## 7. Climate Related Disclosures

AGL recognises that the impacts of, and the responses to, climate change at global, national, and state levels have significant implications for our business. This presents both material risks and opportunities that can shape AGL's financial position, performance, and prospects.

As an early adopter of the Task Force on Climate-related Financial Disclosures (TCFD) framework in Australia, AGL has made a commitment to disclose climate-related information considering this framework, which is currently voluntary in Australia. We have incorporated climate-related risk and strategy disclosures in our annual corporate disclosures since 2016, and since 2018, these disclosures have been aligned with the TCFD framework. As noted on page 2, our disclosures related to the TCFD framework are now included in this report rather than in a stand-alone publication.

We are closely monitoring evolving regulatory obligations and investor expectations regarding climate-related reporting and have considered the evolving draft Australian Sustainability Reporting Standards (ASRS) to inform and enhance our disclosure practices this year.

### 7.1 Governance

The AGL Board of Directors plays a pivotal role in overseeing climate-related matters. It actively considers climate-related risks and opportunities when reviewing and setting the company's strategy and making investment decisions. In September 2022, the Board approved AGL's Climate Transition Action Plan (refer to Section 7.2.1), which was subsequently endorsed by shareholders at the 2022 Annual General Meeting, underscoring our commitment to addressing climate change and transitioning to a more sustainable future.

Two Board-level committees also provide oversight of particular aspects of climate-related risks and opportunities: the Audit & Risk Management Committee (ARMC) and the Safety & Sustainability Committee (SSC).

The ARMC oversees the development of AGL's annual reporting aligned with the TCFD recommendations. Climate change response is a Tier 1 Strategic Risk (refer to Section 2.3). The SSC considers climate-related issues from a sustainability perspective, including considerations for AGL stakeholders. More information about the role of the Board and its committees can be found on the AGL website, in the [Governance Summary](#) in this report, and in the [2024 Corporate Governance Statement](#).

AGL's CEO & Managing Director is responsible for implementing AGL's overall strategy, which includes our response to climate-related issues through our dual focus on *connecting our customers to a sustainable future* and *transitioning our energy portfolio*. This involves translating the strategic vision and goals into actionable plans and initiatives that effectively address the challenges and opportunities posed by climate change. The CEO & Managing Director works closely with the Board to monitor the changing landscape of climate-related policies, regulations, and market dynamics. This role is critical in ensuring that climate-related issues are integrated into the core business strategy, to enable AGL to adapt and thrive in the rapidly changing energy sector.

AGL recognises the importance of our Board having the climate-specific knowledge, skills, experience and background to effectively make decisions relating to climate-related threats and opportunities. As an integrated energy generator and retailer, climate is inextricably linked to the nature of our business, and the competencies required likewise intersect. AGL's commitment to robust governance practices related to climate change is reflected in our governance framework.

AGL uses a skills matrix to identify the key skills and experience the AGL Board is seeking to achieve in its membership, which includes 'ESG and Climate Change risks and opportunities'. Director skills and experience are assessed on a regular basis. The competency of the Directors with respect to these key skills and experience is outlined in the [Governance Summary](#) and in the [2024 Corporate Governance Statement](#).

The Board is comprised of a number of Directors with specific energy and climate change experience. Directors undertake a program of ongoing Director education to ensure that they are kept up to date on the risks and opportunities facing AGL's business. During FY24, Director education included a session on Climate Transition Action Plans.

For further information, see our [2024 Corporate Governance Statement](#).

### 7.2 Strategy

As outlined on page 10, AGL has two primary strategic objectives – *connecting our customers to a sustainable future* and *transitioning our energy portfolio*. Released in September 2022, AGL's Climate Transition Action Plan (CTAP) outlines our commitments to work towards these objectives. The following sections outline AGL's CTAP commitments, progress made against these commitments, a summary of the scenario analysis used to inform the development of our 2022 CTAP; scenario analysis undertaken during FY24 to improve our understanding of physical risk, and how AGL aims to evolve our capital allocation over time to transition our portfolio to deliver on our strategy.

As discussed in Section 2.1, Australia's energy sector is undergoing a period of significant change, as ageing thermal generation plants are replaced by a range of renewable generation, energy storage and flexible generation technologies with lower emissions intensities to drive the decarbonisation of Australia's energy sector.

AGL strongly supports Australia's commitment to the Paris Agreement to ensure the increase in global average temperature is held to well below 2 degrees Celsius and importantly to pursue all efforts to limit temperature increase to 1.5 degrees Celsius. Consistent with this, AGL continues to support Australia setting ambitious economy wide emissions reduction targets consistent with delivering Australia's share of national contributions to limit global temperature rise to 1.5 degrees Celsius, or as close as can be practically and economically delivered.

Achieving emissions reductions consistent with a global 1.5 degrees Celsius ambition will require significant emissions reductions across all sectors of the economy. To deliver this transition, a major market-wide infrastructure and asset replacement program is needed, requiring substantial investment in grid-scale generation and storage, transmission, distributed energy, electrification and fuel switching.

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Decarbonising the electricity system and energy sector will be central to decarbonising Australia's economy and meeting government targets. This will require rapidly increasing the share of renewable energy sources, and the uptake of electrification and consumer energy resources to reduce dependence on fossil fuels. The energy transformation will need to be supported by significant investments in grid infrastructure, renewable and firming technologies, and supportive policy and market settings to ensure reliability and security of supply. Most importantly, achieving the necessary rate and scale of transition will need a coordinated approach among federal, state, and local governments, market bodies, industry, and consumers.

## 7.2.1 AGL's Climate Transition Action Plan

In September 2022, AGL released our inaugural [Climate Transition Action Plan \(CTAP\)](#). AGL's CTAP included a commitment to bring forward our exit from coal, targeting the closure of Loy Yang A Power Station by the end of FY35. AGL will be net zero for operated Scope 1 and 2 emissions following the closure of our coal-fired power stations. We are seeking to supply our customer demand with 12 GW of additional renewable and firming capacity by the end of 2035 (with an interim target of 5 GW by 2030), and since the release of our CTAP, we have committed to seeking options to accelerate where possible.

Our CTAP recognises the importance of striking a balance between responsible transition and rapid decarbonisation to ensure the security, reliability, and affordability of Australia's electricity supply. We are committed to working collaboratively with our stakeholders, including government bodies, employees, and the communities where we operate to lead a responsible and orderly transition. We received shareholder support for our CTAP through the 'Say on Climate' vote at our 2022 Annual General Meeting. As outlined in our CTAP, and in line with emerging best practice, we propose to put our decarbonisation plans to shareholder vote every three years. We anticipate that we will build on the ambitions of our 2022 CTAP in our next CTAP, scheduled for release with our FY25 results.

A summary of the commitments made by AGL in our CTAP, and the progress achieved against those commitments to date, is outlined below. We engaged Deloitte to undertake limited assurance of selected quantified targets in accordance with the Australian Standard on Assurance Engagements ASAE 3000 *Assurance Engagements other than Audits or Reviews of Historical Financial Information* and ASAE 3410 *Assurance Engagements on Greenhouse Gas Statements* issued by the Australian Auditing and Assurance Standards Board. Full details of the assurance scope, process and outcome are included in the assurance statement on page [200](#).


Key	 Complete	 In Progress	 Ongoing - met in FY23
Commitment	Progress as at 30 June 2024		Assurance
Scope 1 and 2 emissions			
Liddell Power Station will be closed by April 2023.		Liddell ceased generation in April 2023 and decommissioning has commenced.	Yes <sup>1</sup>
Achieve a reduction of at least 17% in annual <sup>2</sup> Scope 1 and 2 emissions against a FY19 baseline <sup>3</sup> by FY24 <sup>4</sup> following the closure of the Liddell Power Station.	 	AGL's operational Scope 1 and 2 emissions reduced by 23.3% in FY24 compared to a FY19 baseline, primarily driven by the closure of Liddell in FY23. AGL's flexible operations program is also enabling emissions reductions. Refer to the <a href="#">Environment scorecard</a> and <a href="#">Assets scorecard</a> for more information.	Yes
Bayswater Power Station will be closed between 2030-2033 - no later than 2033 (FY34).  Achieve a reduction of at least 52% in annual Scope 1 and 2 emissions against a FY19 baseline <sup>3</sup> by FY35 <sup>4</sup> following the closure of the Bayswater Power Station.  Loy Yang A Power Station is targeted to close by the end of FY35.  Achieve net zero emissions following the closure of AGL's coal-fired power stations (Liddell, Bayswater, and Loy Yang A power stations).		AGL's asset management plans have been structured to support availability and reliability until the planned closure of the Bayswater and Loy Yang A power stations, in the timeframes targeted in the CTAP.  AGL has informed AEMO of our updated closure dates as per the requirements of NER 2.2.1(e)(2A).	N/A
AGL will develop appropriate strategies for the use and/or origination of high-quality offsets, guided by the development of carbon markets over the coming years.		AGL has developed a company-wide <a href="#">Carbon Offsets Policy</a> .	N/A

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Commitment Progress as at 30 June 2024 Assurance


## Scope 3 emissions

<p>AGL has the ambition of being net zero for Scope 3 emissions by 2050 and is currently working on a decarbonisation pathway for these emissions.</p>		<p>AGL is developing a decarbonisation pathway to meet our ambition of net zero Scope 3 emissions by 2050. Further details will be published in the 2025 CTAP which will be published with AGL's FY25 results.</p>	<p>N/A</p>
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## Responsible and orderly transition

<p><b>Our Sites:</b> AGL is committed to re-purposing its large thermal generation sites into low-carbon energy hubs. Our industrial energy hubs at Loy Yang, Torrens Island and in the Hunter will bring together renewable energy production and storage with energy-intensive industries, centred around a shared infrastructure backbone.</p>		<p>Progress made to develop our integrated energy hubs is outlined in the <a href="#">Assets scorecard</a>.</p>	<p>N/A</p>
<p><b>Our Communities:</b> We recognise our responsibility reaches beyond the safe operation of our assets and supply of energy, and includes supporting the communities in which we operate before assets close, and managing the responsible best practice rehabilitation of our sites.</p>		<p>AGL's engagements with local communities, local businesses and government, and connections with Traditional Owners, are outlined in the <a href="#">Relationships scorecard</a>.</p>	<p>N/A</p>
<p><b>Our People:</b> The energy transition is an industry-wide transformation that will involve significant changes to the way AGL operates. As we manage this transition, the labour and skills required to operate our generation assets will change over time. Our future workforce is likely to be smaller; employees will be located across a distributed network of sites, operating a diverse portfolio of energy and related assets and technology.</p>		<p>Actions undertaken in FY24 in relation to supporting the transition of our workforce are outlined in the <a href="#">People scorecard</a>.</p>	<p>N/A</p>

## Portfolio reshape and capital allocation alignment

<p>AGL intends to transition our portfolio to support a lower carbon world and will seek to supply our customers' energy demand by building and accessing 12 GW of new renewable generation and firming capacity before 2036, with an interim target of 5 GW by 2030.</p>		<p>AGL has 978 MW of new renewable and firming capacity contracted or in delivery from FY23, as discussed in the <a href="#">Assets scorecard</a>.</p>	<p>Yes</p>
		<p>AGL has a development pipeline of 6.2 GW<sup>5</sup> of renewable and firming assets, as discussed in the <a href="#">Assets scorecard</a>. Capital allocation is discussed in Section <a href="#">7.2.3</a>.</p>	<p>N/A</p>

## Green revenue


<p>In accordance with our FY23 long-term incentive (LTI) plan, we aim to increase the percentage of total revenue derived from green energy and carbon neutral products and services in FY26<sup>6</sup> to at least 22.2%, with a stretch goal of achieving 27.0%.</p>		<p>The percentage of AGL's total revenue derived from green energy and carbon neutral products and services in FY24 was 19.3%. Refer to the <a href="#">Remuneration Report</a> for further details.</p>	<p>Yes</p>
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Commitment Progress as at 30 June 2024 Assurance




## Climate policy engagement

<p>AGL will advocate for a responsible transition that balances energy reliability and affordability with the need to decarbonise. We will take action to deliver, and speak up for, a responsible transition.</p>		<p>A summary of AGL positions on climate related advocacy is available in the <a href="#">ESG Data Centre</a>.</p> <p>All AGL submissions are published on <a href="#">The Hub</a>. AGL has not made any political donations in FY24.</p> <p>AGL continues to monitor the policy positions of industry associations of which we are a member (refer to the <a href="#">ESG Data Centre</a>).</p>	<p>N/A</p>
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## Climate governance

<p>Climate transition metrics aligned to AGL's Climate Transition Action Plan will be included in future Remuneration Reports.</p>		<p>Climate transition metrics are included in executive remuneration. Refer to the <a href="#">Remuneration Report</a>.</p>	<p>N/A</p>
<p>AGL will disclose a summary of the key focus areas of the Board and its committees annually, which will include how each body has considered climate-related risks and opportunities over the year.</p>		<p>Information is disclosed in the <a href="#">Governance Summary</a>.</p>	<p>N/A</p>
<p>AGL will regularly assess Board skills in categories that cover the core competencies necessary to lead the energy transition (for example: environmental; energy markets; and entrepreneurship, commercial leadership and growth) and disclose the outcomes of these skills assessments annually.</p>		<p>Information is disclosed in the <a href="#">Governance Summary</a>.</p>	<p>N/A</p>

## Transparency

<p>AGL will continue to use the TCFD Framework to report on governance, risk management, strategy, and metrics and targets in relation to climate change as part of our annual reporting suite.</p>		<p>Information in this report has been prepared using the TCFD Framework.</p>	<p>N/A</p>
<p>AGL's Climate Transition Action Plan will be subject to a non-binding shareholder vote every three years at AGL's Annual General Meeting. In the event that material changes to the plan are made within the three-year timeframe, a revised plan will be put to shareholder vote at the following Annual General Meeting.</p>		<p>AGL's CTAP was put to a shareholder vote at the 2022 Annual General Meeting where it was supported by a majority of shareholders. AGL's next CTAP will be published with our FY25 Results and put to shareholder vote at AGL's 2025 Annual General Meeting.</p>	<p>N/A</p>
<p>We will report progress against the commitments in our Climate Transition Action Plan annually. We will also regularly undertake independent assurance of our material operated Scope 1 and 2 emissions to allow progress against our emissions reduction targets to be measured.</p>		<p>AGL has reported against our CTAP commitments in this document and obtained limited assurance over our FY24 operated Scope 1 and 2 emissions.</p>	<p>N/A</p>

1. This metric was assured in FY23.
2. As indicated in the release of the Outcomes of Review of Strategic Direction which accompanied AGL's inaugural CTAP publication, this target applies from FY24 to FY34 inclusive.
3. Emissions comprise Scope 1 and 2 greenhouse gas emissions for all facilities operated by AGL, as reported under the National Greenhouse and Energy Reporting Act 2007. FY19 was selected as the baseline year as it provides a better reflection of representative historical output from thermal assets compared to FY20-FY22.
4. FY24 and FY35 represent the first full financial years where no emissions from Liddell and Bayswater power stations occur following the closure of these power stations in April 2023 (FY23) and CY33 (FY34) respectively.
5. As of August 2024.
6. Green energy revenue represents: green revenue including State-based green schemes; RET revenue from green charges passed through to customers; and other revenue from State-based charges passed through to customers.

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## 7.2.2 Scenario analysis

AGL undertakes climate-related scenario analysis on a periodic basis to inform decisions regarding our operations, investments and strategic direction. Climate scenario modelling helps AGL assess the resilience of our strategy and operations across a range of potential future pathways, anticipate risks and opportunities, and align our actions with the evolving energy landscape. AGL undertook climate scenario modelling of transitional climate-related effects on the National Electricity Market (NEM) in 2022 to inform the development of the CTAP, and more recently undertook modelling of hazards arising under different climate-related scenarios to increase our understanding of the physical risks to our operational portfolio.

### Scenario analysis of climate-related transitional effects on the electricity market

In 2022 we used climate-related scenario analysis of the electricity market to inform the development of our CTAP. The scenarios modelled a broad range of outcomes in terms of climate and energy transition pathways. The targeted closure dates for AGL's thermal coal assets outlined in our CTAP were consistent with a modelled decarbonisation scenario where the NEM achieved a well below two degrees outcome, and with the climate ambition of the 'Step Change' scenario within AEMO's 2022 Integrated System Plan<sup>1</sup>. Our CTAP recognises that to achieve a net zero energy system in an orderly and efficient way, individual generators and asset owners will decarbonise at different rates as the NEM efficiently decarbonises as a whole. Dynamic market settings in the NEM may result in less reliable and higher-cost assets exiting the market first, while more reliable, lower-emissions, and lower-cost assets will remain in the system to support reliability and affordability objectives as the system rapidly decarbonises in the most efficient way.

Since the 2022 scenario modelling was undertaken, there have been several key developments affecting the outlook for Australia's energy market and economy. Notably, as discussed in Section 2.1, the Australian Government has introduced the Capacity Investment Scheme which seeks to support state commitments and achieve the government's targets of 82% renewables by 2030 and economy-wide emissions reduction of 43% on 2005 levels by 2030. The federal and state governments have also announced new climate and energy policies to support a faster uptake of renewables and transmission infrastructure, and to support the development of emerging technologies such as energy storage, hydrogen, offshore wind, electric vehicles, and consumer energy resources. At the same time, state governments have entered into agreements with the operators of some thermal assets to provide certainty around closure dates, and have put forward regulatory mechanisms to extend the life of thermal generation assets, if required, to maintain system reliability and security.

As the market continues to evolve, we plan to publish updated climate-related energy market scenario analysis within our next CTAP, scheduled for release with our FY25 Results.

The scenarios modelled in 2022 and the key outcomes of each are summarised below.<sup>2</sup>

Modelled scenario (2022)	Scenario outcomes
<b>Scenario I</b>	
Challenging economic environment, lack of coordinated decarbonisation policy and slow renewables infrastructure build-out slows the decarbonisation of the NEM. Emissions reduction and energy policies are not delivered due to, for example, energy affordability concerns, lags in renewable project development and connection delays.	Limited growth in system demand results in relatively stable annual generation levels and generation capacity in the NEM to 2050. Coal-fired generators run at relatively low load factors as a result of low system demand. Annual emissions and emissions intensity of NEM generation decline over time as coal-fired generation exits the system, and is replaced by renewable generation technology, driven by economics. The scenario shows approximately 70 GW of renewable and storage capacity added to the grid between FY24 and FY50.
<b>Scenario II</b>	
Emissions reduction goals are progressively ratcheted up over time in pursuit of an economy wide 26-28% emissions reduction target by 2030 (against 2005 levels) and economy-wide net zero emissions by 2050.	Significant growth in system demand owing to strong electrification drives increasing generation levels and significant growth in installed capacity in the NEM. The scenario shows approximately 225 GW of renewable and storage capacity added to the grid between FY24 and FY50, while economics drives the progressive exit of ageing coal-fired generation capacity. Annual emissions and emissions intensity of NEM generation decline over time as renewable generation grows and coal-fired generation exits the system.

1. Based on scenario modelling of the NEM undertaken by ACIL Allen utilising a carbon budget for the NEM which is consistent with limiting global temperature increases to well below two degrees Celsius above pre-industrial levels.  
 2. The full details of AGL's methodology, assumptions and limitations of the scenarios are available in our 2022 [CTAP](#).

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Modelled scenario (2022)

Scenario outcomes

## Scenario III (Well below 2 degrees)

Rapid consumer-led transformation of the energy sector and coordinated economy-wide action, fuelled by a step change in policy commitments and deployment and coordination of enabling technologies, delivering a Paris-aligned decarbonisation pathway	Meeting a Paris well below 2°C aligned carbon constraint results in coal-fired generation exiting the system in advance of economic closure dates and operating at relatively lower load profiles compared to Scenario II, while the increasing electrification macro trend drives increasing system demand. This results in approximately 250 GW of renewable and storage capacity being added to the grid over the FY24-FY50 period. Annual emissions levels and emissions intensity of NEM generation declines more rapidly than under Scenarios I and II, owing to earlier coal exits and strong growth in renewable generation, and the NEM reaches net zero emissions in the early 2040s.
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## Scenario IV (1.5 degree goal)

Accelerated policy action and significant technological breakthroughs driving a rapid transformation of the economy, delivering a 1.5°C-aligned pathway.	Meeting a Paris-1.5°C aligned carbon constraint results in an accelerated exit of coal-fired generation from the system, with all coal closed by the early 2030s, while the increasing electrification macro trend and longer-term shift to hydrogen generation technology drives a strongly increased long-term system demand outlook. This results in approximately 295 GW of additional renewable and storage capacity being required by the grid over the FY24-FY50 period. Annual emissions levels and emissions intensity of NEM generation decline more rapidly than under Scenarios I - III, owing to accelerated coal exits and strong growth in renewable generation, with the NEM reaching net zero emissions by 2040.
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### Scenario analysis of climate-related physical risk on AGL's portfolio

AGL has also undertaken climate-related physical risk analysis to assess potential risks facing our assets under different warming scenarios. The modelling was conducted across each of our operational sites, our integrated energy hubs, assets with which we have Power Purchasing Agreements and for selected future assets within our development pipeline. Our disclosures in this document do not cover all future assets or assets AGL is seeking to close or divest in the short-term. Refer to Section [7.3.2](#) for details of the outcomes of this analysis.

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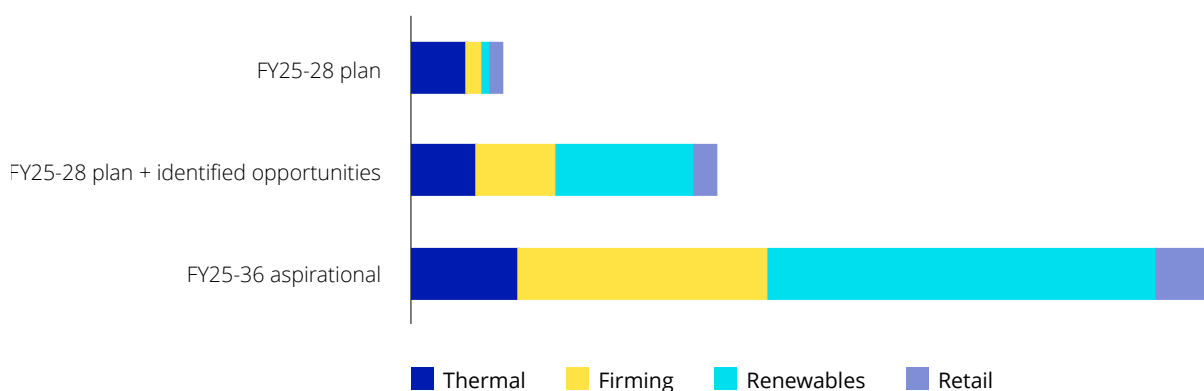
## 7.2.3 Capital allocation to support the energy transition

As part of our current and long term strategy, AGL has the aspiration to significantly grow our pipeline of climate solutions.<sup>1</sup> In FY24, AGL's allocation of capital toward climate solutions included \$274 million of capital expenditure on a mixture of grid-scale batteries, investment in hydro assets and Energy as a Service projects, equivalent to approximately 32% of total capital expenditure for FY24.

We recognise that our commitment to decarbonising our portfolio will require a significant capital investment across both firming and renewable<sup>2</sup> technologies throughout the next decade. Further, we acknowledge that ongoing uncertainty of the future state of the Australian energy market will require AGL to refine how we allocate capital<sup>3</sup> year-on-year.

The chart<sup>4</sup> below shows the anticipated evolution of AGL's capital allocation<sup>3</sup> towards meeting our plans to add 12 GW of renewable generation and firming capacity before the end of 2035. This reflects the total required investment to be funded through a combination of balance sheet, offtakes and partnerships.<sup>5</sup> <sup>6</sup>The FY25-28 period reflects AGL's estimated spend across the next 4-year period and the current pipeline of identified growth opportunities that AGL is actively pursuing. AGL's capital allocation to thermal<sup>7</sup> assets is focused on ensuring the ongoing safe and efficient operations of Loy Yang A and Bayswater power stations until closure, and is indicative of the role that thermal generation is expected to play in providing reliable and affordable electricity to support the energy transition.

Our disciplined capital allocation decisions reflect AGL's commitment to transition our portfolio responsibly and effectively to renewable and firming capacity, in line with our capital allocation framework.



### Capital allocation evolution

The table below outlines the anticipated evolution of AGL's capital allocation in the short, medium and longer term in terms of the proportion of capital expected to be allocated to climate solutions.

Period	Capital allocation for climate solutions <sup>1</sup>
FY25-28 plan	23%
FY25-28 plan + identified opportunities	68%
FY25-36 aspiration	71%

1. Climate solutions allocation reflects the average annual capital allocation across the defined period.

- For the purposes of capital allocation, AGL defines climate solutions as grid-scale renewable generation, grid-scale batteries and pumped hydro, retail electrification and decentralised sustainable business energy solutions for customers.
- For capital allocation: Renewables includes Tilt Renewables assets.
- Capital allocation is broader than capital expenditure and AGL has aligned our definition of capital allocation to that of capital deployment in the draft Australian Sustainability Reporting Standards to be, "the amount of capital expenditure, financing or investment deployed".
- Illustrative only of the magnitude of investment; chart not to scale. Forward-looking projections have been calculated using pro-rata grouped costs.
- Amounts include notional capital for offtake commitments and all capital costs of any Joint Venture arrangements. When funding occurs, AGL may only have to contribute its share of equity related contributions to Joint Venture arrangements.
- For capital allocation: Retail includes Kaluza.
- For capital allocation: Thermal includes Torrens.

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## 7.3 Climate-related risks and opportunities

AGL manages climate-related risks in line with our enterprise-wide risk management framework. Through this framework, AGL identifies key risks that could impact the achievement of our strategic priorities (Tier 1 Strategic Risks). As shown in Section 2.3.1, 'climate change response' was identified as a Tier 1 Strategic Risk. Climate-related impacts are also associated with many of our other Tier 1 Strategic Risks, due to the interconnected nature of climate change with the energy sector.

At a more granular level, AGL's climate-related risks can be categorised into two main areas: transition risks and physical risks. As shown below, the TCFD framework breaks transition risk into four subcategories and physical risk into two subcategories.

Transition Risks				Physical Risks	
<b>Policy and Legal</b> Risks arising from policy or legal interventions that attempt to constrain actions that contribute to the adverse effects of climate change or actions that seek to promote adaptation to climate change.	<b>Technology</b> Risks arising from the technological changes which are occurring to support the transition to a low carbon economy and the disruption they can cause to markets and businesses	<b>Market</b> Risks associated with changing supply and demand for commodities and other products and services.	<b>Reputation</b> Risks arising from changing customer and community perceptions of organisations due to their action on climate change, with impacts to reputation leading to reduced customer trust and participation with a business.	<b>Acute</b> These risks refer to those that are event-driven, including increased severity of extreme weather events, such as cyclones, hurricanes, droughts or floods.	<b>Chronic</b> These risks refer to longer-term shifts in climate patterns (e.g., sustained higher temperatures) that may cause sea level rise or chronic heat waves.

AGL uses our enterprise-level strategic planning processes to identify, assess and manage climate-related opportunities on an iterative basis. Through this process we identified climate-related opportunity areas, which include resource efficiency, low emission alternative energy sources, product and service innovation, new markets and asset types, and building climate resilience capacity.

The following sections include a summary of the climate-related physical and transition risks that AGL considers could reasonably affect our business' prospects, and the time horizons in which these risks could be expected to materialise, as well as an outline of key climate-related opportunities for AGL.

### 7.3.1 Transition risks

The potential challenges and uncertainties that arise from the shift towards a low-carbon economy and the transition away from carbon-intensive industries and practices are known as climate-related transition risks. These risks emerge as a result of various factors, including policy changes, technological advancements, market dynamics, and evolving societal expectations. Key climate-related transition risks for AGL are summarised below:



Key  Short term (1-4 years)  Medium term (5-10 years)  Long term (10+ years)

#### Climate-related risk causes

#### Mitigation approach

##### Policy or regulatory intervention

AGL is impacted by policy and/or regulatory intervention or other restrictions that seek to address greenhouse gas emissions or climate change adaptation.

<ul style="list-style-type: none"> <li>Government policies and/or other interventions designed to limit the impacts of climate change or manage the impacts of Australia's transitioning energy system may have a material impact on AGL's operations or strategy, or be implemented in a disorderly or unplanned manner which may increase uncertainty for AGL's strategic direction and in the allocation of resources.</li> <li>Increased resourcing may be required to anticipate, understand and comply with new regulatory requirements. Any new regulations that place further restrictions or limitations on greenhouse gas emissions are likely to increase the cost of operating thermal plants.</li> </ul>	  	<ul style="list-style-type: none"> <li>AGL has committed to a portfolio transformation including 12 GW of new renewable and firming capacity by the end of 2035 (and seek options to accelerate where possible) and the closure of our coal-fired power stations.</li> <li>AGL actively engages with government and regulatory bodies to advocate for balanced policy outcomes that consider the interests of our stakeholders, and support AGL and the broader NEM to provide reliable and affordable energy during Australia's energy transition.</li> <li>AGL contributes to the ongoing development of relevant government policy, including through participation in public forums and the submission of formal responses to government policy consultation. Through this process, AGL seeks to understand and inform current and anticipated regulatory changes, to ensure that AGL is able to respond to changing regulatory requirements quickly and effectively.</li> </ul>
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## Climate-related risk causes

## Mitigation approach

### Access to capital

AGL's access to capital markets, including debt, equity investors and insurance, may become further constrained where our energy transition timing does not meet the expectations of these markets.

<ul style="list-style-type: none"> <li>ESG challenges and capital market perception of carbon risk will remain an ongoing challenge for AGL, as debt and equity markets continue to increase their focus on climate impacts, particularly limiting lending and investing in fossil fuel companies.</li> </ul>		<ul style="list-style-type: none"> <li>AGL has committed to a portfolio transformation including 12 GW of new renewable and firming capacity by the end of 2035 (and seek options to accelerate where possible) and the closure of our coal-fired power stations.</li> <li>AGL has in place a Green Finance Framework, which sets out the process by which AGL intends to issue and manage Green Debt on an ongoing basis to fund expenditure on firming capacity and renewable energy.</li> <li>AGL engages with capital market stakeholders regarding our strategic direction and to understand their expectations.</li> <li>AGL engages with other key stakeholders, including the community, on relevant development opportunities to understand expectations and key risks, and to develop our social license to deliver on these projects.</li> <li>Across FY24, AGL materially increased its debt tenor, improved its liquidity position and maintained a Baa2 "stable" investment grade Moody's rating.</li> </ul>
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### Changing customer needs and expectations

AGL may not effectively harness new technologies, products or services that support changing customer decarbonisation and electrification needs and expectations. Additionally, the increasing uptake of rooftop solar and electrification of vehicles and other services is resulting in changing demand and load profiles across the Australian electricity market.

<ul style="list-style-type: none"> <li>As low-carbon, renewable, electrification and behind-the-meter technologies alter electricity supply to the NEM and change the profile of Australia's electricity supply, some energy assets and investments may no longer provide a viable economic return and could therefore see their economic life curtailed.</li> <li>AGL may fail to identify and/or appropriately invest in new technologies that support the transition and are aligned to its business objectives, impacting on financial performance.</li> </ul>		<ul style="list-style-type: none"> <li>As we seek to help our customers decarbonise the way they live, move and work. AGL is actively monitoring new technologies, new products and business models with a view to meeting future customer demand and evolving customer expectations. These include opportunities in electrification services such as electric vehicles and charging, hot water, heating and cooling, Distributed Energy Resources (DER) like rooftop solar and residential battery storage systems, and asset monitoring and management.</li> <li>AGL has also entered into an agreement with Kaluza to transform our customer operations in order to support our customers' needs including supporting how they decarbonise and electrify.</li> <li>In FY24 AGL launched its Electrify Now platform across the National Electricity Market, helping households to understand the potential benefits of electrifying their homes by providing personalised information for the most impactful upgrades.</li> <li>AGL continues to invest in and focus on the safety, reliability and flexibility of our existing power stations, to support plant capability and efficiency that will allow us to capture value from the changing energy market.</li> </ul>
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### Stakeholder perception

Stakeholder trust in AGL is negatively impacted by changing community perceptions and expectations of our contribution to the energy transition.

<ul style="list-style-type: none"> <li>AGL's success is dependent on the ongoing support of our key stakeholders, including our people, customers, shareholders and the communities where we operate. Where AGL is unable to meet current expectations or anticipate and/or respond to changing expectations, our ability to achieve our objectives could be significantly challenged.</li> </ul>		<ul style="list-style-type: none"> <li>AGL is committed to engaging with stakeholders in a transparent manner regarding climate change. Our CTAP aims to find a balance between meeting Australia's current and future energy requirements while responsibly reducing carbon emissions. The plan includes specific targets towards achieving net zero emissions, facilitating a responsible transition for Australia's energy market. AGL has committed to putting our CTAP to a non-binding shareholder vote every three years.</li> </ul>
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# Climate Related Disclosures

For the year ended 30 June 2024

## 7.3.2 Physical risks

Physical risks associated with climate change have the potential to significantly impact AGL's business. These risks can be categorised into two main types of hazard: acute and chronic.

Both acute and chronic physical hazards pose significant risks to businesses, communities, and the overall economy. They can result in direct damages, operational disruptions, increased costs for repair and maintenance, decreased productivity, and loss of assets and infrastructure. Additionally, these hazards can have cascading effects, impacting supply chains, insurance costs, investor confidence, and the overall stability of financial markets.

Physical climate hazards can additionally have both primary and secondary effects. The primary effects are the direct impacts on assets such as power stations, critical infrastructure, and corporate facilities. The secondary effects are impacts on supply chains, distribution networks, customers, and markets. Key climate-related physical risks for AGL are summarised below:

Key	←	Short term (1-4 years)	⇒	Medium term (5-10 years)	≡	Long term (10+ years)
Climate-related Risk Cause			Mitigation Approach			
<b>Acute hazards</b>						
<i>Acute, event-driven hazards resulting primarily from the increasing severity of extreme weather events.</i>						
<ul style="list-style-type: none"> <li>Increasing frequency and severity of extreme heat, fire, and storm events impacting the operation of AGL's thermal coal fleet.</li> <li>Extreme heat, fire and wind events impacting the operation of AGL's wind and solar assets.</li> <li>Extreme heat leading to spikes in demand for electricity and potential electricity shortfalls.</li> <li>Major flooding events causing disruption to AGL generation capabilities.</li> </ul>	<ul style="list-style-type: none"> <li>←</li> <li>⇒</li> <li>≡</li> </ul>	<ul style="list-style-type: none"> <li>To mitigate the impacts of acute weather and natural hazards risks, AGL has Emergency Management and Response Plans in place across our portfolio. These include bushfire management plans, and procedures for extreme weather and flood management.</li> <li>The flexibility of AGL's generation fleet allows us to efficiently respond to changing generation and load profiles when acute hazards impact generation assets across the NEM.</li> <li>As acute natural hazards are usually localised to a specific region, the geographic diversity of AGL's generation portfolio helps to minimise the risk of major impacts across the fleet.</li> </ul>				
<b>Chronic shift in climate patterns</b>						
<i>Chronic, long-term shifts in climate patterns leading to ongoing changes to environmental hazards.</i>						
<ul style="list-style-type: none"> <li>Extended drought periods compromising water security at thermal and hydro assets, impacting asset availability.</li> <li>Ongoing increases in average temperatures leading to higher energy demand from customers.</li> </ul>	<ul style="list-style-type: none"> <li>⇒</li> </ul>	<ul style="list-style-type: none"> <li>AGL actively monitors access to water and water availability for our assets to mitigate drought risks and ensure availability of our assets. In addition, AGL maintains water licences or entitlements for each asset.</li> <li>AGL continues to invest in critical spares and equipment to support the ongoing reliability of our generation assets.</li> </ul>				
<b>Secondary effects of hazards</b>						
<i>Chronic and acute physical hazards that impact AGL due to their secondary effects.</i>						
<ul style="list-style-type: none"> <li>Extreme weather and fire events affecting the vulnerability of transmission and distribution networks, limiting AGL's ability to supply and source electricity from the market.</li> </ul>	<ul style="list-style-type: none"> <li>←</li> <li>⇒</li> <li>≡</li> </ul>	<ul style="list-style-type: none"> <li>As these secondary effects are inherently risks on assets that are outside of AGL's control, our ability to directly mitigate them is limited.</li> <li>However, AGL actively engages with government and regulatory bodies to advocate for balanced policy outcomes within the NEM to provide reliable and affordable energy during Australia's energy transition, particularly related to transmission access and project approvals.</li> </ul>				

Another mitigation strategy that applies across all risks set out above is the implementation of the commitments made in our CTAP. This will limit greenhouse gas emissions while diversifying AGL's portfolio of assets and allow us to continue to meet the needs of our customers.

# Climate Related Disclosures

For the year ended 30 June 2024

## AGL's scenario analysis of climate-related physical hazards

In FY24, AGL engaged Aon, an external risk specialist, to undertake climate-related physical hazard modelling to assess potential hazards facing our assets under different warming scenarios. The modelling was conducted across each of our operational sites, our integrated energy hubs, assets with which we have Power Purchasing Agreements and for selected future assets within our development pipeline. AGL has limited the disclosure of the analysis as set out below to our operational electricity generation assets and integrated energy hubs as it best represents our material assets and potential material risks.

Three scenarios aligned to three different temperature outcomes<sup>1</sup> were modelled, with each scenario considering both acute and chronic hazards, as summarised below.

Physical risk type	Hazard type	Modelling approach	Scenarios modelled for each hazard <sup>1,2</sup>
Acute hazards	Bushfire Flood Cyclone Hail Storm	The current exposure to acute hazards was analysed using a proprietary model, containing seven billion data cells and over 200 risk variables.  For assessing future exposure to acute hazards, the model was extended by integrating climate science from the CSIRO, Bureau of Meteorology, and the Climate Measurement Standards Initiative. This model forecasts changes in hazard exposure at an asset level for various emissions pathways over intervals to 2090.	<i>Scenario A</i> - The expected change in climate under a ~1.8-degree scenario aligned with RCP2.6 / SSP1-2.6.  <i>Scenario B</i> - The expected change in climate under a ~2.7-degree scenario aligned with RCP4.5 / SSP2-4.5.  <i>Scenario C</i> - The expected change in climate under a ~4.4-degree scenario aligned with RCP8.5 / SSP5-8.5.
Chronic hazards	Drought Extreme heat Extreme rainfall	The analysis of current and future exposure to chronic physical hazards utilised a proprietary model incorporating data from the Coupled Model Intercomparison Project Phase 6 (CMIP6), which informed the IPCC Sixth Assessment Report. This model provides climate projections at 10-year intervals relative to the historical baseline period (1995-2014) extending to 2100.	

1. Relative Concentration Pathways (RCP), are concentration pathways for greenhouse gases and aerosols, demonstrating possible future emissions and radiative forces (i.e. Temperature intensity) scenarios for the world until 2100, as defined by the IPCC.
2. Shared Socioeconomic Pathways (SSP), describe how socioeconomic trends around the world may evolve over time, as defined by the IPCC (2017).

For modelling acute hazards, the analysis considered the declared value of each AGL asset to estimate the Average Annual Loss (AAL) loading for each hazard. When assessing future acute hazards, the model estimated the proportion of the declared value at risk over various scenarios, evaluating these risks at intervals up to the year 2090.

This financial assessment focused on the direct effects of potential climate hazards on each asset, without considering impacts to the income generated by the asset or the broader impacts of the hazard on supporting infrastructure and markets.

For chronic hazards, the model employs a percentile-based scoring system that ranges from 1 to 100. This scoring indicates the relative hazard level of each asset's location compared to global locations. For instance, a score of 70 signifies that the hazard level for that specific location is higher than 70% of all locations worldwide.

This analysis has enabled AGL to more accurately assess current physical hazards facing our assets and anticipate areas where exposure to hazards may increase under different climate scenarios in the future.

It is important to note that this analysis is centred on changes in exposure to physical hazards based on the asset's location. It does not consider the type of asset, its vulnerability to the hazards, or any mitigation actions that might be implemented. As such, the *impact* of the hazard has not been assessed. Additionally, the scenarios modelled are not predictions or forecasts but indicators of potential outcomes.

The primary finding from this analysis is an expected correlation between rising temperatures over time and increasing exposure of our assets to physical hazards.

1. Temperature outcomes are as outlined in the most recent report from the Intergovernmental Panel on Climate Change (IPCC): Assessment Report 6 (AR6)

# Climate Related Disclosures

For the year ended 30 June 2024











































## Acute physical hazards

The modelling assessed the exposure of AGL's assets to current acute physical hazards expressed as an AAL loading. Further, the modelling of exposure to future acute physical hazards considers the value at risk of each asset for each hazard under each scenario.

The change in value at risk has been mapped in the table below by asset type. However, as the asset type groupings include geographically dispersed assets, the changes shown are indicative only and represent the totality of change for each group. Increasing exposure as shown in the table indicates a higher likelihood of an asset or asset group being affected by a hazard but may not lead to a higher risk.

<b>Key<sup>1</sup></b>	 Large increase in exposure	 Moderate increase in exposure	 Stable or small increase in exposure	N/A	Negligible or no exposure to this hazard type
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1. For the purposes of representing AGL's acute physical hazard exposure under the modelled scenarios, the following boundaries have been applied: Stable or small increase in exposure is indicative of a 0-4% upwards change in exposure; moderate increase in exposure is indicative of a 5-9% upward change in exposure; and large increase in exposure is indicative of a >=10% upwards change in exposure.

Asset type	Hazard	Scenario A			Scenario B			Scenario C		
		2030	2050	2090	2030	2050	2090	2030	2050	2090
<b>Integrated energy hubs</b>	Bushfire	—	—		—			—		
	Flood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	—	—		—	—		—		
	Storm	—	—		—	—		—		
<b>Coal generation</b>	Bushfire	—	N/A	N/A	—	N/A	N/A	—	N/A	N/A
	Flood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Storm	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
<b>Gas peaking generation</b>	Bushfire	—	—	—	—	—	—	—	—	—
	Flood	—	—	—	—	—	—	—	—	—
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	—	—		—			—		
	Storm	—	—		—	—		—		
<b>Hydro generation</b>	Bushfire	—	—		—			—		
	Flood	—	—		—			—		
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	—	—		—			—		
	Storm	—	—		—			—		

# Climate Related Disclosures

For the year ended 30 June 2024

Asset type	Hazard	Scenario A			Scenario B			Scenario C		
		2030	2050	2090	2030	2050	2090	2030	2050	2090
<b>Grid-scale solar generation</b>	Bushfire	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Flood	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	—	—	↗	—	↗	↗	—	↗	↗
	Storm	—	—	↗	—	↗	↗	—	↗	↗
<b>Wind generation</b>	Bushfire	—	—	↗	—	↗	↗	—	↗	↗
	Flood	—	—	↗	—	↗	↗	—	↗	↗
	Cyclone	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A	N/A
	Hail	—	—	↗	—	—	↗	—	↗	↗
	Storm	—	—	↗	—	—	↗	—	↗	↗
<b>Grid-scale batteries</b>	Bushfire	—	—	—	—	—	—	—	—	—
	Flood	—	—	—	—	—	—	—	—	—
	Cyclone	—	—	↗	—	—	↗	—	↗	↗
	Hail	—	—	↗	—	—	↗	—	↗	↗
	Storm	—	—	↗	—	—	↗	—	↗	↗

The modelling of acute current hazards outlines that over 90%<sup>1</sup> of AGL's portfolio exhibits moderate to lower levels of exposure across all acute hazards. This assessment underlines that AGL's current risk from acute physical hazards is limited and manageable.

Under the future acute scenarios, the largest increase in value at risk across all hazards is projected for floods, with a 23% increase in exposure by 2090 under Scenario C. Hydro generation assets are most exposed to this hazard. However, this increased exposure does not necessarily correlate with a higher level of risk for these assets.

The analysis also shows that under Scenario C, exposure to bushfire hazards is expected to increase by a similar margin of 22.8% by 2090. Storm exposure across the portfolio under Scenario C has a lower increase, and is primarily concentrated in a single location.

These specific increases represent significant projections for the end of the century, by which time it is anticipated that several of AGL's assets will be retired. AGL continues to monitor proposed locations for new assets to minimise exposure and risk in this context. Further, maintaining a geographically diverse fleet helps mitigate the likelihood of acute physical hazards affecting multiple assets simultaneously, thus reducing overall business risk.

1. The percentage of asset exposure is calculated based on the percentage of the total declared value of the assets identified as being exposed.

# Climate Related Disclosures

For the year ended 30 June 2024































































































































































## Chronic physical hazards

To assess AGL's exposure to chronic physical hazards, each asset was evaluated based on historical data. From this, a baseline exposure scenario for each hazard was determined, and this exposure was evaluated as the relative hazard level. This relative hazard level has also been calculated under each future scenario, and the change in this level is mapped in the table below.

As the asset groupings in the table include geographically dispersed assets, the changes mapped are to be read as indicative only and represent the totality of change for each group. Increasing exposure in the table indicates a higher likelihood of an asset or asset group being affected by a hazard, but may not lead to a higher risk.

<b>Key<sup>1</sup></b>	 Large increase in exposure	 Moderate increase in exposure	 Stable or small increase in exposure	N/A Negligible or no exposure to this hazard type
------------------------	--	---	--	---

1. For the purposes of representing AGL's chronic physical hazard exposure under the modelled scenarios, the following boundaries have been applied: Stable or small increase in exposure is indicative of a 0-9% upwards change in exposure; moderate increase in exposure is indicative of a 10-29% upward change in exposure; and large increase in exposure is indicative of a >=30% upwards change in exposure.

Asset type	Hazard <sup>1</sup>	Scenario A			Scenario B			Scenario C		
		2035	2055	2085	2035	2055	2085	2035	2055	2085
<b>Integrated energy hubs</b>	Drought									
	Extreme heat									
	Extreme rain									
<b>Coal generation</b>	Drought		N/A	N/A		N/A	N/A		N/A	N/A
	Extreme heat		N/A	N/A		N/A	N/A		N/A	N/A
	Extreme rain		N/A	N/A		N/A	N/A		N/A	N/A
<b>Gas peaking generation</b>	Drought									
	Extreme heat									
	Extreme rain									
<b>Hydro generation</b>	Drought									
	Extreme heat									
	Extreme rain									
<b>Grid-scale solar generation</b>	Drought									
	Extreme heat									
	Extreme rain									
<b>Wind generation</b>	Drought									
	Extreme heat									
	Extreme rain									
<b>Grid-scale batteries</b>	Drought									
	Extreme heat									
	Extreme rain									

1. The potential hazard of freeze was also assessed, and it was found that AGL's assets have no exposure to this hazard.

# Climate Related Disclosures

For the year ended 30 June 2024

Based on the modelled outputs of AGL's chronic hazard exposure, AGL is most exposed to projected changes in extreme heat and drought under all three scenarios. Notably, AGL's current exposure to extreme heat<sup>1</sup> is already elevated. This is known to de-rate and impact performance of most generation technologies. The analysis suggests that under Scenario C, AGL's portfolio could experience an increase in the annual average number of days with extreme heat from 10 to 50 by the end of the century.

Drought exposure is based on consecutive months for which the mean precipitation is below the historical 15th percentile for the location modelled.<sup>2</sup> The modelling indicates that under Scenario A, AGL's exposure peaks around 2045 at approximately 1.9 consecutive months of drought (up from 1.5 months), then decreases slightly towards the end of the century. In contrast, under Scenario C, exposure steadily increases to approximately 2.6 months.

Exposure to extreme rainfall across AGL's portfolio shows only a low to moderate increase through the end of the century.

### Further controls and mitigation

AGL's management of climate-related physical risks is grounded in our commitment to being net zero for operated Scope 1 and 2 emissions following the closure of our coal-fired power stations. This commitment along with others outlined in our 2022 CTAP and subsequent disclosures, are intended to progress and support action on climate change to limit warming outcomes.

Through these measures AGL aims to contribute to the mitigation of climate-related physical hazards and the avoidance of a high-warming outcome as modelled in Scenario C. More specifically, AGL's physical hazards are controlled and managed through AGL's risk management process as outlined in Section 2.3.

AGL's asset portfolio is resilient to direct physical risks in part through its geographic distribution, which acts to dilute the impact of location-specific acute impacts. The generation fleet is also technologically diverse, which provides increased resilience to the impact of temperature increases on generation efficiency. In addition, water rights and supply security allow for certainty even in extensive drought conditions.

As outlined, the key direct risks faced by AGL's fleet are consistent across most assets and locations and include increasing frequency of extreme heat and fire events, as well as water security. AGL currently has comprehensive mitigation strategies in place in relation to bushfires and water security, as detailed in our FY23 TCFD Report which is available on our [website](#).

### 7.3.3 Opportunities

Climate-related opportunities may arise from addressing climate challenges, adopting new business models, developing new products and services, and capitalising on new or emerging technology, as well as through leadership, differentiation and reputation enhancements which may drive customer growth and employee attraction and retention.

AGL's strategy recognises the significant opportunities arising from the decarbonisation of Australia's energy sector, and as set out on page 11, we have set ambitious targets to add new renewable and firming capacity to our energy portfolio, grow behind the meter customer assets and expand our portfolio of decentralised assets under orchestration, and drive growth in green revenue. We are also advancing our plans to repurpose our thermal generation sites into integrated energy hubs, connecting industrial partners into a circular economy at the sites.

Key climate-related opportunities for AGL are summarised below:

Climate-related opportunity	Strategy to realise opportunity
<h3>Helping our customers decarbonise</h3>	
<p>Customer demand for renewable and clean energy is driving a transition towards a more decentralised energy system and electrified economy. This shift presents opportunities for companies like AGL to expand into new and expanding markets.</p> <p>AGL also sees opportunities to utilise decentralised orchestration to help alleviate peak demand events and capture new and growing value pools particularly. The increasing demand for these products and services presents a significant opportunity for AGL to continue to grow our customer offerings.</p>	<p>We are committed to helping our customers to electrify and decarbonise.</p> <p>We have set a strategic target of having 1.6 GW of decentralised assets under orchestration by FY27. Progress against this target is outlined in our Strategy scorecard on page 11.</p> <p>We offer customer load flexibility services and are expanding our home electrification and decarbonisation solution portfolios. We also offer a suite of certified carbon neutral products. For our commercial and industrial (C&amp;I) customers, we are progressing on scaling our Energy as a Service solutions; we continue to be the largest solar provider in the country; we are increasing our contracted C&amp;I PPAs as well as commercial assets under monitoring and management. For further details see the <a href="#">Customer scorecard</a>.</p>

1. Extreme heat is defined as the daily maximum temperature exceeding 35 degrees Celsius under Coupled Model Intercomparison Project Phase 6 (CMIP6), which was used to inform the IPCC Sixth Assessment Report.  
 2. Defined under Coupled Model Intercomparison Project Phase 6 (CMIP6), which was used to inform the IPCC Sixth Assessment Report.

# Climate Related Disclosures

For the year ended 30 June 2024

## Climate-related opportunity

## Strategy to realise opportunity

### Grid-scale renewable energy

The transition away from high-emissions thermal power generation presents opportunities for investment and development of renewable energy projects. This includes solar, wind, hydro, geothermal, and other forms of clean energy generation.

AGL has an ambition to add 12 GW of new renewable and firming capacity by the end of 2035 with an interim target of 5 GW by 2030, and we will seek options to accelerate where possible. AGL has the ambition to add approximately 3.1 GW of renewable capacity by 2030. AGL expects the majority of renewable capacity to be accessed via PPAs. We have set a strategic target of having 2.1 GW of new renewable and firming capacity development contracted or in delivery from FY24 by FY27.

Progress against this target is outlined in the Strategy scorecard on page [11](#).

### Grid-scale energy storage and long-duration firming

With the integration of intermittent renewable energy sources into the electricity grid alongside the retirements on thermal baseload power, there is a growing need for effective energy storage solutions.

Energy storage technologies, such as batteries, pumped hydro, and thermal storage, play a crucial role in grid stability and system strength as well as storing excess energy during periods of high generation and releasing it when demand is high, or generation is low. Gas peaking generation also has a role to play in supporting system reliability through the transition.

AGL has an ambition to add 12 GW of new renewable and firming capacity by the end of 2035 with an interim target of 5 GW by 2030, and we will seek options to accelerate where possible. AGL has the ambition to add approximately 2.3 GW of firming capacity by 2030. AGL expects the majority of firming capacity to be funded on balance sheet.

We have set a strategic target of 1.5 GW grid-scale batteries operated, contracted or in delivery by end of FY27. Progress against this target is outlined in the Strategy scorecard on page [11](#), and in the [Assets scorecard](#).

### Repurposed infrastructure

AGL is committed to transitioning our baseload thermal generation sites into integrated energy hubs.

The transition of our thermal generation sites will support the economic diversification of these regions, providing new jobs and skills development opportunities for the communities where we operate.

The Hunter Valley, Torrens Island and Latrobe Valley hubs will bring together energy production and energy-intensive industries around a shared infrastructure backbone, with a focus on circular economy principles, including innovative re-use of valuable infrastructure, recycling and co-location of complementary industries.

For information on our progress in FY24, refer to the [Assets scorecard](#).



# Climate Related Disclosures

For the year ended 30 June 2024

## 7.4 Metrics and targets

AGL is committed to transparently disclosing climate-related metrics and targets to provide stakeholders with information on our greenhouse gas emissions performance and progress. AGL uses several metrics to measure our emissions and climate-related impacts, and discloses this information publicly through this report, our [ESG Data Centre](#), and numerous investor-led surveys and benchmark initiatives.

AGL also reports emissions to the Clean Energy Regulator to meet the requirements of Australia's *National Greenhouse and Energy Reporting Act 2007* (NGER Act), and voluntarily discloses our emissions targets and progress against these targets to the Clean Energy Regulator's Corporate Emissions Reduction Transparency Report (CERT).

### 7.4.1 Metrics

Key climate-related metrics are discussed in the [Environment scorecard](#) and summarised in the table below. Additional breakdowns of emissions data as well as other climate-related metrics can be found in the [ESG Data Centre](#). Definitions of relevant terms can be found in the [Glossary](#).

	FY24	FY23	FY22	FY21	FY20
<b>Emissions (MtCO<sub>2</sub>e)<sup>1</sup></b>					
Scope 1	<b>32.9<sup>2</sup></b>	34.8	39.5	40.2	42.2
Scope 2 (location-based)	<b>0.26<sup>2</sup></b>	0.44	0.54	0.46	0.51
Scope 2 (market-based)	<b>0.25<sup>2</sup></b>	0.40	Not reported	Not reported	Not reported
Scope 3 <sup>3</sup>	<b>25.9</b>	25.0	26.4	Not reported	Not reported
<b>Emissions intensity (tCO<sub>2</sub>e/MWh)</b>					
Operated generation intensity <sup>4</sup>	<b>0.94<sup>2</sup></b>	0.92	0.94	0.95	0.94
Operated and contracted generation intensity <sup>5</sup>	<b>0.936<sup>2</sup></b>	0.916	NR	NR	NR
Emissions intensity of electricity supplied <sup>6</sup>	<b>0.841</b>	0.879	Not reported	Not reported	Not reported
<b>Proportion of generation output and capacity from renewables</b>					
Operated renewable and electricity storage capacity (%) <sup>4</sup>	<b>24.7</b>	29.1	24.2	23.0	22.5
Operated and contracted renewable generation and storage capacity (%) <sup>7</sup>	<b>32.8</b>	30.5	Not reported	Not reported	Not reported
New renewable and firming capacity (MW) <sup>8</sup>	<b>978</b>	478	Not Applicable	Not Applicable	Not Applicable
<b>Revenue related metrics</b>					
Emissions intensity of total revenue (ktCO <sub>2</sub> e/\$m)	<b>2.4</b>	2.5	3.0	3.7	3.5
Green revenue as a % of total revenue (%)	<b>19.3</b>	17.5	15.3	13.4	11.5

1. Gross greenhouse gas emissions. Scope 1 and 2 emissions are from AGL's operated facilities. The use of carbon offsets has not been accounted for.

2. Data for FY24 is based on material emission sources and estimates for non-material sources and may change.

3. Annual Scope 3 emissions are estimated, and the calculation methods continue to evolve each year to improve accuracy. Calculation method changes have not been retrospectively applied. FY24 Scope 3 emissions are based on estimates for material emissions sources; immaterial sources have been approximated and may change.

4. In June 2024, AGL and Tilt Renewables agreed to terminate agreements pursuant to which AGL provided asset management and agency and dispatch services in respect of certain assets owned by Tilt Renewables, namely the Nyngan Solar Plant, Broken Hill Solar Plant, Coopers Gap Wind Farm and Silverton Wind Farm. As a result, Tilt Renewables will be responsible for operations and maintenance for each facility, while AGL continues to have offtake agreements in respect of these assets. This is to be considered when making prior-year comparisons against AGL's FY24 performance.

5. This metric replaces the previously reported controlled generation intensity metric. The boundary has been adjusted to better reflect delivery of our target to add 5 GW new renewable generation and firming capacity by 2030. FY23 data has been restated.

6. FY23 data has been restated in line with the updated calculation method.

7. This metric replaces the previously reported controlled renewable and battery capacity metric. The boundary has been adjusted to better reflect delivery of our target to add 5 GW new renewable generation and firming capacity by 2030. FY23 data has been restated.

8. Measured as new renewable and firming capacity in construction, delivery or contracted from 1 July 2022 onwards.

















# Climate Related Disclosures

For the year ended 30 June 2024

## 7.4.2 Targets

AGL has set a number of climate-related targets through our [FY27 strategic targets](#) and our [CTAP](#), as summarised below, as well as [Remuneration Report](#). Additional to these targets, AGL has the ambition of being net zero for Scope 3 emissions by 2050 and is currently working on a decarbonisation pathway for these emissions. Definitions of relevant terms can be found in the [Glossary](#).

Key  Short term (1-4 years)  Medium term (5-10 years)  Long term (10+ years)

Category	Metric	Target	Time horizon	Target source
<b>Customer decarbonisation</b>	Cumulative customer assets installed behind the meter	FY27: 300 MW		<a href="#">FY27 strategic target</a>
	Decentralised assets under orchestration	FY27: 1.6 GW		<a href="#">FY27 strategic target</a>
<b>Emissions</b>	Reduction in annual <sup>1</sup> operated Scope 1 and 2 emissions against a FY19 baseline <sup>2</sup>	17% by FY24	 	<a href="#">2022 CTAP</a>
		52% by FY35		<a href="#">2022 CTAP</a>
		Net zero following closure of coal-fired power stations		<a href="#">2022 CTAP</a>
	Emissions intensity of electricity supplied	FY28: from 0.825 tCO <sub>2</sub> e/MWh to 0.812 tCO <sub>2</sub> e/MWh <sup>4</sup>		<a href="#">FY25 LTI plan</a>
<b>Portfolio transition</b>	Closure of coal-fired power stations	Bayswater Power Station: between 2030-2033		<a href="#">2022 CTAP</a>
		Loy Yang A Power Station: by end of FY35		<a href="#">2022 CTAP</a>
	New renewable and firming capacity <sup>3</sup>	FY27: 2.1 GW		<a href="#">FY27 strategic target</a>
		5 GW by 2030		<a href="#">2022 CTAP</a>
		12 GW (ambition) by end of 2035		<a href="#">2022 CTAP</a>
		FY28: 3.5 GW to 4.0 GW <sup>4</sup>		<a href="#">FY25 LTI plan</a>
	Total grid-scale batteries operated, contracted or in delivery	FY27: 1.5 GW		<a href="#">FY27 strategic target</a>
<b>Finance</b>	Increase in green revenue from FY19 <sup>5</sup>	FY27: 85%		<a href="#">FY27 strategic target</a>
		FY28: 96% to 106% <sup>4</sup>		<a href="#">FY25 LTI plan</a>

1. As indicated in the release of the Outcomes of Review of Strategic Direction which accompanied AGL's inaugural CTAP publication, this target applies from FY24 to FY34 inclusive.

2. Gross Scope 1 and Scope 2 greenhouse gas emissions. The surrender of carbon offsets has not been included within this target.

3. Measured as new renewable and firming capacity in construction, delivery or contracted from 1 July 2022 onwards.

4. Represents the vesting range. For further details refer to the [Remuneration Report](#)

5. Increase in revenue from green energy and carbon neutral products and services compared to FY19 baseline.