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**Department of Climate Change, Energy, the Environment and Water**

**Submitted via online portal**

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### **Capacity Investment Scheme Public Consultation Paper**

AGL Energy (AGL) welcomes the opportunity to make a submission in response to the Capacity Investment Scheme (CIS) consultation paper.

AGL is a leading integrated essential service provider, delivering 4.3 million gas, electricity, and telecommunications services to our residential, small and large business, and wholesale customers across Australia. We operate Australia's largest electricity generation portfolio and have the largest renewables and storage portfolio of any ASX-listed company, having invested billions over two decades in renewable and firming generation.

AGL is helping to drive forward the energy market transition and decarbonisation of Australian industries. By 2050, we believe that Australia can be both carbon neutral and an energy superpower. This will be realised by Australia generating low-cost power using zero emissions wind and solar resources, backed up by technologies like batteries, hydro power and, for some of this transition, gas. We believe this will underpin the competitiveness of the Australian economy just as fossil fuels did in the twentieth century.

As the global community responds to the risks of climate change, AGL recognises the large part that we must play in the transition to a low carbon economy. In September 2022, AGL released its inaugural Climate Transition Action Plan (CTAP) which states AGL's updated ambition for decarbonisation.

Our plan recognises that a balance needs to be struck between responsible transition and rapid decarbonisation to keep Australia's electricity supply secure, reliable, and affordable. We are committed to working constructively with our stakeholders, including government, our people and the communities in which we operate, to lead a responsible and orderly transition.

We will seek to supply our customer demand with ~12 GW of additional renewable and firming capacity, requiring a total investment of up to \$20 billion, before 2036. Our initial target is to have up to 5 GW of new renewables and firming capacity in place by 2030, funded from a combination of assets on our balance sheet, offtakes and via partnerships.

To achieve these ambitions, we need the right market settings to invest in new generation assets when and where they are needed. There are currently a large number of state and federal based schemes (and reforms) designed to incentivise adequate levels of system reliability and security. AGL is supportive of a nationally consistent approach through the CIS.

A well designed CIS will support the energy transition by ensuring clean dispatchable generation is entering the market and operational in time for the planned closure of thermal asset. AGL asks that the Department consider and clarify whether the purpose of the CIS is solely to address the timing of capacity entry (ie support



new firming generation to enter the market potentially years before it is needed for system reliability); or whether the purpose is to provide long term support for firming capacity that may not be economic under the existing market settings.

AGL suggests that certain aspects of the proposed CIS could be simplified to reduce the cost and complexity of the scheme, while still achieving the desired outcomes:

1. Reduce the complexity of the CIS contract by:
  - a. basing the payment on an annuity instead of a cap and floor arrangement; or
  - b. if a cap and floor arrangement is retained, defining “net revenue” to only include energy and FCAS settlement (and not contracts).
2. Consider reducing the CIS contract duration to 2-5 years, to provide a financial backstop until the thermal asset closure or other identified “reliability gap” it is intended to address.

The remainder of this submission address the consultation questions raised by the Department and provides further detail on AGL’s suggestions.

### **Interactions between the CIS and energy markets**

*The Department is seeking feedback on what other implications the CIS might have on the energy market, and how the CIS can be designed to mitigate risks while delivering on key policy objectives.*

*The Department is seeking feedback on WA implementation of the CIS, including interaction with the existing Reserve Capacity Mechanism. This will be further canvassed in a WA-specific consultation paper.*

One of the market implications of the CIS that may need to be managed is the impact it could have on existing assets that are providing system reliability, to the extent that the new assets cause an excessive depression in wholesale prices. While this is indeed the intent of the CIS (to bring in firming generation ahead of existing asset closures) we suggest the following two factors need to be considered in the design of this scheme:

- The impact on existing batteries and peaking generators that are not otherwise intending to close, but could be at a disadvantage when competing against CIS supported generation;
- bringing in new generation in excess of what is needed for system reliability, or earlier than needed, could inadvertently bring forward thermal asset closures.

For these reasons, policies of this nature are typically technology neutral and holistically deal with entry and exit of capacity.

AGL has further comments below on the impact of the CIS design on contracting markets, including some suggested improvements to the CIS and an alternative approach.



## Minimum Storage duration

*What minimum storage duration should be required for tender eligibility, to achieve CIS policy objectives?*

*What methodology for modelling and measuring duration requirements for various technology durations would be appropriate?*

*How could the CIS eligibility criteria and assessment methodology change and adapt over time*

At the public forum, the Department noted an intention that the minimum duration for storage would be 4 hours. The NEM will require a portfolio of firming generation with different duration capabilities, to support a high renewable energy grid. This will include both long and short duration storage as well as fully firm generation. Ideally the CIS would support the uptake of this portfolio, and not favour or inadvertently exclude any of these categories.

We appreciate that the Department intends to compare the relative value of storage projects by applying a rating/ derating factor, and that this approach would help to identify any projects that are of exceptional value. However, the value provided by a longer duration storage or fully firm project is not entirely comparable to short duration storage especially in the later years. Over time, and to support a greater percentage of system renewables, longer duration storage or fully firm projects will be needed. AGL suggests that CIS tenders could provide further duration categories to address the identified reliability gaps, should modelling identify those needs.

AGL also suggests that tenders and eligibility criteria be mapped out in advance (like NSW LTESA) to provide project proponents with some certainty around upcoming processes and to facilitate planning and preparation.

## Tender process and design

*What methodology for considering a project's contribution to zero scope 1 emissions would be appropriate?*

*How could this criteria and assessment methodology adapt as technology matures over time?*

*What types of demand response would be consistent or inconsistent with the CIS objectives?*

*How can the CIS design be future-proofed for an evolving/changing technology mix?*

AGL is supportive of the CIS including expansions to existing storage of generation assets, where additional capacity or duration can be demonstrated. This could include an increase in the MW capacity of an asset, or it could include an extension of the duration (and therefore reliability) of a storage asset. In each case, the asset could be assessed for the impact of the expansion on system reliability.

*The Department is seeking feedback on the eligibility requirement of projects in the NEM for equal to or greater than 30MW registered capacity*

AGL is comfortable with the 30 MW eligibility requirement, which aligns with the scheduled generator category in the NEM. We note the high administrative burden of both preparing and assessing tender applications, so considers it appropriate for the Department to select a suitable threshold that reflects a project size that is able to provide a significant contribution to system reliability.



*The Department is seeking feedback on each of the eligibility requirements including:*

- *the focus on a base level of development status of land tenure, planning and connection approvals.*
- *the impact of participation in other government schemes on CIS eligibility.*
- *the eligibility of existing projects to bid into the CIS, and questions of CIS additionality that result from this approach.*
- *the technology risk appetite of the CIS*

In today's investment climate with high inflation and supply-chain delays, all projects will have some level of delivery risk. AGL suggests that the non-performance and termination terms in the term sheet should acknowledge where issues are out of the control of the project proponent, and the proponent is making every effort to adhere to a cure plan.

We note that projects that connect at existing sites, with infrastructure and connections already in place, are a significantly lower risk than at new connection sites. This is one of the reasons that AGL is developing Energy Hubs at the sites of existing thermal asset sites, and it looking to build generation at those sites.

### **Merit Assessment**

*The Department is seeking feedback on the evaluation criteria, on the appropriate structure to assess a project's contribution to system reliability and feedback on the potential development and application of de-rating factors.*

The consultation paper mentions the possibility of a requirement that CIS projects be located within a REZ. While there are some benefits of locating storage within a REZ to charge on excess renewables, the storage is then limited in its ability to meet system reliability (such as high demand periods) because it would be subject to the same transmission constraints as the rest of the REZ. It is significantly more valuable to locate dispatchable generation near the demand centres to be able to ramp to meet peak demand. The ideal outcome may involve CIS supported storage and firming generation being located across the system. However it should primarily be focussed on the ability to serve demand centres, and should certainly not be limited to within a REZ.

### **Underwriting Instrument Design**

*The Department is seeking feedback on the appropriate structure and sizing of performance requirements necessary to deliver on the policy objectives of the CIS without distorting storage market participation.*

*The Department is seeking feedback on all aspects of the high-level commercial model including:*

- *the floor price support mechanism –*
- *the use of a single net revenue floor for both VRE and scheduled generators (including storage) –*
- *the term of the contract, including financing requirements around revenue tenor –*
- *the performance requirements, including the LOR3 performance requirements –*



- *the milestone requirements, penalty provisions and termination provisions –*
- *A contract structure that divides development/construction and operating periods into two contracts, similar to the NSW Project Development Agreement and LTESA division*

*The Department is seeking feedback on the commercial model's applicability to pumped hydro energy systems.*

#### *Term of support period*

One of the objectives of the CIS is to address the timing of new capacity entry and support firming generation and storage to enter the market before it is needed for system reliability.

AGL notes that reducing the CIS contract duration to 2-5 years, to align with the identified reliability gap it is intended to address, would support this objective.

For example, CIS contracts could cover the period leading up to a thermal generator closure. This would provide the CIS asset with a financial backstop while the market is temporarily “oversupplied”, but then minimise any impact on ongoing market signals and contracting behaviour. We envisage this approach would be lower cost to taxpayers overall, even if the floor price for the 2-5 year CIS contract is higher. It would also provide a strong incentive for the asset to begin operation in time, as the end date of the contract would be firm.

#### *Cap and floor mechanism and “net revenue”*

The Department is proposing that each year CIS projects are assessed for their “net revenue” from various contracts and markets. If net revenue is above the revenue cap, the proponent would pay back a certain percentage to the government. If net revenue is below the revenue floor, the proponent would receive payment of a certain percentage from the government. This would operate for the life of the agreement and not be an exercisable option.

AGL supports the Department’s approach to avoid a contract for difference arrangement, which withdraws capacity from the market. While the Department’s “net revenue” proposal does not prevent the generator from contracting or participating in the market, there are some significant complexities in determining and attributing “net revenue” that would need to be addressed for the CIS to be successful.

Firstly, the proposed approach does not recognise that many assets are operated within a portfolio. The owner may not necessarily sell contracts linked with particular capacity; but manage its contractual obligations through a collection of assets. This issue is exacerbated for those with both generator and retail businesses, where customer demand is another parameter that is managed within the portfolio. It would be prohibitively difficult to attribute wholesale contracts and determine net revenue of individual assets.

Secondly, there would likewise be significant challenges in attributing net revenue for a project that is only partially funded by CIS (eg 100MW of a 200MW battery). We understand that some of these challenges have become apparent for the projects participating in the NSW LTESA scheme.

Thirdly, the proposed approach could make it difficult for developers to build and own new capacity, with a separate participant as the asset operator. It’s currently unclear what the relevant net revenue for the developer would be in this situation, and how it would be applied. AGL is concerned that the CIS could result in these types of business arrangements becoming impractical or no longer financially viable.



We therefore suggest that the Department consider alternative options for the CIS that are simpler to administer, while still providing system reliability. For example:

1. An agreed fixed annuity payment. This would be easier for the Department to assess and compare projects (\$/MW) compared with the multiple variables that would need to be assessed in the current CIS proposal.
2. “Net revenue” to only assess energy and FCAS settlement revenue (and not “eligible wholesale contracts”). This could retain the cap and floor arrangement, but be significantly less complex to administer, manageable for companies with a portfolio of assets, and more manageable for assets where only a portion of the asset is funded under the CIS.

A payback mechanism that is limited to any amounts received from the Government in previous years of the scheme is an appropriate sharing of risk between taxpayers and private sector.

#### *Participation requirements*

AGL has the following comments on the participation requirements:

1. To be available:

AGL is broadly supportive of this requirement and suggests that it include a small buffer to allow for unforeseen events. We are comfortable with a requirement that the generator must be available 95% of the time, apart from scheduled maintenance, before any penalties are applied.

We also request that the Department provide additional guidance on the meaning of availability, especially with regard to the expected performance of batteries. For example, does “available” mean that the asset is simply capable of market participation? Would a battery meet this requirement with an ability to either charge or generate, or does it need to always be available for generating (and therefore retain a certain volume of capacity in reserve)?

2. To respond to price signals:

This requirement creates a concerning market distortion and AGL believes it is unnecessary. If a generator is able to sufficiently benefit from responding to price signals (as discussed above) then there are adequate incentives for CIS generators to be price responsive.

It's unclear how this requirement would be defined in a way that does not cause unintended consequences. If all CIS generators respond once the price reaches a certain threshold, batteries may need to withhold capacity in case this threshold is met, and broader market and investment signals would be distorted.

In addition, this requirement would interact with the requirement to bid in during LOR3 events, as a proponent may need to charge during a time of high prices to meet the 50% capacity requirement.

Finally, the availability requirement above means that the generator would be available for AEMO direction during significant market events.

3. To bid 50% of capacity in when LOR3 events are identified:

AGL is concerned that storage may need to withhold generation ahead of a market shortfall in order to meet this requirement. This could also interfere with the ability of storage to offer contracts, as it imposes another limitation on its operation.



CIS projects should be unencumbered with requirements to generate, apart from the requirement to be available (and therefore participating and responding to price signals in a competitive manner). We also note that they would be subject to AEMO direction when that is deemed necessary.

*Pumped hydro energy storage*

With regard to pumped hydro energy storage (PHES) projects, we note that the timeframes involved in the CIS possibly preclude participation of that technology. We therefore suggest that a longer term view be considered for the CIS (for example for delivery out to 2035) which would enable the inclusion of a wider range of technologies to compete for government support.

If you wish to discuss this submission further, please contact Jenessa Rabone at [JRabone@agl.com.au](mailto:JRabone@agl.com.au).

Yours sincerely,

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