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Australian Energy Market Commission (AEMC)

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Retailer reliability obligation exemption for scheduled bi-directional units

AGL Energy (AGL) welcomes the opportunity to provide feedback on the Australian Energy Market Commission (AEMC) Retailer reliability obligation (RRO) exemption for scheduled bi-directional units rule change consultation.

About AGL

Proudly Australian for more than 186 years, AGL supplies around 4.3 million energy and telecommunications customer services. AGL is committed to providing our customers simple, fair, and accessible essential services as they decarbonise and electrify the way they live, work, and move.

AGL operates Australia's largest private electricity generation portfolio within the National Electricity Market (NEM), comprising coal and gas-fired generation, renewable energy sources such as wind, hydro and solar, batteries and other firming technology, and gas production and storage assets. We are building on our history as one of Australia's leading private investors in renewable energy to now lead the business of transition to a lower emissions, affordable and smart energy future in line with the goals of our Climate Transition Action Plan.

Overview

AGL considers the RRO should be appropriately designed so as not to undermine its intended objective of supporting NEM reliability. We consider there is an opportunity to amend the regulatory settings under the RRO to maximise reliability benefits for the NEM, while supporting the development of bi-directional technologies.

AGL strongly supports the proponents' rule change proposal to exempt scheduled bi-directional units (grid-scale batteries) from the RRO; however, AGL considers a more preferable rule change, which also includes the pumped-hydro energy storage (PHES) asset class as part of the exemption, should be considered by the AEMC.

We also suggest that the full RRO mechanism is due a review, given it is five years since its implementation.

Compliance with the RRO by batteries may compromise the reliability of the NEM

AGL considers the existing RRO undermines the security of the NEM by imposing obligations on batteries and other storage assets such as PHES. We agree with the proponents' assessment of NEM-wide risks as a result of the existing design of the RRO.

Including batteries and PHES as liable entities in the RRO incentivises operators of these assets to avoid consuming energy to provide frequency control ancillary services (FCAS), and other system-security services, during a reliability-gap period. This is due to risks of RRO non-compliance which could result in penalties and Procurer of Last Resort (PoLR) costs.

Consequently, if batteries and PHES withhold the provision of grid-supporting services to avoid consuming during a gap period, system security risks could increase, with flow-on effects of added costs to consumers.

The RRO exemption should include both batteries & pumped hydro

AGL considers the proposed RRO exemption should take a technology-neutral approach and include batteries and PHES, given both technologies ultimately contribute to energy system security.

We consider the exemption should apply to PHES irrespective of registration category and not be linked to the Integrated Resource Provider (IRP) registration category. This is because not all PHES assets will initially be required to register as an IRP.

The current regulatory settings under the RRO are not fit-for-purpose as they require energy storge technologies, such as batteries and PHES, to purchase contracts to cover reliability gaps. We do not consider batteries and PHES should be treated in the same way as other types of load in the NEM because batteries and PHES offset system reliability risks and actively support the firm contracts required under the RRO. The need for batteries and PHES to support firming contracts will also increase as coal-fired generation retires and more variable renewable energy enters the system.

Pumped-hydro is integral to system security & reliability

Developing PHES and other synchronous long duration storage (LDS) technologies is integral to ensuring reliability and affordability as Australia transitions to a renewable energy system.

AGL is the largest private owner and operator of hydro generation in Australia, with 785MW of hydro generation located in Victoria and NSW. We recognise the importance of PHES to maintain grid reliability, balance intermittent renewable energy sources, provide essential system services and facilitate the decarbonisation of our energy supply.

We note there are a range of benefits associated with long duration PHES technology that should be appropriately evaluated when assessing any regulatory settings which affect PHES development. We consider the long-term reliability of the energy system is best served by investing and developing a portfolio of diverse technology types that deliver the optimal combination of reliability and sustainability outcomes at an efficient cost.

- PHES provides dispatchable and flexible generation to meet peak demand with deeper reserve capacity, greater ability to store excess generation during peak solar hours, and greater ability to cover the tail risk of long wind or solar droughts, since it has a long duration that significantly exceeds the typically four-hour maximum duration of batteries
- PHES also produces synchronous generation which is similar to existing thermal generation technologies and aligns with the configuration of the existing energy system. This enables PHES to provide numerous benefits in terms of system strength, voltage control, inertia, black start, and frequency control.
- PHES has a proven asset life in the order of 50 to 100 years or more.

PHES and other key long duration storage technologies face significant challenges to develop. A well-balanced policy and investment environment is essential for the development of PHES projects, in addition to new markets that reflect the value of medium to long duration storage and essential system services. We note developing long duration PHES is already a significant challenge for the market, given the:

- High initial capex requirement
- Extended and complex environmental approvals
- Sensitivities associated with social license and water resource as a shared asset
- Technical complexity of pumped hydro projects
- Lack of supportive market mechanisms or incentives

Due to the importance of PHES for system reliability and security, and the significant challenges in the development of PHES, we consider it crucial that RRO obligations should not apply to PHES since they have the potential to undermine the ability of PHES to fulfill its important role in the market.

Cost impacts & interaction with existing regulatory processes

AGL considers the benefits of the proposed exemption exceed any associated costs. The system benefits from the proposed rule change would be maximised by also including the PHES asset class.

In terms of interaction with other regulatory processes, the AEMC should allow for adequate timing to ensure the Integrating Energy Storage Systems into the NEM rule change and associated asset registration transitions to the new integrated resource provider category have been completed.

The RRO is due a full review

AGL considers the RRO is due a full review, given it is five years since it was first implemented.

We do not consider that obligating generators to ensure their contract positions meet retailer peak load, as is required under the RRO, is an effective way to ensure reliability. Since the firmness of different source of supply varies, and retailer peak load is challenging to forecast, the RRO necessarily requires simplifying assumptions that undermine its utility. It is also not clear why the RRO is necessary given the existence of the Capacity Investment Scheme, various state schemes, and the Reliability and Emergency Reserve Trader mechanism.

The RRO places significant compliance burden on retailers, generators, and AEMO, with the costs passed to consumers. We do not consider that these costs are justified by any significant benefit.

As an interim measure, we recommend the minimum size of market making contract volumes under the Market Liquidity Obligation reduce from 5MW to 2MW. Given recent market trends, there has been relatively low trade of lots greater than 2MW, particularly for periods far out in the curve. Amending the minimum trading parcels to 2MW would thereby improve liquidity of trades and support the more efficient operation of the market, without creating any significant issues for participants seeking contracts.

If you have any queries about this submission, please contact Alifur Rahman on +61 416 00 1664 or at ARahman3@agl.com.au.

Yours sincerely,

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Wholesale Markets Regulation