AGL Energy Limited
ABN: 74 115 061 375
Level 24, 200 George St
Sydney NSW 2000
Locked Bag 1837
St Leonards NSW 2065
t: 02 9921 2999
f: 02 9921 2552
agl.com.au

Energy Security Board

info@esb.org.au

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Response to Customer Insights Collaboration – Release One – Q1 2022: Call for evidence

AGL Energy (**AGL**) welcomes the opportunity to respond to the Energy Security Board's (**ESB**) Customer Insights Collaboration, Release One call for evidence.

AGL is one of Australia's leading integrated energy companies and one of the largest ASX listed owner, operator, and developer of renewable generation. AGL is also a significant retailer of energy and telecommunications with 4.5 million customer accounts across Australia. AGL supports an energy market system that empowers consumers to take control of their energy consumption and costs.

We are a market leader in the development of innovative products and services that enable consumers to make informed decisions on how and when to use their distributed energy resource (**DER**) assets to optimise their energy load profile and better manage their energy costs. Our current DER product and services include our leading-edge Virtual Power Plant (**VPP**)[1], Peak Energy Rewards demand response program[2], retail offer for electric vehicle (**EV**) owners[3] and EV subscription service[4]. Through our EV Orchestration Trial,[5] we are also seeking to understand how EVs could help the wider energy system by 'orchestrating' vehicle charging through smart chargers, Vehicle to Grid chargers and API technology.

Strategic direction

AGL supports the ESB's approach to the DER Implementation Plan that focuses on the perspective of customers. As we observed in response to the ESB's Post 2025 Market Design Options Paper, approaches to reform should maximise shared value between customers and businesses, driving efficient investment in resources that support customers without impacting on the broader grid.[6]

There is strong potential for whole-of-system cost savings to be realised through the integration of DER and the associated value streams that can be provided by the orchestration of DER assets. By establishing effective competitive arrangements for the procurement of system security and network services, DER has potential to substitute expensive network build, deliver value to owners and broader consumers, and provide alternative ways of meeting system security requirements. Over time, electric vehicles will play an

[1] For further information regarding AGL's Virtual Power Plant, currently available to customers in New South Wales, Queensland, South Australia and Victoria please refer to https://www.agl.com.au/solar-renewables/solar-energy/bring-your-own-battery?cide=semr&gclid=EAIaIQobChMIicjKmKuP5wIVyjUrCh2eXwvVEAAYASAAEgLZRPD_BwE&gclsrc=aw.ds.
[2] See further AGL Peak Energy Rewards, available at https://www.agl.com.au/newcampaigns/peakenergyrewards.
[3] See further, AGL EV Plan, available at https://www.agl.com.au/electric-vehicles.
[4] See further, AGL Electric Vehicle Subscription, available at https://www.agl.com.au/get-connected/electric-vehicles/ev-subscription.
[5] See further, AGL Electric Vehicle Orchestration Trial, available at https://arena.gov.au/projects/agl-electric-vehicle-orchestrationtrial/.
[6] See further, AGL Submission on the Energy Security Board's Post 2025 Market Design Options Paper (10 June 2021), Available at https://www.agl.com.au/thehub/articles/2021/06/agls-submission-on-the-energy-security-boards-post-2025-market-design-options-paper.

increasingly important role in the energy system, so market reform here has significance for the transport sector and its own energy transition.

Consumers and communities increasingly expect greater autonomy, with different options for participation and aggregation in the market, and network connection. Putting in place the right market arrangements and institutions will ensure innovation products and services will provide appropriate economic signals to energy consumer (residential and business) so that they can produce, store or consume energy in a way that not only optimises their usage but also provide wider system services that maintain system reliability and security.

In assessing the current barriers and enablers to customers being rewarded for flexibility from their DER and flexible energy use, we would recommend consideration be given to the following topics:

1. **Regulatory and market reform to unlock value and choice for customers, including:**
    - Promoting and supporting innovative business models that can provide flexible energy services to the broader energy market system, such as Virtual Power Plants;
    - Seeking out opportunities associated with behavioural demand response and addressing practical issues associated with current technical standard settings;
    - Seeking out cost effective and innovative solutions for commercial and industrial customers to enhance flexibility;
    - Trialling competitive market opportunities to manage electric vehicle charging and understanding the negative csutomer impacts from traditional regulated command and control approaches that disempower and disincentivise consumer participation;
    - Establish customer centric solutions to address the challenges of minimum operational demand and only use command control arrangements in genuine emergency circumstances;
    - Consider learnings from international experiences in the development of structured procurement platforms for distribution network and market flexibility services;
    - Ensure effective network economic regulation to ensure networks compete in the contestable market on an equal footing to prevent cross-subsidisation and potential consumer harm; and
    - Distribution network pricing reform to better signal the costs of using the infrastructure.
2. **Wholesale market settings to support flexibility, including insights with respect to:**
    - The AEMO NEM Virtual Power Plant Demonstrations;
    - Necessary iterations to the Demand Response Mechanism;
    - Fairly balancing the application of TUOS and DUOS charges in the Integrating Energy Storage rule change; and
    - Research insights on the potential to synchronise commercial and industrial demand response capability to increase participation and scale contribution across the market.

3. **Fit-for-purpose consumer protection to improve experience for all consumers:**
    - Updating current energy consumer protection regulations to ensure they provide consistent protections to small consumers irrespective of where they source or how they use their energy
    - Consumer insights research from individual market participants providing DER services.
    - Customer insights from the AEMO Virtual Power Plant Demonstrations.

In the **Attachment** we provide a reference list to a range of authoritative source materials on each of these topis to support the ESB's development of a knowledge sharing report.

We would welcome the opportunity to discuss these topic areas in further detail as the ESB synthesises key insights about customer values, expectations and needs with respect to DER and flexible demand technologies and services.

Should you have any questions in relation to this submission, please contact me at CHristodoulidis@agl.com.au.

Yours sincerely

Con Hristodoulidis

Senior Manager Regulatory Strategy

ATTACHMENT – REFERENCE LIST

1. **Regulatory and market reform to unlock value and choice for customers**

- Customer and regulatory insights with respect to innovative business models that can provide aggregated services to the broader energy market system, such as Virtual Power Plants. See for example AGL's ARENA VPP Knowledge Sharing Reports: https://arena.gov.au/projects/agl-virtual-power-plant/
- Customer and regulatory insights on demand response, including:
    - The opportunities associated with behavioural demand response. See for example AGL 2021 Knowledge Sharing Report in the context of our ARENA NSW Demand Response Trial: agl-nsw-demand-response-final-report.pdf (arena.gov.au)
    - The practical issues associated with the application of the Demand Response Enabling Device (**DRED**) control methodology specified in AS4755. See for example AGL 2019 Knowledge Sharing Report in the context of our ARENA NSW Demand Response Trial: https://arena.gov.au/assets/2018/09/agl-nsw-demand-response-report-october-2019.pdf.
- Insights on innovative solutions for commercial and industrial customers to enhance flexibility. By way of example, Epho's ARENA Bright Thinkers Power Station that is now owned by AGL demonstrated an innovative approach to facilitating flexibility for both commercial tenants and landlords whilst de-risking investment for the financier and asset owner. This was made possible due to the technology that enables providers to sell energy behind-the-meter through PPA arrangements and front-of-meter to the NEM. See further: https://arena.gov.au/projects/bright-thinkers-power-station/.
- Early insights on opportunities to manage electric vehicle charging. See for example AGL EV Orchestration Trial: https://arena.gov.au/projects/agl-electric-vehicle-orchestrationtrial/. See also the Distributed Energy Integration Program EV Grid Integration Working Groups and the findings of key taskforces including the EV Tariff and Incentive Taskforce that was co-chaired by the Electric Vehicle Council and AGL: https://arena.gov.au/knowledge-innovation/distributed-energy-integration-program/ev-grid-integration-workstream/
- Insights on the challenge of minimum operational demand and the opportunity to a establish a customer centric solution. See for example AGL Hub Story 'Maximising solar to support Australia's evolving grid, part 1' (1 November 2021): https://www.agl.com.au/thehub/articles/2021/11/maximising-solar-to-support-australias-evolving-grid; AGL Hub Story Part 2 (3 November 2021): https://www.agl.com.au/thehub/articles/2021/11/maximising-solar-to-support-australias-evolving-grid-part-2; AGL's Solar Grid Savers market offer: https://discover.agl.com.au/energy/helping-to-maximise-your-solar-savings/
- International experience in the development of structured procurement platforms for distribution network and market flexibility services. See approach adopted by the UK Government and Ofgem: https://www.gov.uk/government/publications/transitioning-to-a-net-zero-energy-system-smart-systems-and-flexibility-plan-2021

- Effective network economic regulation to ensure networks compete in the contestable market on an equal footing to prevent cross-subsidisation and potential consumer harm, including:
    - Strengthened ring-fencing arrangements to prevent direct investment in battery storage: Refer AER industry consultation on ring-fencing arrangements and need to test the market for non-network solutions: https://www.aer.gov.au/networks-pipelines/guidelines-schemes-models-reviews/electricity-ring-fencing-guideline-review
    - Clear parameters on investment in 'community' distribution level storage assets to ensure monopoly network businesses do not displace the competitive market for DER services, that is better placed to facilitate co-optimisation between the multiple value streams that adhere to energy storage. See, for example, Oakley Greenwood, Implications of network ownership of grid-side battery assets on competition in the Wholesale Electricity Market (May 2021), ogw-report_wa-competitive-effects-of-network-provision-of-grid-scale-batteries_may2021.pdf (energycouncil.com.au); https://energyconsumersaustralia.worldsecuresystems.com/Report%20community%20battery%20ownership%20models%20Feb2020.pdf.
- Distribution network pricing reform to better signal the costs of using the infrastructure, including consideration of:
    - The potential benefits associated with mandating time of use network tariffs across distribution networks to optimise the use of existing infrastructure by encouraging demand management pricing; and
    - Alternative approaches to tariff design, such as the bulk wholesale network tariff model. Under this model, distribution networks charge cost reflective network tariffs to retailers based on an aggregated load profile of the retailers' customers. This approach could better incentivise retailers to manage the risks associated with network costs thereby promoting greater innovation in the development of products and service and investment.

    See for example, Infrastructure Victoria's Recommendation 9 in its 30 Year Infrastructure Strategy for Victoria: https://www.infrastructurevictoria.com.au/report/1-1-navigate-the-energy-transition/# On the bulk wholesale network tariff, see the Brattle Group Report (2018) Electricity Distribution Network Tariffs: Principles and analysis of options: https://www.brattle.com/wp-content/uploads/2021/05/14255_electricity_distribution_network_tariffs_-_the_brattle_group.pdf. See also DEIP access and pricing reform package outcomes: https://arena.gov.au/assets/2020/07/deip-access-pricing-reform-package-outcomes.pdf.

2. **Wholesale market settings to support flexibility**

- Market insights from the AEMO NEM Virtual Power Plant Demonstrations: https://arena.gov.au/knowledge-bank/aemo-nem-virtual-power-plant-demonstrations-knowledge-sharing-report-4/
- Industry insights on regulatory settings that will need to be adapted in the Demand Response Mechanism as the demand response market matures. See AEMO industry consultation on the development of the Demand Response Mechanism: https://aemo.com.au/en/initiatives/trials-and-initiatives/wholesale-demand-response-mechanism/nem-demand-response-mechanism
- Industry insights on the need to fairly balance the application of TUOS and DUOS charges to support continued investment in assets that can provide flexibility services. See AEMC industry consultation on the Integrating Energy Storage Rule Change: https://www.aemc.gov.au/rule-changes/integrating-energy-storage-systems-nem
- Research insights on the potential to synchronise commercial and industrial demand response capability to increase participation and scale contribution across the market. AGL has recently commenced work in partnership with RMIT University through C4NET on this subject and would welcome the opportunity to discuss this potential in more detail.

3. **Fit-for-purpose consumer protection to improve experience for all consumers**

- AGL's submission to the AEMC's Consumer protections in an evolving market review in 2019 provides guidance on how energy consumers view energy from the grid and their DER assets. In particular, our position is that consumers, irrespective of how they choose to receive their energy supply and services, should be afforded the same rights and protections as those customers of traditional retailers. However, we do not consider the current NECF arrangements are fit-for-purpose. The focus of NECF is on providing consumer protections for connection to and supply from the NEM. However, there are now a growing range of energy supply and access models and the diversification of service or product from the point of view of the customer in terms of accessing and utilising energy, agl_submission_-_aemc_consumer_protections_submission_-_13_feb_public_version_redacted.pdf, page 26 onwards.
- Consumer insights research from individual market participants providing DER services. AGL would welcome the opportunity to provide insights on a confidential basis given the commercial sensitivity of this work.
- Customer insights from the AEMO Virtual Power Plant Demonstrations: https://arena.gov.au/knowledge-bank/virtual-power-plant-demonstrations-consumer-insights-report/.