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Rebecca Knights
Director, Energy Policy and Programs
Department for Energy and Mining
South Australian Government

Submitted by email: DEM.REES@sa.gov.au

20 July 2020

Dear Rebecca,

Consultation Paper on the proposed Retailer Energy Productivity Scheme regulatory framework and activities

AGL Energy (**AGL**) welcomes the opportunity to make a submission in response to the Consultation Paper on the proposed Retailer Energy Productivity Scheme (**REPS**) regulatory framework and activities (**Consultation Paper**).

AGL is one of Australia's largest integrated energy companies and the largest ASX listed owner, operator and developer of renewable generation and is committed to meeting the needs of its energy customers. Our diverse power generation portfolio includes base, peaking and intermediate generation plants, spread across traditional thermal generation as well as renewable sources.

AGL supports the principle of developing an energy productivity scheme to optimise energy usage of South Australian (**SA**) energy users. However, AGL does consider that the new aims of the proposed REPS represent a significant 'pivot' for the industry (retailers, installers, product suppliers), and that the 1 January 2021 commencement date does not allow sufficient time for the industry to up skill, create new business models or source suitable products to meet the new objectives.

As such, we encourage the SA Government to commence the new REPS activities with an incremental ramp up to full activities once methodologies have been developed and tested in market. A phased introduction will also ensure the program complements other SA Government reforms, including Smarter Homes consultation.

Based on our experience with the ARENA and NSW Government jointly funded Peak Rewards program, we also consider that the REPS should initially focus on large commercial and industrial user activity, residential batteries and behavioural demand response as these activities are the most likely to generate the lowest cost solutions in the initial stages. Whilst this is occurring, we recommend that the existing REES activities remain at their current GJ value, to allow retailers to meet their 2021 targets whilst new demand response activity methodologies are being explored and implemented. We have outlined further options for an incremental ramp up in **Appendix A** below.



Another option available to the SA Government is to undertake a trial of energy productivity measures based on the categories above. In undertaking a trial, the SA Government can also ensure that consumer choice and protections are inherent in the REPS, including those protections proposed in the Smarter Homes consultation. For example, technology standards underpinning the REPS products and services should facilitate two-way communication to enable consumer choice and comfort. In matching these consumer needs, the REPS must therefore also offer flexibility in operation (e.g. undertaking behavioural research to understand the number of consumers that will utilise or give effect to their consumer rights and protections).

Trials or an incremental ramp up of the REPS as described above would provide the evidence to ensure we get the regulatory framework right and that the intended benefits for SA energy consumers are realised.

Should you have any questions in relation to this submission, please contact Leilani Kuhn (Manager Policy & Strategy) on 03 8633 6934 or myself on 03 8633 6207.

Yours sincerely,



Elizabeth Molyneux

GM Policy & Energy Regulation, AGL Energy



APPENDIX A

Overview of the REPS

REPS aims to support energy demand management and demand response activities, as well as energy efficiency activities in homes and businesses. This changes the scheme from an energy efficiency scheme, to an energy productivity scheme, predicated on flattening the 'duck curve' (created by an excess of rooftop solar PV installations in South Australia) and assisting with the stability of the electricity grid.

The metrics to achieve this will be based on the number of GJ per activity; in the first instance, on its ability to change load and, in the second instance, on the energy efficiency of the activity.

Whilst we are in general agreement with the direction of REPS, AGL believes the new aims of proposed REPS represent a significant 'pivot' for the industry (retailers, installers, product suppliers), with insufficient time for the industry to up skill, create new the business models or source suitable products to meet the new objectives for a 1 January 2021 commencement date.

Thus, to achieve the proposed aims of REPS, our recommendations are:

1. **Transition incrementally into substantive new demand response and time of use methodologies during 2021 and in close consultation with industry and the SA Government Smarter Homes pricing proposals.** This is explored more fully below.
2. **Leave the values of all existing REES activities as they are for 2021, and transition to REPS methodology in 2022.**

This approach:

- allows time for new energy productivity methodologies to be developed, tested in market and changed as required to make them cost-effective and suitable for achieving the aims of the REPS; and
- gives certainty to retailers for carry over GJ, which in turn, keeps installers and other REES contractors in business from September onwards.

3. **Increase the carryover from REES to REPS from the proposed 20% to 40%.**

This would help keep installers and contractors employed until REPS starts (as noted above) and would enable retailers to meet their targets for 2021 whilst allowing for the development of new methodologies, which would start to be implemented in the latter half of 2021.

4. **Include smart meters as a REPS activity.**

Most of the new activities proposed require a smart meter to be installed at the property, however less than 20 percent of residential customers in SA have interval meters. As not all homes will be suitable for PV and/or batteries (particularly rentals), installing digital meters in these properties would open the REPS activities to a much wider customer base.

5. **Incorporate methodologies from energy efficiency schemes in other states**

AGL encourages the SA Government to look at implementing successful programs from energy efficiency schemes in other states, as these are proven methodologies, acknowledging that the methodologies would have to be revised to take account of SA conditions.

In designing the REPS, we believe consumer choices and comfort must be paramount. There will inevitably be some customers that are unable or not interested in Distributed Energy Resource (**DER**) participation or responding to price signals; similarly there will be some customers who will participate but will want/need the



ability to opt-out of demand response when it suits them, especially when extreme weather conditions in summer have the potential to impact their health. This makes it important that the technology standards underpinning the REPS products and services facilitates two-way communication and therefore enables consumer choice. We acknowledge this is likely to reduce the value of firm capacity, but consumer choice and comfort are important principles in the design of the REPS.

Some aspects of the REPS are currently unclear, especially as the SA Government is running a co-current consultation on Smarter Homes that is seeking solutions (such as solar curtailment and standard setting), and we offer the following considerations for the ongoing design:

- AEMO or SAPN curtailing the assets for network reliability will affect liabilities – this will likely devalue the ability of the device to optimise energy usage.
- The equipment standards used will affect both the scheme and the ability of contracting parties to dispatch against the needs of the grid. For example, the proposed Demand Response Enabling Device (**DRED**) standard does not currently support two-way communication (as acknowledged in the Smarter Homes consultation).
- Wholesale and retail designs will impact the effectiveness of such schemes, for example expectations of contractual arrangements and sharing of risk for REPS. This will include understanding issues such as identification of change of ownership (e.g. contracting parties move residence) and how this is addressed under the scheme as well as other market designs.

The benefits of trials/incremental ramp up

Given this is a major change from REES and many issues and potential outcomes are unknown, AGL considers that the SA Government should look at an incremental ramp up of the REPS. For example, the SA Government could seek to commence a trial or sandbox arrangement for REPS, to more fully understand the energy productivity capacity, the value that the scheme would unlock and any unforeseen challenges that may occur. An incremental ramp up of the REPS could be done several ways:

1. Prioritise implementation of large C&I customer activities, where retailers have experience with similar arrangements (e.g. RERT), and behind the meter batteries as these activities are likely to more easily determine firmness and therefore the true value of available capacity.
2. Behavioural demand response is another opportunity under an incremental ramp up, allowing customers time to become familiar with the concepts and operational requirements of demand response and time-of-use (**TOU**) tariffs.
3. Maintain the values for all existing REES activities for 2021 and run a trial – this would allow industry and SA government to put the mechanisms in place and allow industry to both familiarise themselves with the scheme and set the appropriate contracts with parties without compromising the ability to reach 2021 targets.
4. Commence using a trial / sandbox arrangement that focuses on a small target or particular time of the day (e.g. trialling a specific aspect of the scheme with a smaller set of consumers).

We would also encourage the SA Government to use the period before the commencement of the five-minute settlement (**5MS**) to run any trials or initiate an incremental ramp up of the REPS. This would allow the SA Government take learnings and ensure that the scheme is delivering the intended results.

Trials or an incremental ramp up of the REPS as described above would provide the evidence to ensure we get the regulatory framework right and that the intended benefits for SA energy consumers are realised.

APPENDIX B

AGL's responses to the Consultation Paper questions

No.	Consultation Question	AGL response
1	Are these proposed thresholds appropriate for the REPS?	AGL suggests that smaller retailers should be obligated, but have the option to pay their obligation (not a penalty), like the ACT EEIS
2	Are there alternative approaches to setting thresholds that should be considered for the REPS?	No comment at this time.
3	Are there designated purchases which should be excluded for determining obligation thresholds? Why?	No comment at this time.
4	Are the proposed means of setting targets appropriate?	<p>AGL supports the proposal that the Minister would set annual Energy Productivity Targets in five year periods, noting that we strongly urge governments to set the targets at least a year in advance to provide retailers and energy management companies time to prepare, set up their systems and order appropriate volumes of stock.</p> <p>AGL also understands that the SA Government does not want to disadvantage non-priority group residential customers. However, including a household energy productivity target (HEPT) as well as priority group energy productivity target (PGEPT) adds complexity and therefore cost to the REPS scheme.</p>
5	Are there alternative approaches to target setting that should be considered?	No comment at this time.
6	Are the sub-targets appropriate or should others be considered?	<p>AGL is concerned about the number of sub-targets that are proposed, as this will increase the cost and complexity of the REPS.</p> <p>In AGL's view, setting a regional target / requirement for a new scheme may be overly ambitious, as the SA Government will need to work up methodologies and best equipment solutions before moving to regional areas.</p> <p>Furthermore, a threshold of 15% for regional activities may be set too high. AGL considers that any threshold for regional activities should be set with reference to the share of total energy consumption by households in regional areas.</p>
7	Is inclusion of rental properties as a priority group the best way to incentivise delivery of	AGL supports rental properties being included as a priority group but does not support the introduction of a separate sub-target.

No.	Consultation Question	AGL response
	<p>activities to this group or should a separate sub-target be considered?</p>	<p>It is also important to note that extensive global and local experience shows that, on their own, incentives are generally highly ineffective at encouraging landlords to install energy efficiency measures. For example, very few landlords took up the offer of completely free insulation under the Federal Government's Home Insulation Program.</p> <p>Other ways to improve the energy efficiency of rental properties include:</p> <ul style="list-style-type: none"> • mandating Mandatory Energy Performance Standards for rental properties in SA, in line with other governments overseas, to incentivise landlords to increase the energy efficiency of their properties¹. • disclosing energy efficiency ratings of rental properties (e.g. Scorecard² energy rating methodology).
8	<p>Are these proposed REPS normalisation factors appropriate?</p>	<p>AGL does not consider the proposed REPS normalisation factors appropriate and considers that, at least for the first REPS year, the energy efficiency normalised GJ for existing activities should remain the same as under REES. The reasons for this include:</p> <ul style="list-style-type: none"> • the calculation to include time of use in these activities (which are typically static) is complicated and needs to be consulted on. • the timing factors under REPs are not consistent with the new TOU tariff structures proposed by SAPN which means the incentives are not aligned. • the targets for retailers as well as the GJ values need to be out in August to allow for market assimilation, development and REPS contract discussions. • if the carry-over GJ from REES do not have the same value, retailers will not carry over REES credits and therefore the installer market may come to a halt in around September leading to potential mass unemployed from the industry. In the alternative, retailers could revise their contracts with REES contractors for the latter half of 2020 based on REPS assumptions, which would allow them to carry over GJ not at a loss. This would lead to contractors making a loss in 2020. • if GJ for existing energy efficiency activities are reduced, then there is a good chance that retailers will

¹ https://www.acoss.org.au/wp-content/uploads/2015/06/ACOSS_ENERGY_EFFICIENCY_PAPER_FINAL.pdf

² <https://www.seccca.org.au/project/residential-efficiency-scorecard/>

No.	Consultation Question	AGL response
		not make their targets in 2021, due to lower GJ values and new activities not being in place.
9	Does the low demand normalisation factor provide enough incentive to move energy consumption away from other periods (incl off-peak) to the low demand period??	<p>In AGL's view, the low demand normalisation factor does not really provide enough incentive as:</p> <ul style="list-style-type: none"> • the difference between off-peak and low demand normalisation factor is only 20%. • some activities are assisting productivity by reducing energy demand across the site and need to be used at certain peak times (e.g. lighting). However, these activities are being penalised, even though they may save more energy per site per year than a demand response activity. • there will be few demand response / TOU activities for priority group households. Therefore, these GJ will have an inherent lower value, unless the retailers pay the difference between to cost of a deep dive retrofit and the REES cost – which may then be passed on to customers in SA.
10	Are there alternative factors that should be considered?	No comment at this time.
11	Is the flexibility to conduct such a program appropriate?	<p>It is AGL's view that retailers will need more than four months' notice to be ready and able to bid into any bespoke programs announced by the Minister, especially if the new program activity is outside of BAU under the REPS. More time will allow retailers to assess the requirements and skills needed, quote appropriately and ensure they are in a position to deliver.</p> <p>The Consultation Paper also does not specify whether the data shared between retailers when REPS credits are transferred will include personal information, or whether the data will be deidentified and/or aggregated. In the interest of customer privacy, AGL recommends that, when REPS credits are transferred between retailers, there is no requirement to include the personal information of individuals.</p>
12	Are any improvements to the proposed process necessary?	No comment at this time.
13	Is the proposed Ministerial Protocol appropriate for the purpose in guiding the selection of energy savings activities and calculation methods in the REPS?	Yes, based on REES historical operations in this space.

No.	Consultation Question	AGL response
14	Is annually the appropriate timeframe for cost and offer reporting?	AGL considers the requirement for offer reporting to be unnecessary and costly.
15	Are any other obligations necessary to incentivise competitive cost and activity delivery?	GJ multipliers to incentivise strategic activities that are currently not cost-effective.
16	Is there a case for any other activity targets from the commencement of the REPS?	No.
17	Which of these activities and methods do you think will be implemented through the REPS, and which will not? Please provide reasons.	<p>Based on AGL’s experience, the probability of take-up, as shown by REES and other energy efficiency schemes, primarily relates to two factors:</p> <ul style="list-style-type: none"> • the ease of undertaking and reporting on the activity, and • the cost-effectiveness for the entity paying for the activity. <p>These are important factors to consider when trying to pivot an entire industry, such is happening in the transition from REES to REPS.</p> <p>AGL is very keen to undertake ‘deep dive’ retrofits for all our hardship customers and have been looking at ways to do this, with a pilot to commence shortly. However, this must be for a certain profile of customers, otherwise it is not cost-effective for a retailer to do this.</p> <p>AGL suggests that the SA Government look to incentivise this new market for energy productivity activities by having a transparent subsidy scheme which gives GJ over and above those under normal REPS assignment. For instance, rather than incentivising the installation of demand management boxes onto existing (possibly inefficient) air conditioners, give significantly more GJ to encourage the most efficient DRED-enabled RC heat pumps to be manufactured locally or brought into Australia. This would help develop the market and thus reduce pricing. This multiplier could also be reviewed every two years under the proposed review process and adjusted accordingly.</p> <p>Programs from other states suitable for implementation under the REPS</p>

No.	Consultation Question	AGL response
		<p>AGL agrees that the majority of activities proposed by the Consultation Paper are suitable to be adapted for SA conditions under the REPS.</p> <p>However, the multi-purpose residential and small business aggregated measurement and verification method to recognise measured small energy productivity gains across thousands of sites at a program/portfolio level is unlikely to be taken up, especially in the first tranche of REPS.</p> <p>Proposed new REPS activities</p> <p><i>New battery installed with on-site charge-discharge management coupled to an existing solar PV system:</i></p> <ul style="list-style-type: none"> AGL supports new battery installations being 'orchestration ready'. In our view, the various VPP trials underway will help to illustrate how these dynamic resources can be operated and the value streams that can be optimised. <p><i>Install demand shifting timer/PV shifter/ripple control etc. on an electric storage water heater:</i></p> <ul style="list-style-type: none"> Existing storage water heaters are not very efficient. Therefore, moving their use to soak up the solar sponge is likely to disadvantage customers in terms of tariffs, even though it may achieve REPS productivity aims. Similarly bolt-on DRED devices to air conditioners are not a long-term solution. Rather equipment specified under the REPS should have an existing integrated DR technology. <p><i>Connect a new or pre-existing solar PV -battery system to a remote management system, such as a Virtual Power Plant:</i></p> <ul style="list-style-type: none"> AGL supports new and pre-existing solar PV – battery systems being connected to remote manage systems, like Virtual Power Plant. However, the SA Government should consider the lack of a standard industry-wide communications protocol, and the costly processes that are entailed in aggregators integrating multiple technologies into their control platform. Hardware vendors typically have their own proprietary control platforms to manage their hardware. However, functionality and system telemetry across these systems varies widely, and may not be practically

No.	Consultation Question	AGL response
		<p>controllable as a single VPP without an additional orchestration layer that can communicate consistently with each hardware vendor platform.</p> <ul style="list-style-type: none"> In practice, this additional orchestration layer is expected to be bespoke for each orchestration entity, as is the case today. We consider that multiple communications layers will be required to support end-to-end communications between the customers' participating assets and AGL's orchestrated Virtual Power Plant. We also envisage that some customers may have existing home energy management or battery storage systems that are not technically able to be integrated with external orchestration platforms. <p><i>Connect demand-response enabled equipment (such as air conditioner, pool pump, water heater or electric vehicle charger) to remote demand response system:</i></p> <ul style="list-style-type: none"> Remote control of a device by an entity other than the householder is a very new phenomenon, and one that needs time for householders and small businesses to have confidence in before they will agree to allow a retailer or an aggregator to take control of their energy use at peak times. Many electric vehicles include functionality to delay charging to a preferred time, selected by the driver. Where a customer is on a time of use tariff the customer faces an incentive to align charging with the off-peak rate. While control of EV charging behaviour over and above what customers are likely to do when faced with a TOU tariff is possible, implementing such control comes at a cost. The uptake of control of EV charging behaviour will have to be balanced against the cost of implementation, possible loss of convenience for the driver and the benefits available to customers under the REPS. <p><i>A residential or small businesses customer elects to connect to a SAPN time of use or prosumer tariff under a retail market offer:</i></p> <ul style="list-style-type: none"> AGL has published a standing offer tariff that utilises the structure of the SAPN residential time of use tariff. This will commence from 1 August 2020 and AGL will



No.	Consultation Question	AGL response
		also be introducing a market offer in the future.
18	Is there a strong case for retaining any of the current REES activities that are currently not planned for inclusion in REPS? If so, please provide detail reasons.	<p>It is AGL's view that all the current REES activities should be retained for the 2021 REPS year. This would allow the SA Government time to carry out further consultation to make sure that the market agrees with the ones slated for exclusion.</p> <p>The reason for this suggestion is that REPS is a completely different market to REES and some of these activities may have currency under the new scheme, particularly top-up insulation and double-glazed windows.</p>
19	Which of the proposed new REPS activities are best suited to a deemed REPS credit, and which should be developed as a measurement and verification method? What basis would be used to calculate deemed benefits?	It is AGL's view that this requires further industry consultation to allow all stakeholders to understand the ramifications of this methodology for specific activities, and what the most appropriate deemed calculation should be for credits.
20	Are there any other load shifting/demand response activities that have sufficient data to develop deemed REPS credit methods? What basis would be used to calculate deemed benefits?	AGL considers that this needs further consultation with various stakeholders to ensure that the benefits and consequences are fully understood.
21	Are these penalties adequate to ensure compliance? Why?	AGL consider that the proposed penalties are adequate and doesn't believe that it would be appropriate to increase the target penalties in the first year of a completely new scheme.

AGL comments on Appendix 1 of Consultation Paper

Section of Appendix 1	AGL's comment
<p>Maximise No. activities that provide broader benefit to SA, such as:</p> <ul style="list-style-type: none"> • Reduced electricity wholesale prices • Reduced electricity network costs • Improved energy system security benefits 	<p>From the industry's perspective, the implementation of the new REPS initiatives will, through appropriate knowledge sharing, explore new technologies and develop innovative approaches to orchestration that will benefit participating customers whilst contributing towards reduced demand at peak times, reliability and system security. However, this will likely take time for knowledge to be gained in this very new and innovative program.</p> <p>The new REPS initiatives, if implemented in a considered manner, also have the ability to gain broad customer acceptance, and accelerate the broader market for orchestration of DER assets, enabling customers to realise the full value stack of</p>



Section of Appendix 1	AGL's comment
	<p>their assets while supporting the Government's emissions reduction ambitions.</p>
<p>Ensure sufficient activities to allow focus on low-income households</p>	<p>Energy efficiency improvements will continue to be the most important initiatives to be undertaken under the REPS for low-income households.</p> <p>These customers are also generally unable to contribute to co-payments, which is acknowledged by the REPS program, but may also not be suitable for retailer debt relief due to their lack of consistent payments and/or lack of engagement with their retailer.</p> <p>Therefore, smart meters as a REPS activity could enable low-income households to participate in demand response activities proposed under REPS, as well as enabling them to track their energy use using retailers' energy Apps and/or in-home displays.</p>
<p>Calculation methods should provide:</p> <ul style="list-style-type: none"> • Credible means of calculating normalised GJ credits that balances compliance costs with accurate calculations • Greater rewards for products and services that deliver higher levels of performance • Informed by research and defensible • Adjustable to SA's climatic zones, housing stock and energy use practices • Ability to adjust credits to account for: <ul style="list-style-type: none"> ○ improved thermal comfort, ○ likely performance change over time, ○ changing BAU scenarios, ○ free riders ○ persistence or ○ planned future regulation 	<p>We look forward to providing further comment on these metrics in further stages of consultation.</p>