Department for Energy and Mining Response to Feedback from Consultation on Regulatory Changes for Smarter Homes

Key Issue	Detail	Response
General		
Timing	Concerns regarding stakeholder engagement and proposed implementation timeframes risk the adoption of rushed reforms, given that similar systems have not been implemented widely in Australia or internationally.	The Australian Energy Market Operator (AEMO) has indicated that the alternative action to manage the emerging issues in South Australia may be extreme measures such as an immediate moratorium on new distributed photovoltaic (PV) installations (from 2020). Following feedback, certain proposals now have amended commencement dates and transitional arrangements – please see below. Other timings remain consistent with those proposed in the Consultation Papers due to engagement previously undertaken.
Duplication	The proposed remote disconnection and reconnection requirements and smart meter requirements aim to address similar issues to dynamic export limits and tariffs.	Whilst all of the proposals seek to contribute to solving the same issues, they are complementary rather than duplicative. Dynamic export limit capability provides for network constraints management. Tariffs reward customers for changing behaviour to mitigate or delay the issues listed within the Consultation Papers. Smart meter requirements enable controllable generation and load (such as hot water) to respond to tariffs and potentially contribute as an emergency backstop solution. Remote disconnection and reconnection acts as an emergency backstop. The requirement is technology neutral.
Necessity of Requirements	Are these requirements the most appropriate and cost-efficient way to meet the stated objectives, when compared to the encouragement of the uptake of batteries?	AEMO advice indicated that the South Australian power system is already facing serious security risks, and deeper record low demands are anticipated in spring 2020. Continued installation of distributed PV installations is forecast. The new requirements ensure that these installations do not exacerbate the risks and seek to contribute to mitigating the risks.
Procedure	Stakeholders noted that it is not clear what type of sites/customers will be targeted and in what order. For example, would residential customers be targeted before or after larger systems?	Over time, the remote disconnection and reconnection proposal will increase the generation (and load) customers have available to contribute to the management of an electricity supply emergency.

Key Issue	Detail	Response
General		
		The Emergency Management Act 2004 provides for the Minister to issue directions in an electricity supply emergency. The National Electricity Rules sets out requirements for how the AEMO uses its powers to issue directions. What directions need to be issued in an electricity supply emergency will depend on the nature of the emergency and the supply and demand balance at that time.
Costs to customers	Stakeholders expressed concerns around the lack of detail/modelling of the costs of these changes to customers.	Customer impacts were assessed as part of the decision-making process, with the benefits associated with these proposals considered to be greater than the costs.
Alternative solutions	Stakeholders indicated that there are alternative solutions to achieve the same outcomes that are sought by the Government. Due to the Consultation Papers only concerning smart meters and inverters, it was not clear to the industry whether the South Australian Government is taking an outcome based, or a prescriptive based, approach.	The South Australian Government has considered the broad range of views provided by submissions on alternative solutions to the requirements set out in the consultation papers. In a number of scenarios, the South Australian Government agrees with the feedback provided. It is therefore proposed that a number of prescriptive requirements are moved to outcome-based requirements, with technical attributes being dealt with in guidelines made by the Technical Regulator.
National approach	Some stakeholders would prefer a national approach to address these issues identified in the Consultation Papers, unless there is a specific need in this jurisdiction.	AEMO advice suggests that the South Australian power system is already facing serious security risks, and deeper record low demands are anticipated in spring 2020. The national processes are lagging behind the timing of the South Australian security risks.
Roles and responsibilities	Stakeholders expressed concerns around the lack of clear roles and responsibilities for parties involved.	Obligations are proposed on the following parties: - Remote disconnect and reconnect – Customers, installers, SA Power Networks (SAPN) and relevant agents. Guidance will be published that clearly defines the roles and responsibilities of relevant agents. - Voltage ride through – Customers, installers, SAPN, manufacturers and importers. - Export limits – Customers, installers, SAPN. - Smart meters – Retailers and metering coordinators. - Tariffs – Retailers.
Compliance	An effective compliance regime is required to ensure these new requirements have the full, desired effect.	The proposed regulatory pathway for the technical standards includes an enforcement framework, with the Technical Regulator responsible for compliance and enforcement activities.

Key Issue	Detail	Response
General		
		The Technical Regulator is actively investigating and developing a compliance regime for Distributed Energy Resources (DER). There are also a number of jurisdictional and national bodies considering the compliance of DER.
New versus existing	Several stakeholders queried whether an approach that only considers new solar generating plants and not the existing fleet is a fair approach.	The proposals include a fair approach for their application to the existing fleet. Over time, the existing fleet will be required to comply as customers replace components of their installation that are capable of meeting the new standards (for example, a trigger may be the replacement of a meter or inverter).

Key Issue	Detail	Response
Paper #1 – Proposed remote disconnection and reconnection requirements for distributed solar generating plants		
Timing	Stakeholders indicated that the requirement to have remote disconnection/reconnection capability by September 2020 may be difficult to achieve. Industry indicated at least six months upon release of the detailed requirements (including technical specification and implementation detail) would be required for implementation.	A commencement date of 28 September or such later date declared by the Minister is being recommended, with a transition period to 31 December for relevant agents to establish their activation capability. Every effort will be made to achieve the 28 September commencement.
Obligations	Stakeholders expressed that it is not clear what obligations will be placed on consumers, SAPN and manufacturers, who will do this work and who will pay for this.	The obligation will apply to customers, installers and SAPN. The decision to become a relevant agent and accordingly the charging methodology will be a matter for the competitive market.
Compliance with requirements	Stakeholders reported that solar generating plants coupled with batteries or electric vehicles (EVs) (or dual meter requirements) will face compliance challenges due to their inherent configurations.	The regulatory framework will provide flexibility to apply the requirement to any electricity generating plant connected to the distribution network. The guideline made by the Technical Regulator will also address these concerns.
Customer Transparency	Submissions stated that customers will need to know why systems are being disconnected, how	The Department for Energy and Mining (DEM) will work with stakeholders to develop appropriate communication and education material.

Key Issue	Detail	Response
Paper #1 – Proposed remote disconnection and reconnection requirements for distributed solar generating plants		
	often and for how long this will occur, and whether any compensation will be paid.	
Technology / Equipment	Many submissions provided information on solutions that currently exist in the market that would fulfil this requirement. Additionally, it was submitted that the AEMO has confirmed that they will instruct Distribution Network Service Providers (DNSPs) to coordinate all disconnection and reconnection orders for DER. It was suggested that a complete, technology agnostic, technical specification should be developed in consultation with industry to provide guidance on standardised processes for disconnection and reconnection.	Outcome-based requirements which are technology neutral are being proposed, with stakeholders having the ability to engage with the Technical Regulator to deem that various technology solutions meet the requirements. Feedback on existing technology that meets this requirement will inform the guidelines to be made by the Technical Regulator. The Technical Regulator will consult with stakeholders in the development of their guidelines.
Technical Standard / Procedures	Some stakeholders expressed that a technology neutral approach to communication with the relevant agents may end up generating competing standards, impacting how effective the system could be. Additionally, stakeholders questioned whether the 'Demand Response Mode (DRM) 0' function present in current inverters would fulfil this requirement if triggered. Some submissions expressed concern that before sighting a guideline published by the Technical Regulator, it was difficult to assess the impact of this requirement.	The South Australian Government has considered the broad feedback provided by stakeholders on this matter, particularly on the differences between 'disconnection/reconnection' and 'DRM0' as per AS 4777.2. It is proposed that DRM0 will be sufficient to meet the requirement where there is a relevant agent to activate this functionality when called upon.
AEMO consideration	Some stakeholders queried whether these proposals aligned with other national work programs on integration of DER.	The South Australian Government is aware of the concurrent work streams that are being undertaken by the Energy Security Board (ESB), the Australian Energy Market Commission (AEMC) and AEMO that is aimed at improving the use and management of (amongst other things) DER.

Key Issue	Detail	Response
Paper #1 – Proposed remote disconnection and reconnection requirements for distributed solar generating plants		
		The South Australian Government is engaged with these work streams, to ensure that the requirements, where possible, align with future national requirements.
Warranty replacements	Submissions considered that the new requirements should not extend to inverters replaced under warranty as this will impose additional costs on customers who may have invested in solar systems many years ago.	It is proposed a warranty replacement will not be considered a replacement that triggers compliance with the new requirements.

Key Issue	Detail	Response
Paper #2 – Proposed export limit requirements for distributed solar generating systems		
Timing	Stakeholders noted that the timeframe suggested may not be feasible and that a staged approach and alignment with other projects underway would lead to a better result.	From 28 September 2020, systems will be required to have internet capability and an on-board communication port for a physical connection to another device. This aligns with the Victorian smart ready requirements commencing in September 2020. From 1 July 2021 or such later date prescribed by the Minister, dynamic export limit capability with limits able to be updated remotely.
Compensation	Stakeholders queried whether there will be any compensation payable to customers who are export limited.	The proposal is to future proof the technical capability of technology – to ensure installed systems have the technical capability to participate in dynamic export limits. Dynamic export limits are not implemented by this proposal.
New versus Existing	A submission questioned whether a focus entirely on new installations over existing solar generating plants is fair.	The proposals include a fair approach for their application to the existing fleet. Over time, the existing fleet will be required to comply as customers replace components of their installation that are capable of meeting the new standards (for example, a trigger may be the replacement of the inverter).
Australian Energy Regulator (AER) scrutiny	Stakeholders noted that the changes to export limits will require greater scrutiny from national and jurisdictional regulators to ensure customer impacts are balanced with the needs of the network.	Noted. The proposal is to future proof the technical capability of technology rather than implement dynamic export limits.

Key Issue	Detail	Response
Paper #2 – Proposed export limit requirements for distributed solar generating systems		
National approach	Submissions expressed a preference for a nationally consistent dynamic export requirement, to reduce costs and complexity for manufacturers related to compliance with dynamic export limit functionality.	The requirements to commence from 28 September 2020 are consistent with Victorian smart ready requirements commencing in September 2020. The new commencement date for dynamic export limit capability provides time for broader discussions on the specific technical requirements for this capability.
Testing required	Stakeholders suggested that further work is required to test the operation of dynamic export limits to mitigate any negative customer impacts and ensure appropriate cyber security arrangements are established prior to their introduction.	Noted. The proposal is to future proof the technical capability of technology rather than implement dynamic export limits.
Scope	Some stakeholders suggested that the scope of this requirement should be applied to battery storage.	The proposal will allow the Minister to prescribe the types of electricity generation plant to which this requirement will apply. Distributed PV installations are proposed to be prescribed from the commencement of the new requirements.
Internet connectivity	Stakeholders expressed concern with the requirement for internet connectivity to enable the setting of export limits, and the reliability of this connection.	The South Australian Government acknowledges that, in some circumstances, certain customers will be unable to receive remote dynamic export limits due to communication issues. The Technical Regulator exemption powers and guideline powers will be sufficient to manage this issue.
Alternative solutions	Some stakeholders suggested alternative market and technical solutions to achieve the same goals as flexible export limits.	The requirement for dynamic export limits is to apply to the distributed solar generating system rather than any particular part of that system. This provides some flexibility for further consideration and development of technical solutions to achieve the outcome.

Key Issue	Detail	Response
Paper #3 - Proposed new low voltage ride-through requirements for smart inverters		
Timing	Stakeholders expressed concern that the timeframe provided for laboratory testing of	The requirement is to commence on 28 September 2020, with a transition option to provide sufficient time for laboratory testing.

Key Issue	Detail	Response
Paper #3 - Proposed new low voltage ride-through requirements for smart inverters		
	inverter models, and compilation of a list of compliant inverter models.	
Warranty replacement	Several submissions queried what consideration would be given to inverters replaced under a warranty provided by the manufacturer.	Inverters replaced under warranty will be exempt from these requirements.
Compliant smart inverters	Stakeholders requested further information on where the list of compliant inverters would be published, the consideration of installations in progress, and whether individual models of inverter would need to be certified or whether a family of inverter models could be certified together.	A list of compliant inverters will first be published by the Technical Regulator under the transition option, and later included in the Clean Energy Council's (CEC's) list of approved inverters once laboratory testing is completed.
Increased costs	Some submissions questioned whether there would be additional costs to consumers associated with this requirement.	While there may be some small impact on the cost of some inverters which require additional capabilities, there are no direct costs to consumers associated with mandating short duration undervoltage ride through capabilities in inverters.
Internal testing and certification	Several industry stakeholders suggested that they should be able to provide evidence of compliance with the AEMO short duration undervoltage ride through test via internal testing initially, to avoid delays associated with certified testing laboratories.	The transition option will allow inverters to be installed if the manufacturer (and associated importers) provide evidence of compliance with the AEMO test, commit to laboratory testing by 31 March 2021 and commit to make good if laboratory testing does not find compliance. Initially, the Technical Regulator will publish and update a register of inverters which meet these requirements.
AEMO Testing Standards	A submission questioned whether the proposed test would adequately address negative load and frequency ride-through issues.	AEMO has been asked to engage directly with the proponent of this question.
Existing stock	Some stakeholders highlighted the uncertainty around what occurs for existing stock that has not yet been installed.	Some manufacturers have indicated that they are likely to comply with AEMO's short duration undervoltage ride-through test procedure, notwithstanding the issue around timing. In addition, inverters replaced under warranty will be exempt from these requirements which would enable existing stock to be used.

Key Issue	Detail	Response
Paper #3 - Proposed new low voltage ride-through requirements for smart inverters		
		Finally, these requirements are for South Australia only. Therefore, these inverters would be permitted within other jurisdictions who do not have similar requirements.

Key Issue	Detail	Response
Paper #4 – Proposed smart meter minimum technical standards		
Technical/Regulatory	Stakeholders questioned whether the new wiring requirements would accommodate battery backup during power outages, controlled loads, flexible generation, or hybrid systems where the solar generating plant is connected to a battery, then to the load and/or installations where the solar generating plant is connected to a distribution board.	The Technical Regulator will publish guidelines which will aim to accommodate a variety of scenarios. Battery backup, hybrid and other systems will be considered in addition to simpler installations.
Timing	Submissions expressed concern that meters with additional elements and contactors may require additional time to develop, manufacture and procure.	The South Australian Government has considered the broad range of views provided by submissions on timing, as well alternative solutions to achieve the same requirements (such as multiple meters). It is proposed to move to an outcome-based requirement to provide greater flexibility in solutions.
Technical considerations	Stakeholders supported meters with three elements and three contactors but encouraged clear guidelines on a range of scenarios to be provided on how these should be wired.	It is proposed the requirement moves to an outcome-based requirement to provide greater flexibility in solutions. The guidelines to be published by the Technical Regulator will address a variety of installation scenarios.
Alternative Solutions	Several submissions contained alternative solutions proposed to meet the requirements.	The South Australian Government has considered the broad range of feedback on alternative solutions and/or methods of achieving the requirements being sought as part of this consultation paper. It is proposed to move to an outcome-based requirement, with technical attributes being dealt with in the Technical Regulator guideline.

Key Issue	Detail	Response
Paper #4 – Proposed smart meter minimum technical standards		
Net/gross metering	Some submissions queried about metering in South Australia becoming gross metering and in particular, whether the separation of load and generation onto different elements causes a settlement issue.	Separation of load and generation will not result in gross metering and further guidance on this matter will be provided in the Technical Regulator guideline.

Key Issue	Detail	Response
Paper #5 – Proposed tariffs to incentivise energy use in low demand periods		
Customer education	Stakeholders noted that customers may react negatively to being forced onto cost reflective tariffs, with an associated need for education around tariff structures and consideration of the customer's ability to respond. Disadvantaged or vulnerable customers may require additional attention.	Customers can move to a market offer and select the tariff structure of their choice. DEM will also work with stakeholders to develop appropriate communication and education material.
Customers unresponsive	Several submissions expressed that customers on standing offer tariffs may be unresponsive to price signals or will transition to market offers.	DEM will work with stakeholders to develop appropriate communication and education material.
Limited impact	Stakeholders noted that there are a small proportion of customers on standing offers and with interval meters. Intervention may therefore be ineffective in addressing issues.	The proposal will require retailers to ensure their systems are capable of managing tariffs which incentivise energy use in low demand periods, eliminating this as a barrier to market offers with these incentives.
Retailer costs	Submissions noted that the proposal will potentially generate compliance costs for retailers.	The proposal only brings forward changes which will mandatorily assign some residential customers to these tariffs from mid-2021.
Disruption	A submission queried whether the proposal will cause disruption for customers by requiring price changes in September 2020, following changes taken place from 1 July in line with the Default Market Offer determination.	This will be a one-off change for a limited number of customers.
Overriding AER process	Several stakeholders submitted concerns that the proposal indicates a willingness to override the	The National Energy Retail Law provides for jurisdictions to set tariff structures.

Key Issue	Detail	Response
Paper #5 – Proposed tariffs to incentivise energy use in low demand periods		
	AER's and SAPN's considerations on network tariffs.	
Tariff structures	The South Australian Government should ensure that regulated retail tariff structures match the underlying network tariff structure. Any misalignment will increase price risk for retailers in not recovering appropriate costs for these customers, resulting in potential cross subsidies across customer classes. Stakeholders queried whether the proposal would negatively impact certain models such as a Virtual Power Plant (VPP).	It is proposed that the prescribed tariff structures be: - the time of use tariff structure of the SAPN residential time of use tariff. - the demand tariff structure of the SAPN residential prosumer tariff. - the time of use tariff structure of the SAPN small business time of use tariff. - the structure of the SAPN small business time of use with demand tariff. - the tariff structure of the Retailers choice where the Minister is satisfied that the retailer has generally available market offers. providing efficient signals to customers of when to use energy and is using best endeavours to market those offers to customers.
Requirement unnecessary	Stakeholders noted that this requirement may be unnecessary as retailers are releasing market offers with appropriate signals.	It is proposed to reward retailers offering market offers with appropriate signals by allowing them to choose their own standing offer tariff structure. The Minister will be responsible for verifying the retailers market offers for the purpose of this reward.
Interaction with DMO	Several submissions noted that the Default Market Offer (DMO) is set as an annual amount, and it also prescribes a usage model that retailers must apply, and that the that usage model is reflective of the current market consumption, whereas the solar sponge tariff attempts to shift this usage.	No concerns were raised on this matter by the AER.
Timing	Stakeholders noted that the timeframe provided may not be sufficient to deploy and meter a new tariff structure.	The requirement only applies where a customer has an interval meter.
Regulation should be temporary	A submission suggested that once the South Australian Government sees that many retailers are offering the SAPN solar sponge tariff, the jurisdictional based regulation would not be required.	It is proposed to reward retailers offering market offers with appropriate signals by allowing them to choose their own standing offer tariff structure. The Minister will be responsible for verifying the retailers market offers for the purpose of this reward.

Key Issue	Detail	Response
Paper #5 – Proposed tariffs to incentivise energy use in low demand periods		
Alternative structures	Submissions noted that as the Summer Demand tariff applies from November to March, it might not be the most effective way in reducing maximum demand on hot days. Given there is a peak in demand in evening time and a lower demand early afternoon, another consideration would be to encourage battery discharge in the evening.	It is proposed to reward retailers offering market offers with appropriate signals by allowing them to choose their own standing offer tariff structure. The Minister will be responsible for verifying the retailers market offers for the purpose of this reward.
Opposed to regulated tariffs	Stakeholders expressed the view that any regulation of retail tariffs is detrimental to a competitive retail market, including regulation of the structure of the retail tariffs.	The proposal does not regulate prices, it only prescribes tariff structures for standing offers applicable to customers with an interval meter. It does not restrict retailer market offers in regard to price or structure.
Application	Stakeholders queried if the regulation will require all small customers with interval meter to be on a standing offer with the prescribed tariff structure.	No, customers with an interval meter can continue to select the market offer of their choice.
Embedded networks	A submission expressed that many operators of embedded networks do not have or use sophisticated billing software required to meter and bill such tariffs or have the capacity to afford them. In the event they are forced to offer the new tariff and they cannot - the embedded network operator may no longer be able to bill the embedded network.	The requirements apply to the holders of a retailer authorisation.
Government tariff	A stakeholder suggested that the South Australian Government should enact a competitive, sponsored retail Time-of-Use market offer in conjunction with undertaking analysis of potential impacts for low income households and other disadvantaged households.	Noted.