



## Smart Energy Council Submission to AEMC

### Draft rule determination: Governance of DER technical standards

The Smart Energy Council (SEC) is disappointed in the Australian Energy Market Commission (AEMC's) draft rule determination on the governance of Distributed Energy Resources (DER) standards. We believe it flies in the face of the AEMC's stated mission: "To work for Australia's future productivity and living standards by contributing to a decarbonising, affordable and reliable energy system for all consumers".

The governance of DER technical standards is a mess and must be fixed. Please find attached the original Sapere/CutlerMerz report which made this clear three years ago. To quote from that report:

*In the absence of reform of the DER technical standards governance system, outcomes will not be consistent with the public policy objectives (and by implication the NEO). There is a much higher risk of a no-win outcome, under which there is substantial consumer investment in DER installations and appliances, alongside substantial utility investment in replacement of existing generation, storage and network capacity, resulting in widespread inefficient duplication of overall capacity and much higher total electricity supply costs. This would reduce overall affordability and consumer satisfaction.*

The Energy Security Board (ESB) spent 18 months reviewing this matter and developed a proposal with near universal support and the Australian Energy Markets Commission (AEMC) has somehow failed to implement it. Instead, the AEMC is proposing to make no rule and put in place no formal governance arrangements, just a series of informal suggestions about how the AEMC could play various roles in DER technical standards, largely, monitoring



and review. This offers no path for the AEMC to be held accountable for these new roles and no certainty that the changes needed and identified in the rule change proposal have been taken seriously and will be made in a timely way.

This fails to give the governance of DER technical standards the importance it deserves and delays the substantive regulatory action needed. The DER industry, as represented by Smart Energy Council members, continues to be concerned that the energy market institutions continue to treat DER as a second order issue.

The Smart Energy Council requests the AEMC reconsider its draft rule change determination and create the arrangements proposed in the ESB's rule change request. Without formal governance arrangements (i.e. explicit in the rules), the industry will continue to navigate a complex mess of technical standards governance and consumers will pay the cost. The cost of not forward planning on DER technical standards could be very high, especially if it misses risks or opportunities, for example from the coming electric vehicle (EV) boom. There is also an important case here to be made for cybersecurity which is often overlooked in this context. In the age of connected devices and a strong dependency of systems stability on services provided by overseas entities the question of cyber resilience will become important quickly. The governance of DER cybersecurity standards is particularly opaque and slow moving.

The Smart Energy Council has the following concerns with the draft rule determination:

### **1. Disregard for evidence that substantial change is needed**

While the AEMC's consultation paper made the issues with the lack of governance clear and referenced the Energy Security Board's 18 months of work on this matter, the draft determination ignores the evidence that seven different governance arrangements for setting technical standards currently exist and the costs and confusion that creates.



The draft rule change provides no certainty for industry about how future standards will be created. The well documented mishmash of processes will continue, with the AEMC simply observing, reviewing and reporting on this debacle of governance.

To quote again from the Sapere/CutlerMerz report:

*All the governance arrangements described above have gaps and weaknesses when assessed individually. Furthermore, when considered in aggregate, the individual governance models, rather than being complementary:*

- *Give rise to coordination and harmonisation issues.*
- *Have gaps in terms of coverage of technologies and technical risk.*
- *Have gaps in terms of adequate resourcing.*
- *In some cases, deliver inefficiencies where multiple entities have responsibility for ensuring compliance with technical standards for the same DER systems.*

*The most critical gaps and weaknesses are:*

- *An overall lack of leadership and coordination and clear objective as to how DER technical standards should be governed, particularly in a divided and distributed regulatory environment*
- *The lack of an adaptive regulation system where the good (enough for now) is not blocked by the perfect, and practical and enacted standards evolve at a pace similar to technology and industry*

- *Inability to implement technical standards related to emerging system security challenges - none of the governance models (other than voluntary Australian and International Standards) currently enable AEMO to impose technical standards for managing system security risks*
- *The Standards Australia process which, in some stakeholders' view is too slow, not sufficiently transparent, does not enable participation from a broad range of stakeholder groups (especially customer groups) and decision making is not explicitly aligned with NEO*
- *Lack of harmonisation in network connection standards across DNSPs in terms of both decision-making processes and the technical standards themselves*
- *The lack of planning in terms of how the broadly successful processes adopted by the Clean Energy Council (CEC) and Clean Energy Regulatory (CER) under the Small Scale Renewable Energy Scheme (SRES) will transition as the SRES is wound down*
- *Under resourcing of compliance and enforcement activities, and gaps especially for non-safety related standards in a divided and distributed regulatory environment*
- *Lack of coverage of existing governance models to electric vehicle technology, potentially leaving the industry exposed to technical risks at network and system level, should penetration increase rapidly.*

By virtue of saying the AEMC will observe Standards Australia's process, it suggests the AEMC is endorsing that one means of setting DER technical standards, also ignoring the substantial evidence about the impaired nature of Standards Australia's processes in a



rapidly changing sector. This was one of the main reasons that industry DER stakeholders were so outspoken to the ESB about the need for new governance arrangements. Of course, the ESB rule change proposal allowed for Standards Australia's processes to be able to be used where the governing body considered that appropriate.

## **2. Not taking DER sufficiently seriously**

In the act of making no rule, this suggests to the DER industry that the AEMC does not understand the important role of DER in the current and future electricity system

Nowhere else in the world has more rooftop solar per person than Australia. We have 15GW of rooftop PV now; AEMO's Integrated System Plan (ISP) step change scenario models this will be over 69GW by 2050; 75% of dispatchable capacity could be behind-the-meter (BTM) by 2050.

Given rooftop solar is already the biggest generator in the National Electricity Market, what would have to happen for the AEMC to prioritise rule changes supported by the DER industry and consumers?

Other jurisdictions, like Germany and Hawaii, have grasped the nettle and put new, appropriate governance arrangements in place that include formal roles for industry and consumers. We are more than a decade behind Hawaii (despite having more rooftop solar). This was also mentioned in the Sapere/CutlerMerz report:

*In 2010 the Hawaiian Public Utilities Commission (HPUC) established a working group to respond to the rapid changes required in technical standards (related to DER and large-scale renewables) to achieve Hawaii's 100% clean energy by 2045 target. The*



*working group established strict decision-making processes in order to fast track decision making.*

The Smart Energy Council desires to see a governing body with membership from industry, including DER manufacturers and software developers and consumer representatives. It desires to see DER technical standards given the same level of expert input and resourcing as the Reliability Panel provides for the overall market standards and settings and the Smart Energy Council is willing to advocate to Energy Ministers for additional funding for this role if required.

### **3. Not managing future risks or opportunities in the NEM**

In keeping with this lack of due seriousness, the AEMC has failed to manage DER-related risks and opportunities in the NEM. AEMO has found the lack of disturbance ride-through by inverters to be a concern for system security and hence the update of inverter standard AS4777.2 and the AEMC's decision to include it in the rules.

What other risks or opportunities from DER are being missed by having no body responsible for forward planning on DER technical standards in the rules? The original rules were written before DER was a feature of the NEM. The AEMC has given DNSPs responsibilities for integrating DER, but has itself no explicit responsibility for DER integration. It is all very well for a regulator to say it will take on new roles under its existing responsibilities, but that gives industry and consumers no certainty that any future system risks or opportunities will be scoped or well managed.

As part of this, the proposed new roles do nothing to address DER compliance and enforcement issues. The ESB proposal explicitly addressed this matter, stating consideration



of compliance and enforcement of DER technical standards would be in the scope of any committee and AEMC.

#### **4. Rear-vision, not forward planning or comprehensive governance**

Mark Vincent at South Australian Power Networks (SAPN) is fond of saying the NEM (i.e. energy market institutions) missed the air conditioning boom of the 1990s-2000s, the rooftop solar boom of the 2010s and maybe it could prepare for the electric vehicle (EVs) boom of the 2020s.

The AEMC's proposals to undertake ad hoc reviews is not the same as forward planning. While the SEC understands that both ARENA and the ESB are doing work on DER integration, they are not regulatory bodies. (The ESB of course has no legal basis or authority and has no real accountability as a result). A body that is able to look forward to new DER standards (which could be developed in a variety of flexible ways) would fill a valuable role.

#### **5. Failing to realise the importance of governance, including with stakeholder involvement**

The AEMC voluntarily stating it would take on various roles through its existing responsibilities is not the same as formal governance arrangements, let alone what was proposed by the ESB which is a body under the AEMC involving industry and consumer experts. As noted above, we have a comparable committee for reliability standards and settings.

The SEC appreciates that what the ESB proposed would be additional work for the AEMC and would involve additional resources, but with an additional 50GW of rooftop solar coming, alongside 17 million light EVs and several million heavy EVs, the investment to have good



governance of technical standards seems a very small price compared with the risk of getting it wrong.

In addition, without an accountable body, there is no transparency of process.

AEMC's roles are not ones it can be accountable for—they won't even be documented in the rules. For example, the AEMC states it will 'work with other market bodies to identify the priority issues to aid the development and implementation of DER technical standards' – not with consumer or industry stakeholders.

The AEMC has relatively little expertise in DER (and shouldn't be expected to have), hence the need to involve DER experts from industry and consumer organisations in the governance. The Smart Energy Council is willing and able to nominate experts to any future governance arrangements for DER technical standards.

Again, it is important to restate that the ESB doesn't have any formal role in the governance of standards, neither does ARENA. The AEMC is the appropriate body to auspice governance arrangements for DER technical standards and formality is needed to provide clarity and certainty.

Requiring rule change requests for new DER technical standards to be included in the National Electricity Rules (NER) goes against the AEMC's stated principle of flexibility. The ESB proposed for new DER technical standards to be in a subordinate instrument under the rules specifically to avoid the time-consuming and onerous nature of rule change processes.

In terms of the AEMC's stated reasons for volunteer roles without accountability for the AEMC rather than a making a rule putting in place new DER technical standards governance arrangements:

- 1. Time elapsed since rule change request**





Frankly, this is due to the AEMC's one year delay in opening the ESB's rule change request and does not change the burning issues that need to be addressed here.

In addition, the new work on standards over the last year (especially by the DEIP program) does not mean governance arrangements are not needed. Indeed, the DEIP has stepped in to work on standards in the absence of a body with accountability for doing so. In theory, there's no reason why a research and development agency should be championing the development of new DER technical standards. Of course, ARENA could continue to do this work under the ESB's proposed rule change, but there would be a forward-looking governance body above the actual activity of standards development.

## **2. Avoiding duplication**

The ESB's proposed approach avoids duplication by stating that standards setting processes could be done in a variety of ways. The new governance body would look to forward plan and fill gaps and/or develop new processes only if the existing ones were inadequate for the NEM's needs.

In this way, the ESB proposal would reduce the administrative and regulatory burden that already exists. While it is appreciated that the AEMC cannot direct state governments, the seven different standards arrangements are, in part, a result of the lack of any national governance.

It is simply not true that the ESB's new arrangements would be duplicative, they are about coordination, forward planning and governance, only doing the actual standards development work where necessary.

That makes the AEMC's following arguments spurious:



*This approach could lead to duplicating work across market bodies, which may undesirably slow DER integration (such as installation timeliness) and limiting consumer choice of DER based products and services.*

*A smaller range of DER devices being sold in the local market may also be less suited to the needs of consumers and place upward pressure on device prices, particularly if there is the potential for complex or additional technical standards.*

It is the absence of clear governance arrangements that will push up prices of DER devices, systems and software for consumers.

### **3. Maximising flexibility to technically integrate DER**

This statement from the AEMC is strange:

*If the AEMC was to undertake its future DER work under new rules as proposed by the rule change request, then that work would be limited to considering only those issues envisaged by the rule change request. The AEMC may not be able to consider all issues related to the technical integration of DER under such provisions.*

given the matters outlined to be considered were broad and that the AEMC could choose to make them even broader (ie 'all the issues related to the technical integration of DER') in its draft rule determination.

Also strange is the statement that:

*The Commission has concluded it would not be consistent with the NEO to include detailed rules on the convening and operation of a standing committee in the NER.*



given the AEMC could choose to write matters regarding the convening and operation of a standing committee however it saw fit, most likely general matters in the rules, specific matters in Guidelines, as for the operation of the Reliability Panel.

Industry needs transparency and predictability, not maximum flexibility for innovation. There needs to be certainty about who is governing the development of DER technical standards and how they are doing so. In addition, the NEM has electrical needs which must be met (see risks above) and so the AEMC's economic arguments about productive and dynamic efficiency fail to appreciate the reality of how industry operates. There is a need for strategic investment to make sure the critical phase of the transition is funded. Profit-oriented market players would not fund this transition without a clear business case and the lack of governance becomes a risk factor.

Likewise, it is unclear how the AEMC concludes that the ESB's proposed arrangements would result in increased risk for device manufacturers due to insufficient time to update processes and equipment. Most updates are done via firmware and can be remotely applied if specified correctly. Standards development is often missing the opportunity that the Internet of Things (IoT) provides in this context.

Under the AEMC's draft determination, standards setting in effect would be left to Standards Australia. Aside from the concern previously expressed about these processes, Standards Australia is not required to consider the operation of the NEM or the National Electricity Objective (NEO). Indeed, its standards are a commercial product.

Clear governance arrangements are much more efficient for industry product development.

The AEMC roles proposed do not meet the need for a forward work plan and suggest a misunderstanding of what governance means. Ad hoc self-initiated reviews, reporting and 'potential' establishment of committees will be inadequate for the task required



The Commission states it 'recognises the importance of timely action to address DER technical standards'. It needs to do far more than what is in the draft determination. It needs to make a rule, to lead on new governance arrangements for DER technical standards as proposed by the Energy Security Board.

The Sapere/CutlerMerz report put it like this:

*Create a new DER standards governance coordinating structure, with a statutory head of power, to provide clear leadership, and line of sight between a DER governance vision and continuing distributed governing of DER technical standards, supported by a new performance monitoring framework, along with improved monitoring, and compliance arrangements to allow earlier detection and remedies for non-compliance.*

The Smart Energy Council urges the AEMC to revise its draft determination and instead adopt the arrangements proposed in the Energy Security Board's rule change request.

Sincerely,

A handwritten signature in black ink, appearing to read "John Grimes".

**John Grimes**  
Chief Executive  
Smart Energy Council