

# GEORGE WILKENFELD AND ASSOCIATES

Pty. Ltd. A.B.N. 78 003 846 848

## POLICY AND PLANNING CONSULTANTS

### ENERGY AND WATER

34 Leichhardt St Katoomba NSW 2780 Australia, PO Box 460 Katoomba 2780  
Sydney (+612) 4782 1155 geosanna@ozemail.com.au

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#### **Response to Energy Security Board Governance of DER Technical Standards Consultation Paper**

I am making this response on the basis of long-standing involvement with electrical product standards, both for energy efficiency and demand response.

As one of the original members (and since 2018, chair) of Standards Australia committee EL-054, established in 2005, I helped draft AS/NZS 4755 *Demand response capabilities and supporting technologies for electrical products*.

I am also Secretary of IEC TC 59 Working Group 15, *Connection of household appliances to smart grids and appliances interaction*, which prepared IEC Technical Specification 62950:2017 *Household and Similar Electrical Appliances – Specifying smart capabilities of appliances and devices – General aspects*.

I am also very familiar with the Greenhouse and Energy Minimum Standards (GEMS) Act, the Equipment Energy Efficiency (E3) Program and the process of regulating the performance of electrical products with regard to energy efficiency and, more recently, demand response capability. GWA prepared the cost-benefit analysis which supported COAG Energy Council's November 2019 decision to mandate compliance with AS/NZS 4755 for selected products.<sup>1</sup>

This submission represents only my own views, not the positions of any of the bodies or committees with which I am associated.

#### **Scope of DER Technical Standards**

I agree with the Consultation Paper's definition of DER to include appliances (loads) as well as small-scale energy generation and storage systems:

Distributed Energy Resources (DER) in Australia currently include millions of distributed air conditioners, hot water systems, pool pumps and an increasing number of other large appliances (load which is or could be flexible), over 2.2 million rooftop photovoltaic (PV) systems, a few thousand small diesel generators and over 24,000 distributed batteries. The transition of the Australian vehicle fleet to electric vehicles will also raise challenges and opportunities for the delivery of energy services (p i).

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<sup>1</sup> <https://www.energyrating.gov.au/document/regulation-impact-statement-decision-smart-demand-response-capabilities-selected-appliances>

However, it seems to me that the Consultation Paper and the proposed structure of the DER Standards Governance Committee (SER SGC) embody the limiting assumption that DER standards become effective (both technically and legally) at the point of connection of a product to the network in Australia.

In fact, DER standards impact well in advance of the design of a product (or its redesign in accordance with regular model update cycles). In fact, design standards may be the only effective lever. Products such as air conditioners and pool pump controllers may never be hard-wired to the network or professionally installed but simply plugged in by the user, and so bypass connection rules. The inadequacy of network connection rules alone for enforcing compliance with product standards has been well documented in the case of the WaterMark scheme for plumbing products.<sup>2</sup>

Technical standards need to be published and publicised well in advance to permit the design chain to adapt – specially for globally traded products such as air conditioners, pump controllers and EV chargers. The most effective legal point of standards enforcement may be the point of supply, not the point of connection.

The Energy Efficiency Advisory Team (EEAT), comprising the jurisdictions which manage the E3 Program under Intergovernmental Agreements<sup>3</sup> is experienced in managing the issues of mandatory performance standards at the point of product supply, and should have a formal role in the proposed DER Standards Governance Committee.

I note that the Sapere/Cutler Merz review of seven current “governance arrangements” concluded that:

The strengths of the GEMS Act are its legislative support and stakeholder participation.

The key weaknesses are in its coverage of technologies and technical risks which would require amendments in legislation to expand (p 67).

However, this assessment failed to appreciate that the GEMS Act is currently one of the few governance arrangements to ensure uniform nationwide mandatory application of technical standards at the point of product supply (without the harmonisation issues of state based regimes). GEMS Act determinations can already extend to demand response requirements for products regulated for energy efficiency (e.g. air conditioners and water heaters) and a recent independent review of the Act recommended that this become a general power:

RECOMMENDATION 38: The Commonwealth Government update the GEMS Act to allow for mandatory demand response capability.<sup>4</sup>

Therefore the Sapere/Cutler Merz review under-estimated the potential of the GEMS Act and the E3 program to support DER technical standards and over-stated the

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<sup>2</sup> <https://www.abcb.gov.au/Resources/Publications/Certification/WaterMark-Point-of-Sale-Feasibility-Study>

<sup>3</sup> <https://www.energyrating.gov.au/document/inter-governmental-agreement-gems>

<sup>4</sup> <https://www.energyrating.gov.au/document/report-independent-review-gems-act-final-report>

limitations, which are in the process of being addressed. Similarly, the DER Technical Standards Consultation Paper overlooks the potential for the GEMS Act and the E3 program to be central supports for DER technical standards.

### **Timing and Delay**

From the ESB webconference of 21 July, I note that the earliest likely time for constitution of a DER SGC, after COAG Energy Council decisions and rule changes, is August 2021, i.e. a year from now. It will then take some time for the Committee to start addressing its terms of reference.

This should not be taken as a reason to interrupt existing processes with regard to DER standards or delay their adoption under currently available mechanisms. Indeed, introducing further delay would run counter to one of the most common criticisms of the present governance arrangements: that they take too long.

I note that the Consultation Paper recognises the AEMO rule change request for the development of an initial DER technical standard as a parallel process that may come within the scope of the proposed DER Standards Governance Committee at some future time. The same principle should be applied to AS/NZS 4755, noting that:

- It has been developed by a properly constituted Standards Australia committee with broad stakeholder representation (including AEMO, DNSPs, OEMs, consumers, regulators and independent experts);
- Its adoption as a *minimum* demand response standard has already been endorsed at the highest level (COAG Energy Council), with target implementation dates;
- It is designed to be flexible and extendable, including the possibility of interfacing with international standards (none of which are currently adequate for adoption in terms of predictability and verifiability of response);
- A new part now in draft (AS 4755.2) covers cyber-security rules (developed with significant input from AEMO); and
- There is an existing framework for implementation (the GEMS Act).

### **Responses to Questions**

*Q1. Do you support the proposal to establish a DER Standards Governance Committee under the National Electricity Rules? If not, what alternative would you suggest?*

I support the establishment of a DER SGC that would be initially advisory, not determining. If it is not determining, it is unclear why its establishment would require a change to the National Electricity Rules (other than to enable the AEMC to resource it?). It should have the power to initiate, as a Committee, future requests for rule changes should this be the only, or the preferred mechanism for implementation of specific DER technical standards.

*Q2. Do you have any feedback on the proposed functions of the DER Standards Governance Committee?*

I support the general proposed functions, but they should extend to consideration of DER standards that are beyond the scope of National Electricity Rules, such as standards applying to product performance at the point of supply.

*Q3. Do you support the DER Standards Governance Committee being advisory or be determining? Please provide reasons.*

The DER SGC should be advisory in the first instance, at least until the first 3-yearly review. It will take at least a year for the DER SGC to be in a position to demonstrate its effective operation and ability to engage stakeholders. Giving it determining powers at the outset would risk paralysis and delay of existing DER standards development.

*Q4. Do you have any feedback about the Committee determining standards in a subsidiary instrument under the rules? No view.*

*Q5. Do you have any feedback on the development of new compliance and enforcement arrangements for DER technical standards?*

Compliance and enforcement arrangements for product standards appear to be beyond the scope of the National Electricity Law, so a comprehensive approach to DER standards co-ordination would need to engage other legislation and other regulators.

*Q6. Do you support the proposed composition of the membership and nature of chair of the Committee? Please provide reasons or nominate alternative arrangements.*

Given that there will always be tension between broadness of representation and a workable committee size, the proposed composition seems reasonable. However, the committee should include a nominee of the E3 Energy Efficiency Advisory Team (not necessarily the Commonwealth), which would link the committee to the work of the E3 Program and the GEMS Act. The 2019 COAG Energy Council decision concerning AS/NZS 4755 envisaged implementation through GEMS determinations and required the "E3 Committee" to undertake a number of DER standards development studies, and these should be co-ordinated with the work of the DER SGC.

*Q7. Do you support the proposed terms and selection arrangements? Please provide reasons. No view.*

*Q8. Do you have any feedback on the other elements of the proposed operation of the Committee? No view.*

I am happy for this submission to be made public.

Sincerely



Director  
George Wilkenfeld & Associates