Ethnic Communities' Council of NSW Inc.

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Submission concerning the Energy Storage Registration Consultation Paper

The Ethnic Communities' Council of NSW (ECC NSW) welcomes the opportunity to provide input into the Energy Storage Registration Consultation Paper from the Energy Market Transformation Team.
Since its formation 40 years ago the ECC NSW has been the peak body for culturally and linguistically diverse (CALD) community members and representative organisations in NSW. The Ethnic Communities' Council of NSW main activities are advocacy, education and community development. It is a member of the Federation of Ethnic Communities Councils of Australia (FECCA) and the Energy Advocacy role represents FECCA in the NEM.

The ECC NSW thanks the COAG Energy Council for the opportunity to contribute to the discussions on energy storage registration and to provide a CALD perspective on the issues where appropriate.

The consultation paper presented a range of questions in several areas. ECC NSW has provided comments on some of those questions below.

2.1 Why a register is needed:

- *Do stakeholders agree an energy storage register is needed in Australia? Are there any other reasons energy storage data should be collected?*

It is important to note that 'energy storage' can take many forms and the emerging new energy products and services market is expanding rapidly to provide a range of these in a growth market. Hot water storage (traditionally through cheap off-peak power, now through simple and cheap solar PV diverters), mechanical storage (chemical phase change, flywheels, compressed air), space heating storage techniques, water pumping and release are all energy storage techniques that probably do not warrant inclusion on an energy storage register in the form envisaged by the consultation paper. We will limit our responses to battery and capacitor storage devices only, including electric vehicles.

A battery energy storage register is vital for the three areas discussed in the paper:

- power system planning and operation

- emergency response
- system security and safety.

We have been fortunate with the national rollout of solar photovoltaics that a mechanism was established for collection of data about installation through the Small-scale Renewable Energy Scheme (SRES) by the Commonwealth Clean Energy Regulator (CER). This has provided vital information for system operation and reliability to the industry and ongoing data about distribution, operation, technology and capacity of PV systems across the NEM as Australia takes its place as a world leader in the rollout of solar PV.

In the event that system security is potentially threatened, such as worried German agencies with the distinct possibility that large numbers of household inverters would all trip simultaneously at a particular voltage drop in the system, enormous time and expense was incurred visiting and adjusting individual inverters across Germany. Australian agencies in a similar hypothetical scenario were able to use this information to identify all inverter installations and trip voltages across the NEM and determine that there would not be a similar issue in Australia.

Battery storage and the associated battery management systems have the potential to be utilised (and aggregated) to provide ancillary services (frequency control, inertia and 'black start' capabilities for example) as well as more traditional storage applications and it will be imperative that the location, capacity and availability are known and accessible by energy agencies and operators.

- *Given large-scale energy storage systems are now required to be registered as a Generator under NER, should a register be established for distributed energy storage (less than 5 MW generating capacity)?*

Yes, all battery storage, from EVs and household size to grid-based systems. Small systems have the potential to be aggregated and it will be important that all details of capacity, specifications and installation are collected.

- *Do stakeholders agree the Victorian Case Study is an effective framework for storage emergency response?*

The Victorian case study is a good case study for the development of an effective NEM-wide approach for battery storage emergency response.

2.2 Data and access

- *Given the needs of AEMO, emergency response and other potential users, what is the "must have" data which should be collected? What are the likely costs of this data and do the impacts outweigh benefits?*
- *What is the "nice to have" data, and does the cost of this additional data collection merit its collection?*
- *How would data be collected and provided to a central register?*

- *What arrangements and requirements should be put in place to ensure data is collected and supplied in a timely manner?*

- *Could a national register be linked to other databases e.g. data collected by distribution businesses? Are there other databases which should be considered?*

- *Beyond AEMO and emergency response providers, what other parties should be able to access the data register and on what grounds? Are there particular conditions which should apply to these users?*

2.3 How the register should be set up
2.3.1 A register led by a national body

- *Do stakeholders agree with setting up a register led by a national body? Are there any other key benefits or concerns that the Energy Council should be aware of for this approach?*

A register led by a national body is the best option. It will support power system planning and operation as well as system security and safety across the NEM in a coordinated manner and has the potential to encourage a national approach to emergency response mechanisms.

- *Can CER, AEMO or a new register be a feasible option? If yes, how can the barriers or challenges discussed be overcome?*

The CER has already put in place registration systems for SRES, and while this process may wind down as subsidies diminish or disappear post 2017, CER is in a strong position to provide a registration mechanism which includes both solar PV distributed generation and battery storage. This has the potential to be more useful than either singly in the three areas of power system planning and operation, emergency response and system security and safety. Obviously the amendments necessary to the Renewable Energy (Electricity) Act 2000 would have to be fully investigated and instituted.

As indicated, AEMO may not be able to accommodate safety and emergency response data in its current systems which may be a considerable hurdle unless this role was added to its existing functions.

The establishment of a new body to collect and disseminate this data is a potential solution, however the extension of CERs remit to battery storage appears to be a more cost effective solution.

Cost is an important consideration, as it is yet unclear how the costs for setting up the mechanisms and the ongoing collection and dissemination of information is to be effected and who will pay.

- *Are there other organisations suitable to host a national energy storage register?*

No apparent ones particularly when cost factors for establishing a NEM-wide data collection and dissemination process are factored in.

- *What are stakeholders' views on maintaining information on distributed solar after the scheduled decline in SRES incentives for solar installations from 2017?*

It is most important that the collection and dissemination of information on distributed solar is maintained as both solar PV penetration and the battery storage market grows. The CER is in the best position to continue this process, albeit with legislative and administrative changes required.

2.3.2 A register led by an industry body

- *Is an industry-led register a feasible option? Who can lead this register?*

See comments above in Section 2.3.1.

- *Are there examples of industry-led initiatives or industry operated schemes that are underpinned by a regulatory framework / minimum regulatory requirements?*
- *What are the other benefits and challenges of an industry-led approach?*

2.3.3 State-based registers

- *Is a state-based energy storage register a feasible option?*

See comments above in Section 2.3.1

- *Are there other organisations (apart from electrical safety regulators) that can host this register?*

3 Other registration requirements

- *Are there opportunities to leverage data collection under other frameworks into a national register?*
- *Should relevant jurisdictional licensing frameworks be reviewed and amended to require registration of energy storage devices? Are there other alternatives?*

- *It is understood that off-grid distributed generation, including energy storage, is not currently captured under both national and state/territory registration frameworks. Should consideration be given to registration of off-grid storage systems for emergency purposes or other uses?*

Certainly, off-grid battery storage presents challenges for emergency response teams, and registration of these systems would be a valuable part of any storage register. There is a growing enthusiasm for some individuals and communities to choose to go off-grid. There are cost incentives for networks to institute or encourage edge-of-grid communities to form micro-grids potentially off-grid. These individuals and

communities, while possibly having little impact on whole-of-grid system operation and security, would need to be part of any emergency response mechanism.

If you require additional information please contact Iain Maitland, Energy Advocate on 02 9319 0288 or email iain.maitland@eccnsw.org.au .

Sincerely yours,

Mary Karras

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