

31 May 2021

Anna Collyer  
Chair  
Australian Energy Market Commission

Dear Anna

**Submission: Access, Pricing and Incentive Arrangements  
for Distributed Energy Resources (ERC0311)**

We welcome the opportunity to make a submission in response to the draft determination. The rule change process has made a useful contribution to the debate about Distributed Energy Resources (DER) and builds on important collaborative work through the Distributed Energy Integration Program Access and Pricing Workstream and the Energy Security Board's (ESB) DER / demand side participation design initiative. We support the aspects of the rule change that would lead to export services provided by Distribution Network Service Providers (DNSPs) being formally recognised in the National Electricity Rules (NER). We very much welcome increased transparency and reporting around export limits, and the commitments to consultation.

We do, however, oppose the deletion of 6.1.4 of the NER. Our understanding is that the proposal to delete 6.1.4 of the NER and introduce export charging does not enjoy a consensus of support from state governments. If the AEMC was to proceed with a rule change that is implemented in some states that would further fragment the National Electricity Market (NEM). Export charges could theoretically impact the 2.8 million households and businesses that have rooftop solar plus all other generators and batteries connected to the distribution network. If consumers and investors in some states bear export charges that are not imposed in other states that would be seen as arbitrary and unfair. That would increase conflict around energy policy.

In the following sections we make two sets of arguments. Firstly, we reiterate the case presented in the joint Australia Institute and Smart Energy Council submission that the problem definition is not clear.<sup>1</sup> Before making such a significant change to the NEM it is necessary to fully consider the costs and benefits of doing so.

Secondly, the rule will have economic and administrative impacts that are complex, inefficient and possibly counter-productive. This makes it contrary to the National Electricity Objective (NEO).

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<sup>1</sup> Cass & Grimes (2020) *Submission : Distributed energy resources integration - updating regulatory arrangements*

The best outcome from this rule change would be for the AEMC to pass on the good work done to the ESB's Post 2025 redesign. It would contribute significantly to the Maturity Plan Pilot – Integrating DER and Flexible Demand. The purpose of the Pilot is to produce a 'detailed, integrated market design'. As we argued in our prior submission to this rule change process, export pricing cannot be credibly implemented until there is a full framework for DER integration, including tariffs, charges and rights of access and market participation.

## Insufficient evidence of problem

The draft determination asserts that the rule would address two problems: network congestion and the supposed inequity that results from networks spending money to rectify that congestion. The draft determination uses voltage as a measure of congestion. The logic is that voltage rises in the low voltage distribution network can be attributed entirely to household PV exports.

The University of New South Wales study commissioned by the ESB, which is referenced in the draft determination, clarified that the correlation between PV exports and over-voltage issues is anything but clear.<sup>2</sup> Until there is an objective quantification of the nature of network problems associated with prosumer PV there is no justification for export charging.

There is a need for future network expenditure to integrate DER. However, the level of this expenditure has not been quantified. There is no analysis of the full costs and benefits of DER integration and how these would affect various consumer groups.

Some advocacy in favor of a rule change has canvassed the fact that renters are generally poorer than homeowners and cannot install rooftop PV.<sup>3</sup> This is presented as 'evidence' of inequity in that renters are denied an opportunity to reduce their bills or earn income from solar PV and thus is an argument for export charging. Energy poverty and inequities in the housing market are important public policy issues and the rule change is not an appropriate way to address them.

If there is an equity argument for export charging it needs to be evidence-based. As the draft determination states; 'to the extent there are cross-subsidies between DER and non-DER-households, low income households may be disadvantaged'.<sup>4</sup> This indicates that the AEMC does not accept the argument that there is conclusive evidence of an equity problem caused by rooftop PV under current arrangements.

## Complex, inefficient and possibly counter-productive

DER requires a detailed, integrated market design. The rule change is not a detailed market design. It is at most a set of principles and a decision-making framework to inform network determinations

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<sup>2</sup> Heslop, Bruce, Heywood, MacGill and Passey (2020) *Voltage Analysis of the LV Distribution Network in the Australian National Electricity Market*

<sup>3</sup> ARENA (2021) *New scheme proposed for solar households*, <https://arena.gov.au/blog/new-scheme-proposed-for-solar-households/>

<sup>4</sup> AEMC (2021) *Access, pricing and incentive arrangements for distributed energy resources, Draft rule determination*, p.175

which might be partially or fully implemented in some states and not at all in others. It would risk upending a fundamental pricing principle of the NEM and creating a complex and changing arrangement of different export charging regimes across different distributors.

There has been no quantification of the implementation costs of the rule change. For example, it is not clear what impact it might have on retailer billing systems and who would bear those charges.

The rule might not even reduce the network costs actually paid by non-solar customers. There is no requirement for electricity retailers to reduce network charges on the bills of consumers without rooftop solar. For example, in Queensland the distribution network Energex allocates a daily fee of 7c to solar households but some retailers operating pass this network cost through to non-solar households.

The key regulator for export charges would be the AER. This agency principally regulates the monopoly networks and other market participants. How does the AER intend to transform itself into a consumer-facing regulator with millions of new market participants/stakeholders? Is this the most efficient regulatory framework for demand side participation?

The rule change preempts the ESB's DER/DSP plans for the NEM redesign. We accept the ESB and AEMC's argument that it is appropriate that system security rule changes proceed in parallel with the P2025 redesign and are integrated into that process. DER integration policy is very different to system security. It involves millions of market participants/stakeholders and requires a new vision for the NEM, whereas system security is a more niche, technical issue that can be resolved more quickly and with less broad consultation.

The ESB's DER/DSP workstream has been far less conclusive than the security work and it is premature to create any part of the economic regulation framework until there is a proper integrated market design for DER.

This rule change might also have unintended consequences. Based on Victorian Energy Policy Centre analysis of the Victorian region, it could increase wholesale energy prices, which has implications for equity and for business customers.<sup>5</sup>

A survey conducted by Solar Citizens of over 1,300 solar owners found that 63% of respondents would consider going off grid if they faced export charges.<sup>6</sup> If the rule change slows down DER growth that would undermine state policies, frustrate national decarbonization efforts and effectively be a wealth transfer to incumbent mostly fossil fuel generators compared to business as usual.

## Charting a Better Course

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<sup>5</sup> Mountain, Percy and Burns (2020) *Rooftop PV and electricity distributors: who wins and who loses?*

<sup>6</sup> Gray (2021) *Sun tax could trigger network 'death spiral'*,  
[https://www.solarcitizens.org.au/sun\\_tax\\_could\\_trigger\\_network\\_death\\_spiral](https://www.solarcitizens.org.au/sun_tax_could_trigger_network_death_spiral)

As we noted above, the AEMC has done important work on principles for DER regulation. Networks are becoming two-way and the AEMC is right to insist that export services are well regulated. The principle of information transparency is important. This information would inform DER/DSP reforms. Networks should report on voltage issues, hosting capacity, network congestion and the impact of Virtual Power Plants (VPPs) and other DER integration trials. There must be greater transparency around how often static zero export limits are enforced by networks and the justifications for enforcing them.

Technological innovation will turn DER from a set of resources that are portrayed as an occasional liability into a reliable asset. Inverters with dynamic operating envelope capabilities, smart electric vehicles chargers and community batteries are smarter solutions to DER integration than export charges. Trials of these and other technologies should be expedited and used to inform market design work.

We are happy to provide further detail if required.

Regards,



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