AUSTRALIAN ENERGY COUNCIL

Department of Climate Change, Energy, the Environment and Water
GPO Box 3090,
Canberra ACT 2601

Submitted online: https://consult.dcceew.gov.au/neps-consultation-paper

3 February 2023

Dear Sir/Madam,

Australia's National Energy Performance Strategy

The Australian Energy Council (AEC) welcomes the opportunity to respond to the Australian National Energy Performance Strategy (NEPS) consultation.

The Australian Energy Council (AEC) is the peak industry body for electricity and downstream natural gas businesses operating in the competitive wholesale and retail energy markets. Our members collectively generate the overwhelming majority of electricity in Australia, sell gas and electricity to millions of homes and businesses, and are major investors in renewable energy generation. The AEC supports reaching net-zero by 2050 as well as a 55 percent emissions reduction target by 2035 and is part of the Australian Climate Roundtable promoting climate ambition.

- How can demand considerations be better integrated into Australian energy governance and what are the priorities for change?
- What new or modified coordination mechanisms or institutional responsibilities would be appropriate to better drive energy performance action in the future?

There are already three Demand Response markets in Australia. These being the Wholesale Demand Response Mechanism (WDRM), the Reliability and Emergency Reserve Trader (RERT) and the Frequency Control Ancillary Services (FCAS).

In July 2022 the AEMC published its Updated International Review of Demand Response Mechanisms in Wholesale Markets[1] prepared by the Brattle Group. The AEMC asked the Brattle Group to examine how demand response participates in electricity markets in six jurisdictions outside Australia to draw on the lessons learnt from other jurisdictions. The Brattle Group broadly found that in these six jurisdictions that, like the NEM, demand response participation is driven by a price signal to consume less when the price is high. And that the volumes of energy provided from demand response are trivial in normal periods since

[1] AEMC, International Review of Demand Response Mechanisms in Wholesale Markets https://www.aemc.gov.au/sites/default/files/2019-06/Updated%20International%20Review%20of%20Demand%20Response%20Mechanisms.pdf

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energy prices will usually be below the willingness-to-pay of almost all loads, which seems like economic theory working in practice.

Given the governance of each of the WDRM, RERT and FCAS integrates them into the national market, providing opportunities to respond to price signals from the wholesale energy market (WDRM), to contract with AEMO to participate in the RERT mechanism, and to participate in frequency control for financial reward, the AEC considers that there is no shortage of markets or potential opportunity in the current governance structures.

The 'low hanging fruit' in any demand side response has always been considered as industrial type loads, and nascent markets for these are underway between businesses and their suppliers. For example, AGL's Commercial and Industrial Demand Response product provides a range options for businesses with at least 250 kW of curtailable load and/or 250 kW of back up generation.[2] Energy Australia's ResponsePro[3] enables is customers to derive a revenue stream from actions such as operational curtailment, switching on the customers own generation assets or simply behavioural change. Other more recent entrants such as Flow Power are actively pursuing customers and participating in the South Australian Government's Demand Management Trials Program.[4] In each of these examples, and there are many more, the interface with the energy market is via these providers.

Because of an apparent desire to desire to unbundle demand response from the retail function[5], through the Wholesale Demand Response Mechanism (WDRM) businesses can directly participate in energy markets by responding to signals from wholesale energy market, though in practice this appears a less preferred approach for Commercial and Industrial customers. It is important that now that the foundations are there, that regulators allow existing structures to work for industrial and commercial consumers. Whilst there are shortcomings, existing mechanisms and governance responsibilities should be built upon and no new or modified coordination mechanisms or institutional responsibilities are at present required.

At a domestic (residential and small business) energy level, the question of coordination mechanisms and institutional responsibilities is alive and important work is currently underway. To ensure that policy responses are evidence based there is the AEMO/Mondo/Ausnet Project EDGE, Western Power's Project Symphony, Evoenergy's Project Converge and Ausgrid's Project Edith. The AEC has been on the Demonstration Insights Forum of Project EDGE[6], and when talking about DER/CER integration and its implications for WDRM, RERT or FCAS participation, the most recently released EDGE paper[7] does provide some useful insights and grapples with some important questions. Perhaps the most important of these is the pathway towards either a centralised or decentralised hub for data exchange and the ownership, governance and cost recovery that will facilitate efficient and scalable data exchange between industry actors. The primary use cases being tested in Project EDGE are the exchange of Dynamic Operating Envelopes (DOEs), and trade of local network support services between DNSPs and consumer agents/aggregators. However, use cases could expand as retailers seek to communicate with consumer agents/aggregators. What future functions are actually required are still potentially a long way off in terms of functional specifications.

So whilst the AEC supports generally strengthening the role of demand-side considerations in energy system planning there is no need for a specific action on institutional responsibility or market mechanisms

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[2] AGL Commercial and Industrial Demand Response https://www.agl.com.au/business/solar-and-energy-efficiency/commercial-demand-response?zcf97o=vlx3ap

[3] Energy Australia Industrial and Commercial Demand Response https://www.energyaustralia.com.au/industrial-and-commercial/energy-management/demand-response/energyaustralia-responsepro

[4] FlowPower https://flowpower.com.au/south-australia-demand-response-trial/

[5] AEMC Demand Response Mechanism and Ancillary Services Unbundling: Final Determination. November 2016.

[6] Energy Demand and Generation Exchange (EDGE), ARENA funded AEMO project for the development of a major Victorian Distributed Energy Resources (DER) marketplace. https://arena.gov.au/projects/project-edge-energy-demand-and-generation-exchange/

[7] Project Edge https://aemo.com.au/-/media/files/initiatives/der/2022/project-edge-lessons-learnt-2--final.pdf?la=en&hash=0A6D7D1A47CE168E130983F082EA9CDE

right now. With examples such as the WDRM there is a strong *build it and they will come* vibe, but prudent assessment before committing to step change will more likely be in the long-term interests of consumers. While at present we still have a small number of individual users at small scale, we should let things evolve further in the decentralised model. The first priority for change should therefore be to let the market evolve within its existing mechanisms.

Questions for consultation

- Would an energy efficiency target or targets be suitable for Australia?
- What is the most appropriate methodology for designing and implementing a target that effectively drives demand side action towards Australia's overall net zero target?
- How should progress towards an energy efficiency target be measured?

The NEPS Consultation Paper asserts that Australia is lagging behind on demand-side action.[8] The NEPS paper then suggests that this is due to a lack of clear and well designed targets. But this is questionable. Perhaps another more likely reason is that energy prices in Australia will usually be below the willingness-to-pay of almost all loads? There is trial evidence that suggests that the cost of incentive payments for residential DR to drive a response is high compared to wholesale market spot prices[9]. Australia has amongst the lowest indexed electricity prices in the world[10] and given its resources and renewables base and potential this seems likely to continue for some time. Demand side action appears to correlate best internationally where energy prices are high.

Setting targets that drive demand side action really requires that the method not interfere with the lowest cost of achieving Australia's net zero target. Demand side response is another low emissions technology, and the Federal Government has a plan[11] to drive down the cost of low emissions technologies and to deploy these technologies at scale. The AEC position is that the most appropriate methodology for designing and implementing a target that effectively drives demand side action towards Australia's overall net zero target is that it does not exclude any technologies. Attempting to pick technology winners weakens competitive market forces and is not in consumers long term interests. Therefore, the AEC does not support discrete targets for demand side action, but rather supports demand side action as another low emissions technology participating in achieving Australia's net zero target.

For net zero the goal is the substitution of existing higher emission technologies and practices with cleaner, more efficient, and lower cost technologies. In our view progress towards an efficiency target is best accommodated within a single overall net zero goal as this will see the rational choice of the best new and emerging technologies.

- What are the key opportunities to improve the energy performance of new and existing residential buildings?

[8] National Energy Performance Consultation Paper, November 2022, p.6.
[9] AGL NSW Demand Response ARENA Knowledge sharing report May 2021 p. 22
[10] International Energy Agency, Executive Summary Electricity Market Report July 2022, https://www.iea.org/reports/electricity-market-report-july-2022/executive-summary
[11] Australia's Long Term Emissions Reduction Plan, May 2022, https://www.dcceew.gov.au/climate-change/publications/australias-long-term-emissions-reduction-plan

- What opportunities are there to improve or streamline existing policies aimed at empowering consumers to undertake energy performance improvements in their homes?
- What are key financial and non-financial barriers to the uptake of energy performance improvement opportunities? How can these barriers be overcome?

A lot of work has already been completed in this space recently, including the October 2022 changes to the National Construction Code (NCC) that lift minimum thermal efficiency standards and appliance efficiency standards for new builds and some renovations.[12] Given this recent work, in the AEC's view any additionality to these new performance standards is not warranted given that most of the projects it will affect have not even commenced yet.

With regard to opportunities to "improve or streamline existing policies aimed at empowering consumers to undertake energy performance improvements in their homes", consumers need honest information about the overall electrification transformation to switch to more efficient appliances. Energy Consumers Australia recently identified that just 9% of household consumers said they were seriously considering running their home on electricity only, whilst 77% either had not thought about it or had decided not to. For small business consumers these numbers were higher: 27% said they were seriously considering converting from gas to electricity, while 30% report they are considering it but not seriously.[13]

Electrification brings its own challenges, so policies aimed directly at "appliance end of life" choices could even out the transition from natural and bottled gas to electric appliances over the next decade or two. Ultimately there will be a point at which the gas pipeline network has too few customers to support, and some form of step change is required.

- How can demand management and electrification support lowering energy bills and emissions?

The NEPS paper seeks advice on ways to improve demand side energy performance. This is seen as necessary to reduce long-term and permanent costs for consumers, to assist meet Australia's emission reduction targets, improve the security of the energy system and improve health and comfort.

The long-term nature of the NEPS desired outcomes should not be overlooked. Much optimism has accompanied plans to replace the existing generation fleet with renewables and low emissions generation ***and*** its concomitant spend on transmission[14] that it ***will*** reduce electricity prices. And it likely will reduce them in the longer term. Transitioning to close to 100% renewables could and probably will cost less than continuing with the status quo but most of the price benefits to consumers from the transition will accrue closer to tomorrow than to today. In the shorter-term policy may still be able to mitigate increases in energy bills and to keep them lower than they otherwise would have been on a business as usual pathway and it reasonably follows that better energy performance can also be part of this.

In the consultations view there is a need to strengthen the role of demand-side considerations in energy system planning. The AEC's broadly agrees with this view but is cautious that there are already sufficient demand response markets that could sufficiently strengthen and expand the role of demand side considerations, and that any policy for demand side action first and foremost requires that it not interfere with the lowest cost of achieving Australia's net zero target.

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[12] The Whole of Home requirement: https://ncc.abcb.gov.au/news/2022/new-whole-home-energy-efficiency-whats-it-all-about sets out how this works in practice.

[13] Energy Consumer Behaviour Survey (ECBS), a study commissioned by Energy Consumers Australia with input from Monash University's Digital Energy Futures Project. October 2021, https://energyconsumersaustralia.com.au/news/new-study-reveals-how-australians-energy-behaviour-has-changed-and-what-it-means-for-the-energy-transition-ahead

[14] The Integrated System Plan (ISP) estimates as much as $23 billion to be spent on transmission alone over the next 20 years. Energy consumers and taxpayers will bear the cost.

Please contact the undersigned at David.Markham@energycouncil.com.au should you wish to discuss.

Yours sincerely,

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