Federation Asset Management Pty Ltd
Level 11, 143 Macquarie Street
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25 July 2022

Ms Anna Collyer
Chair
Energy Security Board

By email: info@esb.org.au

Dear Ms Collyer

Sustainable Australian Real Assets trust – Response to Capacity Mechanism Project High-level Design Paper

Federation Asset Management Pty Ltd ("Federation") is pleased to have the opportunity to provide feedback on the Energy Security Board ("ESB") Capacity Mechanism – High Level Design Paper dated 20 June 2022 ("CM Paper").

Federation is an Australian employee-owned alternative asset management company with circa $1,300m in funds under management or advice. Federation is the manager of the Sustainable Australian Real Asset trust ("SARA"), Australia's only pure play energy transition fund. SARA owns the 150 MW / 300 MWh Riverina Battery Energy Storage System ("Riverina BESS"), alongside Edify Energy Pty Ltd. Federation owns 25% of Windlab Pty Ltd, a leading Australian renewables developer.

Federation deploys capital on behalf of international and domestic institutions and wholesale investors. SARA's mission is to invest capital in sustainable infrastructure to accelerate the energy transition in Australia. SARA takes a technology agnostic approach, and seeks to develop greenfield renewable energy infrastructure, or upgrade existing infrastructure in support of the energy transition.

Preamble

Policy certainty is crucial to investment. Historically Australia has been perceived as a low sovereign risk investment destination, and deservedly so. We have benefited strong foreign direct investment (FDI) inflows, coupled with a low sovereign risk premium. This capital efficiency has helped drive Australian infrastructure development over the past 25 years.

The energy transition currently taking place in Australia is a once-in-a-generation capital formation event. We estimate that $200 billion of investment into generation *alone* is required to retire the coal fleet in the National Electricity Market ("NEM In addition to that massive investment capital flows are required to finance storage, transmission, and connection infrastructure.

To efficiently finance Australia's energy transition, we will need to source unprecedented inflows of domestic and international capital, at the lowest possible weighted average cost of capital ("WACC").

The uncoordinated actions and inactions of Federal and State Governments, Federal and State regulatory authorities, and Network Service Providers ("NSPs") in response to a rapidly changing energy market have, unfortunately, contributed to a perception of increasing sovereign risk in Australia. This is a lens through which Federation has considered the CM Paper and provides this submission.

To counter perceptions of increasing sovereign and investments risks in Australian energy markets any changes to energy market design must be necessary, minimal, fair, and crucially, enduring.

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Capacity market design principles

Federation will not respond to each question posed to stakeholders in the CM Paper. Rather we set out below what we consider to be key principles for capacity market design, together with our rationale.

Australia's energy price only market has been largely functional since 2005, but the energy transition has materially changed the risk profile of the NEM, and this is reflected in increased price volatility. Where energy price is the only market signal, it is reasonable to expect higher volatility markets with capacity payments. The NEM has among the highest energy price caps globally, reflecting the need for strong market signals to incentivise investment in this energy price only environment.

The Australian energy market is concentrated, particularly at a retail level. This endows the incumbent "gentailers" with substantial market power. Any changes to market design in Australia should encourage greater diversity in market participants. Renewable technologies offer greater scalability and diversification than legacy fossil fuel generation. This, combined with broader participation in energy markets, will lead to lower energy costs in Australia.

It is our experience that consumers – wholesale and retail – are not only sensitive to energy prices, but equally, to energy price volatility. It is in the context of increasing price volatility that Federation is supportive a capacity market mechanism.

The CM Paper (sec 3.2) attributes investment hesitance in Australia largely to a "wait and see" bias engendered by the energy-only market structure. This an over-simplification. Investment hesitance in Australian renewables may be attributed additional key risk factors such as transmission capacity, and even where sufficient capacity is available, the ability to achieve connection at a reasonable cost and in a predicable time frame. Lack of a long-term carbon price signal is also a material contributor to investment hesitance. Our support for a capacity market is caveated by an acknowledgement that there are material issues to address in addition to capacity and storage to accelerate Australia's energy transition.

Capacity versus storage market

Fundamental to the question of market design is – what is *minimally* required to achieve our objectives? The current NEM design has been broadly successful in ensuring sufficient capacity is available, albeit with periods of volatility in our energy only market environment. Accordingly, we must consider whether a capacity market is required, or merely a market for storage. We note that storage is being introduced under the current market design using private contracting – Riverina BESS being a case in point. In our view a storage market is likely to assist in accelerating the introduction of storage, particularly with higher risk longer duration technologies such as pumped hydro energy storage (PHES), and with the introduction of new battery chemistries including the emerging iron-air and flow battery technologies.

Retrospective versus future eligibility

Federation is of the view that any new capacity or storage market should apply to new investments only. The rationale for this position is;

- The principle of minimal change
- Preservation of the conditions upon which previous investments were made
- Minimisation of the risk of unintended consequences; deferral of coal retirements and preservation of inefficient gas plant, for example.

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Link to de-carbonisation

A capacity or storage market must support Australia's commitments under the Paris Agreement. To the extent that only new build facilities qualify for the storage market the risks of outcomes inconsistent withour Paris Agreement commitments are substantially reduced.

Technology

Efficient energy transition will require multiple technologies with the ability to cover very short term (5 minute), through to ultra-long-term storage required to cover "renewable drought" conditions. Demand response is likely to be an efficient and important component of a 100% renewable NEM and should qualify in any capacity or storage market.

Pricing considerations

Any market pricing mechanism implemented should be structured to pass to consumers the advantages of declining cost curves, and the emergence of new technologies. Net Cost of New Entry ("Net-CONE") is an established mechanism in international markets, and a version of Net-CONE is operating in the Southwest Interconnected System ("SWIS") in Western Australia.

On the principles of minimising regulatory change and to the extent possible reflecting international capacity market praxis, we support adoption of Net CONE as the basis for pricing a capacity or storage market.

Transmission Capacity

A capacity or storage asset must be able to provide the contracted capacity storage as and when required by the market. Accordingly, Federation takes the view that an efficient capacity market must reflect transmission in determining capacity or storage eligibility.

The distribution of VRE throughout the grid has weakened the power system and introduced new grid constraints. Consequently, solutions that stabilise the power system in these weaker locations, present a sensible solution. BESS assets combined with advanced inverter technologies have the capability to mitigate these types of grid constraints. Hence, improvements to grid capacity because of capacity or storage assets should be reflected in the analysis of transmission constraints. This enables the optimisation of capital expenditure across generation, transmission, and storage.

Centrally planned versus retailer obligation.

Australia's energy-only market has been largely functional since 2005, but the energy transition has materially changed the risk profile in terms of volatility. Where price is the only market signal, it is reasonable to expect higher volatility. The NEM has among the highest energy price caps globally reflecting the need for strong market signals to incentivise investment in this environment.

It is our experience that consumers – wholesale and retail - are not only sensitive to energy prices, but equally, energy price volatility.

Federation supports a centrally planned market operated by AEMO. Ensuring sufficient capacity availability and market stability should be at the core of AEMO's objectives. We note that this centrally planned format is in place in the SWIS and has been operated successfully, albeit in a smaller and less evolutionary market environment. In our view a centrally planned market can more effectively access to quantum of new capacity or storage required.

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Transfer rights

The ability to engage in the secondary trading of capacity certificates between qualified facilities should be incorporated as part of market design. Transferability will improve market efficiencies and assist in optimal allocation of resources.

BESS assets are highly scalable both in terms of power and duration. The ability to acquire existing capacity certificates could promote efficiencies via incremental investment in existing BESS assets.

State and Territory policies

Federation acknowledges the substantial contribution that State based measures have made to accelerating the Energy transition. We are also cognisant of the rights of the States in the National Electricity Law framework.

This notwithstanding, Federation is of the view that Australia should be seeking to maximise consistency in our rules and regulations across the NEM. Accordingly, we do not agree with the Energy Ministers' principles that States must be able to determine which technologies are eligible in their States and should not be able to opt out of the mechanism, once implemented. Inconsistency in rules and regulations across the NEM will, in our view, contribute to perceptions of elevated risk, ultimately resulting in higher WACC expectations.

Commitments by the Federal Government to contribute $20 billion to transmission upgrades must give impetus to greater integration of jurisdictions into a single uniform NEM.

Federation appreciates the opportunity to provide our input into the CM Paper, and we look forward to the prospect of further engagement with the Energy Security Board in the development of market design.

Please do not hesitate to contact Stephen Panizza (stephen.panizza@federationam.com) in the first instance if you have any questions or comments on our submission.

Yours faithfully,

Stephen Panizza
Partner
Federation Asset Management Pty Ltd