

Energy reform after COVID-19

Stimulus for clean energy reform

Coal generators are pushing to delay important reforms that would make the National Electricity Market more reliable and efficient and help lower emissions. Speeding up NEM reform will help drive economic recovery not delay it.

Discussion paper

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Summary

Coal generators and other energy companies have lobbied the Council of Australian Governments (COAG) Energy Council to delay and reconsider important reforms to the National Electricity Market (NEM). They argue that the implementation of new market rules and related consultation processes will divert resources, and called for a 'review of the regulatory reform roadmap to ensure that critical supply and reliability could be prioritised.'¹

The market bodies that regulate and operate the NEM – the Australian Energy Market Commission (AEMC), Australian Energy Market Operator (AEMO) and Australian Energy Regulator (AER) – have taken responsibility of reviewing regulatory timelines of 31 key reforms.² On 19 May 2020 they released their final version of the new timeline.

The key change proposed is that Five Minute Settlement (5MS) will be delayed by 12 months. Up to 16 other rule changes are affected.

It is necessary to prioritise the safe operation of the energy sector during the health crisis. If energy companies can present credible evidence of the system risk created by implementing rule changes, they should do so now for public consultation and consideration. This has yet to be the case.

Once the peak health crisis has passed and restrictions are progressively lifted, the pace of NEM reform should be increased as part of the public sector response to the economic impact of the COVID-19 crisis. Rule changes that make the NEM more reliable and efficient will help with economic recovery. The biggest reform on the COAG agenda, the Post-2025 Market Redesign Project, could be accelerated, to deliver early benefits from 2023 onwards.

Once the health crisis is over and economic recovery has begun, Australia will need the economic and social benefits of NEM reform even more than we did before the crisis.

There is also a great opportunity to simplify the regulatory system, to help clean and innovative interests have their voice heard more clearly as Australia's energy laws are re-written.

¹ Barnes (2020) *COVID-19 brings reform challenges*, <https://www.energycouncil.com.au/analysis/covid-19-brings-reform-challenges/>

² Pierce, Zibelman, & Savage (2020) Letter to COAG EC SCO - Implementation timeframes for rule changes

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Introduction

In 2020, the COVID-19 pandemic has shaken the world. Australia like other countries will have to rebuild its economy and reshape economic and social structures to accommodate the risks posed by the pandemic and improve resilience in anticipation of future shocks.

The electricity sector can play a central role in this transformation. There is an opportunity for 'reform stimulus' in the National Electricity Market (NEM) to help with economic stimulus and long term recovery.

Australia's electricity network was designed and built in the last century and is no longer fit for purpose. The NEM is being progressively redesigned so that renewable energy and storage can provide reliable, affordable energy for households and business. There is bipartisan agreement at COAG Energy Council for a timeline of reform that will see the NEM redesigned by July 2026.

On 19 March 2020 the Australian Energy Council (AEC), a lobby group for coal-fired generators, the big three generator-retailers or 'gentailers' and other energy companies, lobbied the COAG Energy Council to delay this reform.

The AEC argued that reform poses a threat to the reliability of supply during the COVID-19 health crisis and will create risk and instability in the sector. The AEC claims firstly, that participating in the regulatory reform process is a risk, because staff are required to attend consultations and write submissions. The second, more substantial claim is that implementing reforms requires changes to IT systems or power systems, which may be difficult to implement during the health crisis and could pose unacceptable risks to supply.

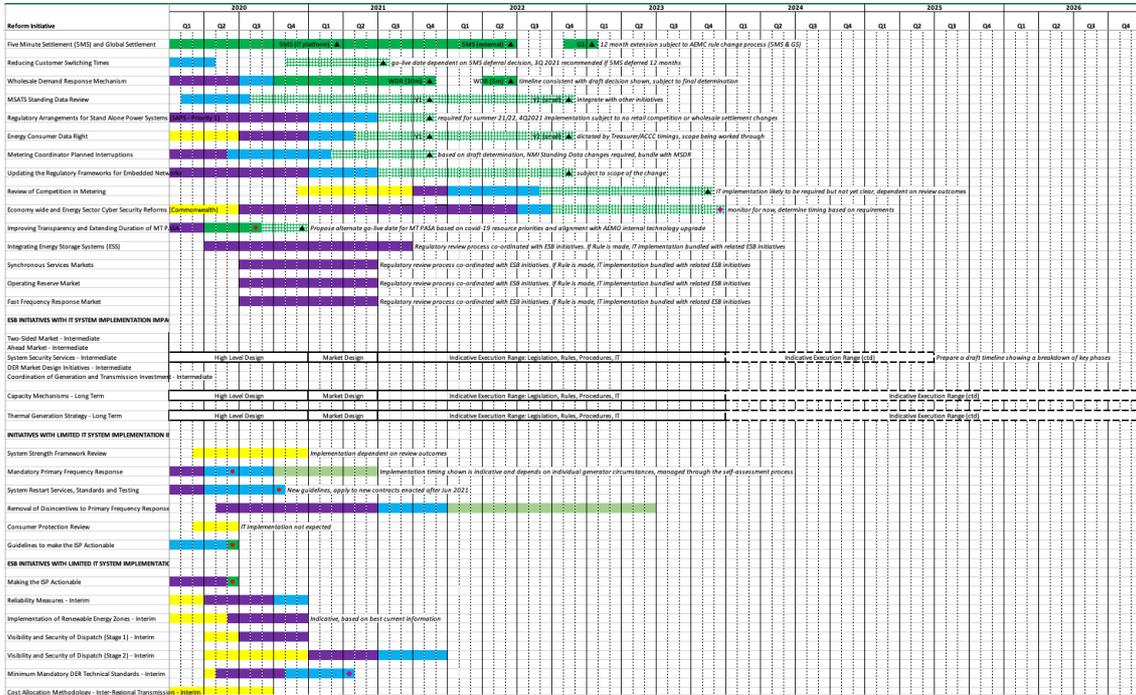
The heads of the three NEM market bodies – the Australian Energy Market Commission (AEMC), Australian Energy Market Operator (AEMO) and Australian Energy Regulator (AER) – wrote to COAG Energy Council on 26 March to advise that they will recommend a new timetable for regulatory work in the NEM.

On 19 May 2020 the market bodies released their timetable for 31 key NEM reforms and potential changes to their implementation dates, from now until the end of 2026.

Changing any of the early rule changes could have an impact on subsequent rules and so timetabling is a very complex exercise. This is conveyed in Figure 1, which is a screenshot of the spreadsheet of rules that was circulated in early May. These changes

will potentially impact a very large number of rules, if delays in 2020 force subsequent reforms to be delayed.³

Figure 1: Screenshot of regulatory change timetable (version 2)



Source: AEMO

In this paper I propose that governments and the market bodies should take a long-term view of the issues raised by the AEC.

The key delays agreed to by the market bodies are

- 12 month delay of Five Minute Settlement, subject to AEMC rule change process
- Keep to current Wholesale Demand Response draft ruling, subject to final AEMC determination due 11 June
- No deadline for Mandatory Primary Frequency Response reform, allowing individual generators to self-assess when they can implement

³ It is impossible to be precise about the number of rules being reconsidered as many are not yet formulated as rule changes. Reforms for the early years 2020 and 2021 are formal rule changes such as wholesale demand response while in later years the reforms are often ESB initiatives leading up to the Post-2025 Market Redesign Project, such as DER Market Design. These are currently broad high-level proposals which would be expected to lead to multiple rule changes.

- Possible delay of several months for Improving transparency and extending duration of MT PASA⁴

Australia should prioritise the health of electricity workers, system reliability and protection of vulnerable households. Regulatory processes should take second place to these priorities.

However the decision to delay rule changes must be evidence-based and transparent.

Over the medium term (2-5 years), the need for NEM reform will become even more important. The market bodies could bring forward the centrepiece of NEM regulatory change, which is the Post-2025 market redesign, in order to have key market benefits in place by 2023 (Figure 2), rather than delayed until mid 2026.

This would help deliver lower costs to consumers. It would stimulate investment and generate jobs, particularly in regional Australia, where large-scale renewable energy generation is built. This increase in generation, transmission and storage infrastructure will improve reliability. There would also be flow on benefits to the economy.

These reforms would have large co-benefits for sustainability and climate performance, as they will allow clean, distributed energy to replace coal-fired power, which is Australia's largest source of greenhouse gas emissions.

The regulation of the NEM is complex. The sheer volume of rule changes, inquiries and other processes is a barrier to participation for innovative new clean energy technologies and companies and for laypeople. One of the very important outcomes of the debate over regulatory timelines could be to simplify the regulatory system and open it up to participation from energy innovators and organisations representing household consumers.

⁴ (n.d.) *Joint market body prioritisation framework*, p.6

Figure 2: Current and proposed timelines for NEM market design project

Year	Post-2025 timetable delayed Benefits from 2026	Proposed stimulus approach Benefits from 2023		
2020	COVID-19 delay Delay during health lockdown	COVID-19 delay Delay during health lockdown		
2021	Design - ESB Consultation & high-level design development	Design - ESB Consultation & high-level design development		
2022	Rules - AEMC Develop, consult & make rule changes (NEL & NER)	Rules - AEMC Develop, consult & make rule changes (NEL & NER)	System - AEMO System development, live testing	Benefits Start dates decisions delegated to AEMO
2023				
2024	System - AEMO System development, live testing			
2025				
2026	Benefits Benefits commence from 1 July 2026			

The need for NEM reform

Australia has had significant political conflict over climate and energy policy for twenty years. Despite this, there is a bipartisan agenda to build a new NEM design that can deliver reliable supply over the next decade, alongside the necessary retirement of aging coal-fired generators.

The first comprehensive vision of this new NEM was produced by the Finkel Review in 2017. The Independent Review into the Future Security of the National Electricity Market, chaired by the Chief Scientist, Dr Alan Finkel, titled its final report *Blueprint for the Future* and this *Blueprint* is the basis for the development of national energy law in Australia.

COAG Energy Council approved the *Blueprint* in June 2017, when it passed 49 of the 50 Finkel Review recommendations. This is the origin of the Post-2025 Market Redesign Project ('the 2025 project').

The Finkel Review's key governance recommendation was the establishment of an Energy Security Board (ESB), to advise COAG Energy Council and coordinate the redesign of the NEM. The ESB is in charge of the 2025 project and the agencies in the ESB – AEMO, AEMC, AER – are currently developing the new COVID-19 regulatory timeline for COAG Energy Council.

The 2025 project will see a new market architecture put in place, that replaces the rules designed for 'baseload' coal with new rules designed for distributed renewable energy. Dr Finkel's review was important because it was optimistic that Australia can create an efficient electricity market around renewable energy and put forward a vision for that system.

In the past, reliability was maintained by coal and gas and hydro power stations. The Finkel Review made clear that new, distributed renewable energy generation and batteries can also deliver reliability. These technologies can provide reliability services but unfortunately the NEM as designed does not create revenue for those services.

If coal-fired generators continue to retire but distributed energy and storage cannot access the market fully, to provide new reliability services, then the NEM will become less reliable. This will increase the cost of energy, as the market operator AEMO will be forced to intervene more to provide reliability 'out of the market', which is expensive.

In summary, if COVID-19 is used as an excuse to delay reform of the NEM, this will increase unreliability and push up prices. It will also encourage governments to prop up coal, which would make it impossible for Australia to make credible reductions in our greenhouse gas emissions, including targets of all NEM states to reach net-zero emissions by 2050.

The push to delay reform

From late March 2020 Australian governments have been working through COAG Energy Council to help the energy industry maintain supply.

On 20 March 2020 COAG Energy Council formed an Energy Coordination Mechanism⁵ to manage risk in the NEM and energy supply more broadly, as part of the National Coordination Mechanism run by the Department of Home Affairs.⁶

The day before COAG met, the AEC – an energy industry association representing all privately-owned coal generators in the NEM and the big three vertically integrated ‘gentailers’ – wrote to Minister Taylor lobbying for the ‘delay of a number of pending reforms to allow energy businesses to redeploy committed project teams to where they were more critically needed’.⁷ This letter has never been made public, although the AEC has disclosed some of its contents.

The AEC asked for a six month delay of 5MS and a three month delay to the implementation of a rule change that will require synchronous generators to restore the frequency control services they used to provide (‘Mandatory Primary Frequency Control’).⁸

The market bodies have agreed to delay 5MS for 12 months and on 14 May 2020, the AEMC published a rule change from AEMO that would formalise a new date in energy law.

AEC members have now also proposed to delay WDR until after 5MS, which means delaying to after end of Q2 2022, versus the current implementation date of 1 October 2021. This would mean that there is no in-market capacity available to help maintain reliability during heatwaves of summer 2021 – 2022. The result is that there will be less reliability services in the NAM and costs will increase for consumers. The winners would be the generators who are members of the AEC and make significant profits from the very high peak demand prices of summer.

The AEMC will decide on the implementation date for WDR as part of the normal rule change process and this will be made public in the final determination on 11 June 2020.

More worrying is that the AEC is also pushing for delays to reform over the next 5 years, calling on the ESB to ‘take stock and reconsider the urgency of this schedule.’

⁵ COAG Energy Council (2020) *Meeting Communique*, p.1

⁶ (n.d.) *National Coordination Mechanism*, <https://www.homeaffairs.gov.au/about-us/our-portfolios/emergency-management/about-emergency-management/national-coordination-mechanism>

⁷ Barnes (2020) *COVID-19 brings reform challenges*

⁸ Barnes (2020) *COVID-19 brings reform challenges*

Even before the COVID-19 health crisis, there was agreement that there is an urgency in making these changes. As the AEMC warned last year, Australia presently has a ‘window of opportunity to establish a fit for purpose framework ahead of fundamental, consumer-led changes’, that would otherwise threaten reliability and push up costs.⁹

⁹ AEMC, *How digitalisation is changing the NEM*, p.3

The new regulatory timetable

The electricity sector involves regulatory processes besides the national ones that are included in the timetable. For example, there are also national and state climate and transport policies (such as the electrification of light passenger vehicles) that change the economics of generation investments. There are national processes for setting standards, such as for solar inverters and large energy-consuming devices such as HVAC systems. The timetable does not include guidelines that are issued by AEMO, which are subsidiary to rule changes made by the AEMC.

Each state has the constitutional authority over electricity supply and its own energy, safety and pricing regulators, which make rules for registering generators, may set retail prices and so on.

The regulatory complexity of the NEM is onerous for all stakeholders including governments. This gives the large, established companies an advantage, as they have dedicated regulatory affairs staff and are well connected to government and regulators. The NEM regulatory system is not designed to advantage any sector but the sheer complexity of its processes are a bias against competition, innovation and decarbonisation, because emerging clean and innovative businesses, new sectors and households cannot hope to keep up with all the decision making going on.

This is a great opportunity to find ways to simplify the NEM regulatory system and level the playing field to help clean and innovative businesses and technologies get heard more effectively.

Some of the reforms under consideration for delay are still at a very general stage, such as the ESB's initiatives including the 2025 project. Any one of these initiatives, such as the market design for distributed energy resources (DER), would require a number of rule changes. What this means in practical terms is that a delay to a single reform listed for the later years of the timeline would set back many rule changes.

Of the 31 rules included in the market bodies current timetable, 22 could have a substantive impact on the energy trilemma and are listed in Figure 3. The final column predicts the potential negative impact if the reform is delayed. The three kinds of impact are the three goals of the energy trilemma that policymakers are trying to deliver: improve reliability of supply, reduce the cost of electricity and reduce greenhouse gas emissions.

Figure 3 : reforms under consideration for delay which have potential high impacts of reliability, cost and emissions

	Reform	Status	Potential Impact if delayed
Industry- wide	Five Minute Settlement (5MS) and Global Settlement	Committed	Cost Reliability
	Wholesale Demand Response	In progress	Reliability Cost Emissions
	Two-Sided Market - Intermediate	Proposed	Cost Reliability Emissions
	Ahead Market - Intermediate	Proposed	Cost
	System Security Services - Intermediate	Proposed	Reliability
	DER Market Design Initiatives - Intermediate	Proposed	Cost Reliability Emissions
	Coordination of Generation and Transmission Investment - Intermediate	Proposed	Cost
	Capacity Mechanisms - Long Term	Proposed	Cost Reliability
	Thermal Generation Strategy - Long Term	Proposed	Emissions
	System Strength Framework Review	Proposed	Reliability
	Guidelines to make the ISP Actionable	Committed	Cost Reliability Emissions
	Reliability Measures - Interim	In progress	Reliability
	Implementation of Renewable Energy Zones - Interim	Proposed	Cost Reliability Emissions
Wholesale	Integrating Energy Storage Systems (ESS)	Proposed	Cost Reliability Emissions
	Synchronous Services Markets	Proposed	Reliability
	Operating Reserve Market	Proposed	Reliability
	Fast frequency response market ancillary service	Proposed	Reliability
	Mandatory Primary Frequency Response	Committed	Reliability
	System Restart Services, Standards and Testing	Committed	Reliability
	Removal of Disincentives to Primary Frequency Response	In progress	Reliability
	Visibility and Security of Dispatch (Stages 1 & 2) - Interim	Proposed	Reliability
Networks	Minimum Mandatory DER Technical Standards - Interim	Proposed	Reliability

Benefits of reform more important after COVID-19

The COVID-19 pandemic will change Australian society and economy in ways we cannot imagine. One thing that is certain is that the economy will take years to recover. Many people who lost jobs or had their long-term health impacted by the virus will be poorer than they would otherwise have been.

Reforms of the NEM that increase competition and reduce costs could be brought forward after the COVID-19 health crisis, to help with economic recovery and reduce costs for vulnerable households.

A more efficient market and future certainty about its design will encourage private sector and household investment in electricity, potentially including electric vehicles and demand response as well as solar and batteries. This would generate employment particularly in the regional areas that will host new solar, wind and transmission infrastructure that Australia needs to replace retiring coal-fired generators, the 'Renewable Energy Zones' proposed by the Finkel Review.

Whatever impact the health crisis and lockdowns have on the installation of solar, battery and other 'distributed energy resources' (DER) in 2020, it is reasonable to think that households, commercial consumers and investors will be keen to invest into solar, batteries and other DERs during the recovery period, in order to reduce energy costs. That would only increase generation and demand variability and lack of visibility, that reform is trying to mitigate, and is another reason to bring forward the 2025 project.

CONSUMER BENEFITS

Unfortunately, there are no published economic studies of the impact of each of the 31 reforms under consideration by the market bodies timeline. Some submissions to the market bodies about the draft regulatory timeline have proposed cost benefit analysis to inform decisions about the tempo and staging of reforms.¹⁰

One of the key reforms in progress currently is wholesale demand response and there are two studies that indicate the potential value this reform could have. The purpose of demand

¹⁰ Australian Energy Market Operator (2020) *Prioritisation of regulatory initiatives – stakeholder consultation - Consolidated summary of feedback from consumer forum, 20 April 2020 and industry forum, 21 April 2020*, p.5

response reform is to allow consumers to reduce consumption and sell this into the wholesale market.

The first study is a peer reviewed academic paper from 2017. This looked at the change in actual wholesale prices, over an 8 hour period, compared with pre-dispatch predictions by AEMO, for a single summers day in Queensland in 2017 to infer the impact of demand response on the spot market.¹¹ (The wholesale market is not open to demand response formally participating as a scheduled bidder, but the study gives an indication of how much a formal wholesale demand response market might suppress peak prices.)

The researchers estimated price responsive demand reduced the average spot price in Queensland from about \$3,500/MWh to \$2,100/MWh, which would have reduced the wholesale electricity cost by around \$100 million for the day.¹²

The researchers then presented modelling results showing that 3 GW of scheduled demand response could suppress the average wholesale price of electricity in the NEM by 13% over a then-future two-year period (2017-2019).¹³ If this saving was passed on to consumers then it could see a reduction in household electricity bills of around 4%.¹⁴

Wholesale demand response reform could lead to significant cost savings beyond the 4% calculated in this study. Increased levels of demand response should also reduce network, generation and storage investment, which over the long-term would result in further savings to consumers.

The second study was a cost benefit analysis commissioned for COAG Energy Council in 2019. Last year 2019 COAG Energy Council decided in favour of a proposal sponsored by South Australia, that will require large consumer devices such as HVAC and battery chargers sold in Australia after 2023 to have circuitry that allows them to be remotely controlled, to provide demand response. If wholesale demand response reform goes ahead and is opened up to households, then consumers with these devices will be able to contract with demand response service providers who would bid their demand reduction into the wholesale market, helping lower the cost of energy for all consumers.

The Regulatory Impact Statement included modelling indicating that mandatory compliance would have a positive benefit/cost impact in the order of \$2.3 – 4.3 billion NPV, with a likely value of almost \$3 billion.¹⁵ This equates to a benefit per household of \$300 for all

¹¹ Madafiglio, Bruce, & MacGill (2017) *Impact of Demand Response in the Australian National Electricity Market with High Renewable Energy Penetration*

¹² Ibid, p.6

¹³ Madafiglio et al. (2017) *Impact of Demand Response in the Australian National Electricity Market with High Renewable Energy Penetration*, pp.1, 8

¹⁴ Assuming wholesale costs is about 33% of average retail electricity bill.

¹⁵ Department of Environment and Energy (2019) *Consultation Paper: 'Smart' Demand Response Capabilities for Selected Appliances August 2019*

consumers, which does not include the savings for those households that participate in wholesale demand response and receive direct financial incentives.

This modelling also quantified potential reliability benefits of demand response. Under a high activation scenario – equivalent to the activation rates in Queensland’s existing PeakSmart programme – these modest demand response devices would deliver as much capacity as the Snowy 2.0 project, by 2033.¹⁶

In the future, reform should be able to deliver a more profound financial benefit for consumers, when they are able to compete with their retailer. This is the ‘2 sided market’ (2SM) model described above. This is also termed the ‘producer-consumer’ or *prosumer* model. The term might be clumsy but it captures the central concept which is that a household or business will soon be able to produce, store and trade energy with other parties.

Low income households have the most to gain over the long term from reform because they are paying the highest proportion of their income on energy currently. In 2019 the AER reported that ‘Low income customers on standing offers in South Australia and NSW faced the least affordable electricity in 2019, with 9.9 per cent and 9.5 of income going towards electricity costs respectively.’¹⁷

If the 2SM design delivers a better price for exported electricity from households with solar, batteries or EVs, that is a direct financial benefit available to over 6 million Australians, which could be very important for those under financial stress.¹⁸ The earlier that low income households can participate in the 2SM, the greater the equity benefits of NEM reform will be.

¹⁶ Wilkenfeld (2020) ‘Quantifying the demand response capacity of household appliances’, ENERGYNEWS (Vol 38, Quarter 1), p.39

¹⁷ Australian Energy Regulator (2019) *Affordability in retail energy markets*, p.14

¹⁸ 2,344,134 household solar PV systems multiplied by 2.6 persons per household. (PV data from CER (2020), Postcode data for small-scale installations, <http://www.cleanenergyregulator.gov.au/RET/Forms-and-resources/Postcode-data-for-small-scale-installations#Summary-of-postcode-data>, household composition from AIFS (n.d.) *Population and households*, <https://aifs.gov.au/facts-and-figures/population-and-households>

Proposal and recommendations: some delay now and accelerated reform later

The core of the proposal is that a stimulus to NEM reform could assist in economic recovery from the COVID-19 pandemic. It would be very useful to have research done into the economic and social benefits of NEM reform. This would go beyond the national electricity objective that the AEMC consider when making rule changes, to the broader ‘co-benefits’ of NEM reform, including regional employment and emissions reduction.

Even if some rule changes are delayed over the next 12-18 months, it should be possible to accelerate other work, to deliver the benefits of reform earlier. This ‘stimulus’ proposal is to allow for some delay in some rule changes consultations and implementations, including the Post-2025 redesign project, during the health crisis but then rephrase subsequent stages of the redesign, to deliver market impacts from 2023 and assist in economic recovery.

The market design project consists of three key phases: design, rules, system delivery.¹⁹ The current timeline is shown in Figure 1, alongside a proposed accelerated approach.

Reform should be accelerated as much as possible. The current project schedule has the ESB consulting with stakeholders during 2019 – 2020. The ESB is also commissioning research and drawing all these inputs together to formulate high-level design proposals. Some consultation could be done more efficiently using online meetings and if there are delays, they should be minimal.

In 2021 and 2022 the ESB will translate this design into detailed new rules for the market. The rules of the NEM are designed by the AEMC and they would be expected to carry this work on behalf of the ESB, which the AEMC is a member of.

From 2023, the rules would then be implemented by market participants and the system operator, AEMO. The ESB has not elaborated how part of the process will work, but the intention of the project is that the reforms are not implemented until 2025 or after.

¹⁹ COAG Energy Council (2019) *Energy Security Board Post 2025 Market Design Issues Paper*

Recommendation 1: study into economic, social and climate co-benefits of NEM reform stimulus by 2023

ESB should commission a report for COAG Energy Council into how the market design project could deliver major reforms by 2023 and how this could integrate with stimulus spending, especially for household and community-scale DER, to support economic recovery, targeted to low-income households.

In March 2020, when the Australian Energy Council first proposed delaying 5 Minute Settlement and other reforms, it was hoped that the COVID-19 crisis might be resolved in a year or two. The World Health Organisation and other experts are now warning that the pandemic may take much longer to pass and that the virus may never be eradicated.²⁰

This is a very different scenario, in which there may be physical distancing for many years into the future. If the health situation is used as a justification to delay major rule changes until there is an ‘all clear’ this would hold back important reforms and lock in the existing coal-fired generators for many years.

On 14 May 2020 the AEMC opened consultations on a procedural rule change, to delay the implementation of 5 Minute and Global Settlement. This is an expedited rule, with a final determination due on 9 July 2020. The AEMC’s Consultation paper set out the assessment framework which will be used to decide whether or not a delay is justified with regard to the national energy objective. The AEMC will compare the cost savings of delay to potential cost increases including the impact of holding back the consumer benefits of reform.²¹

This is an important principle which should be applied to any decision to delay a rule or reform that has substantial benefits for consumers or for reliability. Proponents of delay should be required to provide substantiation of the cost of implantation. The AEMC should provide a transparent account of these costs in its decision.

Delay of 5 Minute Settlement will protect existing generators at the expense of most consumers. AEMC economists Tim Nelson and Alan Rai have written that ‘Five minute settlement provides more efficient price signals for investment in fast response technologies, such as batteries, reciprocating gas engines and demand response.’²²

²⁰ (2020) *WHO warns coronavirus may never go away*, <https://www.abc.net.au/news/2020-05-15/who-warns-coronavirus-might-never-go-away-vaccine/12251432>

²¹ Australian Energy Market Commission (2020) *Delayed implementation of five minute and global settlement - Consultation paper*, p.7

²² Rai, Esplin, Nunn, & Nelson (2019) *The times they are a changin’: Current and future trends in electricity demand and supply*, p.20

Recommendation 2: Evidence-based short-term delay of substantive reforms

Reforms that are designed to deliver a substantial reduction in cost or improvement in reliability should only be delayed on the basis of clear evidence.

If NEM reform is accelerated then the market bodies, particularly AEMO, will need additional resourcing.

Recommendation 3: Federal Government funding for reform stimulus

Additional Federal Government funding for the market bodies to accelerate the market redesign project and other reforms.

One of the problems in energy law reform is that future may belong to the innovators but the present belongs to the lobbyists working on behalf of business as usual. There are many complex rule changes processes going on at once and it is impossible for new companies or for consumer advocates to participate fully in every consultation that is important.

The innovators who are working on the solutions to our long-term energy challenges find it hard to participate in NEM reform at the best of times, as there are so many fora and these companies may not even have a dedicated regulatory expert in-house. The market bodies should give particular thought to ways to actively encourage innovators to play a more effective role, as they are best placed to understand the potential of the new NEM to deliver for consumers. The federal government should fund this increase in engagement with innovators. There are perhaps 10-20 innovative energy companies that engage in regulatory processes. Something like \$700,000 over a three year period would be a reasonable amount to pay for regulatory analysis, modelling and coordination of the innovative energy industry.

Recommendation 4: Federal Government funding for innovators to engage better with market bodies and ESB reforms

The federal government should provide funding of around \$700,000 over 2020-2022, to help innovative new companies participate in reform and ask the ESB to coordinate this extra engagement through the market bodies.

Conclusion

COAG Energy Council, the ESB and NEM market bodies could take a 'stimulus' approach to NEM reform. It is proposed to accelerate the Post-2025 market design project to deliver benefits to consumers from 2023 and link it directly to economic stimulus programs.

There appears to be no reason to delay reform once the health crisis is over and there are strong reasons to bring forward the centrepiece of market transformation earlier than 2025. The new NEM will be more efficient and resilient, which will assist economic recovery following the COVID-19 crisis.