SNAPI

May 30, 2024

Response to AEMC's Draft Rule Determination

Dear Anna,

On behalf of SNAPI, thank you for the opportunity to provide a response to the Australian Energy Market Commission's (AEMC) *Draft Rule Determination*.

We absolutely agree with the AEMC that faster digitisation of the NEM is fundamental to establishing a more stable, efficient, and lower emissions "future grid". The faster we can replace legacy meters, the sooner we can improve services for consumers.

It is important, however, to review the *Draft Rule Determination* and proposed reforms in light of objectives and "smart meter rollout realities". Namely, recent government reports on the UK's smart meter rollout and local market conditions. This includes skills shortages and technical issues which must be factored into the AEMC's assumptions regarding rollout cost and schedules.

Indeed, the implementation of smart meters across various jurisdictions, including Victoria and the UK, provide a valuable opportunity for learning. It would be remiss to ignore this opportunity to address risk factors inherent in assumptions in the AEMC's *Draft Rule Determination* and the AEMC *Review of the Regulatory Framework for Metering Services*.

For example, the AEMC states "the earliest feasible target date" for achieving the universal penetration of smart meters to be 2030. But it also admits to "barriers that may prevent a 100 per cent smart meter uptake by 2030 in practice", citing site remediation as a potential issue.

Indeed, current site remediation figures indicate upgrades to an estimated 1.2million meters may be delayed or indefinitely postponed, challenging the 2030 deadline.

Further issues reported by UK authorities in October 2023 relevant to Australia's smart meter rollout include:

- Skills Shortages
- Technical Issues
- Cybersecurity Risks

- Consumer Resistance

Despite problems with several of the AEMC's assumptions and obvious barriers to achieving 100% penetration of smart meters, SNAPI disagrees that 2030 is the earliest feasible date for achieving 100% *digitisation* of the NEM. Rather, if an "ecosystem approach" to digitisation were adopted, as proposed in AEMC's own *Draft Review of the Regulatory Framework for Metering Services* in 2022, the NEM could be digitised up to four years earlier, by 2026.

Indeed, timeframes are not just a goal, but critically important, since AEMC identifies 2030 a critical tipping point in the cost/benefit analysis of an accelerated rollout for consumers, too. As stated in the Draft Rule Determination: "Oakley Greenwood's analysis showed delaying the target date for universal penetration beyond 2030 is likely to lead to a significant reduction in benefits that are not offset by the reduced capital costs."

And while increased costs are considered an unavoidable biproduct of an accelerated smart meter rollout, financials remain extremely important. Many Australians who rent, live in mobile black spots, in old homes and those who can't afford remedial works won't have access to smart meter benefits, including solar sponging and time-of-use tariffs. These groups will end up paying more for electricity over a longer period, and ultimately, pay for Australia's expensive energy network upgrades.

AEMC's smart meter rollout was already set to cost $2.4billion and the AEMC's accelerated rollout adds approximately $120.8 million to this total. Therefore, if the AEMC hasn't achieved 100% penetration of smart meters, or 100% digitisation of the NEM by 2030, the project has either cost consumers a percentage of $506million in lost benefits, wasted over $120million, or both.

SNAPI take this opportunity to propose the inclusion of a provision to the determination.

This provision will reduce risk while universally improving outcomes for all stakeholders.

One recommendation we believe the AEMC should consider, is the inclusion of an explicit yet broad provision for the use of temporary, complimentary solutions to solve the issue of site remediation.

By including a provision which explicitly allows for transition technologies such as SNAPI to support the accelerated rollout by instantly digitising legacy meters at sites found to be defective. This will uphold an AEMC claim to digitise 100% of the NEM by 2030, regardless of site defects. Further, this will eliminate increasing manual meter reading costs, benefit retailers and customers, and support environmental decarbonisation programs.

While such a provision isn't required for the use of devices such as SNAPI on legacy meters, inclusion of complimentary, transition technologies in the determination benefits all stakeholders. Explicitly allowing a Smart Meter installer who encounters a defective site to immediately digitise the legacy meter will reduce risk and saves cost, while universally providing better customer, DNSP, retailer and environmental outcomes.

Please find a detailed response and recommendations from SNAPI with the aim to achieve objectives of a more equitable and efficient energy supply for all Australians via a more connected 'future grid'.

Kind Regards
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Barriers to 100% Smart Meter Penetration by 2030: Site Remediation Requirements

Today, approximately 20% of scheduled smart meter installations are indefinitely delayed due to remediation requirements. Indeed, AMEC's Draft High Level Implementation Assessment clearly identifies site defects a considerable hurdle, contributing to rollout delays and rollout costs. With 6million analogue meters yet to be upgraded, this represents site remediation of approximately 1.2million smart meter installations.

Consequently, legacy meters are likely to remain scattered throughout DNSP's networks. These 'patchy' smart meter installations add to costs for either DNSPs, or the legacy meter owner, who remain responsible for labour-intensive manual meter reading for quarterly energy bills; costs which are set to significantly increase as smart meters reduce manual meter reading volumes. Meanwhile, further additional costs add up, because efficiencies attributable to the geographically-targeted accelerated implementation proposed in AEMC's Review are diminished.

For example, SNAPI an Australian innovation that can address this issue.

By providing a smart meter technician an alternative means of digitising the legacy meter upon detecting a deficient site without interruption to service, DNSPs, retailers and customers will benefit.

Namely, instantly upgrading the legacy meter to remotely capture energy consumption data digitally, at high intervals while the site remediation process is undertaken, thus:

- Removing need for ongoing manual meter reading, eliminating manual meter reading costs;
- Eliminating estimated reads and OH&S issues related to site access;
- Providing retailers alternative tariff options for customers on legacy meters;
- Reducing risk of disadvantaging vulnerable customers – namely, those in older dwellings, who are unable or unwilling to pay for remediation;
- Providing customers with greater visibility into consumption, empowering participation in emissions reduction activities and cost savings;
- Avoiding the smearing of remediation costs currently being considered by jurisdictions for defective customer sites.

Barriers to 100% Smart Meter Penetration by 2030: Skills Shortages

Competition amongst Australia's energy retailers for electricians is already high, and only set to become higher under an accelerated smart meter plan.

Indeed, the very same skills shortage has impacted UK installation rates. In London, "installers cost more and are less available", adding to costs and slowing progress. Suppliers have reported on a steady decline in the number of installers - around 14% since March 2020.

Similarly, a shortage of technicians and trades has impacted Australia's economy for years now. The latest quarterly report from Jobs and Skills Australia states the availability of Technicians and Trades skills to be the lowest of all employment sub-groups. Less than half of jobs advertised for this set of workers is filled.

Recent Government commitments to new housing volumes is likely to increase demand and cost for skills critical to the accelerated smart meter rollout.

This significantly increases the risk of missing the 2030 deadline unless alternative means of rapidly digitising sites requiring remediation are included in reforms.

AEMC's equivalent in the UK, Ofgem, assigned responsibility for Great Britain's smart meter rollout to energy suppliers in 2008. Since, suppliers have been bound to targets set each financial year. Yet just 57% of the UK rollout has been completed, with 3.7 million of a targeted five million meters installed in 2022. Only one of thirteen suppliers reached their 2022 rollout target.

Of those connected, 4.31 million, or 12% of the UK's 35 million installed smart meters, aren't working properly. Consequently, smart meters are not sending energy use information to suppliers. With incentives based on *new* device installations, faulty smart meters aren't being fixed nor reinstalled by suppliers.

Further, over seven million UK smart meters are set to stop working as 2G and 3G networks are retired. Homes in mobile black spots don't have connectivity. Devices installed in apartments don't work "where it is difficult to place meters and in-home displays in sufficient proximity to each other". Pilots are underway to test a solution.

Based on these issues, it's evident that little thought has been put to the practicality and technical resilience of a 100%, nation-wide, commitment to smart meters. Due

complexities and challenges, Australia's own smart meter rollout is set to suffer tech challenges before the implementation is completed. Indeed, similar to the UK, AEMC has provided no scope nor financial forecast into ongoing maintenance of smart meters once the implementation phase is complete. Smart meters demand more maintenance when compared with analogue equivalents, including cybersecurity considerations and software patches. More transparency into these costs must be made available.

Risk to 100% Smart Meters by 2030: Cybersecurity Considerations

A time-critical demand for data has resulted in the need to accelerate the rollout of smart meters.

Naturally, the more connected critical infrastructure becomes, the more robust cybersecurity protections must be. Over the years, however, academics, engineers and hackers have uncovered outdated protocols, sloppy standards and poor cybersecurity practices used in smart meter rollouts here and overseas.

Applying significant pressure to accelerate Australia's smart meter rollout is only set to increase the likelihood of further slip-ups and cybersecurity risk in the rush to digitise the NEM.

One critical consideration in this regard is the risk of a cyber-attack leveraging smart meter's remote update (Firmware Over the Air) and remote disconnection features on massive scale.

To explain: even if a small section of the grid is remotely switched off with smart meters indefinitely decommissioned via a cyberattack, significant work is required to reinstate power. Meanwhile, the integrity of the remaining grid is compromised by sudden instability, potentially sparking further blackouts across the electricity network. One example of this is an oscillation attack in 2015, the BlackEnergy malware attack upon Ukraine's energy infrastructure. What capability and capacity do we have in place to address such an attack with urgency?

Indeed, the temptation to fiddle with energy meters has lasted generations. But with today's more sophisticated hacking capabilities of internet-connected digital smart meters, it's much easier to achieve a critical, wide-scale attack. A risk only exacerbated by time and resource constraints under accelerated rollout conditions.

The AEMC must consider how we accelerate digitisation of our grid, free of cyber risk, while allowing adequate time to strengthen smart meter technology, policy, and safeguards.

Barriers to 100% Smart Meter Penetration by 2030: Consumer Resistance

Indeed, energy consumers are meant to be at the heart of smart metering objectives. By design, smart meters provide customers more reliable billing, visibility into their consumption, low-price periods, and more retailer options.

The sooner customers have this data, the sooner they can select and save on broader electricity options. This is the justification for exactly why expensive accelerated rollout plans exist in Australia and abroad. Energy consumption data helps consumers to understand their consumption, waste, and ways to conserve energy for financial or environmental reasons.

Unfortunately for energy consumers, UK regulators recently reported to Parliament "we are concerned that smart meters are not achieving the consumer benefits they are supposed to and are benefitting certain, often wealthier, consumers more than others."

Similarly, the AEMC has acknowledged the risk of providing Australia's emerging 'Great Energy Divide' any more momentum. Indeed, in the UK, smart meters are most often owned by older, more wealthy men who own a home. Renters, people in apartments and those in regional areas or with no mobile coverage, meanwhile, are less likely to have a smart meter and opportunities for savings attributed to the tech.

In the UK, tens of thousands of UK customers are rejecting smart meters, either because of bad experiences with either suppliers applying pressure to install a smart meter (to hit installation targets), or fear of being swapped over to 'smart' prepayments. Similar issues feature in Australia, with customers experiencing bill shock having been placed on a time-of-use tariff at the point of a smart meter installation with no notice.

Unless Australian energy consumers feel safe with smart meters and see the benefits, suppliers and energy regulators are only going to find it more difficult to hit installation targets - especially with willing smart meter consumers shrinking in number. UK energy suppliers haven't been able to convince individuals to convert to smart meters. With assistance from Energy Consumers Australia (ECA), the AEMC has started to review its own community engagement programs a way to reduce consumer resistance and trigger more requests for smart meters necessary for the accelerated rollout.

Meanwhile, Australian energy retailers are rightfully concerned about the burden of longer notice periods and providing more customer data on smart meters and impacts upon pricing. Unless tariff options are more attractive, more information may, in fact diminish any enthusiasm for smart meters. Indeed, the ACCC has recommended consumers maintain the option of a flat-rate tariff once a smart meter is installed.

More thought must be put to simplifying complex pricing and addressing poor communication practices so that smart meters don't inadvertently disadvantage less financially illiterate and vulnerable members of the community at risk. Australian energy pricing structures already benefit individuals who have flexibility over their power consumption, can afford storage, solar panels and EVs. Unless more is done, Australia's most vulnerable sections of society are going to be left paying for a very expensive smart meter rollout.

Reform is Required

Slow and error-prone smart meter implementations are not just a local issue, but a global one.

Indeed, the AEMC states "industry widely agreed that the current approach to legacy meter replacement will not lead to smart meters being deployed fast enough to support the transition to the future energy system." So, we all agree, more must be done to unlock the data that can rapidly evolve and decarbonise Australia's energy network.

If we're setting new rules to fix Australia's smart meter rollout, the AEMC review should go beyond the speed at which smart meters can be implemented. Rather consider how a 100% digitised NEM through an ecosystem approach will reduce costs, time delays, complexities, cyber risk and thus, de-risk Australia's energy transition whilst satisfying the need for data and improved customer services.

As Anna Colyer stated in the Australian Energy Market Commission's public forum on the Accelerating smart meter deployment draft rule determination in May, "it's about the data, not the device".

As such, SNAPI believes further reforms are required to reduce risk inherent the AEMC's strategy, and assumptions found in the Draft Rule Determination and proposed Accelerated Smart Meter Rollout.

One recommendation we believe the AEMC should consider, is the inclusion of an explicit yet broad provision for the use of temporary, complimentary solutions to solve the issue of site remediation.

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Indeed, electricity is an essential service running on critical infrastructure. Thus, while updates to networks are required, the benefits of a more robust, holistic digitisation strategy must be considered to mitigate risks and costs to Australians and energy retailers in the pursuit of a 2030 target.