UNSW Collaboration on
Energy and Environmental Markets

UNSW Submission to AEMC Draft Report (Dec 2025)

- **Pricing Review: electricity pricing for a consumer-driven future**

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Introduction

The UNSW Collaboration on Energy and Environmental Markets welcomes the opportunity to comment on the Dec 2025 Draft Report 'Pricing Review: electricity pricing for a consumer-driven future', released as part of the review initiated by the Australian Energy Market Commission (AEMC).

The review is timely and provides an opportunity to assess the effectiveness, efficiency and equity of current network electricity pricing and services. These arrangements should put energy users first and foremost. Many of these energy users face affordability challenges, many wish to improve energy self-sufficiency and reliability, and many want to help reduce the environmental harms of their energy use.

Key to all of these aims is facilitating and encouraging household and C&I electrification, and particularly the deployment of CER, particularly behind-the-meter PV and BESS but also EVs and controllable hot water systems. Not all energy users are able to take advantage of these opportunities, but the right pricing frameworks can mean that all energy users can benefit from the emissions reductions, increased network utilisation and reduced network augmentation investments, and energy market savings that they can offer.

In contrast to the AEMC (Summary, p.i) we do not consider that the existing price framework has worked well in the past. Australian retail electricity market arrangements have, with some notable exceptions, failed to engage energy users and support them meeting their energy services at least cost, seen significant cross subsidies between different classes of energy users, while suffering from structural market concentration and informational asymmetries that reduce competition. However, they have facilitated, with external policy efforts, world leading deployments of behind-the-meter PV and now BESS, that have helped reduce overall electricity sector costs and emissions. So while we are agreed with the AEMC on the need to assess and then reform pricing arrangements to better support the future electricity sector, we note the risks and possible inequitable and inefficient outcomes for energy users associated with some of the changes that the AEMC is proposing. In our view we need detailed quantitative assessments of the impacts of different energy users with, and without CER, on past, present and potential future energy and network costs, supported by scenario analysis of different possible market interventions. This needs to be complemented by social science led engagement with energy users on transition in the NEM's retail markets.

While the draft report proposes changes on a range of important issues, we will focus our submission on only the following question:

'Question 5: Implement reforms such that network tariff design is focused on efficiency'

- *Do you consider that the proposed reforms would be effective in delivering more efficient network tariffs and better promote the long-term interests of consumers than the existing rules?*
- *If not, are there different approaches that would work better?*

Summary

CER (rooftop solar and BESS) has an extraordinary capability to flatten distribution network load profiles, and in combination with controllable loads such as water heating and EV's, significantly reduce peak demand growth with the investment this requires. Therefore the overarching aim of policies and regulations that drive the uptake and operation of CER

should be to capitalise on its attributes and so reduce the costs of electricity for all customers, especially those that don't have it. The focus should not be on punitive measures that aim to limit its uptake driven by assumptions that focus only on potential loss of income to DNSPs.

Unfortunately, the AEMC's proposal to increase fixed network charges then apply dynamic network tariffs only to areas facing local capacity constraints would likely:

1. Increase costs for many, if not most, low-income households in the short term because of their relatively low consumption that would mean they would be disproportionately impacted by the increased fixed charges
2. Reduce the uptake of CER due to reduced returns for behind-the-meter PV and BESS with lower volumetric charges, and so increase costs for low-income households in the medium to long term by:
    a. Reducing the effectiveness of energy efficiency initiatives and therefore the uptake of efficient appliances – because they would have a longer payback time
    b. Reducing the time taken for unconstrained parts of the network to become constrained – because the dynamic price signals would only focus on short to medium-term constraints while most energy users would have less incentive to reduce their peak demand
    c. Requiring higher price signals to drive peak demand reduction – because less households and businesses would invest in CER, including controllable flexible loads
    d. Making it more difficult to achieve the 82% renewable energy target by constraining the uptake of distributed solar, in the context of ongoing challenges in delivering utility-scale wind and solar projects by 2030
    e. And resulting in higher greenhouse emissions due to lower uptake of distributed solar
3. Require retailers to develop location-specific dynamic retail tariffs (to pass through the location-specific dynamic network tariffs). We expect retailers are unlikely to do this, meaning the price signals would most likely be passed through as the same price signal smeared across all customers (much like what we have currently, although most likely as demand charge tariffs, which are unpopular).

In contrast, the alternative tariff reform approach proposed here could likely:

1. Maintain downward pressure on bills for most low-income households in the short, medium and long term by:
    a. Maintaining the effectiveness of energy efficiency initiatives and therefore the uptake of efficient appliances
    b. Enabling CER to reduce demand peaks and therefore place downward pressure on the size of the network
    c. Helping CER to continue to drive down wholesale market spot prices
    d. Making it easier to achieve the 82% renewable energy target
    e. And hence reducing greenhouse emissions

1. Approach to this submission

When answering the first part of Question 5, there are two separate issues to be considered.

1. The first is whether to increase the daily fixed network charge, by how much, and who that should be applied to.
2. The second is how best to provide a more dynamic network price signal, in what form, and who to - which in turn depends on whether and how retailers pass on that pricing signal.

The rationales behind changes to each of these tariff components are not dependent on each other and so we have discussed them separately. Of course, having higher fixed charges would lead to other charges being lower, but as discussed below, we believe that this would have serious inequity impacts on lower socioeconomic households, and would limit the uptake of Consumer Energy Resources (CER), which would have negative consequences for customers in general.

2. Increasing fixed daily charges

Fixed charges applied to energy users are argued to provide greater revenue certainty to DNSPs, particularly in recovering the network's sunk and other fixed costs, while ensuring that all consumers pay for use of the network, even if they have CER and only rely on it very occasionally. Alone, uniform fixed charges can of course be wildly regressive in terms of energy affordability given very diverse incomes and wealth and also provide no incentives for energy efficiency or demand management.

In terms of economic efficiency such fixed charges should not be uniform, as causer-pays principles suggest that they should be based broadly speaking,[1] on how individual energy users, have contributed historically to the size and cost of the network assets serving them. Large households with historically high electricity peak demand should pay a higher fixed charge than small households with much lower peak demand. Although the collective nature of network infrastructure means that this contribution cannot be accurately calculated for each energy user, we do know that network peaks that drive a lot of network investment and hence costs are caused by coincident demand peaks in summer and winter, and these are driven by heating and cooling loads, predominantly air conditioning (A/C). While a growing majority of households now have A/C for cooling, and often heating, their contribution to peak demand varies largely depending on the size of the houses and common use of ducted units.

In Vol 2 of its Electricity Network Regulatory Frameworks report (2013)[2] the Productivity Commission estimated there is a "subsidy of $350 per year to customers who own and use air conditioners at peak times, paid for through higher bills for all other customers", because of their impact on peak demand and therefore the size of the network.[3] It is reasonable to

[1] An important caveat to this is where householders have limited control over their A/C demand. For example, renters may be stuck with whatever is provided, and low-income households, even homeowners, may be unable to afford an efficient A/C and could only afford a poorly insulated house. In these cases, causer-pays would arguably not be appropriate.

[2] https://assets.pc.gov.au/inquiries/completed/electricity/report/electricity-volume2.pdf, page 351

[3] This finding is similar to a UNSW study that compared the impacts of air conditioners and rooftop solar under both a Weighted Average Price Cap and a revenue cap. It found that the 70% uptake of air conditioners at that time increased the bills of customers without air conditioners by about $310/yr (WAPC) and $295/yr (revenue cap). Where 30% of Australian households were assumed to have rooftop solar, the bills of other households

assume that the larger the air conditioner, the greater the cross subsidy. If fairness is a priority for the AEMC, why is it not considering the impacts of such appliances? Notwithstanding the issues around causer-pays discussed in footnote 1, increases to an unavoidable fixed charge for all customers will therefore result in a significant additional cross-subsidy from those who are least responsible for the size of the network to those who are most responsible. Although there are of course exceptions, low-income households generally use less electricity than higher income households.[4] Therefore, for the net income to DNSPs to remain unchanged, shifting charges away from usage charges to unavoidable fixed charges would create a relative increase for low-income households and an equivalent decrease for high income households. According to Energy Consumers Australia, 48% of households with an annual income under $50,000 already report experiencing energy hardship.[5] This would make them particularly hard hit by the AEMC's recommendations.

It is also worth noting there is a negative correlation between household income and uptake of rooftop solar, meaning that rooftop solar uptake is more likely in lower income households.[6] However, this is only true above incomes around $30,000 per year, and of course renters find it much more difficult to have rooftop solar because of the split incentive problem. This has resulted in frequent calls for support for renters and hardship customers to install rooftop solar.[7] Thus, in contrast to the AEMC's proposal, a more direct way to benefit such customers would be for other arms of government to develop policies that enable their use of rooftop solar, ideally linked to CER that could respond to dynamic price signals and thereby generate income.

In this context it is worth noting that the daily fixed charges in regional and rural NSW are about double the rates in city areas. Although this is because of the longer distribution network, local councils and Local Government NSW are currently advocating for them to be reduced.[8]

Increasing the fixed charge and then relying on targeted dynamic price signals will of course also impact on the financial benefits of any energy efficiency options that don't necessarily target demand peaks. This would include the use of more efficient appliances and options such as low-flow shower heads – thereby acting in direct opposition not only to a long history of government programs, but also the National Energy Objective related to the reduction of greenhouse gas emissions.

2.1. Future costs

The AEMC approach appears to be driven solely by the assumption that households with CER generally have solar, and more recently batteries, which reduce usage-based payments to Distribution Network Service providers (DNSPs). Under the revenue cap regulatory framework, this then increases costs for other customers. It is unclear why the AEMC

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increased by $5/yr (WAPC) and $25/yr (revenue cap). Passey, R., Watt, W., Bruce, A. and MacGill, I. (2018) 'Who pays, who benefits? The financial impacts of solar photovoltaic systems and air-conditioners on Australian households', *Energy Research and Social Science*, 39, p198-215.

[4] Electricity use steadily increases from income quintile Q1 to Q5. Saddler, H. (2018) 'How low income households use electricity: Discussion paper', for The Australia Institute.

[5] ECA (2025) 'Understanding and measuring energy hardship in Australia', Energy Consumers Australia.

[6] Best, R. and Chareunsy, A. (2022) 'The impact of income of solar panel uptake: Exploring diverse results using Australian data', *Energy Economics*, 112, and McCarthy, B. (2025) 'Broadening equitable access to solar: renters, non-adopters and the impact of consumption values on attitudes and installation intentions', *Australasian Journal of Environmental Management*, 32:2, p164192.

[7] Nelson, T. and Dodd, T. (2021) 'Australian household adoption of solar photovoltaics: A comparative study of hardship and non-hardship customers', Griffith Business School, Griffith University.

[8] https://www.abc.net.au/news/2025-12-12/push-for-cheaper-energy-prices-in-regional-nsw/106121430

doesn't take into consideration the various benefits provided by CER in terms of reducing demand peaks and therefore the size of the network, which reduces the costs faced by all consumers – on both a short run marginal cost (SRMC) and long run marginal cost (LRMC) basis.

Historically, rooftop solar's ability to reduce and delay summer peaks in the past is well documented in Distribution Annual Planning Reports (DAPRs), and has contributed to many feeders now being winter peaking. Solar also provides significant benefits in terms of peak demand reduction at the wholesale market level. Figure 1 and Figure 2 compare the generation mix in Victoria and 2009 and 2026, illustrating the clear benefits that rooftop solar provides, not only in terms of emission reduction but also in terms of peak demand reduction – both of which benefit all customers. If the focus really is on economic theory and benefits, not just financial transactions, then these benefits should also be taken into consideration by the AEMC.

As discussed below, the installation of solar then influences the uptake and operation of options such as batteries and EVs, which, if operated appropriately, can provide benefits to customers who don't own them.

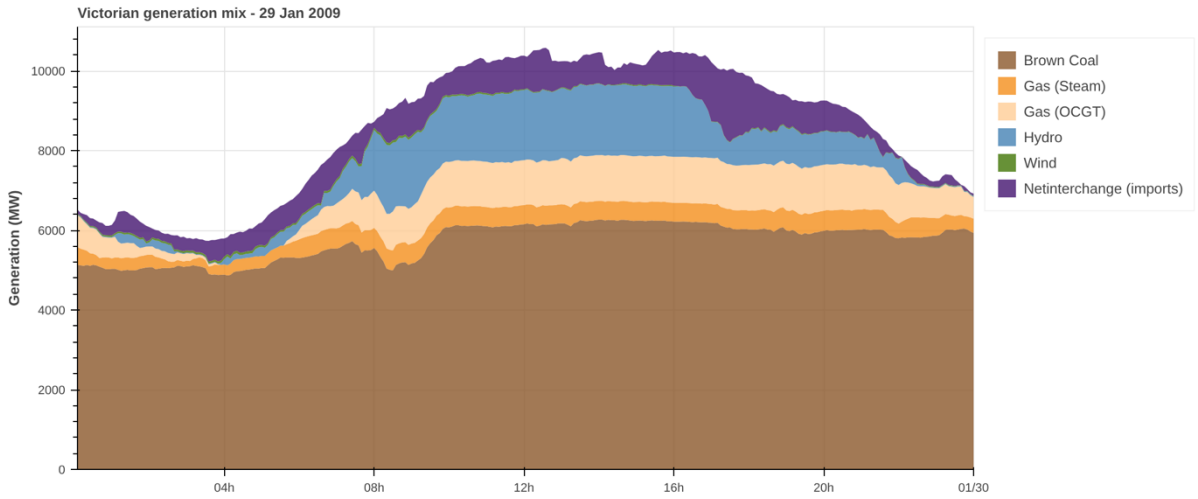

Figure 1. Victorian generation mix, 29 Jan 2009

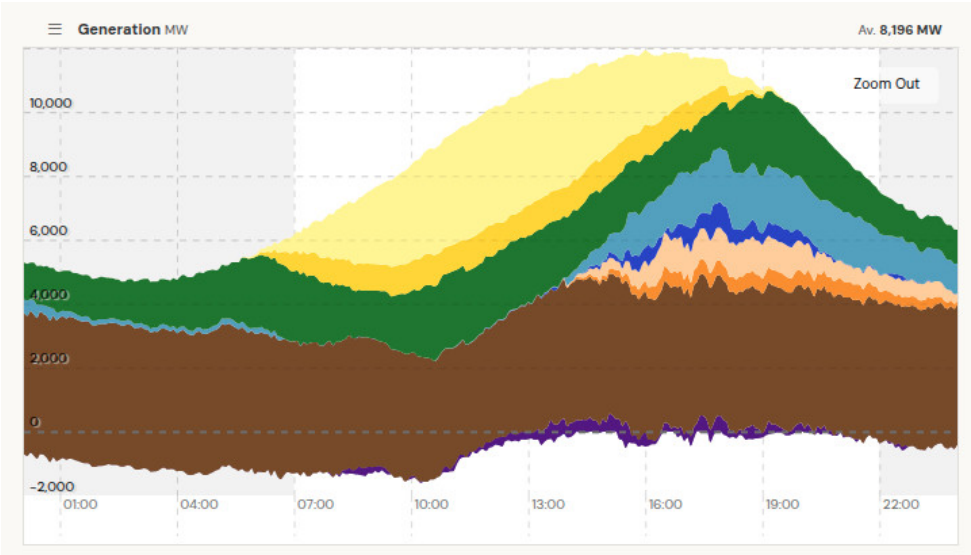

Figure 2. Victorian generation mix, 27 Jan 2026

3. Technology-linked evolution of innovation

It is also important to understand that the National Electricity Market (NEM) is in a particular type of transition period, where the installation of one technology can accelerate the installation of others and can influence how they are operated. This means that technologies should not only be assessed individually, but also in terms of how they impact the overall energy transition. For example, although the net impact of an incremental addition of rooftop solar may now[9] increase costs faced by non-solar households, rooftop solar also influences the time of day that households charge their electric vehicles (EVs). As demonstrated through Energy Queensland (EQL) data[10] and through a detailed analysis of EV charging patterns in response to different incentives throughout Australia,[11] EV charging predominantly occurs outside peak periods in response to TOU/LRMC and solar-derived price signals, while increasing electricity sales and so placing downward pressure on other customers' tariffs – see Figure 3. These price signals can occur directly when households own rooftop solar, but also indirectly when non-solar households have TOU tariffs that encourage daytime charging.

Likewise, these TOU tariffs mean that households without solar etc can still shift their water heating to the middle of the day, and so financially benefit from other households having solar. By shifting around 50% of their water heating to the middle of the day (certainly more can be shifted), such households can save between $60-$120 per year (depending on usage amount, tariffs and state).[12]

Similarly, solar households are much more likely to install batteries, which not only reduce network peaks even on a flat tariff, but can be used for Virtual Power Plants (VPPs) that can have significant network[13] and spot price benefits. Detailed analyses, such as those being undertaken through the EnergyMasters project, are needed to determine whether such battery benefits are outweighed by reduced payments to DNSPs.

[9] Although rooftop solar continues to limit summer peaks, these peaks have now been delayed to the extent that it can no longer reduce them any further.

[10] The original report and charging data do not currently appear to be available online but we can provide them on request.

[11] Shaughnessy, M. (2024) 'Home EV charging and the grid: Impact to 2030 in Australia', for the Electric Vehicle Council

[12] Yildiz B, Bilbao JI, Roberts M, Heslop S, Dore J, Bruce A, et al. (2021) 'Analysis of electricity consumption and thermal storage of domestic electric water heating systems to utilize excess PV generation', *Energy*. https://doi.org/10.1016/j.energy.2021.121325 and Yildiz B, Saldivia D, Saberi H, Klisser R, Bruce A, Sproul A. (2024) 'RACE for 2030 SolarShift Turning Household Water Heating Systems into MW Batteries Project Report'.

[13] Although these network benefits occur sooner for parts of the network facing near-term capacity constraints, they can also avoid the need for capex far into the future. Thus, LRMC price signals, such as those provided by TOU tariffs, that encourage installation and operation of CER on unconstrained parts of the network have preventative value.

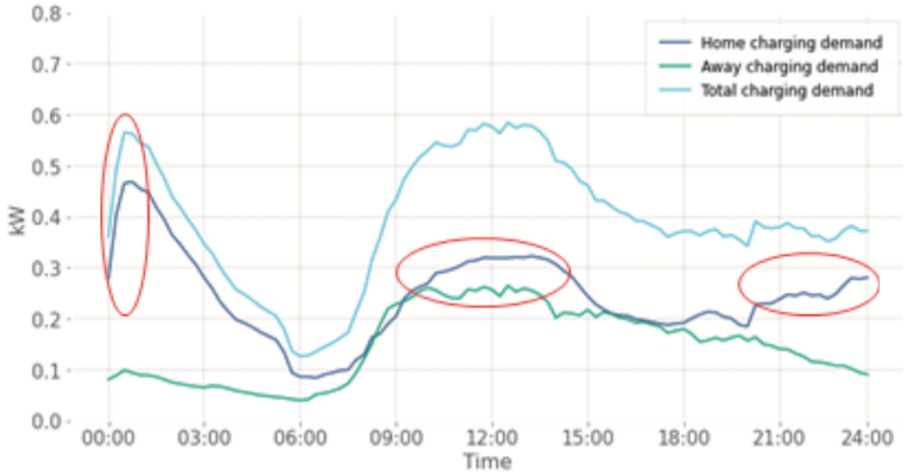

Figure 3. Residential EV charging profile, 119 vehicles, EQL data.

In summary, before assuming that a fixed daily charge is required to stop CER households increasing other customer's bills, there is a clear need to analyse what the net impacts of these technologies, and of air conditioning, actually are. We recommend that the AEMC undertakes a review of studies that have attempted to quantify these impacts. We note that some of the authors of this submission are involved in the Energy Masters project, which will, amongst other things, analyse these countervailing impacts in detail. We also recommend that the AEMC include sociology, human geography or similar critical social science expertise that engages in lived experiences in future review processes, especially those that target households. A review of the growing social practices literature about how energy fits into everyday life would also be useful.

In addition, by reducing the incentives for CER, an increased fixed charge would act in direct opposition to the National Energy Objective related to the reduction of greenhouse gas emissions. This is also relevant to the achievement of Australia's 82% by 2030 renewable energy target, where increased solar on distribution networks is increasingly seen as required because of delays to large-scale renewables and transmission lines.[14]

4. How to elicit demand response

The AEMC's preferred approach to use targeted dynamic pricing to elicit a demand response is correct according to economic theory, but not for the real-world reality facing householders. Figure 4 illustrates the complex array of pathways that influence a household's take-up of technologies and response to signals.[15]

In summary, the degree to which households can respond to any incentives depends on their capacity to do so, sometimes called '*flexibility capital*' which includes their intrinsic *abilities* (red box: health, understanding, etc.) their level of *opportunity* (red box: having appropriate loads, time to engage, insulated homes, money, etc.) and their access to *enabling technology* (orange box: including smart meters, data visualisation, control devices, etc.). Their response

[14] As a result of which the CCA recommends accelerating the uptake of rooftop solar, including the formation of Distribution System Operators. CCA, 2025, 'Unlocking Australia's clean energy potential: Supplement to the 2024 Annual Progress Retort', Climate Change Authority, June 2025.

[15] Roberts, M., Passey, R., Adams, S., Whittaker, L., Russell-Bennett, R., McAndrew, R., Caton, S. and Ben-David, R. 'Opportunity Assessment Report: Rewarding flexible demand: Customer friendly cost reflective tariffs and incentives', RACE for 2030

also depends on their values or internal motivations (red box) which, in turn, are shaped by the societal context (yellow box). All this is exacerbated by the fact that a household is not a single economically rational actor. Rather, households are a collection of heterogeneous actors, whose actions are governed by multiple logics. These are often rational, but not necessarily in an economic sense, reflecting the household as a place of care rather than of profit-making.[16,17]

Therefore, assuming that targeted dynamic price signals will result in equitable outcomes is at best overly optimistic and at worst quite detrimental - because of the potential for significant bill increases for those least able to afford them.

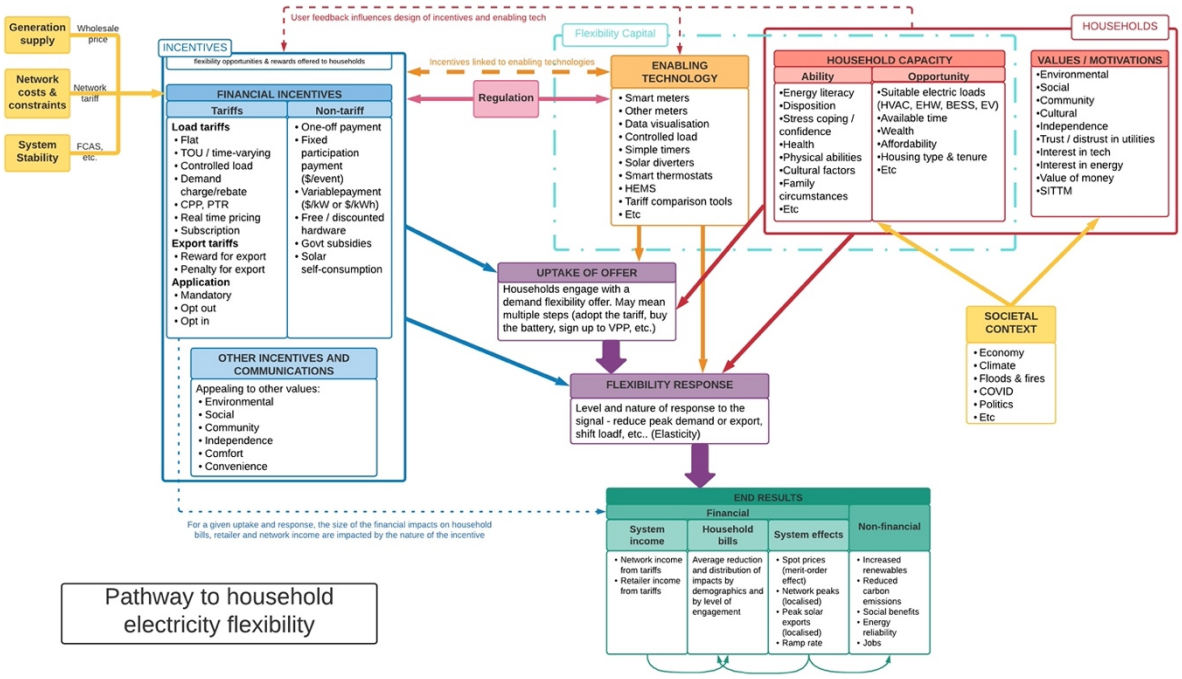

Figure 4. Conceptual framework showing pathways to household electricity flexibility and the multiple factors that influence take-up of offers and flexibility response to signals [15]

To place this in terms of economic theory, the types of dynamic price signals described in the Draft Report appear to assume that households are rational, have perfect access to information, and that utility/financial maximisation is their primary motivator – none of which are true.

As discussed in the Draft Report, retailers would have the opportunity to pass the dynamic network signals onto customers in any way they wished. While certain business models are available, such as a 3rd party-funded package (e.g. Reposit), they would not be suitable for, or

[16] For example, Power and Mee (2020) highlight the role of the home in facilitating caring and relational practices, Power, Emma, and Kathleen Mee. 2020. "Housing: An Infrastructure of Care." *Housing Studies* 35 (3): 484–505. https://doi.org/10.1080/02673037.2019.1612038. Gordon, et al. (2021) highlight that energy related practices of care in the home may conflict with economic logics established in energy markets Gordon, Ross, Theresa Harada, and Gordon Waitt. 2021. "Molar and Molecular Entanglements: Parenting, Care and Making Home in the Context of Energy Capitalism." *Environment and Planning D: Society and Space* 39 (3): 534–52. https://doi.org/10.1177/0263775820961397.

[17]

acceptable to, most households.[18] As a result, it is highly likely most retailers would simply pass on the dynamic price signals using some version of demand charge tariffs.

There is a reason that such a small percentage of households (17%) are on demand charge tariffs – they generally just don't want them because they are more complex and often result in higher bills (unless you can respond to them effectively).[19] Survey after survey has shown that households want simple consistent predictable tariffs, especially when considering investing in CER and flexible energy appliances. Although they prefer flat tariffs, time-of-use (TOU) tariffs are more acceptable because at least they are consistent from one day to the other (notwithstanding weekday/weekend and, in some cases, seasonal variations), unlike demand tariffs which can apply a penalty on any day and over a broad time period. However, it is important to consider the impact TOU tariffs have on different household types as some households are less able to shift their energy consumption.[20]

Demand charges and, to a lesser extent, TOU tariffs are really only suitable for customers that have the ability to respond to them, preferably automatically. This could of course include households with controllable CER, preferably with a Home Energy Management System (HEMS). However, for the remainder, demand tariffs could simply result in higher bills.

With the proposed dynamic price signals being locationally specific, for them to be passed on as the AEMC envisages, retailers would have to develop locationally specific retail tariffs. This would not just mean splitting customers into those with and without dynamic network tariffs, but most likely different rates for different areas – which would add significant complexity to their billing systems.

Of course, if retailers don't pass the localised dynamic price signals on, customers would just increase their demand whenever it was convenient. This could be particular problematic for EV chargers, where instead of charging occurring as in Figure 3 (driven by TOU price signals), it would more likely occur during network peaks when people arrive home. This would in turn increase the size of the network, increase the RAB, and therefore increase the unavoidable fixed charges proposed in the Draft Report.

4.1. Alternative approach

The Draft Report appears to focus only on increasing the accuracy of price signals, which as discussed above, is highly unlikely to result in the desired outcomes. We proposed that the AEMC should go one step further, and where appropriate, make such price signals more accurate/targeted to particular technologies and customers (who can respond).

The following divides loads into those that are 'time-discretionary', those that aren't and those that fall in between. Time-discretionary loads include those such as water heating, EV

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[18] e.g. Rather, engagement with network signals is governed by a complex mix of emotions Ransan-Cooper, Hedda, Heather Lovell, Phillipa Watson, Andrew Harwood, and Veryan Hann. 2020. "Frustration, Confusion and Excitement: Mixed Emotional Responses to New Household Solar-Battery Systems in Australia." *Energy Research & Social Science* 70 (December): 101656. https://doi.org/10.1016/j.erss.2020.101656.

[19] Monitoring the NSW Retail Electricity Market – 2024/25: Final Report, IPART, NSW Government. According to IPART "However, of households in NSW that were moved onto a cost reflective tariff by their retailer only 14% reported they wanted to move back to a flat-rate tariff. The remaining 86% reported they either did not care (26%) or prefer to stay on their current tariff (61%)"

[20] e.g. Nicholls, Larissa, and Yolande Strengers. 2015. "Peak Demand and the 'Family Peak' Period in Australia: Understanding Practice (in)Flexibility in Households with Children." *Energy Research & Social Science*, Special Issue on Smart Grids and the Social Sciences, vol. 9 (September): 116–24. https://doi.org/10.1016/j.erss.2015.08.018.

charging and battery charging, all of which include a storage component, and so are flexible in terms of when they occur (especially if controlled by a HEMS). Non-time-discretionary loads include those such as lighting, cooking and A/C. Loads such as dishwashing and clothes washing are in theory time-discretionary, but for practical reasons are less convenient to move, and in any case use relatively small amounts of electricity.

Network tariffs could then consist of:

1. Dynamic signals applied to 'time-discretionary' loads, but only for customers that can respond to them. To avoid the 'locationally specific retail tariffs' problem, these signals would need to be sent by the DNSP directly to a HEMS or equivalent, ideally through a Dynamic Operating Envelope (DOE).[21] To minimise inequitable outcomes for households on constrained parts of the network, they could be compensated for responding to excessive constraint signals.
2. Flat tariffs or weak TOU tariffs (low rates) that apply to all households, with stronger TOU tariffs applying to households with EVs and CER (who can readily respond).
3. The current level of daily charge, which, for the equity reasons outlined above, is not increased, and indeed, because of the DNSP income from usage tariffs, would not need to be.[22]

The main issue here would be the lack of a significant price signal on the use of A/C. However, many studies have shown that price signals are a very ineffective way to control A/C. This is simply because when it is very hot or very cold, households that have A/C just use it and just pay whatever it costs (especially for poorly insulated houses). It is likely that the best way to overcome A/C peaks is to enable CER to export and so create negative demand (which can occur anywhere on the same feeder etc as the A/C), both in terms of uptake and operation.[23] Indeed, many government-funded projects in Australia and internationally have demonstrated that VPPs are very effective in reducing demand at peak times. The more effective CER is at reducing demand peaks, the flatter the weak TOU tariff could be, resulting in clear financial benefits for households that don't have CER. As discussed above, the more CER that is installed, the more effective it can be. This of course will not occur with a shift to most network costs being covered by a fixed unavoidable tariff.

5. Alternative vignettes

Although the following vignettes are of course facetious, their intention is to highlight alternatives to what we believe to be somewhat optimistic examples provided in the Draft Report.

[21] DOEs move beyond price signals to physically control loads and so limit them during particularly high network peaks. Needless to say, DOEs work best on controllable CER (and DNSPs are generally reluctant to apply DOEs to A/C)

[22] An alternative to this approach, in terms of setting the relative levels of fixed charges, is to link the daily charge to the property's land value (eg. recommended by Rewiring Australia). This is worth exploring, although land value and property value do not always correlate, and such an approach would need to be specific to particular network areas. For example, Essential Energy has roughly double the fixed charges that Ausgrid does, but the median house price in regional areas is about half that in urban areas.

[23] Where a household has controllable CER, the dynamic tariff could either apply to their entire load, or more ideally, only to their controllable CER. This approach would therefore target households who are likely to be better off and most importantly, most able to reduce network peaks. Customers with CER who elect to not have it subject to dynamic tariffs could be placed on a higher TOU tariff. Although this may result in them reducing demand from time-discretionary loads when they do not need to, this would not matter because they all include storage.

Vignette: a **Behind Barriers** customer – Hubert is renting and wonders why his electricity bill is now almost as high as his neighbour's.

Hubert knows that his neighbour has been running his enormous air conditioners for many years over summer and winter and so has caused massive peaks in demand. These peaks have made significant contributions to the required size of the network, which now has such a large capacity that there are no foreseeable constraints. This has increased costs for everyone, including Hubert, who only has a very small A/C unit. Imagine Hubert's surprise when his neighbour joyfully exclaims that his bill has dropped significantly, whereas Hubert's increased because of the higher fixed charges.

Vignette: a **Not to be left behind** customer – Erica the pensioner wonders why her electricity bill has increased so much.

Erica was told that although she uses very little electricity, her bill would increase a bit because the higher fixed charges would have a greater impact than the reduction in her usage charges. Erica is now very unhappy and surprised when she finds her bill has more than doubled because she was on a constrained part of the network and so was receiving multiple dynamic price signals over summer that she had no way of responding to.