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Network tariff shake-up could create more problems than it solves

How higher fixed charges could deter home upgrades and lead to inequities

- *The AEMC's proposed shift to "predominantly fixed" network tariffs could raise bills for low-consuming customers, and lower them for high-consuming customers.*
- *Higher fixed charges could undermine the financial incentives for household energy efficiency upgrades.*
- *The AEMC's proposal could have a particularly detrimental impact on the financial case for rooftop solar and batteries. It could add \$5,800-\$11,500 in costs over a 10kWh battery's lifetime, more than cancelling out federal government rebates.*
- *Australia's electricity network economic regulations were not designed with rooftop solar and batteries in mind. A first-principles review of electricity network economic regulation is needed to address this, rather than simply shifting costs between different consumers.*

Most retail electricity plans in Australia are structured as a fixed daily charge ("fixed charge"), and a charge per unit of electricity consumed ("volumetric charge"). These charges cover a range of different costs associated with generating and delivering electricity to your household, in addition to a profit margin for your energy retailer. The largest component of these costs are often network charges (comprising [39% of the final energy bill](#) for a typical household).

The Australian Energy Market Commission (AEMC) recently proposed a [major shake-up](#) to the way electricity network tariffs work – recommending a shift towards network tariffs "that are predominantly fixed". If such a change were passed through to retail electricity tariffs, this would likely see the fixed charge of most plans go up, while the volumetric charge would go down.

The AEMC has proposed this change because it believes that, with the rise of rooftop solar and batteries, "the costs of infrastructure are [not shared fairly](#) among electricity consumers". In other words, it is concerned that households with solar and batteries are paying less for the electricity network, while those without are paying more.



However, IEEFA notes that this reflects just one aspect of a much broader question on the impacts of rooftop solar and batteries on electricity system costs, which the AEMC's recent report does not cover, and is mostly outside the scope of this analysis. For example, rooftop solar has had a [demonstrable impact](#) on [lowering wholesale electricity prices](#), and batteries in particular are expected to offer significant reductions in peak demand. Impacts such as these could reduce the need for additional infrastructure and save other consumers money.

About IEEFA's analysis

The proposed change to network tariffs could have significant implications for different households' energy bills, and could fundamentally change the economics of various household energy upgrades. However, the AEMC's proposal has not included a detailed analysis of these impacts.

IEEFA has previously published analysis of the impacts of [household energy upgrades](#). We have chosen to draw on our existing household energy model to explore the implications of the AEMC's proposal on household energy bills, and on the economics of household energy upgrades. Our modelling approach and key assumptions are described in detail in the [technical appendix](#) of our report *A focus on homes, not power bills, could halve energy bills*.

We have introduced the following changes for this analysis:

- **Retail electricity tariffs have been updated**
Market rate tariffs for major electricity retailers are current as of February 2026.
- **Functionality has been added to test the impact of predominantly fixed network tariffs**
The new fixed network tariff is determined based on the total residential revenue requirement per customer for each distribution network, based on their [2025-26 pricing proposals](#), plus GST. We assume that volumetric network charges no longer apply, and that the existing network tariff is passed through directly to retail tariffs. This is consistent with most retailers' [existing approach](#), and with the fact that tariffs that encourage increased consumption are generally in the interest of energy retailers. We substitute the current underlying network tariff for the altered structure above.

We have modelled the impact of the proposed change in network tariffs for several scenarios that align to our previous household energy modelling. Our results represent the average outcome for customers on each major retailer's flat rate or time-of-use tariff, in each applicable distribution network – comprising approximately 160 model runs per scenario.

To align with the scope of the proposed changes, this analysis focuses on capital cities within the National Electricity Market (NEM). We have also included some extensions to the scenarios modelled in our previous report – including modelling inefficient electric appliance upgrades in all capitals, and modelling a 20 kilowatt-hour (kWh) residential battery scenario.

How we interpreted the AEMC's proposal

The AEMC has provided limited information on how a shift to predominantly fixed network tariffs would work in practice. Our approach described above assumes the simplest option – where network costs are allocated equally across customers, entirely via the fixed charge component.



The AEMC recently criticised [other analysis](#) that follows similar assumptions, claiming that this differs from the scenario being proposed by the commission.

The [AEMC's draft report](#) states that some electricity users could face different fixed charges. However, IEEFA has not been able to find any more specific information on what approach is envisioned. While there is a reference to “several different levels of fixed charges based on historical usage”, this is presented only as a “transitional” option for further analysis.

One option could be to determine individual customers' fixed charges based on their actual demand for grid electricity at peak times. However, this effectively describes a demand tariff – something [already enabled](#) under the National Electricity Rules.

We have chosen to proceed with our assumption that network costs would be shared equally across customers via an entirely fixed charge, noting the following:

1. Our final energy bill findings may differ under alternative approaches, and we welcome any further information from the AEMC that would allow us to analyse such alternatives. If several categories of fixed charges that did not vary with customer demand were set, we expect that our directional findings on the impact on low- and high-consuming households would continue to apply for customers within each category.
2. The specific fixed network tariff faced by a household would not impact the household energy upgrade payback results, as this cost is expected to apply both before and after the upgrade. This would differ if the fixed charge were dynamically updated when a household makes an upgrade that impacts its energy consumption. However, this does not match our understanding of the AEMC's proposal.

Our results may also vary slightly depending on the specific definition of ‘predominantly’ in the AEMC's proposal, and on whether there will remain a small residual volumetric charge.

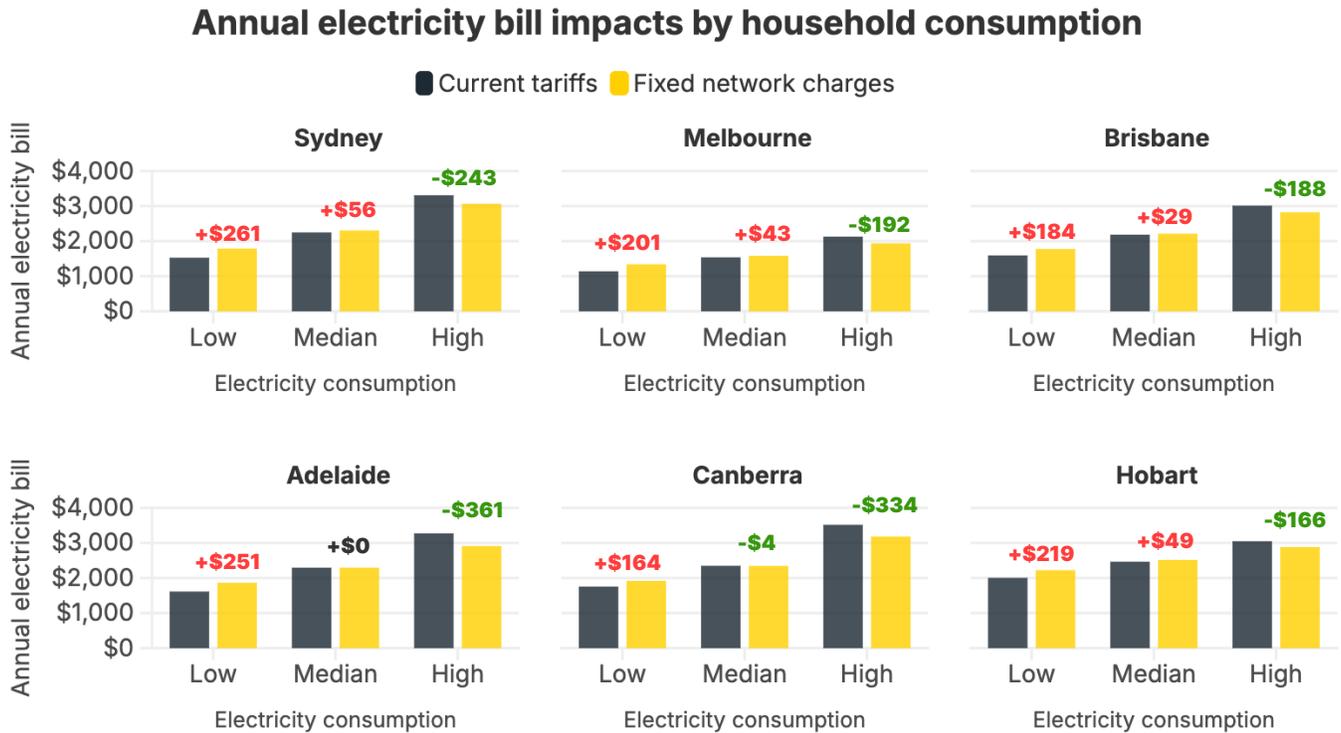
Finally, the AEMC's proposal also refers to a “dynamic charge” component of the tariff – which would “be zero most of the time” but provide “rewards for meeting the needs of the network” and “charges for the export or consumption that strain the network at that time and place”. The impacts of this component are particularly unclear, given the limited information in the AEMC's proposal, and the fact that it appears likely to be location-specific. For example, if this charge were only to apply to constrained areas of the network, it is possible that most households would not be exposed to it. We have therefore not attempted to model the impacts of such a charge, but as with other aspects of their proposal, we strongly encourage the AEMC to provide further detail and analysis of its expected impacts.

Who is impacted by fixed network charges?

As shown in Figure 1, our modelling suggests a shift to predominantly fixed network tariffs would likely raise bills for households with median or low electricity consumption, and lower them for high-consuming households. It's important to note that median household electricity consumption is typically lower than average consumption – which is why these households face a bill rise in most cities.



Figure 1: Impact of higher fixed network charges for a typical home by city and electricity consumption



Note: Low, median and high consumption for Sydney, Melbourne, Brisbane and Adelaide aligns to 25th, 50th and 75th percentile consumption as reported by the [Australian Competition and Consumer Commission \(ACCC\)](#). Hobart is based on low, median and high consumption reported by [Office of the Tasmanian Economic Regulator](#). Canberra is based on average residential consumption per customer on the [Evoenergy network](#), and consumption for households of 1 or 5+ persons as analysed by [Frontier Economics](#).

What drives energy consumption?

To understand how predominantly fixed tariffs might affect different types of households, we need to consider not just their level of grid electricity consumption, but the determinants that drive this consumption – including those discussed in Table 1.



Table 1: Key determinants of household electricity consumption

Determinant	Impact
Ownership of rooftop solar	Rooftop solar owners have the ability to reduce their energy consumption from the grid during the morning, day and early-evening periods. However, in practice this relationship is not straightforward. ACCC analysis finds that rooftop solar owners consume slightly more grid electricity than non-solar owners, potentially indicating a rebound effect.
Ownership of a battery	Battery owners have an even greater ability to reduce energy consumption from the grid. IEEFA analysis found that many battery owners could avoid using the grid at all on most days of the year, and achieve significant peak demand reductions, particularly in summer.
Income	<p>The AEMC has stated that “Many low-income households are actually high energy users – large families in poorly insulated rentals, for example”. However, other sources indicate that lower-income households tend to consume less energy overall. Survey data by the Australian Council of Social Service (ACOSS) finds that many households receiving income support are taking significant energy conservation measures out of necessity.</p> <p>Conversely, higher-income households face fewer pressures to curb their consumption, as energy is typically a far lower proportion of those households’ weekly income.</p>
Household size	Households with more occupants tend to use more electricity. Households that are larger in floor area also tend to require more energy to heat or cool the home to a consistent comfort level.
Appliances and other electrical loads	<p>The appliances and other electrical loads present in a household can have a significant impact on electricity demand. Specifically:</p> <ul style="list-style-type: none"> • Households that use gas for heating, hot water and/or cooking naturally consume less electricity. • Households with inefficient electric appliances may consume far more energy than those with efficient equivalents. • An electric vehicle (EV) can add 25-50% to a typical household’s electricity consumption. • Swimming pool pumps and heaters often account for around 30% of the electricity load for homes that have them.

Many of the factors in Table 1 are interconnected. For example, rooftop solar owners tend to be predominantly in middle-income suburbs, with [uptake decreasing](#) in wealthier suburbs. Households with pools tend to be in [higher socio-economic areas](#). Tenure is another key cross-cutting factor, as renters generally have no ability to change their appliance configuration, install rooftop solar or install a battery.

While the AEMC’s proposal could see some rooftop solar and battery owners paying higher network costs than today, Table 1 highlights the potential for other inequitable side-effects. For example, low-income consumers and those consuming gas (including renters who are unable to electrify) are likely to see an increase in their electricity bills. Meanwhile, high-income consumers including those with EVs or swimming pools could see their bills fall.

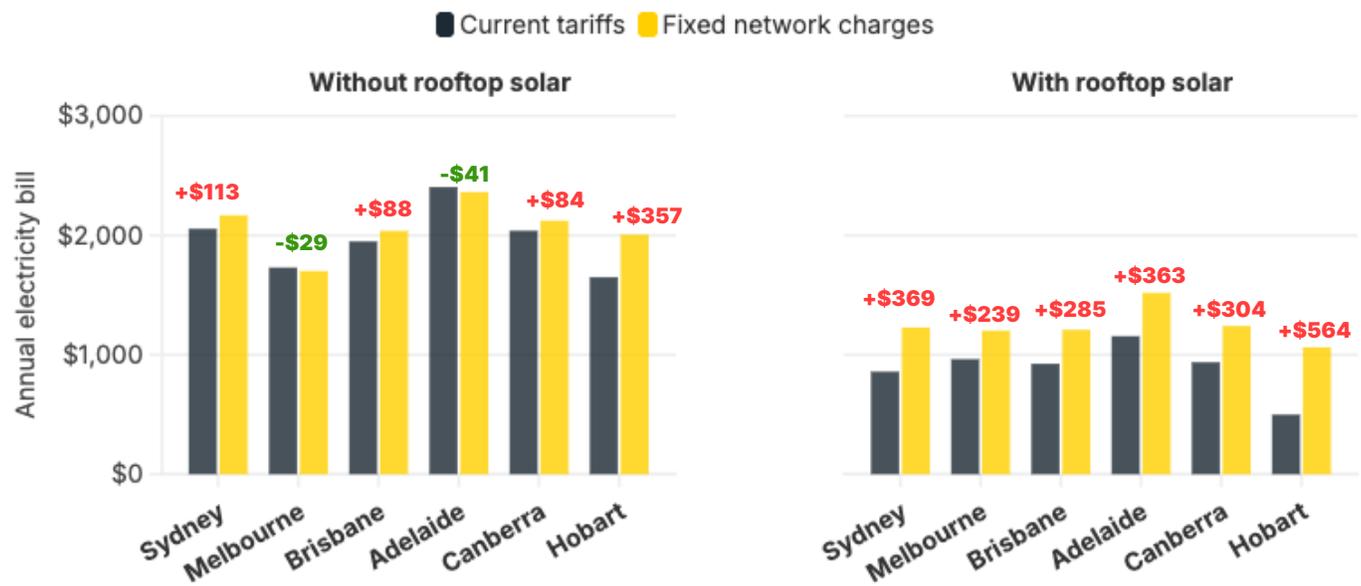


What do predominantly fixed charges mean for household energy upgrades?

Predominantly fixed charges increase costs for some newer, efficient homes

Australia’s existing housing stock exhibits [very poor average thermal performance](#). However, newer homes are now required to be built to a more stringent [NatHERS 7-star standard](#) across most of mainland Australia, and [6-Star requirements](#) in Tasmania.

Figure 2: Impact of higher fixed network charges for a new, efficient electric home



Note: New homes are assumed to meet a 6-star standard in Hobart and 7 stars elsewhere, and are assumed to use efficient electric appliances. Modelling assumes 8 kilowatts (kW) rooftop solar.

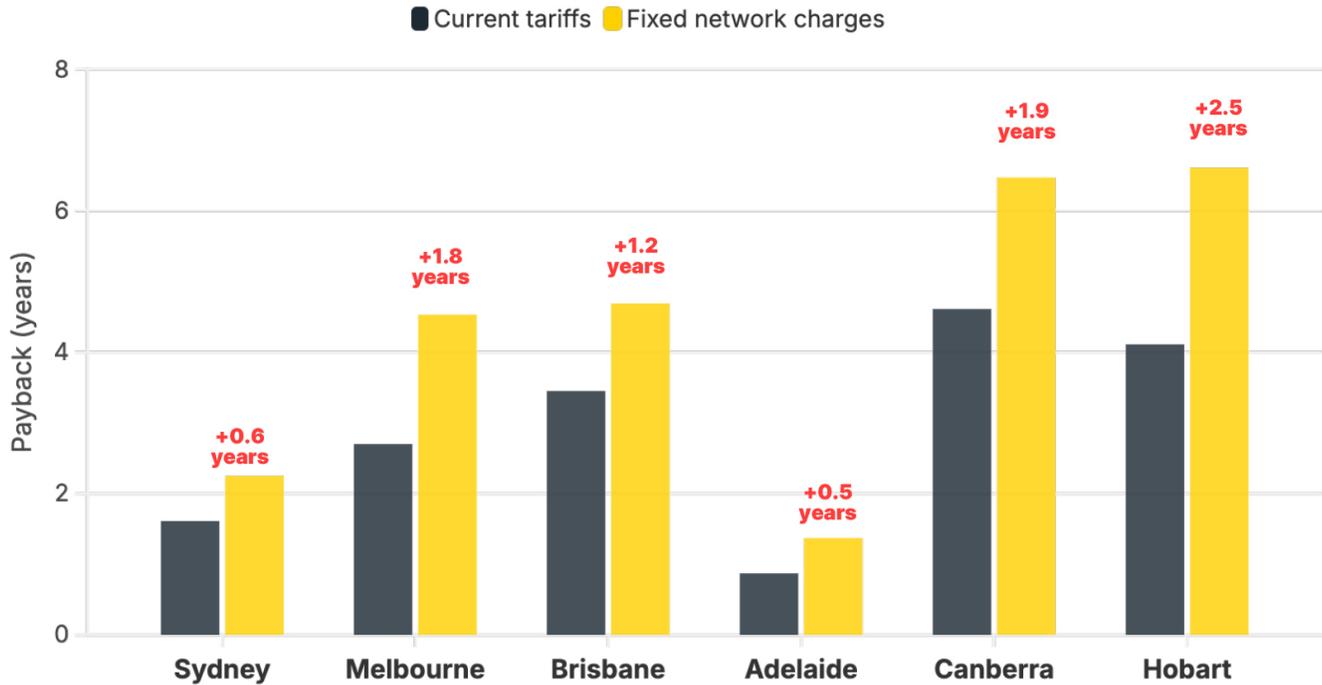
Our modelling in Figure 2 found that shifting to predominantly fixed network tariffs could increase electricity bills for new, efficient electric homes without rooftop solar in all capitals except for Melbourne and Adelaide. When new homes with rooftop solar (approximately [a third of builds](#)) are considered, this trend becomes more universal and impactful, with energy bills increasing by between \$239 and \$564.

Predominantly fixed charges discourage upgrading inefficient electric appliances

Electric appliances that rely on a resistive heating element – such as conventional electric hot water systems or many space heaters – consume [several times more electricity](#) than heat pump-based alternatives. However, they are still commonplace in many Australian homes.



Figure 3: Impact of higher fixed network charges on payback of efficient electric appliance upgrades



Note: Based on a household upgrading a resistive electric hot water system, heater (where applicable) and cooktop with a heat pump hot water system, reverse-cycle air conditioners and induction cooktop at the appliances' end of life.

Our modelling showed that shifting towards predominantly fixed network tariffs could diminish the savings households would achieve when upgrading these appliances at their end of life. Figure 3 reveals that homes could take 0.5 to 2.5 years longer to recover the costs of the efficient appliances.

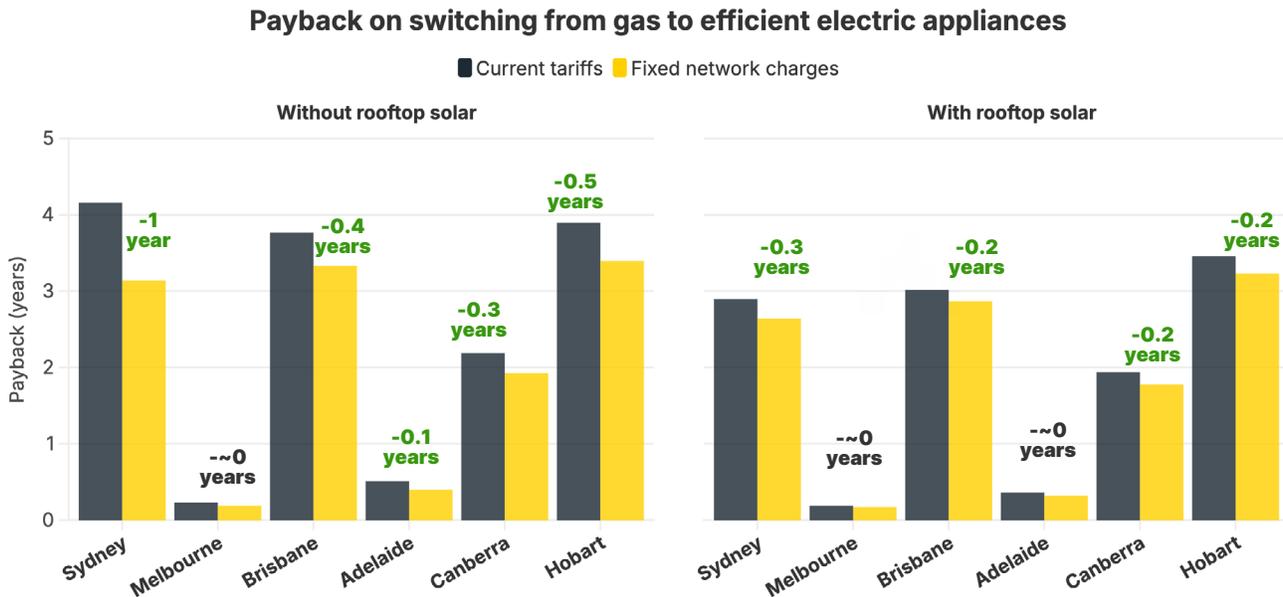
Predominantly fixed charges provide a very slight incentive for electrification

Switching gas appliances to efficient electric appliances is a particularly cost-effective household upgrade based on current pricing structures, given the large [efficiency gap](#) between gas and efficient electric appliances, and recent [increases in gas prices](#). The scale of this opportunity is particularly large for Victoria and the ACT, where residential gas consumption is widespread.

Shifting towards predominantly fixed network tariffs improved the payback on electrification in our modelling, though only slightly, by lowering the volumetric charges associated with running the new electric appliances (Figure 4). The effect was least noticeable in regions where electrification paybacks are already very rapid – such as Melbourne and Adelaide.



Figure 4: Impact of higher fixed network charges on the payback of household electrification



Note: Based on a household upgrading an instant gas hot water system, gas heater (ducted in Melbourne and Canberra, omitted for Brisbane) and cooktop with a heat pump hot water system, reverse-cycle air conditioners and induction cooktop at the appliances' end of life. Modelling assumes 8kW of rooftop solar.

Figure 4 also includes a comparison for households that have rooftop solar – as this is often a [motivating factor](#) to switch to efficient electric appliances. The improved payback on electrification for these households is more muted, as these households already pay less on average for their electricity consumption.

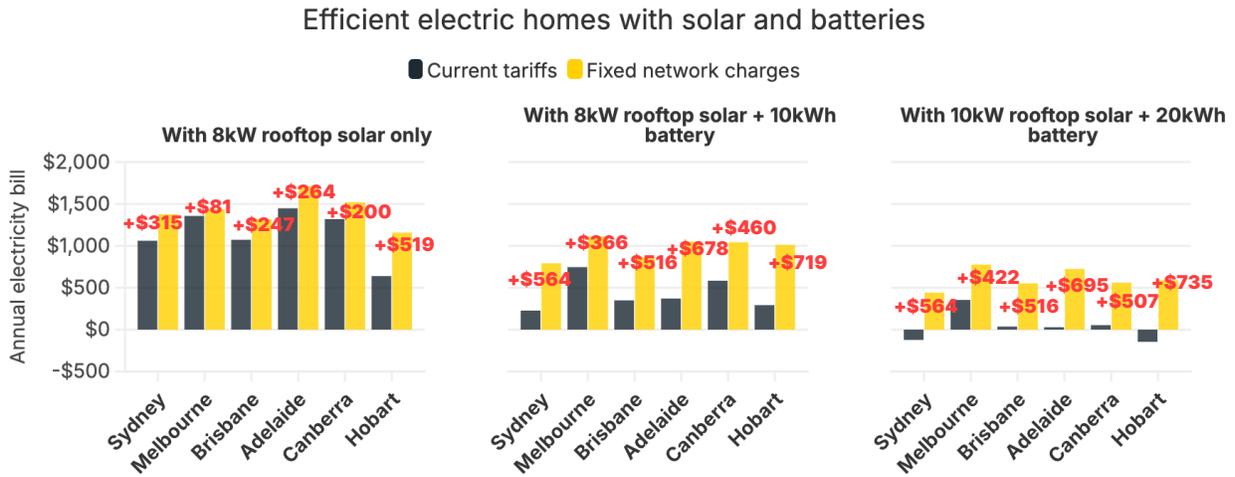
One factor driving this improvement in payback is that gas-consuming households often have below-average electricity consumption, and hence are likely to see their electricity bills increase under predominantly fixed charges. While this may motivate more households to upgrade to efficient electric appliances, it also raises equity concerns for some households such as renters that do not have the ability to make upgrades.

Predominantly fixed charges strongly discourage solar and battery uptake

The most significant impact in our modelling of the AEMC’s proposal was observed for rooftop solar and battery owners. Our modelling in Figure 5 found that a home with an average-sized rooftop solar system could see their energy bills rise by \$81-519/year, while a home that adds a 10-20kWh battery could see this rise by \$366-735/year.



Figure 5: Impact of higher fixed network charges for homes installing rooftop solar and batteries

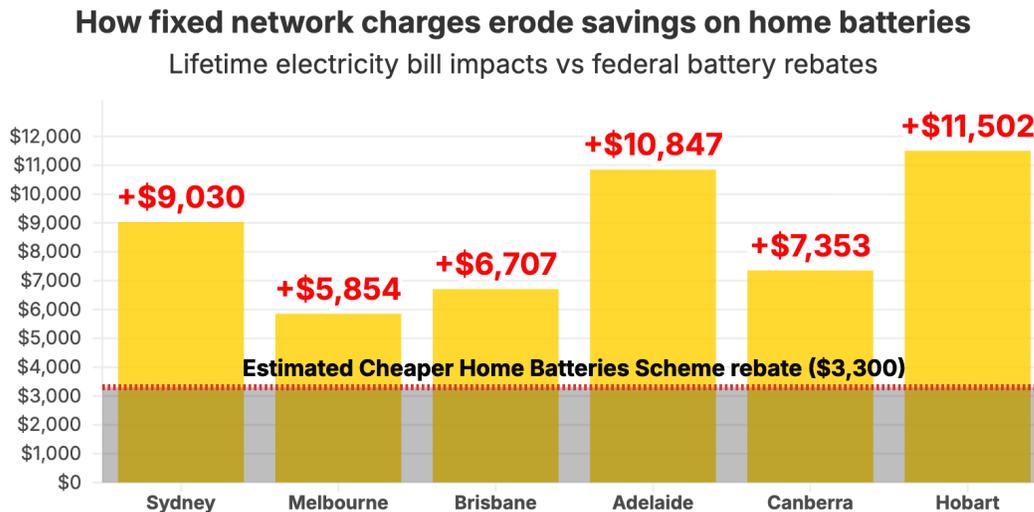


Note: 20kWh batteries are more representative of current [typical installs](#). This is likely to be larger than what the household needs for self-consumption purposes. We therefore assume this household is participating in a virtual power plant (VPP), earning a fixed annual credit of \$250 in addition to standard feed-in income for battery exports.

This impact appears consistent with the core intention of the AEMC’s proposal – a desire that solar and battery owners should bear an increased share of electricity network costs. However, it is arguably inconsistent with federal government policies.

Figure 6 shows the cumulative impact on electricity bills that a shift towards predominantly fixed network tariffs would have for a household that installed a new battery in 2025, over the lifetime of that battery. We found that a typical household with a 10kWh battery could pay \$5,854-\$11,502 extra in electricity bills over the battery’s lifetime. In all capitals, this bill rise is more than enough to cancel out the [estimated \\$3,300](#) rebate that the household would have received under the Cheaper Home Batteries Program.

Figure 6: Impact of higher fixed network charges on lifetime electricity bill savings from a 10kWh battery, compared to estimated rebate on battery purchase



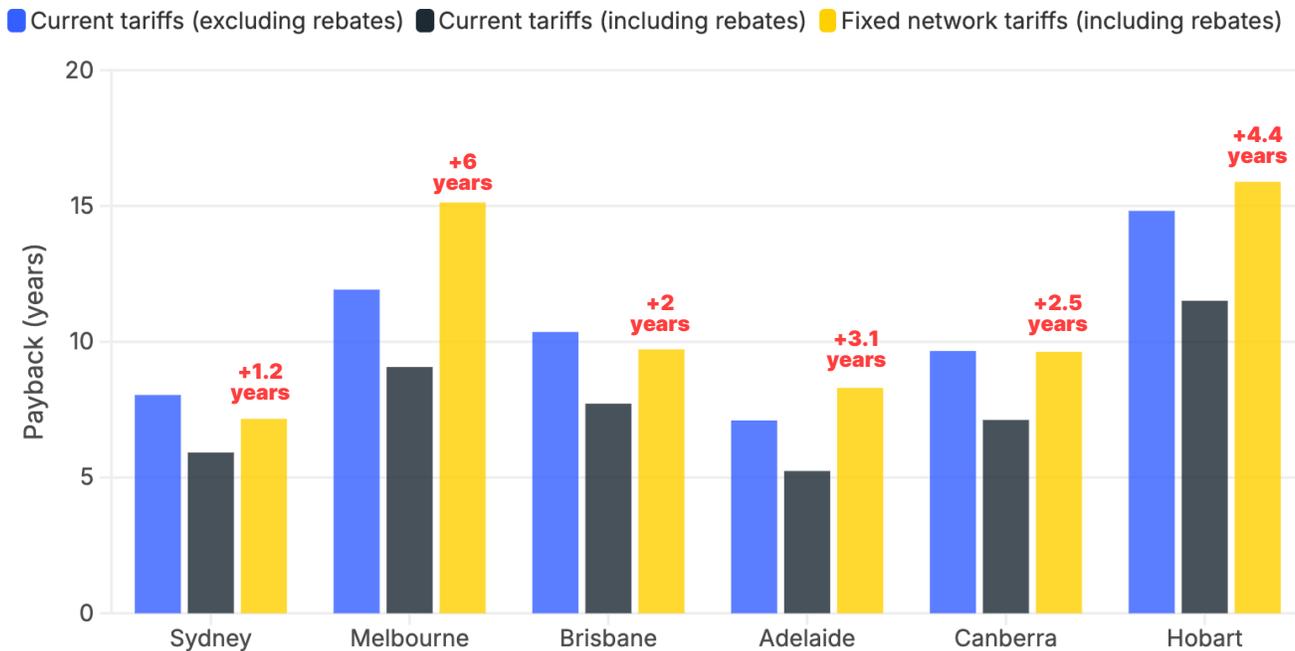
Note: Based on a 10kWh battery installed in a household in 2025 with efficient electric appliances and 8kW solar, used for self-consumption purposes. Battery lifetime assumed to be 13 years in Brisbane and 16 years elsewhere ([SolarQuotes](#)). Cumulative energy bill impacts are likely to represent a minimum bound as they assume no rise in electricity network prices.



The effect is similar for prospective households looking to install new solar and battery systems. Figure 7 shows that paybacks on a bundled 8kW solar and 10kWh battery system, including current government rebates, could increase from between 1.2 to 4.4 years.

Remarkably, the post-rebate payback under predominantly fixed network charges is close to (or in three capitals, exceeds) the pre-rebate payback today. In other words, the shift could largely, or more than, cancel out the impacts of the federal rebates.

Figure 7: Impact of higher fixed network charges on the payback of a solar and battery system



Note: Annotations indicate the increase in payback from current tariffs (including rebates) to predominantly fixed network tariffs (including rebates).

Raising fixed network charges creates more problems than it solves

If the primary aim of the AEMC’s proposal is to allocate more network costs to rooftop solar and battery owners, our analysis indicates it’s likely to be successful. However, it is also a very blunt tool that is likely to carry a range of undesirable side-effects.

Predominantly fixed network tariffs could raise bills for many low-consuming households, not just solar and battery owners. This includes low-income households and gas-consuming households. While the AEMC has acknowledged that “transitional measures” may be required to manage impacts on consumers, it will be challenging to design and implement an equitable fixed tariff regime that considers the many determinants of household energy consumption.

Worryingly, the AEMC’s proposal, based on our interpretation of the information made available, could remove key incentives to lower network costs. Regardless of the approach to setting predominantly fixed network tariffs, if the tariffs were truly fixed in the sense that they do not correspond to the customer’s actual demand (unlike a tariff known as a demand charge), the shift would weaken the financial case for investing in energy efficiency upgrades, and particularly for installing rooftop solar and batteries.



[IEEFA's analysis](#) has found that these technologies have significant potential to reduce peak electricity demand, including on electricity networks. Battery systems combined with rooftop solar were by far the most effective peak demand reduction technology identified in our analysis, yet these technologies could be the most severely impacted by the AEMC's proposal.

While our analysis was based on average day demand profiles, it's important to note that summer peak conditions typically coincide with [ideal conditions for solar generation](#), and that most households are installing batteries of a [much greater size](#) than assumed in our analysis.

In future, winter peak demand will be an important consideration. While our modelling found that in some regions, batteries used for self-consumption could offer limited peak demand reductions in winter, this was easily solved by enabling those batteries to import from the grid during off-peak periods and/or by undertaking thermal efficiency upgrades to those homes.

A common counterargument to these points is that most electricity networks in Australia are operating [well below their capacity](#). In other words, most network costs are “sunk”, and incremental reductions in peak demand do not result in network cost savings.

But the underutilisation of electricity networks raises a more foundational question: Should consumers be liable for paying down network assets that were mistakenly overbuilt?

The regulatory regime was designed in a world before consumers had access to [network alternatives](#) such as rooftop solar and batteries. In the meantime, regulated networks have made [extraordinarily high profits](#) – more aligned with what would be expected from a risk-exposed business.

If rooftop solar and battery owners can legitimately lower their use of network capacity at periods of peak demand, there is a case to suggest they should in fact pay lower network costs. Network tariffs should be designed in a way that recognises how these homes use the network and encourages these technologies to be used in a way that would lower network costs.

However, if these users do reduce their network costs, it would not be an equitable consequence that other consumer groups have to pick up the bill. Rather than shifting costs back and forth between different groups of consumers, we need to consider that networks themselves may be best-placed to bear this demand risk, and are already well compensated for it.

To resolve this issue, we need a [first-principles review of electricity network economic regulation](#). While the AEMC has indeed committed to initiating a review of network regulation in 2026, the [draft terms of reference](#) appear limited, and unlikely to address this fundamental question.



Conclusion

Shifting to predominantly fixed network tariffs that are not dynamically linked to consumers' energy demand could lead to inequitable outcomes for certain energy consumers, and particularly negative impacts on the financial case for household energy upgrades that are key to reducing energy bills and energy system costs.

This is most apparent in the fact that the AEMC's tariff change proposal could effectively cancel out battery rebates recently introduced by the federal government.

By starting with a focus on tariffs, the AEMC's proposal is blind to the more fundamental questions around how costs and risks should be borne by all actors in the electricity system – including both consumers and networks. A first-principles review of electricity network economic regulation is needed to address this.

More broadly, decision-makers concerned with the growing inequity between those with solar and batteries and those without should consider addressing the structural barriers to uptake of those technologies. For example, there is little to no incentive for landlords to install rooftop solar and batteries, or indeed to undertake energy efficiency upgrades. Reallocating network costs between consumer groups will not address this inequity.

About IEEFA

The Institute for Energy Economics and Financial Analysis (IEEFA) examines issues related to energy markets, trends and policies. The Institute's mission is to accelerate the transition to a diverse, sustainable and profitable energy economy. www.ieefa.org

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