



THE SENATE

Senate Economics References Committee

Inquiry into residential electrification

Answers to questions on notice from the Australian Industry Group, asked by Senator Bragg at a public hearing in Canberra on 22 November 2023

(Received 11 December 2023)

Question

CHAIR: Could you take on notice any thoughts you have about minimum standards in relation to the replacement of these machines? That could be quite helpful.

(Proof Committee Hansard, p. 3)

Answer

Ai Group sees a strong role for minimum standards of different sorts, as appropriate for different contexts, in managing appliance transition. Financial incentives, also of different sorts, have a role as well, particularly in the early years of this transition. While some electrified home appliances are very familiar, such as reverse cycle air conditioners, others are new to many, have relatively high upfront costs, or face other challenges such as wiring readiness, tenant/landlord incentive splits, or supply chain and/or skills gaps. Financial incentives can be very helpful in providing resources and momentum to overcome these issues. However financial incentives have at least two limitations:

- The potential for distortions and unintended consequences, depending on the design of incentives and the strength of supporting regulation and institutions. As we testified, there are currently concerns from Ai Group appliance supplier members about the quality of some installations under some existing incentive schemes for heat pump hot water systems.
- Public finance cannot carry the full burden of driving clean appliance takeup forever. To attempt to do so would be very costly, with consequences for other fiscal priorities.

Minimum standards can be phased in, and up, over time, reducing the amount of financial incentives required while providing time to supply chains for preparation and adjustment.

“From handouts to phaseouts” is a decent overall strategy, though the details need extensive debate and design effort.

Relevant standards may include:

Code for new buildings. There is already extensive work here, including the recent residential efficiency changes to the National Construction Code and the upcoming work on commercial buildings. A Code development agenda that progresses pragmatic ambition while keeping as much uniformity between jurisdictions as possible can continue raising the energy performance of new homes.

- Standards for rental properties. The rental stock is critical to Australia’s housing needs but often of poor energy performance and facing serious split incentive challenges. Mandatory energy performance ratings, and ultimately minimum energy performance standards for rental properties, would need support and notice time to prepare for and financial incentives may be very important in the lead in.
- Minimum Energy Performance Standards for a wider range of consumer appliances, including heat pump hot water systems. A minimum standard for heat pumps (which is already under development by the Federal Government) will create a level playing field thus creating confidence: i. for the consumer when purchasing and ii. for the manufacturer when making investment decisions to enter the market.
- Standards development takes time to get right. We also face the urgency of action to achieve transition and ensure consumer health, safety and value in the process. We encourage all jurisdictions to cooperate to balance these imperatives and put appropriate and agreed standards in place.

Question

CHAIR: I might get you to take on notice any broader thoughts you have about the tariff system and how that can be properly calibrated.

(Proof Committee Hansard, p. 3)

Answer

The growth of electrified appliances creates the potential to reduce overall energy system costs, through replacement of high-cost bulk energy with low-cost energy; through the fuller utilisation of existing network infrastructure; and through the coordination of appliances and distributed resources to partly substitute for new large scale energy generation, storage and transmission. However, if not well coordinated and of high efficiency, electrified appliances could instead add substantially to peak electricity demand and total system costs.

The difference between these outcomes will be made by many factors including electricity tariffs. Price incentives cannot solve everything, but well-aligned incentives are an important

part of the solution. There are many relevant ideas. Shifting to time-of-use network pricing, and aligning the prices with our new reality of abundant midday solar, makes a lot of sense, especially to influence water heating and car charging. More dynamic network pricing that reflects real-time shifts in utilisation of the network can also be promising. This might mean changing the price, but it may also mean changing what level of service a given price buys. Distribution networks are beginning work on how to apply Dynamic Operating Envelopes to energy exports, limiting or expanding the amount of solar PV that can be supplied by households to the wider grid depending on the current level of network use and capacity to support it. That same approach could be extended to energy consumption, whether for a household as a whole or for specific major appliances. Customers could pay a moderate overall price for a high level of guarantee of service for certain baseline appliances, and more circumstance-dependent service for energy intense appliances.

This kind of approach typically inspires worries that switching existing customers to new pricing models will create winners and losers, or leave vulnerable customers without adequate understanding to act in their own interests. This has typically made State governments nervous and led to weak, gradual opt-in tariff approaches that cannot support the pace of adjustment that we need to protect all energy users from unnecessary total system costs. Slow progress and uncertainty, combined with the tempo and rigours of the economic regulation process for networks, mean that potential savings are very hard to realise unless firm commitments and timelines are instituted. We encourage governments to look to the collective savings that are possible with widespread uptake of innovative electricity tariffs, and use those savings to assist and compensate short term losers, rather than forego better outcomes for all.