

MEDIA ALERT

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Getting the facts right on solar

Upcoming report challenges the view that solar consumers are cross-subsidised

Are households with solar photovoltaics (PV) cross-subsidised by others, as claimed in the AEMC's recent paper '*Strategic priorities for energy market development*'?

In a national first, upcoming research quantifies the real impacts of rooftop solar on other households' bills.

Preliminary results show households installing air-conditioning (AC) add around \$75 to other households' bills a year, by increasing demand peaks. Since about 70% of households have installed AC, it is important that such peak demand increases be minimised.

Where PV is also added to the network, the bill increase faced by other households due to AC is reduced.

Including a demand charge component in residential tariffs is effective at reducing the costs faced by others when AC and PV are installed. This is a more equitable option than the PV-specific levy proposed by AEMC, and will also cater for the full range of distributed energy options likely to be available in future.

Detailed analysis is essential to understand the complex interactions between new technologies, tariff structures and the existing electricity system.

The coming report from the Centre for Policy Development and Australian Photovoltaic Association (soon to become the Australian PV Institute) will provide robust analysis of these effects using data from real NSW households. See details below. The report will be released early 2014.

CPD and APVA hope this work will support policy decisions based on evidence.

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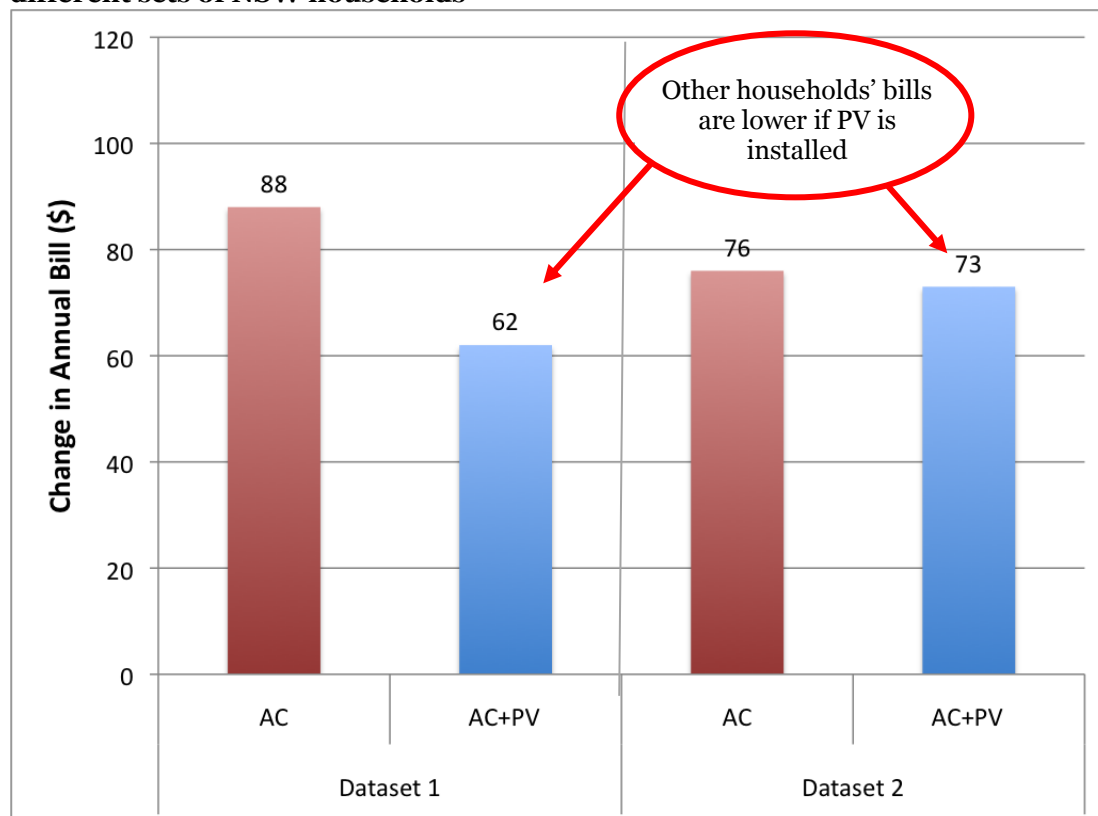
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Further details

- Technologies such as PV and air conditioning (AC) not only affect the electricity bills of households that install them, but can also affect the bills of other households.
- For example, PV decreases peaks in demand (reducing network costs that must be paid by others), and decreases a household's electricity use (increases network payments required by others). AC does the opposite.
- These two counteracting effects complicate the assessment of the real impacts of such technologies.
- A new model has been developed that can quantify these effects based on real data. It uses actual electricity tariffs and, to calculate the impacts on network costs, uses data from the Productivity Commission and the Energy Supply Association of Australia.¹
- Preliminary results show PV systems can decrease the costs faced by other households, in contrast to the claims made in the AEMC report
- Figure 1 shows preliminary results for two independent datasets from NSW households.
 - Assuming 20% of households install an average sized AC on a standard tariff, the annual electricity bills of customers that do not have AC increases by around \$75 a year.
 - If households on the same network also install a 2.5kW PV system, the increases faced by other customers' due to AC would be lower.
- A report with full details of the modelling approach, as well as outcomes for PV with batteries, solar water heaters, and general demand reduction will be available in early 2014. This will include analysis of how time-of-use (TOU) and demand charge tariffs affect different classes of consumers.
- The research recommends a demand charge component be used in electricity bills, rather than the blunt instruments of fixed levies on PV customers, which is currently being considered by AEMC. Demand charges will provide a more equitable outcome and will also cater for the full range of distributed energy options likely to be available in future, including demand management, energy efficiency, storage and electric vehicles.

Figure 1: Impact of AC and PV on other households' annual electricity bills for two different sets of NSW households



¹ The ability of PV to reduce peak demand is based on actual PV output during the distribution and transmission network peaks, which corresponded to 20% and 54% of PV rated capacity respectively for dataset 1, and 11% and 43% respectively for dataset 2.