

Airconditioning and Rooftop Photovoltaics

Because airconditioning tends to be used during the summer peak spikes, it contributes significantly to pressures to increase the size of the local network. Western Power *Retail* may enjoy sales of only a \$100 for a system that may cost Western Power *Networks* over \$1,500 to accommodate (see page 23, " . . LV circuits which are extremely difficult and hence expensive to retrospectively augment . . " and also " . . . (and back up through the transmission and generation). . . "

PV installed on customer roofs does the opposite, it may deprive Western Power Retail of \$100 a year but may save Western Power Networks \$1,500 in avoided upgrades. It is where the line between Retail, Networks and Generation gets very blurred. If the saving of \$1,500 can be passed onto the generator, it represents a significant part of the capital only cost of PV.

To accommodate airconditioning loads, Western Power Networks has estimated a figure of \$19.1M pa, p23. Subsidising PV to the tune of 50%, this represents \$4MW of peaking capacity. Probably a lot more as the size of the task and the money suggested for it would allow construction of a dedicated PV manufacturing plant run for Western Power Networks and so enabling the retail cost of PV to be eliminated.

This discussion on After Diversity Maximum Demand (ADMD) simply ignores any potential for on site PV generation or, extremely cost effective, energy conservation/management. Lack of time of day functions on current metering does not help either.

This applies particularly to points 5 and 9 on p18, points 15, 16, 17 and 19 on p23, points 10,11 and 14 on p20.

Also, by merely putting rooftop airconditioning units in shade, the peak demand for the units should drop 10%.

Meters for the flow of electricity to and fro the meter need developing.

New, modern meters for all domestic customers which include time of day functions to help promote demand management and peak lopping need to be designed, manufactured and rolled out - a project every bit as important as underground power.

The whole discussion seems to be very much business as usual regarding technology and ignores almost completely for potential for embedded generation to have a significant impact on the cost of distribution and transmission, let alone energy conservation/management. The growth of PV at the moment is so great, it is likely to overtake wind in terms of installed capacity within 5 years - this is easily within the life of existing plant. It also ignores ever increasing pressures to reduce carbon dioxide emissions and oil production peaking - the price of gas linked to that of oil.

Applications for Connection and Access

It is suggested that the costs incurred by Networks for the whole connection and access process be passed on to the proponent only WHEN approved. This would encourage cooperation by Networks. An annual deposit proportional to the electricity expected to be generated, say, \$1000/GWh pa, should help deter frivolous projects. The deposit would be deducted out of the connection and access bill.

Also, the 15 days to take up the access offer appears to be very short, particularly given the probable length of time taken to get to this point.