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Our Ref:

Ms Libby Marstrand  
Independent Pricing and Regulatory Tribunal  
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10/4/02

Dear Libby

**Re : Network pricing and demand management**

To date, much of the discussion concerning the relationship between network costs and demand management has concentrated on the impacts on distribution networks of large volume users on networks. The Tribunal has commissioned a report from East Cape Pty Ltd which raises some issues and proposals which have particular relevance for residential consumers. In response to this report, *Efficient Network Pricing and Demand Management*, PIAC wishes to make a few points concerning household use of electricity and to highlight some issues for demand management more generally.

In our view, the treatment of demand management at times reveals a degree of confusion over aims. Perhaps this arises because the two major aims of more efficient use of distribution networks and investment signals often rely on the same mechanism in terms of influencing customer behaviour.

The question which needs to be asked is whether demand management primarily is to be directed at providing the appropriate signals for new investment in network augmentation or the creation of the conditions in which such expenditure ultimately can be deferred or avoided entirely. The choice which is made is important to the effectiveness of demand management measures, particularly those directed at altering the consumption behaviour of households. Ultimately, reduced or avoided investment provides not only a better outcome for consumers but contributes to improved environmental outcomes by the electricity industry.

The East Cape report makes note of the price inelasticity of most residential consumption. This echoes the views expressed repeatedly by PIAC. Clearly, price signals are not an appropriate mechanism for addressing demand management for the majority of households.

The current development of retail electricity markets makes it unlikely that NSW households will be in a position to receive effective price signals within the foreseeable future. Yet, even should the provision of real-time price data become a practical option it remains to be seen whether the level of incentives provided would be sufficient to bring about a significant change in consumption behaviour. As the Tribunal appreciates, this is because price inelasticity on the part of domestic users is based on them having less discretion than do some commercial or industrial end-users over the timing, if not the volume, of their demand.

Under these conditions any move to extend congestion pricing to residential consumers could only have a very different aim from that of deferring or avoiding investment in distribution networks. We note with interest the experience cited by the East Cape report of the use of congestion price signals in New Zealand. This indicates that pricing in times of peak demand has had the effect of realising significant additional revenue for at least one network. In the view of PIAC the only effect of the introduction of seasonal pricing would be to provide similar windfalls to network operators with no significant change in the consumption patterns of customers. It is difficult to reconcile this outcome with the goal of the Tribunal of promoting greater effort on demand management activities.

On the other hand, while the consumption by residential users can be influenced greatly by factors such as the weather much of the demand by this class of customers is regular and predictable. The significant variations between peak and non-peak residential consumption mean that households have a very low level of base load demand. Nevertheless, the nature of that peak demand, centred on the use of household appliances and lighting, as well as its predictability should mean that residential users are well placed for demand management measures which aim to reduce total demand rather than merely displace it.

On this point the Tribunal might consider the success of the REFIT pilot program initiated by PIAC which, largely with funding from EnergyAustralia, is providing low-income households with a range of energy efficient devices. Of particular note is the fact that this program has not come about as a market based response to demand management incentives. Likewise, network pricing initiatives had little relevance to the design of the scheme since the impact on consumption of the retrofitted devices is non-time specific.

By comparison with market alternatives, REFIT is not based on providing incentives to households. The effectiveness of the scheme, then, is not dependent on measuring the effect of such incentives.

The difficulty which arises in relation to price based incentives around congestion or coincident demand is that the final price paid by each customer can depend very much on the decisions not of the individual household as much as the decisions of others in the market. Further, the direct response by households to price signals is not easily quantified since it reflects consumption foregone. A household not using their airconditioning on a hot summer afternoon may instead be the result of a decision to drive to the beach.

Finally, if a price based regime of demand management is to do more than create additional revenue for the networks, consideration needs to be given to the level of price attached to a certain level of congestion or coincident demand. For example, while network operators have concerns about the use of domestic airconditioning, the degree of price subsidy operating between those households with and without these appliances has been shown to be low. This means that households without airconditioning may well be significantly disadvantaged by a tariff set high enough to produce the appropriate response from customers with airconditioning without any offsetting reduction in network charges.

Given these considerations it is unclear whether there are sufficient economic incentives for high-volume households to take up an interruptible supply tariff.

On the other hand, PIAC supports the proposal that the PPM be amended to give greater weight to demand management and distributed generation. Since, as noted by the East Cape authors, this largely is dependent on the availability of appropriate metering in the interim such measures would likely not involve large numbers of residential users. However, the proposal for a targetted trial of new approaches to demand management might tempt a network operator, particularly where the growth in domestic airconditioning presents concerns, to opt for such a trial among its residential customers.

We hope these few comments will assist the Tribunal in working with network operators to develop a better approach to demand management.

Yours sincerely  
Public Interest Advocacy Centre



Jim Wellsmore  
Policy Officer