



Rule Change Package Demand management and transmission networks

Executive Summary

The rule change package is a series of recommendations to more comprehensively incorporate demand management into the national electricity market (NEM). There is a major bias against demand management (DM) in the national electricity market. This is illustrated through massive incentives for inefficient investment and inefficient consumption of electricity.

Transmission network service providers have a longstanding competency and business interest in operating, maintaining and augmenting highly reliable, 'poles and wires' services to meet demand. Compared to this, their familiarity, competency and interest in DM is minimal. This is a fundamental flaw of the NEM, depriving business and residential consumers of considerable changes as well as cost-effective reductions in greenhouse emissions. Broad-scale changes to the rules are urgently required.

Demand management can include both management of peak-loads and energy efficiency as a way of meeting capacity requirements with the greatest cost efficiency. It includes a diverse array of activities that meet energy needs, including cogeneration, standby generation, fuel switching, interruptible customer contracts, and other load-shifting mechanisms.

DM techniques can offer both short and long-term supply and system efficiencies and hence assist system reliability. Overall reduction of consumption can relieve the burden on generation and the whole system, while direct load control and DM aggregation targeting peak demand can assist with short-term congestion.

The long-term interest of consumers would be served by greater efficiency, which would result in lower costs and prices, and increased reliability, leading to improved supply, fewer system failures and a reduction of greenhouse gas emissions.

Ideally, a DM objective should be inserted into the National Electricity Law. Without such an objective, a range of Rule changes are necessary.

The Total Environment Centre proposes nine changes to the rules:

1. Transmission network planning

It is critical that regulators ensure that DM solutions are prioritised and properly investigated in the planning stages of network development.

2. Annual Planning Reports

Transmission networks should be required to publish robust data on upcoming constraints that are relevant and useful to DM service providers. This would serve to inform the DM market of upcoming opportunities and enable it to respond to these in a timely manner.

3. DM Incentive

In recognition of the failure of networks to invest in cost-effective DM, there should be an explicit provision for the Australian Energy Regulator to develop and implement a demand side incentive scheme.

4. Financial cover for DM investments

The circumstances in which transmission networks can recover expenditure on demand side activities needs to be clearly specified in order to create more certainty regarding the ability of transmission networks to investigate, implement and recover DM expenditure.

5. Revenue determinations

It is necessary to prioritise DM activities, the same way as supply side approaches are now prioritised, to ensure they are rightly ranked, properly investigated and integrated into revenue determinations.

6. Acknowledgment of modest DM expenditure

There needs to be explicit acknowledgement of the potential use and value of small scale demand side activities in covering relatively modest amounts of load or hours at risk. Modest demand reduction, unrelated to particular constraints, can provide long term benefits by reducing the need for a wide range of possible future network augmentations.

7. Effective prudency reviews

Prudency reviews that assess past capital expenditure should be undertaken, and conducted by experts with a demonstrated balanced understanding of the theory and practice of DM. These should specifically and thoroughly assess the extent to which transmission networks have implemented, and not ignored, an adequate level of DM.

8. Regulatory Test

Currently, the provisions for the Regulatory Test do not include demand side options as a necessity in any assessment of costs or benefits. To reverse this bias, the Rules should specify that DM options must be investigated *before* augmentation options.

This is likely to ensure that a more appropriate level of transmission networks' resources and attention are directed to DM before augmentation planning is underway.

9. Short-term and long-term price for DM

There is no mechanism in place for setting the price of demand side response (DSR) activities within the market pool. Setting a price for DM will encourage greater investment in DM and facilitate growth of DM aggregation as a market commodity. A market mechanism that provides the opportunity for proponents to bid into the market would encourage new DM entrants; promote competition for existing DM businesses; and make the implementation of DM options easier for network businesses.