

SUPPORTING A COMPETITIVE MARKET FOR DISTRIBUTED ENERGY RESOURCES

Distribution market model project – final report 22 August 2017

The electricity system is transforming

More consumers are buying and selling power



As new energy service providers emerge with more high-tech choices for consumers, we are exploring options to put consumers in the driving seat – giving them more control over how their batteries or other distributed energy resources are used.

The final report outlines the need to buy and sell energy and related services at the distribution level in a more dynamic way, in response to price signals.

For consumers this means that if you want to use the electricity from your solar panels or batteries, you can.

And if you don't need it, you can sell it to whoever values it the most at a particular point in time, for example the local network business or the wholesale market.

Distributed energy resources are different types of energy equipment used by households and businesses and connected to the electricity distribution network. They include battery storage, electric vehicles, rooftop solar or household appliances such as fridges and dishwashers that respond to changes in price. They can:

help consumers reduce their electricity bills

help electricity networks manage peaks in demand

compete in the wholesale electricity market by exporting electricity

provide services that help make the system secure, such as frequency control

help consumers trade energy with their neighbours

What's needed to transform the electricity grid?

The report sets out a vision for our future electricity grid. To achieve this, some essential changes to energy markets are already underway. These include the move to cost reflective network tariffs and a competitive market for smart meters. But it is a long term vision. Our final report proposes a range of 'enablers' including:

Broadening the opportunities for distributed energy resources

- Facilitate better co-ordination between distribution level markets and the wholesale market
- Assess the potential for distributed energy resources to provide frequency control services

More data to keep the network safe, and to spot opportunities

- Identify the data about distributed energy resources which AEMO needs to maintain power system security into the future
- Understand the level of control network businesses need to have over distributed energy resources to maintain system safety, reliability and security
- Get more dynamic information about congestion and technical issues on networks, at more localised levels, to know where distributed energy resources can be of most benefit

Clear and consistent arrangements for access and connections

- Consider if the current access model for distributed energy resources is appropriate, if networks become congested as more resources connect
- Fit-for-purpose Australian Standards, along with clear and transparent technical assessments when connecting distributed energy resources

Why a market?

A well-functioning, competitive distribution market would provide incentives for companies to innovate by providing new and improved services, technologies and business models that are driven by consumer demand.

There would still be a role for regulation to ensure the safety, security and reliability of electricity supply and to maintain consumer protections. Network businesses would also likely continue to own and operate the grid – which is regulated under energy market rules.