

WHAT NEXT FOR A TWO-SIDED ENERGY MARKET? THE IMPLICATIONS OF VENTURING BEHIND THE METER

Creating a two-sided energy market will finally unlock data on consumer energy demand that is hidden 'behind the meter' and which is needed to help keep the power system reliable and secure, a new Energy Security Board paper says.

It will also add exponentially to the value household energy technology contributes to consumers and the broader system. But it will require a major overhaul of how we describe and regulate electricity buyers and sellers – and new systems to govern how bidding takes place in the market.

The discussion paper released today explores what a two-sided market – where all types of energy users actively buy and sell electricity – could look like. It will be followed by a detailed analysis at the end of 2020.

“Consumers are already participating in the electricity market through their use of things like solar panels, electric vehicles and smart devices – but this information is largely hidden, making it very hard for the Australian Energy Market Operator (AEMO) and other market participants to know whether supply will meet demand,” said ESB Chair Dr Kerry Schott.

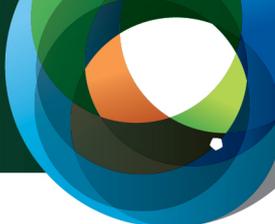
“A two-sided market will change all that because consumers and those who participate in the wholesale market on their behalf will be active in responding to price. When prices are high, they can conserve their own use and supply electricity to the market and when prices are low, they can increase their use. Because this behaviour will be transparent and in real-time the information itself becomes a tool to keep the power system operating securely and reliably and can fill gaps when the sun isn't shining and the wind isn't blowing.”

The paper says this major shift will also mean rethinking some key fundamentals – such as shedding traditional views of how certain participants act in the market and how the rules should apply to them. It suggests replacing the diverse arrangements that exist today around retailers, generators, aggregators etc with two simple categories – those who use electricity and those who sell it on behalf of end users.

This will mean the market rules can be streamlined and make it easier for new types of traders to enter the market. It could also mean that single end users could be their own trader for some services – and use other traders to buy or provide other services for them. Technology will also mean that consumers won't need to monitor electricity prices and decide how or when to participate as these decisions could be set up to happen autonomously or in an agreed way via their retailer or aggregator.

A key pillar in designing this new type of market will be how to 'schedule' consumers to participate in the market. Being scheduled into the market means participants are required to make bids and offers to produce or consume electricity and are bound by certain obligations.

“Having more traders providing information to the market about their intentions will remove imbalances between supply and demand and make the system cheaper to run,” said Australian Energy Market Commission Chair John Pierce. “But the current scheduling system is designed for large generators and users and has significant technical requirements so will need to adapt. We need to strike the right balance between obligations on participants and the incentives to trade in the market.”



“We can trial how this might work through reforms currently being progressed such as the AEMC’s upcoming rule changes on demand response that will allow large energy customers to routinely trade their energy use in the market.”

AEMO’s Virtual Power Plant (VPP) trials are another avenue to trial how to schedule demand-side participants into the market.

AEMO CEO and Managing Director Audrey Zibelman said: “A two-sided market will fundamentally change the way energy is traded to benefit consumers. As the energy system transitions, we have the opportunity to harness technology and establish a new market framework which empowers and rewards all energy system users, from small customers to large generators – to ensure the supply and demand mix is being orchestrated in the most efficient manner, while providing the services needed to keep the system safe, secure and reliable.

“This will involve establishing a framework which values the full breadth of essential system services and scheduling them in a coordinated way ahead of the time to ensure they are there when the system needs them.”

Australian Energy Regulator Chair Clare Savage said: “The transition towards two-sided markets has the potential to bring significant benefits to consumers by rewarding them for selling energy back into the grid when it is needed the most. A key success factor for these markets will be ensuring that the consumer experience is a positive one and consumers can leverage the benefits of new technology and services through products that are simple to understand and engage with.”

The discussion paper identifies a sliding scale of options, from voluntary participation of energy users to full participation. All have benefits and drawbacks, so while full participation is the gold standard, a transitional approach might help the market adapt.

The paper says other major projects already underway are fundamental to realising the vision of a two-sided market. These include the Australian Energy Market Commission’s reforms on the way generators can access the energy grid and the Open Energy Networks project.

Energy Security Board work plan

Two-sided markets are part of the ESB’s plan to improve the reliability, security and affordability of the national electricity market. Also today, the ESB has released a discussion paper on system services and ahead markets – another key arm of this work.

The plan was discussed at the 20 March [COAG Energy Council meeting](#). It will be coordinated through the post 2025 market design project and will involve three key phases:

1. Interim measures to improve the security and reliability of the grid before summer
2. Improving access to the grid for new generators, two-sided markets, ahead markets
3. Examining investment signals needed to ensure a smooth transition to more renewable energy

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Further information:

Read the paper: [Moving to a two-sided market](#)

Read the paper: [System services and ahead markets](#)

COAG Energy Council: www.coagenergycouncil.gov.au

Energy Security Board members

Kerry Schott AO - Independent Chair

David Swift - Independent Deputy Chair (Acting)

Clare Savage - Chair of the Australian Energy Regulator

John Pierce AO - Chairman of the Australian Energy Market Commission

Audrey Zibelman - CEO of the Australian Energy Market Operator