



Level 1, 24-30 Camberwell Road,  
Hawthorn East, Victoria 3123

P. 1300 08 06 08  
F. 03 9277 7768

PO Box 3100 Auburn 3123

go@flowpower.com.au

Progressive Green T/As Flow Power  
ABN 27 130 175 343

flowpower.com.au

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Dear Manager;

### Re: AEMO Integrated System Plan

Flow Power is pleased to provide input on AEMO's planning for the changing Australian energy market.

Given our unique and rapidly growing business model, Flow Power believes it has a unique and important insight into many of the topics raised in the plan.

#### Integrating renewables into the market

The changing power market in Australia welcomes increasing volumes of low cost renewable power, both in the form of large scale installations and distribution energy resources. Flow Power has seen the benefits and changes implemented by customers in different ways for each form of renewable power. We reiterate the point that these forms of generation do not need firming contracts from other generators, if customers are encouraged to "firm" up their response.

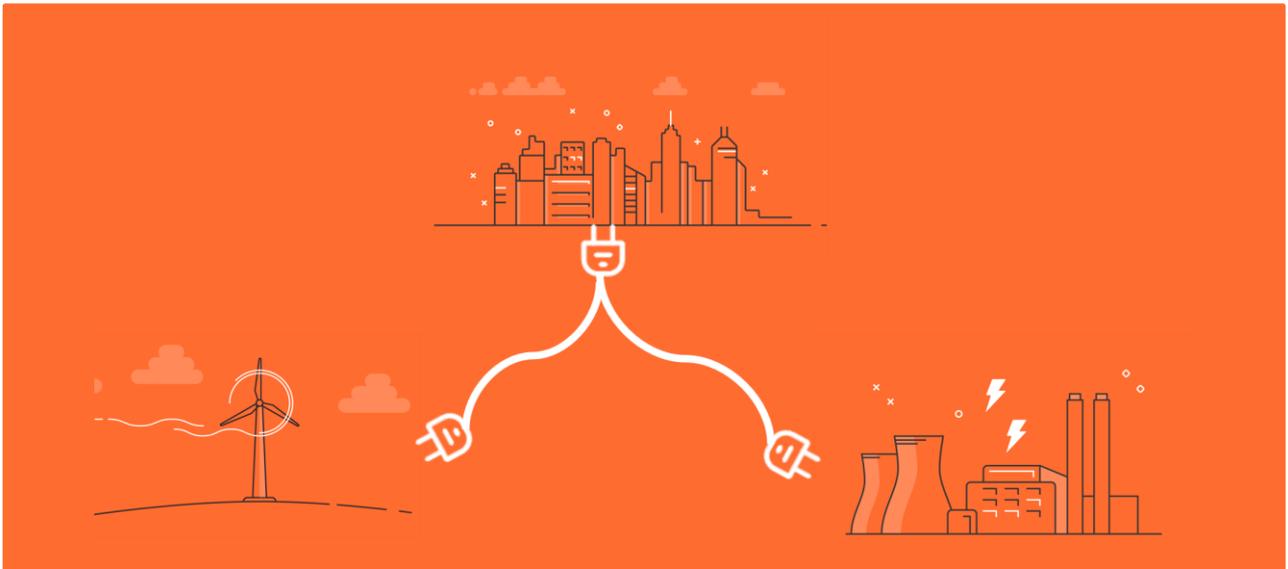
- **Large scale renewables** pose an opportunity for energy users to access low cost clean power that meets their business requirements from both a profitability and branding perspective. Last year, Flow Power announced its first Renewable Corporate Power Purchase Agreements (PPAs) to connect commercial and industrial businesses to the signals of Ararat Wind Farm as well as the wholesale market. These PPAs enable customers to lock in fixed price energy for up to ten years. The secret to their success is linking the customer load to the variability of the wind farm. Flow Power will install our kWatch® Intelligent Controller onto both the customer sites and the Wind Farm meaning that customers will power up and down in line with the output of the wind farm. If the customer needs to use power outside of these times, energy is sourced from the spot market or financial hedges. The interest in Renewable Corporate PPAs is driven by international trends. The AEMO ISP report shows that more and more renewable power is coming online and will be needed to replace aging generation.<sup>3</sup> Renewable Energy Developers need a large portion of the plant to be contracted before reaching financial close. Ad hoc reports show that most retailers have contracted enough to meet their obligations under the

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<sup>3</sup> AEMO Integrated System Plan

RET, meaning that more capacity is available to be sold at prices less than half the current market price.

Figure 1: Aligning customer use to renewable power



- **Distributed Energy Resources** such as solar PV, diesel generation and storage is changing the demand-profile of the Australian power market. The middle of the day has quickly become the cheapest time to use power due to the growth of rooftop solar. Energy users with significant solar systems are already reporting difficulty in obtaining fixed rate retail contracts. Flow Power assumes that is due to the difficulty for other retailers to hedge the shoulder of the peak. Many of those same users are installing technologies such as Zen Ecosystems thermostats and Flow Power’s kWatch Intelligent Controller to control their power use. These users are now able to make choices to move power use into lower cost periods and provide capacity back to the market. Please see the figure below that outlines this in action at a school:

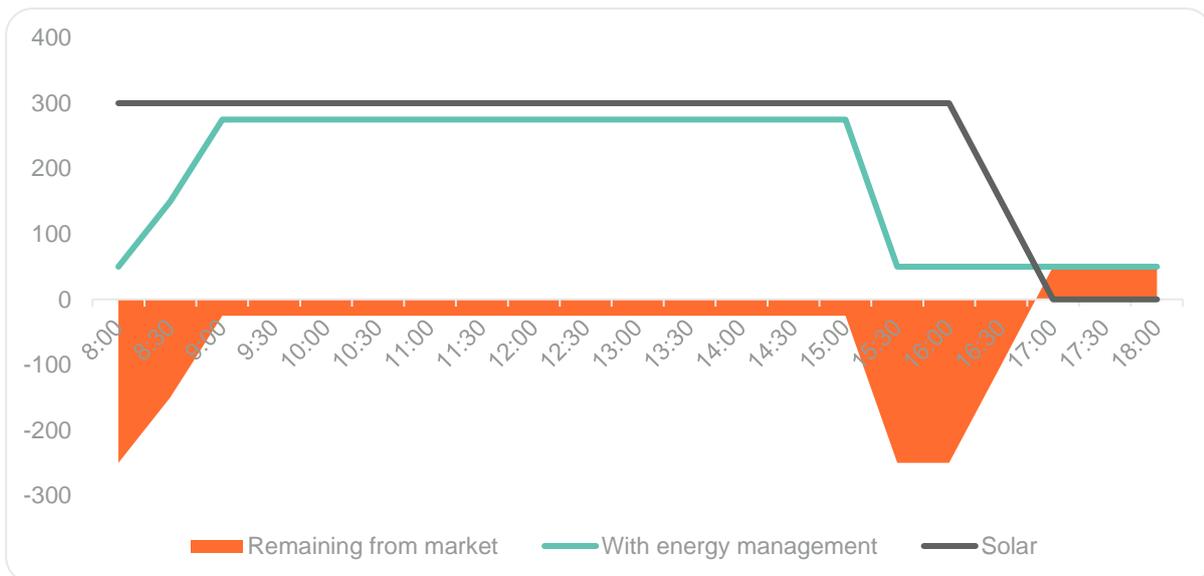


Figure 2: Incentivising users to support the market

Using this example of the school, Flow Power’s model allows them to install solar panels to cut power costs during peak periods of power use. Later in the afternoon, Flow Power’s kWatch®

Intelligent Controller switches off the air conditioning, pushing unused solar generation into the grid. Today, with Flow Power this school would receive the market price and be incentivised to support the power grid. Tomorrow, as the curve changes, the same school could choose to invest in storage to either sell the energy later, or keep their systems up and running overnight.

### Comments on the plan

- Flow Power believes that demand response will play a pivotal role in all scenarios for the Australian power market and in turn suggests that it should be included in all modelling.
- Increased demand response enables the uptake of intermittent sources especially in cost sensitive environments. While this embraces increased renewable demand, it may also change the way that the transmission network is planned under current reliability frameworks. In calculating the influence of demand response on transmission, localised programs such as Ausnet Services' Critical Peak program should be included. In theory, this would encourage network developments to be made in line with the least regrettable outcome and take advantage of the newly introduced DMIS.
- Wholesale demand response will deliver a resource to soak up excess supply during periods of high wind and irradiation. This ensures the profitability of generation and continued drive for strong investment signals.

We look forward to continuing to be involved in the program. If you have further questions please contact Liz Fletcher on 0417 080 535 or email [liz.fletcher@flowpower.com.au](mailto:liz.fletcher@flowpower.com.au)

Kind regards

Matthew van der Linden

Managing Director

Flow Power