



MARCHMENT HILL

- consulting -

Future State Scenario Development

the challenge

The electricity supply system in Australia is undergoing a major transformation in response to the rise of disruptive technologies and changes in customer's expectations and behaviours. Our client wanted to understand how this transformation might result in various alternate future scenarios out to 2045 in order to forecast a range of plausible electricity consumption and demand profiles.

what Marchment Hill did

MHC partnered with the CSIRO in and used their Future Grid Forum work as the basis of this investigation to develop 3 alternate scenarios. The Future State Scenarios considered all aspects of the electricity system with particular focus on:

- The uptake of storage, including electric vehicles;
- The scope of the network monopoly and availability of new contestable markets;
- The uptake of cost reflective tariffs (including required changes to meters);
- The regulator's approach and attitude to allowable costs;
- The uptake of onsite generation and impact of energy efficiency
- The generation mix and generator retirements
- Industrial sector futures, and
- Carbon prices

The report created data inputs on the most likely outcomes for the 30 years to 2045 across some broad categories of inputs and compared them to the CSIRO's Future Grid Forum scenarios.

The MHC partnership with the CSIRO undertook an extensive literature review for this purpose, with MHC leading the development process of the report through scenario construction, expert and end-user review and scenario finalisation.

the benefit

The scenarios and their associated assumptions provide a strong foundation for further investigation into how changes in the policy, regulatory, technological and macroeconomic environment will impact the future of electricity supply in Australia. The report was used to inform the consumption and demand forecasts and also resulted in some key strategic insights with regard to businesses ability to respond to transformative changes and the importance of active management.