

# Strata's Experience

## Introduction

1. Strata's directors, consultants and associates have a range of technical, economic and regulatory skills directly relevant to the energy supply and utilisation industry and its regulators.
2. Our team contains individuals with substantial experience in gas and electricity market reform, at both the wholesale and retail levels. From our background working in both policy/regulatory agencies and in industry participants, we are able to analyse and advise on energy market reform initiatives both from the perspective of the reforming agency (i.e. government or regulator), and from the perspective of market participants.
3. Set out below is a summary of Strata's experience.

## Energy market design and operation

4. Several members of Strata's team have extensive market design and operation expertise and experience. We bring an economic and electrical engineering background to the design of energy markets. Strata's experience extends across wholesale and retail energy markets, with Strata personnel heavily involved in the design of Australian and New Zealand energy markets over the past 15-20 years.
5. Members of our team have also worked for energy market operators in Australia and New Zealand, in particular in retail gas market operations in Australia and in retail and wholesale electricity market operations in New Zealand.
6. Through our associates Strata is also able to offer our clients access to in-depth power system modelling expertise. Members of our team have worked on power system assignments in New Zealand, Asia, Europe and Africa.

## Energy network design and operation

7. Various members of Strata's team have extensive power systems engineering backgrounds, including both system operations and network development.
8. Strata's experience has most recently been applied in the economic regulation of transmission and distribution businesses in New Zealand, Australia and Singapore. In Australia, Strata, in association with EMCa, has provided advice to the AER for its regulatory decisions on electricity transmission and distribution businesses in Queensland, New South Wales, South Australia and Victoria. In New Zealand, Strata has advised the

Commerce Commission during its reviews of electricity transmission and distribution businesses.

9. We have advised the Singapore Energy Market Authority (EMA) on its review of the Singapore electricity and gas businesses, and we are currently advising the Malaysian Energy Commission, Suruhanjaya Tenaga.
10. Strata's capabilities in this area are particularly relevant where an independent external view is critical to assignments that require both strategic in-depth research and analysis of technically complex questions.

## Regulatory analysis and design

11. Strata's personnel have worked in the regulatory sector for many years and have accumulated significant regulatory expertise in Australia and New Zealand.
12. Members of Strata's team have worked on the development and implementation for rule changes in the Australian National Electricity Market, the former NSW/ACT gas retail market, the former SA/WA gas retail market, the New Zealand electricity market, the New Zealand gas retail market, and the Singapore electricity market.
13. Members of Strata's team have been involved in rigorous economic and regulatory analysis and cost-benefit analysis across a wide range of areas (e.g. more standardisation of electricity distributors' use-of-system agreements, revamped metering arrangements for New Zealand's electricity sector, revisions to the force majeure arrangements, the introduction of global reconciliation, an operational review of distributed generation arrangements and the development of a scheme for compensating customers during any electricity conservation campaigns).
14. Strata's managing director chaired the influential Wholesale Market Advisory Group (WMAG) that developed and successfully introduced market rules for the integration of intermittent generation (primarily wind) into New Zealand's wholesale electricity market. Strata has also provided chairmanship roles for advisory and technical groups overseeing the introduction of electricity futures and financial transmission rights in New Zealand.
15. Over the years Strata has also helped to develop a diverse range of market facilitation measures, operational guidelines and information papers published for regulators (e.g. guidelines for the treatment of vulnerable and medically dependent consumers, guidelines for metering and advanced metering infrastructure, guidelines for distributed generation on distribution networks).

## Technology relating to energy markets

16. Strata has provided advice and input to the functional specification for advanced metering infrastructure (AMI) in New Zealand. This has included the preparation of high level AMI policy for the electricity regulator and technical guidelines required to implement the AMI policy.

17. In addition, Strata was involved in the preparation of the technical chapters of the metering rules for the New Zealand electricity market. Strata assisted with the preparation of consultation papers, participated in workshops, reviewed submissions and assisted with the drafting of rules.

## Issues relating to consumers in energy markets

18. Strata's team includes senior managers with previous experience in customer management and engagement in the energy industry. Strata's Managing Director has managed energy sales and customer relationships in electricity retail and distribution businesses. He has held influential roles in the development and operation of energy retail market structures and has managed a start-up energy retail business.
19. On several assignments Strata has advised energy regulators on issues relating to consumers – both large and small.
20. In New Zealand, Strata has strong relationships with major electricity users and has a detailed understanding of their particular needs and issues regarding energy supply. This has led to Strata working with the electricity regulator to determine the value that large consumers place on their electricity supply.
21. Members of Strata's team helped develop the original guidelines for New Zealand electricity retailers to follow in regard to medically dependent and vulnerable residential consumers. Strata has subsequently worked with the electricity regulator and industry participants to update the guidelines over time.
22. Strata's Managing Director is currently the independent chair of a retailer working group that is developing benchmarks for the management of vulnerable and medically dependent electricity consumers. This work involves facilitating discussions between electricity retailers (avoiding competition law issues), support agencies and consumer advocates.
23. Strata has also worked on retailer of last resort arrangements in New Zealand, advising the former electricity regulator on this matter.
24. Strata personnel have been involved in the development and evolution of the Electricity and Gas Complaints Commission governance arrangements and model contracts for domestic electricity consumers.

## Infrastructure investment in the energy markets

25. Strata's team includes several members that have held executive responsibilities for major infrastructure investment projects.

### **Electricity generation construction and management**

26. Strata's managing director, Bill Heaps has managed electricity generation development projects. Bill as General Manager geothermal generation, for Contact Energy was responsible for the integration of asset management for the total generation portfolio of geothermal, hydro and thermal power stations.

### **Market systems investment**

27. Two members of Strata's team have been responsible for investment in system operations systems including generation scheduling and dispatch and market pricing IT infrastructure.
28. One team member was Director and Chair of d-Cyper Limited with governance oversight of investments in data management for metering reconciliation processes and for the IT infrastructure required for the Australian Electricity Futures processes.
29. Members of Strata's team have worked for many years on the development of security constrained dispatch markets. This experience includes zonal and nodal pricing and the impact of transmission network constraints on market prices. Zonal and nodal price differences represent the underlying cost of constraints and therefore the potential market value that may be produced from infrastructure investments that relieve constraints.

### **Energy transmission investment**

30. Strata undertook a review of the \$1 billion North Island Grid Upgrade Project (NIGUP) for the New Zealand Commerce Commission. This review included an assessment of the management of the alliance based Contracts under which the NIGUP had been constructed. David Swanson, who assisted in this project, was project manager for the UK National Grid's major grid investment projects.
31. Two members of Strata's team are past CEOs of major energy infrastructure businesses. Dave has significant experience in infrastructure investment in electricity, gas and mining infrastructure. During the time that he was CEO of ECNZ, one member had responsibility for the construction of the Clyde Dam and repowering of the Manapouri hydro project.
32. One of our team was responsible for the National Grid's investments in Northern England and its commercial operations in the eastern seaboard of the USA. He was also National Grids' Manager for the Bass Link project in Australia.
33. Three of our people were members of the Strata/EMCa team who reviewed and advised the AER on Powerlink's proposed 500Kv transmission upgrade. The deferral of the investment based on the Strata/EMCa advice has avoided a significant and costly stranded infrastructure investment.

**Distribution infrastructure investment**

34. Strata advised the New Zealand Commerce Commission on its assessment of the Christchurch electricity distributor's customised price-quality path application. This work included an assessment of a significant investment in the reconstruction of Christchurch's 66kV subtransmission system.
35. As executives and directors of electricity distribution businesses, three members of our team have had responsibility for numerous distribution system investments.
36. One of Strata's team members has experience in gas infrastructure investment and managing transmission business risk, development, compliance, including management of a \$900 million dollar capital expenditure budget.



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