

**Submission**

**No 16**

## **INQUIRY INTO THE ECONOMICS OF ENERGY GENERATION**

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Jonathan O'Dea MP  
Chair  
Public Accounts Committee  
Parliament of New South Wales  
Macquarie Street  
Sydney NSW 2000

Dear Mr O'Dea

#### INQUIRY INTO THE ECONOMICS OF ENERGY GENERATION

ERM Power welcomes the opportunity to provide a submission to the Public Accounts Committee's inquiry into issues relating to energy generation in New South Wales.

ERM Power is Australia's fastest growing retailer to large (commercial and industrial) electricity customers, and Australia's leading developer of new generation, having developed over 2,000 MW of gas generation in Australia since 2005, including the 660 MW Uranquinty power station.

ERM Power is a member of the National Generators Forum and endorses the NGF submission to the Inquiry. The NGF submission provides a comprehensive overview of the national electricity market and the economics and drivers of efficiency in energy generation. In particular, it makes the key observations that:

- the generation sector is competitive and market-driven
- the sector responds to market investment signals to provide the most efficient generation mix to meet the pattern of demand from end-consumers
- there is little scope to improve the operation of the generation sector, with the exception that efficient investment is distorted by a number of government policies at both a State and Federal level that mandate particular technologies and subsidise inefficient outcomes. Ultimately these policies impose a significant cost burden on electricity consumers and pose a threat to system security.

The purpose of this complementary submission is to address some key principles that should underpin market rules and government policies as they relate to the generation sector, and to identify some further issues that, in ERM Power's view, offer significant opportunities for substantial reductions in retail electricity costs.

While it is recognised that the large-scale renewable energy target (LRET) and small-scale renewable schemes are Federal Government initiatives, in our view it is important to note and draw lessons from the unintended adverse consequences these and similar programs (such as State-based feed-in tariffs) can have on the generation sector and on consumer electricity bills.

The LRET is essentially technology-specific, with wind the only near-commercially viable large-scale generation technology. As the NGF submission notes, wind generation has been found by the AEMC to suppress pool prices and reduce incentives to invest in firm peaking capacity. Under current market rules intermittent generation (and non-scheduled generation) potentially create dispatch risks for firm generation that present further investment risks for scheduled capacity.

Wind generation output is often negatively correlated with demand, meaning that wind capacity needs to be almost entirely duplicated by firm peaking plant. This significantly increases the total infrastructure cost.

Wind generation faces an increasing cost curve, and as sites with more marginal wind resources or further from the existing network are developed, governments will be under pressure to subsidise new transmission connections.

The LRET target is unlikely to be met, and consumers will pay up to a 30% premium on their electricity bills in direct scheme costs, plus additional indirect costs of duplicated network and generation infrastructure.

Similar issues can readily be identified with domestic PV – inefficient capital, additional network costs (to manage reverse flows), negative welfare impacts, minimal carbon abatement benefit – and with the Solar Flagships scheme.

ERM Power accepts that lowering the generation sectors emissions intensity is an important objective. The problem with these schemes is that they are not based on relevant fundamental principles such as least cost abatement, technology-neutral policy, or minimising total infrastructure costs, nor do they reasonably serve alternative objectives such as industry development.

While there may be circumstances in which market intervention is warranted, 'picking winners' is fraught with danger. The generation sector will continue to deliver a reliable and efficient electricity supply so long as it is confident of a stable regulatory environment based on sound principles.

To the extent that the generation sector can be made more efficient, the solution lies in reform of the network and retail sectors. As noted in the NGF submission, the optimal generation plant mix is primarily determined by the shape of the load duration curve.

A flatter load curve (that is, less peaky end-demand) would require less capital to be invested in generation capacity to supply a given amount of energy and, in the long-run, reduce the average generation sector emissions intensity (more baseload and less peaking plant).

Moreover, in time a flatter load curve would substantially reduce the largest and fastest growing component of retail electricity bills, network costs.

ERM Power analysis of regulated retail tariffs indicates enormous scope for reductions in retail tariffs through demand-side innovation. However there are multiple impediments, both regulatory and vested interest, to real reform in this area.

These include the indifference of the large vertically-integrated energy companies with franchise customers to high regulated tariffs, a regulatory structure for monopoly distribution and transmission networks that rewards higher capital expenditure, and a lack of regulatory flexibility to allow customers (and smaller retailers) to share in the benefits of demand response.

ERM Power has established itself as an innovative retailer to large electricity customers and is actively pursuing a range of demand response initiatives including peak demand management. Opportunities in aggregation of firm and non-firm network capacity and dispatch of standby generation across multiple large customers are also currently being considered.

ERM Power considers that many of these initiatives could be offered to smaller customers, subject to changes in current regulations. It is questionable whether regulated customer arrangements, other than some safety net provisions, continue to serve any real purpose for most customers. At the very least, closer scrutiny of some of the tariff components such as customer marketing and retention costs is warranted.

Electricity retailers necessarily manage the relationship with customers and must play a critical role in developing and tailoring products that allow customers to manage their electricity costs. However there is limited scope for retailers to offer innovative products to customers while monopoly network service providers are not obliged or incentivised by market rules to facilitate such arrangements.

Ultimately the objective of Governments should be to put in place a framework that supports consumers being delivered a reliable energy supply at lowest possible cost. While much has been achieved in electricity market reform, rapidly rising retail prices are now placing the focus on the need for significant new initiatives. These reforms must be in the network and retail sectors.

ERM Power would be pleased to contribute to the development of options to substantially reduce retail electricity prices in New South Wales [REDACTED]

Yours sincerely,

 **Philip St Baker**  
Managing Director & CEO  
ERM Power Limited