

CS Energy's response to the Queensland Productivity Commission's Draft Report on the findings of the Electricity Pricing Inquiry

11 March 2016

Executive summary

The Queensland Productivity Commission's (QPC) draft report on the findings of the *Electricity Pricing Inquiry* is a welcome addition to the public discourse on electricity prices in Queensland. CS Energy is generally supportive of the Inquiry's findings. However, there are some recommendations being proposed by the QPC that CS Energy cannot support – specifically, recommendation 6, 7, 8, and 21.

With respect to recommendation 6, CS Energy agrees with the QPC's conclusion that 'the National Electricity Market (NEM) has worked effectively over the last two decades to deliver a competitive generation sector.' Interventions that would strictly prohibit CS Energy to increase its generation capacity are, therefore, unwarranted and counter-productive. Evidence suggests that the market is highly competitive and that there are sufficient signals to drive new investment (or otherwise) in the generation sector – whether by privately owned businesses or Government-owned electricity corporations. CS Energy argues that market power is transient in nature and constrained by competition. To intervene in the manner in which the QPC recommends is contrary to the tenets of microeconomic reform and should not be endorsed by the Queensland Government.

With regard to recommendations 7 and 8, CS Energy believes that the wholesale electricity market is competitive and that activities of market participants are more than adequately regulated. We do not agree with any recommendation that would add another layer of unnecessary regulation to an already heavily regulated industry. To do so would not induce greater productivity. CS Energy rejects the premise upon which these recommendations have been drafted and instead agree with the findings of the QPC's Inquiry that states 'there is no evidence [that CS Energy has] operated outside of the National Electricity Rules' (NER). CS Energy believes that the NEM is competitive and highly regulated by the National Electricity Law (NEL) and NER. Moreover, CS Energy operates in strict accordance with, and takes very seriously, its obligations to comply with all rules and regulations governing the electricity industry. As such, CS Energy cannot support the QPC's desire to require CS Energy and Stanwell to develop and adhere to a Code of Conduct with respect to bidding behaviour. This could potentially reduce competition in the market and may even breach the *Competition and Consumer Act 2010 (Cth)*. In addition, CS Energy cannot support the recommendation that would require CS Energy and Stanwell to report all late rebids on the basis that the NER have recently been amended through due process and provide more than adequate regulation of any market participant's bidding activities.

Finally, CS Energy does not agree with the recommendation that the Queensland Government should be given more oversight of its electricity corporations. CS Energy believes that *Government Owned Corporations Act 1993 (Qld)* provides a more than adequate framework for the Queensland Government to monitor the performance of its electricity assets. In addition, CS Energy must fulfil its statutory obligations under the *Corporations Act 2001 (Cth)*. There are many formal and informal channels that CS Energy reports to the Queensland and Commonwealth Governments to meet its corporate governance and reporting obligations. There is no need for more regulation – that would be counter-productive.

Background

The QPC was tasked with preparing a report that considers the electricity supply chain and the contribution of each component to electricity prices over the short, medium and long term. In doing so, the QPC has developed draft findings and recommendations, some of which CS Energy disagrees with as outlined in this report.

Market concentration

Noting that the QPC itself recognises it has further work to do regarding market concentration¹, it is evident, due to recommendations 4, 6, 7 and 8, that the QPC is minded that the Queensland wholesale electricity market is too concentrated with excessive market power for the two Government-owned generators – CS Energy and Stanwell. This is cited² as being a factor that has increased the Queensland wholesale market price and will contribute to the Queensland price being higher than other jurisdictions in the future. On this basis, the QPC developed the following recommendation:

Draft recommendation 6

To reduce the combined market concentration of CS Energy and Stanwell, the Queensland Government should confirm that it does not intend to increase the size of the existing Government-owned corporation (GOC) generation capacity.

We note that in forming this opinion, the QPC did not consult the Australian Energy Market Commission's (AEMC) recent determination on generator market power. We summarise the AEMC determination as follows:

'Perfect competition'³ is unrealistic in wholesale electricity markets: this may be due to the presence of fixed costs, barriers to entry or imperfect information. 'Empirical estimates' demonstrate the NEM is 'workably competitive', in that if a firm has the ability to increase price above its marginal cost for any sustained period, then new entrants will be attracted to the market and profits will reduce. A workably competitive market does allow for the exercise of 'transient market power', which has economic cost, yet due to its short-lived nature, does not require intervention to improve economic efficiency. This is because regulatory intervention may impose more costs than benefits.

The 'empirical estimates' mentioned above are based on average annual pool prices by NEM region and are compared to an estimate of the Long-Run-Marginal-Cost (LRMC) - that is, the recovery of all costs including a commercial rate of return on the assets – of investing in electricity generation.⁴ Should the pool prices exceed the LRMC estimate persistently, then generators may be earning excessive profits due to there being a presence of a barrier to entry. This test is similar to the Lerner index which is a 'margin' price- cost ratio. The test of competition in the NEM against LRMC effectively acts as a safety net. The regulator has grounds to intervene in the wholesale market where pool prices are persistently in excess of LRMC, a situation not prevalent in the current market.

Application to the Queensland wholesale electricity market

It is CS Energy's view that prices in Queensland have been the result of intense competition. It is not *perfect competition* but is representative of an equilibrium equivalent to a workably competitive outcome.

¹ QPC, *Draft Report: Electricity Pricing Inquiry*, page 43.

² QPC, *Draft Report: Electricity Pricing Inquiry*, p43, 3.3.4, paragraph two

³ Perfect competition is a structure where infinite firms that have freedom of entry and exit, perfect information and offer a homogeneous product. In such a market all firms are price takers and their demand curve is perfectly elastic.

⁴ It is our understanding that the COAG Energy Council is making changes to the National Electricity Law to allow an institution, such as the Australian Energy Regulator (AER), the power to perform this LRMC test.

Because the market is competitive CS Energy believes that it reveals efficient costs and we assume the prices provide the right incentive for marginal decision making, which is a tenet of microeconomic reform. The stable equilibrium has resulted in prices, both in the forward and spot markets, below a generator’s long run costs. Investors, such as CS Energy’s shareholder, have suffered for investing capital in generation based on the expectation of higher electricity consumption and prices which have not eventuated.

The following figure presents annual average regional reference prices (RRPs) for the NSW, Queensland and Victorian regions of the NEM. The data is taken from Australian Energy Market Operator (AEMO) and does not include a deduction for the *Clean Energy Act 2011* (Cth), otherwise known as the ‘Carbon Tax’, that applied in 2012-13 and 2013-14.

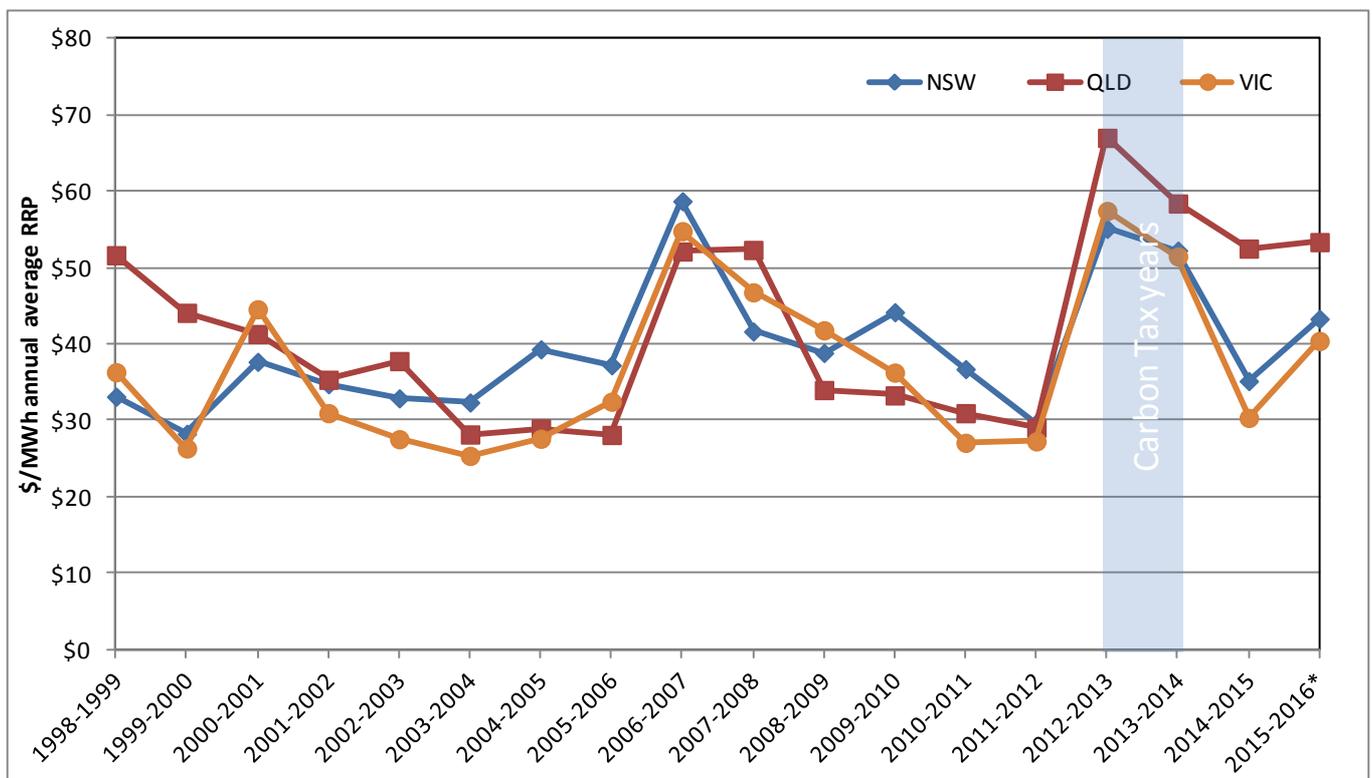


Figure 1: Annual average Regional Reference Price for NSW, Qld and Vic regions of NEM

*2015-16 is year to date, source AEMO, Average Price Tables, data taken 10/03/2016.

Given the NEM is an ‘energy only’ market with a price cap (Market Price Cap currently \$13,800/MWh) used to align with the Reliability Standard, price signals and perceived risks are important for efficient supply. Because the electricity market is made up of producers with differing variable costs, the price being set by a producer at the margin will create a profit or “rent” for a cheaper producer below the margin (NEM auction process sets the price that generators receive at the price of the marginal MW used to meet the marginal demand). These are called infra-marginal rents.

The Market Price Cap is critical as it effectively clears the market at times of high demand. This price signal (or risk) provides the incentive to supply the desired reliability. Please note the market need not clear at the market price cap for the incentive to have worked (encouraged efficient supply).

In his paper for the AEMC Professor Yarrow⁵ highlighted that participants should be expected to offer prices not at their incurred cost (variable cost or short run marginal cost, which is effectively the cost of fuel) but at economic cost, which will invariably be based on their expectations of other participants' offer prices, which will be based on other participants' expectations, and so on. The development of these expectations was described as the price discovery process. Professor Yarrow explained in his paper that a generator will "price up" to the next nearest competitor's price (or even over) to enable it to profit from the circumstances in a transitory nature. These rents should not be confused with infra-marginal rents.

Academic literature⁶ recognises that profit-maximizing behaviour, in a market with transient capacity constraints and inelastic residual demand, is for a participant to offer a quantity in the hope that price equals marginal revenue. This can be approximated to a game theory 'Cournot-Nash' competitive outcome. There has been debate⁷ as to the practical application of these theories in estimating economic harm given there is uncertainty, potential for new entry and irrational behaviour by participants. Given any regulatory intervention itself has an economic cost any intervention to inhibit profit-maximizing behaviour may not be in the consumers' interest.

Obtaining profits from these circumstances is everyday activity in the NEM's price auction process. Typically, however, the profits are small. The differences are usually cents or dollars, rather than hundreds and thousands. The question for economic and competition regulators, such as the AER, AEMC and the Australian Competition and Consumer Commission (**ACCC**) is whether one market participant can *unilaterally* increase prices above cost without the threat of competition over a sustained period. This has not been the case to date, with evident prices still below the LRMC.

Should the Queensland wholesale power market be changed?

The Queensland region of the NEM is depicted in the charts below. Stanwell and CS Energy as competing merchant generators with differing trading strategies and objectives have a combined market share of around 50 per cent. The Queensland market, however, is highly competitive. For generator participants to be able to influence prices at times of higher demand, they have to have lower levels of vertical contracting. However, selling too few electricity derivatives exposes a generator to cash-flow risk should it eventuate that demand is lower than expected or if competitors have sold those electricity derivatives instead. The generation business is a high capital, regulatory and staffing cost business with substantial fixed costs that need to be covered.

The following figures presents market shares by registered capacity with the Australian Energy Market Operator (**AEMO**). The largest demand side participants, Boyne Smelters Limited and Sun Metals, have also been included. Only the share of Gladstone Power Station that CS Energy has dispatch rights over has been assigned to it, otherwise it has been allocated to the Interconnection and Power Pooling Agreement (**IPPA**) participants.

In the left chart, Stanwell share includes Swanbank E CCGT which is presently mothballed. In the right chart this unit has been removed.

⁵ Bidding in energy-only wholesale electricity markets, Professor George Yarrow, assisted by Dr Chris Decker, November 2014 prepared for the AEMC

⁶ Regulating Competition in Wholesale Electricity Supply by Frank A. Wolak, Stanford University 2005,

⁷ For example: A Critique of Wolak's Evaluation of the NZ Electricity Market: Evans, Hogan and Jackson 2011; Market Power in Electricity Markets: Beyond Concentration Measures, Borenstein, Bushnell, and Knittel 1999

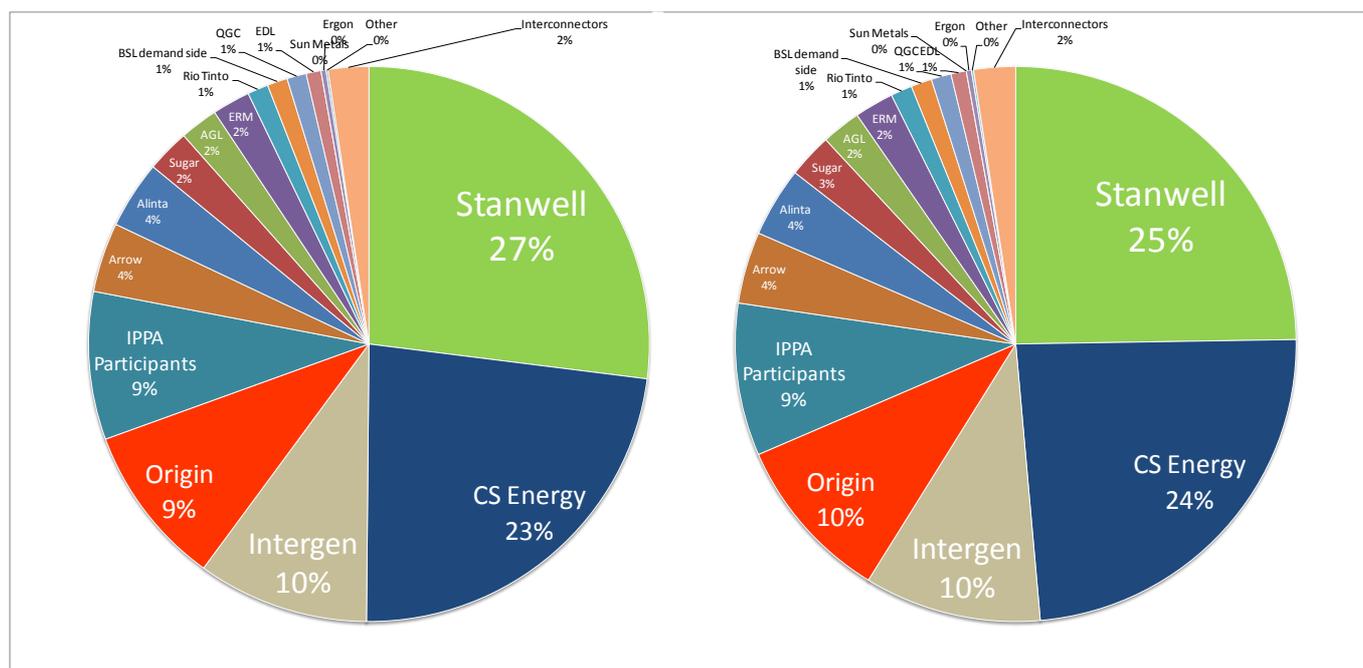


Figure 2: Registered Capacity shares of participants in the Queensland region of the NEM

Due to the presence of competitors, foremost Stanwell in the case of CS Energy, it appears that a single generator participant cannot unilaterally reduce vertical contracting to influence opportunity for higher prices, without significant risk around supply and demand conditions and not being able to profitably exercise that influence. It is for this reason we consider the market power is constrained by competitors, transient in nature and the market can be deemed to be workably competitive.

It is for these reasons that CS Energy considers the existing market structure to be competitive, with this proven by the poor financial results and losses of CS Energy in recent years. Further, CS Energy's forecast financial performance over the coming years achieves nowhere near a commercial rate of return on assets employed.

The competitive pressures have driven CS Energy to reduce costs, more accurately target capital investment and improve performance. In particular we have improved the value achieved for labour and capital inputs in light of lower wholesale prices since the generator restructure of July 2011. These are productivity benefits of the microeconomic reform of establishing the competitive wholesale market.

Notionally CS Energy and Stanwell could be broken up into smaller generators, but this risks interfering with existing management processes, policies and duplicating systems and costs. It would also limit the potential future options for such businesses. It is unlikely smaller operations could compete with more dominant NEM participants, Origin and AGL, who have followed strategies of horizontal and vertical aggregation.

Considering the above discussion, it follows that the main option to mitigate competition impact and economic harm from any perceived transient market power arising from the share of CS Energy and Stanwell is the allocation of vertical contracts⁸. It would not matter how large these generators are, because if the vertical contracts held matched generation there would be little incentive to exercise perceived transient market power.

⁸ Vertical Arrangements, Market Structure, and Competition: An analysis of Restructured U.S. Electricity markets, Bushnell, Mansur and Saravia, 2007

In this context the QPC should realise CS Energy and Stanwell already have vertical contracts (pre-NEM legacy contracts⁹, existing electricity derivatives and those allocated by Government¹⁰) that mitigate perceived transient market power. Importantly Ergon Energy Queensland (**EEQ**) is a primary source of vertical contracts for the state enterprises, CS Energy and Stanwell. The recommendation of the QPC with regards to EEQ is important in this regard. There is also the option for competition regulators to enforce an undertaking or impose a licence condition for the larger generator to offer a certain level of vertical contracts to the market¹¹.

The implications of vertical integration are wider than just the wholesale market. Balanced vertical integration may result in conditions in the wholesale market closer to perfect competition¹², the implications for the retail market may be less favourable. This is because it may create an oligopolistic retail market structure with significant barriers to entry and scale.

It is for this reason the QPC should consider the implications in the long run for both the wholesale and retail markets, as with the emergence of vertical integration, the level of competition in one element of the supply chain affects the other. We note, as recognised in the QPC's Issues Paper, the retail market in south east Queensland is far more concentrated than the wholesale market in Queensland.

Generator rebidding

The QPC appears sympathetic to sophisticated market participants who have invested significant capital in a market with a known design and have had every opportunity to manage their risk appropriately. On this basis, the following recommendations have been made:

Draft recommendation 7

The Queensland Government should require CS Energy and Stanwell to develop and adhere to a common voluntary Code of Conduct (the Code) in respect of their rebidding behaviour. The Code should be developed as part of a public consultation process.

Draft recommendation 8

The Queensland Government should require CS Energy and Stanwell to report to the Government, on an annual basis, all late rebids submitted to the Australian Energy Market Operator. This report should be audited by an independent body, and the findings of the audit made available to the public.

The above two QPC recommendations appear to be premised on the assumption that CS Energy and Stanwell are not conducting trading activities 'consistent with both the 'letter and spirit' of the NER'¹⁴. CS Energy rejects this assumption.

Further, the QPC should note that with increasing renewable generation (for example wind and rooftop solar), supply and demand fluctuations are expected to increase into the future. This will impact system

⁹ The Interconnection and Power Pooling Agreement (IPPA) between CS Energy and the Participants regarding Gladstone power Station and the Boyne Island Aluminium smelter base-load.

¹⁰ For example: Annual Report, 2012/2013, CS Energy: On 22 May 2013, the Queensland Government directed CS Energy to enter into a range of financial derivative contracts with Ergon Energy Queensland Pty Ltd. The contracts, which commence in early 2014, provide increased levels of volume and price certainty over the forecast period.

¹¹ The European Commission has approved under the EU Merger Regulation the proposed acquisition of British Energy (BE) by Electricité de France (EdF). The Commission's decision is conditional upon EdF's commitment to divest the power generation plant at Sutton Bridge in the UK (owned by EdF) and at Eggborough (owned by BE), to sell certain minimum volumes of electricity in the British wholesale market, to unconditionally divest a site potentially suitable for building a new nuclear power station located at either Dungeness or Heysham in the UK at the purchaser's choice and to end one of the merged entity's three grid connection agreements with the National Grid at Hinkley Point in the UK. The Commission concluded that the transaction, as modified by these commitments, would not significantly impede effective competition in the European Economic Area (EEA) or any substantial part of it.

¹² Vertical Integration and Market Power in Electricity Markets, S. Hogan and R. Meade 2007

¹⁴ QPC, *Draft Report: Electricity Pricing Inquiry*, page 50.

stability and inertia, and create market volatility as generation fluctuates, users seek to manage load and suppliers seek to manage supply through rebidding. It is also important to note that with any auction process, which is what the National Electricity Market price setting process is based on, the auction 'heats up' towards the end of the process as further information comes to hand to all market participants and offers are adjusted to meet requirements. Accordingly, it is normal to expect greater volatility in the market towards the end of half hour trading intervals.

As outlined previously, CS Energy believes the Queensland wholesale market to be competitive. We also believe that activities of market participants are adequately regulated.

It would be logical to determine whether stakeholder concerns regarding market structure and concentration are valid, and if so, quantify the economic harm to consumers and then make recommendations consistent with the problem. Typically options to solve concentration problems include divestment, ring fencing, vertical contracting and or third party arrangements to supply to competitors. CS Energy, as with every market participant, operates under the NER (**Rules**). The AEMC has given the AER significant powers to monitor, enforce and prosecute market participants where there is a breach of the Rules. There are significant penalties with corporate and personal exposure.

The AEMC is charged with determining the level of regulation that is required to satisfy the National Electricity Objective (**NEO**). The NEO requires the efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to (among other things) price, safety and reliability.

Accordingly, the recommendation by the QPC which would result in the imposition of further regulation on CS Energy and Stanwell, and further oversight of their operations is illogical and suggests that the QPC does not consider that the current Rules or the current approach to enforcement of those Rules is adequate.

The Rules set strict requirements for offers to the market. New Rule 3.8.22A¹⁵, which is to be effective from 1 July 2016 prohibits offers, bids and rebids that are false, misleading or likely to mislead and applies to all participants, irrespective of the participant's market share or ownership. This new rule also imposes new information recording requirements for rebids that are made 15 minutes (or less) prior to the start of a trading interval. These records must be made available to the AER on request.

In making the 'New Rule', the AEMC specifically reviewed allegations by interested parties around the behaviour that has been ascribed the term 'strategic late rebidding'. It is CS Energy's submission¹⁶ that bidding late in an interval is an integral part of an efficient market and occurs soon after a change in market circumstances. For this reason and upon advice from Frontier Economics, (as shown in Appendix A), that similarly opposed the AEMC's draft determination, CS Energy opposed the basis on which the rule change was proposed. Irrespective of CS Energy and Frontier's input, the AEMC determined the New Rule to be in accordance with the NEO and appropriate to address any concerns in the market about 'strategic late rebidding'.

If the QPC is dissatisfied with the AEMC's determination, it would be for the QPC to recommend the Queensland Government propose a further rule change to the AEMC to address any perceived concerns, not impose further restrictions on specific participants. To do so would place the participant at an unfair disadvantage in a competitive market.

The proposed requirement would place significant additional reporting and auditing costs on the GOCs in what is already a highly regulated market. CS Energy has many units, controls more marginal plant like Gladstone Power Station, and makes a significant quantity of re-offers which are compliant with the

¹⁵ Existing Rule 3.8.22A is known as the 'good faith rule' and requires that participants must have a genuine intention to honour bids and rebids.

¹⁶ Refer to CSE's and Frontier's submissions in this regard expressly.

Rules. Restrictions or imposts on GOCs serve to increase the distortion of Government ownership. QPC recognises itself that it would come at a cost to CS Energy and Stanwell.

In addition, the AEMC's Rule is specifically not designed to intervene in structure of the market, or address any concerns regarding market structure or concentration. Notwithstanding that the QPC itself recognises it has further work to do regarding market concentration¹⁷, it is our opinion the QPC should not recommend a regulation be used for a purpose it is not intended.

It is our opinion that:

- any proposed change which impacts a market participant in a competitive environment should be raised through the formal rule change proposal process so that it receives due consideration, industry consultation and would apply unilaterally to all participants;
- the requirement to agree and cooperate with Stanwell on a code of conduct would potentially reduce competition in the market and may breach the *Competition and Consumer Act 2010* (Cth) 2010. The code of conduct should be the NER;
- the requirement to report on all late rebids would add considerable cost to both parties as each rebid report would need to be prepared as if submissible to court; and
- the requirement for an audit on the late rebids without due process will have little standing.

¹⁷ QPC, *Draft Report: Electricity Pricing Inquiry*, page 43.

Performance monitoring

With the Queensland Government committing to retain ownership of its electricity business, the QPC recommends enhancing the performance monitoring of the GOCs. This includes ensuring a robust monitoring framework and skills-based boards with the necessary expertise and experience. On this basis, the QPC developed the following recommendation:

Draft recommendation 21

The Queensland Government should consider enhancing its shareholder performance monitoring role for electricity GOCs with a focus on achieving cost and performance efficiencies.

The electricity businesses owned by the Queensland Government are established as Corporations Law companies under the *Government Owned Corporations Act 1993 (Qld)* (**GOC Act**) with independent directors and senior executives.

As shareholder, the Queensland Government is entitled to develop commercial mandates for each business, a process which is currently underway and being managed by the Queensland Treasury Corporation, and hold the directors and senior executives accountable for its delivery.

In the private sector shareholders appoint the chair and board of directors with the Chief Executive Officer appointed by the board. The board and executive are empowered by and are fully accountable to the distribution of shareholders (whatever this may be) who have provided capital. If the capital is not forthcoming, then the board reassess business strategy and executive. Capital markets control the executive team.

In a similar manner, the GOC Act should allow the Government shareholder to direct capital in a manner that gives sufficient guidance to, yet without restricting, the GOC director and executive appointments, who remain fully accountable to the shareholder.

It is CS Energy's opinion that the board of directors and executive team should be fully accountable to the shareholder in a similar manner to how the capital markets discipline private businesses. There is no need, in CS Energy's case, for periodic intervention by the shareholder in running the business.

Appendix A – Frontier Economics report