17 December 2014

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Committee Secretary
Senate Standing Committee on
Environment and Communications
PO Box 6100
Parliament House
Canberra ACT 2600
Phone: 02 6277 3526
ec.sen@aph.gov.au

Dear Committee Secretary

Re: Senate Inquiry: Performance and management of Electricity network companies Impact of high electricity

The Bundaberg Regional Irrigators Group (BRIG) was established to represent irrigators in the Bundaberg district across a range of commodity groups including sugar cane, grain and horticulture. We are a member of the National Irrigators Council (NIC) and endorse proposals and submissions raised by the NIC

Firstly we would like to congratulate the Leader of the Australian Greens (Senator Milne) for sponsoring the Senate Inquiry into Gold Plating and Electricity Network Price Hikes. We welcome the opportunity to contribute and we wish to remain involved with the process into the future.

BRIG members farm on approximately 36,000 hectares and use an estimated 1,100 irrigation pumps and associated distribution systems to irrigate a variety of crops in the Bundaberg Regional Council area. A significant percentage of these systems (circa 90%) are powered by electricity.

Rapidly rising electricity prices are having a severe impact on the costs faced by our members and irrigated agriculture in general.

It is clear that the electricity price increases are adding significantly to the cost of irrigated agriculture, are threatening the sugar industry's international competitiveness, and are destroying demand for electricity.

The higher prices are hastening the change to alternative energy sources, threatening the viability of Ergon's network investments and increasing the risk of electricity assets being stranded.

Over the past year, BRIG has worked closely with Queensland Government, The Queensland Competition Authority and Ergon to develop a deeper understanding of the issue and to find alternative pathways to achieve sustainable electricity prices.

Our analysis shows that reducing electricity prices for food and fibre producers will stimulate electricity demand, increase network utilisation and deliver improved financial outcomes for Ergon and the State Government – while delivering price relief to irrigators.

Electricity networks are natural monopolies.

The network price setting process is deeply flawed. It is a one sided process that has no regard for impact on consumers or the wider economy.

Network owners have worked out how to manipulate the rules to maximise revenue and profit.

AN INSIDER'S STORY

EXCLUSIVE
Did Energex conspire to inflate power bills

ELEC TRICKERY

KELMENY FRASER

ENERGEX bosses examined how to artificially drive up household power prices after warnings of a "death spiral" in revenue, a whistleblower has claimed.

Cally Wilson, an Energex treasury analyst who quit on Monday to go public with her allegations, said she was asked to manipulate data as the State Government-owned energy company looked at ways to boost revenue. The allegations come after years of spiralling power prices, with electricity bills doubling in the past six years.

Ms Wilson (pictured) said the incident took place as Energex, which has more than 1.3 million customers, was preparing a proposal to the Australian Energy Regulator, which determines how much the company can charge householders.

"Energex were looking at tactics ... to ensure revenues also remained high," Ms Wilson claimed. An Energex spokesman disputed Ms Wilson's version of events, saying work on the data was for a corporate plan and not the company's revenue bid.

REPORTS P4-5

The agreement that lead to the creation of the Australian Energy Regulator (AER) and Australian Energy Market Commission (AEMC) was negotiated in 2003, formalized in 2004 and AER formally came into existence in 2005. The first AER regulatory decisions took effect in 2009.

Since 2009 we have recorded the world's highest increases in electricity places.

We are now paying 107 per cent more than we were in 2009 (CPI increase over this period was 13.9 per cent) for exactly the same service and level of reliability.

The following table illustrates the "back of an envelope figures for a family owned and operated farm in Bundaberg.

	2007/08	2013/14
Price of cane/tonne	$32.00	$37.00
Harvesting	7.00	7.50
Fertiliser	4.00	6.00
Chemical	2.00	2.00
Rates	0.50	1.00
Fuel & Oil	2.00	2.00
Irrigation Electricity	**3.80**	**9.00**
Repairs and Maintenance	3.00	3.00
Planting	3.00	3.50
Capital reinvestment	3.00	2.50
Balance to live off	**3.70**	**0.50**

It is very clear that ERGON is capturing all efficiencies that the farm is achieving and most of the profit.

For a business that has very high fixed costs there has been little interest from ERGON in stimulating consumption as a means of maintaining revenue while reducing prices. This is another adverse outcome of rules that guarantee revenue regardless of consumption.

While consumers and the wider economy are enduring severe pain, networks are making record profits. Network businesses are the most profitable asset class on the ASX 200.

This profit gouging has a huge impact on irrigated farmers, many of whom are being forced to switch off the pumps because they can't afford the electricity cost to run those pumps.

Irrigators are a cornered demographic and in most instances do not have the opportunity to go off grid. In that characteristic they are not dissimilar to the domestic user who does not have the resources to install solar alternatives.

Many irrigators in Bundaberg are still paying last year's bills. If this wasn't enough to deal with, irrigators in Queensland are battling false claims by Queensland Competition Authority (QCA) and Ergon that they are being supplied well below cost.

An independent expert commissioned by CANEGROWERS and the Australian Sugar Milling Council (ASMC) found that:

- Claims that irrigators are being supplied at well below cost are false
- Claims that irrigators are being subsidised are false
- Per connection Ergon is the most profitable of all Government owned electricity providers
- CANEGROWERS has offered economically well founded solutions which do not impact other consumers

Agriculture is one of the four pillars supporting Queensland's economy and electricity is a large factor in farm profitability.

We are in danger of having dams full of water and no one able to afford to draw on them.

Ergon is reported to have spent $ 6 million hiring consultants and experts to justify their case to the AER.

Optimisation of Ergons profitability is not in the interests of Queensland's electricity consumers.

DOUBLE STING IN POWER CHARGE

EXCLUSIVE
KELMENY FRASER

ENERGY companies are slugging struggling Queenslanders millions of dollars to discover how to charge more for their power.

State-owned Energex and Ergon have spent a fortune hiring consultants and experts over the past year or more to compile a persuasive case for the Australian Energy Regulator to raise network charges.

And the costs of the exercise are passed back to households and businesses through their bills.

Energex CEO Terry Effeney this week referred to the expert advice in defending its proposal for a higher rate of return on investment than the AER guidelines advised.

"I hope you are now convinced that ultimately it is the AER who sets the decisions here," Mr Effeney said in a response to a question from *The Sunday Mail* at a forum.

The power businesses have proposed network price rises of just less than inflation over the next five years in their latest revenue bids to the AER.

While they claim it will offer price relief to households, consumer advocates argue it will "lock in" exorbitant price rises at a time when bills should be dropping.

Ergon's revenue bid has cost $6 million to prepare. Energex did not reveal the cost of its revenue bid, but industry experts estimated it would have cost at least $8 million.

The Major Energy Users lobby group has argued for a change to the process, arguing the AER is at a disadvantage in trying to disprove the arguments put forward by the power corporations.

"The (companies) have every incentive to overstate their needs and attempt to 'game' the regulator," the group argues in a submission to a Senate inquiry into electricity pricing.

"(They) have much more information available to them than the AER can access in the time available to complete the revenue review," it continues.

AER chairwoman Paula Conboy assured it would be "looking under the covers and kicking the tyres" of the revenue bids. The AER has taken a scalpel to revenue bids in NSW.

The Queensland revenue bids could soon be countered by a new alliance of power users being put together by lobbyist SAS Group, which has applied for grants for the move. If successful the grants would ultimately be funded by the power industry.

"We wouldn't be giving them an easy time," SAS consultant Jonathan Pavetto said.

YOUR SAY
Email yournews@thesundaymail.com.au or write to us at GPO Box 130, Brisbane, 4001
WHAT DO YOU THINK?

WHAT CAN THIS INQUIRY DO TO ASSIST

- Limit weighted average cost of capital to a ceiling of 6%
  A WACC of 6 would allow N (network) to be cut between 20% and 30% for everyone. (Not just irrigators)

- Seek approval of a rule by the AEMC that would enable irrigators, and all farmers, who are large users of electricity, to be a separately classified class of customer alongside business and households.

- As members of the National Irrigators' Council, we support a package of measures designed to improve energy productivity in Australian irrigated agriculture. The measures represent reform of network charging that would deliver in the order of a 30% reduction in electricity prices and include:
  - Implementation of volume based food and fibre tariffs, reflecting agricultural power use patterns on the network in terms of base load and off-peak use and including worthwhile time-of-use incentives for agricultural businesses during off-peak periods and over weekends;
  - Revaluing the regulated asset base of network businesses to remove the impact of historic over investment from the underlying cost base;
  - Promotion of increased competition in the electricity market;
  - Funding for on-farm energy audits and incentives for best practice energy efficient measures;
  - Development and implementation of strategies to manage peak demand which will help to optimise the efficiency of regional network investment, such as incentives for farmers to use less power or to rely more on back-up generators and renewable energy during periods of peak demand;
  - Linking capital expenditure (and regulated asset base) to network tariff customer classes;

Please call should you require further information or clarification.

Yours sincerely

Allan Dingle
Chair

Dale Holliss
Company Secretary

AN INSIDER'S STORY

EXCLUSIVE Did Energex conspire to inflate power bills

ELEC TRICKERY

KELMENY FRASER

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REPORTS P4-5

A SHOCK TO THE SYSTEM

Insider exposes ploy to amp up electricity costs

KELMENY FRASER

ENERGEX bosses examined how to artificially drive-up household power prices, a whistleblower has explosively claimed.

Cally Wilson, a treasury analyst with the government-owned corporation, told *The Courier-Mail* Energex staff manipulated data in modelling as the company looked at ways to boost revenue.

She said the "data manipulation" took place in mid-2013 when Energex was in the early stages of preparing its revenue proposal to the Australian Energy Regulator, which caps how much it can recover from householders.

The revenue cap impacts directly on how much household power prices will rise, with network costs by Energex, Ergon and Powerlink making up 50 per cent of power bills.

Ms Wilson's allegations Energex examined techniques to drive-up revenues – and prices – come after years of double-digit power bill increases, with bills doubling over six years.

Documents obtained by *The Courier-Mail* reveal Energex – with more than 1.3 million customers – had only months earlier noted concerns about tumbling demand forcing up power prices.

Ms Wilson, who will write to the regulator with her allegations, said she was asked by her Energex managers to find a debt rate that would meet their targeted weighted average cost of capital (WACC).

The WACC is a major factor in setting revenue caps, and in turn household power bills, and its accuracy has been a key source of concern amid evidence it should be far lower.

Ms Wilson said she and a colleague sat down at a Bloomberg computer terminal after receiving the direction and found a rate that was considerably higher than others to meet the target.

"Energex were looking at tactics to make sure the WACC remained as high as possible to ensure revenues also remained high," Ms Wilson said. "I was asked to find a rate that would support management's target.

"This is called reverse engineering. I found a rate that gave management the targeted number they were after, however, it was an unusually higher rate from a US bank."

Even a 1 per cent shift in the WACC amounts to at least $600 million in revenue, while a 3 per cent drop would lead to a 20 per cent fall in power prices.

"For a company to focus solely on maximising shareholder value to the exclusion of other stakeholders is a simplistic and old-fashioned concept in today's business environment," Ms Wilson said.

"The consequences of this sort of data manipulation predominantly affects the poorest, the disabled and the elderly and I don't think it is worthy of such a company as Energex."

It is unknown whether Energex ultimately used the figures in its confidential draft proposal now before the Newman Government.

But the account is expected to add to ongoing concerns the state's power distributors are using techniques to artificially inflate revenues – and

WHISTLEBLOWER: Former Energex staffer Cally Wilson. Picture:Luke Marsden

POWER TRIP

- Energex's regulated weighted average cost of capital, or WACC, is a key factor in setting power prices
- WACC calculates the cost of capital for an organisation, including the cost of debt
- Former Energex staffer Cally Wilson claims the power supplier examined artificially inflating the company's WACC
- Ms Wilson claims Energex examined choosing a higher debt rate to drive up the WACC
- The higher the regulated WACC, the more a company is able to recover from consumers
- High regulated WACC flows through to higher power bills
- The energy distributor's regulated WACC is currently at 9.72 per cent, but consumer advocates say this figure should be as low as 6 per cent
- There are also claims some distributors have overspent on infrastructure to drive up prices

energex positive energy

prices – under the AER's complex revenue model. Ms Wilson decided to go public after resigning on Monday.

An Energex spokesman disputed Ms Wilson's version of events, saying any work on the WACC in 2012-13 was for its five-year corporate plan and not its draft revenue proposal.

"A number of WACC scenarios were compiled for the Corporate Plan based on long-range and short-term rates at the times," he said.

"All scenarios collected were lower than the approved WACC in the 2010-15 regulatory period."

The AER late last year brought in new WACC guidelines to try to stop "opportunistic behaviour". But it has not halted criticisms the WACC set for NSW is unreasonably high.

"Regulated businesses have incentive to seek a WACC that is as high as possible because it will increase their revenue allowance," the AER reported in December.

Distributors have also been accused of overspending on infrastructure to boost returns.

Energy Minister Mark McArdle said it was "premature" to release details of the proposals. But he said he had commissioned the Queensland Competition Authority to assess the reasonableness of the draft proposals.

"The Government is keen to ensure the businesses' proposals reflect a prudent and efficient response to changing market conditions, including electricity demand and financing costs," he said.

Regulator says prices should fall significantly

KELMENY FRASER

POWER prices should be dropping "significantly" over the next five years, according to the Australian Energy Regulator's Consumer Challenge Panel member Hugh Grant.

Mr Grant said lower financing costs, falling demand, regulatory reforms and less onerous reliability standards should deliver reduced bills for consumers.

"Given those price reduction drivers, Queensland consumers are expecting significant reductions in network prices when the AER sets the revenues for Queensland's monopoly electricity networks for the next five years," Mr Grant said.

But he said that may not be the case if the Queensland Government owned networks – Energex, Ergon and Powerlink – follow the same approach as their NSW counterparts.

The NSW Government-owned networks recently submitted revenue proposals to the AER which would result in price increases of around CPI rather than price reductions.

Those proposals included record high spending on replacing their poles and wires and other equipment. There are concerns Energex could follow.

Every five years the AER decides the revenue energy distributors Ergon and Energex will be allowed to recover from consumers. This revenue cap determines the level of the networks' charges, which flow through to household bills.

Advice to Canegrowers and the Australian Sugar Milling Council on Ergon electricity tariff issues

August 2014

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1 Introduction

Canegrowers has been advocating for changes to the electricity tariffs for its members in Queensland. The Queensland Competition Authority (QCA) sets these regulated tariffs.

Recently the QCA has concluded that irrigators in Queensland are already being subsidised by other electricity users in Queensland, and that the tariff changes that Canegrowers' are seeking will only increase the level of this subsidy.

We have been asked to advise Canegrowers on the relevant issues. This includes assessing QCA's conclusions on Canegrowers' proposals. We have also been asked by the Australian Sugar Milling Council to investigate their electricity concerns. This report responds to these requests.

The report is set out as follows:

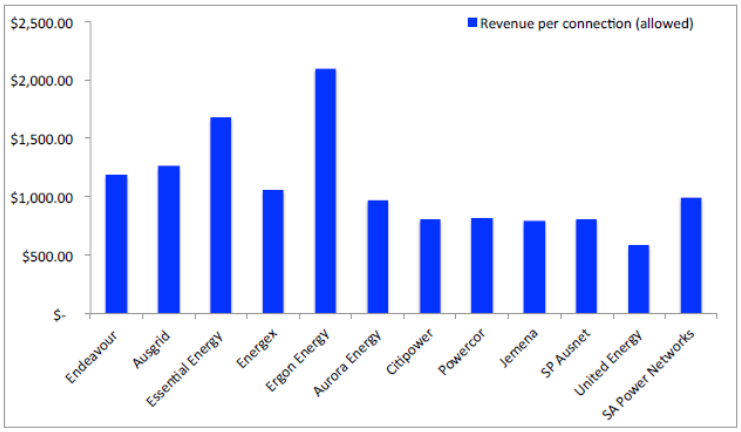
- Section 2 provides relevant background to the issues. It examines Ergon's revenues, costs, profits, regulated assets, average prices and operating conditions. It then describes the Uniform Tariff Policy, and the relationship between this, the Community Service Obligation and Ergon's profits. Finally the section compares the average price that irrigators in Queensland are paying for network services, compared to what they would pay if they were located in New South Wales, Victoria, South Australia or Tasmania.
- Section 3 is our assessment of QCA's subsidy claims in relation to Canegrower's proposals.
- Section 4 is our analysis of tariff issues affecting sugar millers in Queensland.
- Section 5 comments on Canegrower's tariff proposals to the QCA.
- Section 6 concludes and Section 7 recommends.

2 Background

2.1 Ergon revenue, costs and profits

Figure 1 below shows Ergon's allowed maximum regulated revenue per connection in 2014/15 compared to other distribution network service providers (DNSPs) in the National Electricity Market (NEM). It shows that Ergon's revenue per connection is far higher than any other DNSP.

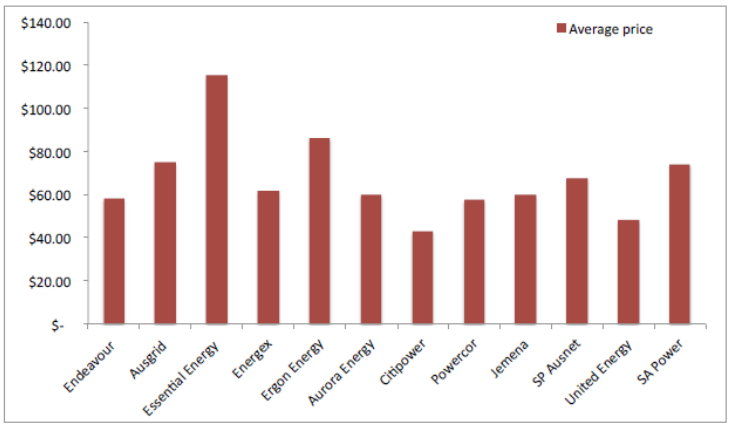
Figure 1. Maximum allowed regulated revenue per connection in 2014/15 for DNSPs in the NEM. ($/connection)



Source: regulatory decisions, CME analysis

Figure 2 shows that Ergon's average price is second only to that charged by Essential. In other words, while Ergon's customers on average consume more than others in the NEM (it actually has the highest energy density in the NEM), Ergon's very high income per connection is not explained by the fact that their consumers use more electricity. Ergon's high average prices are also play a major role.

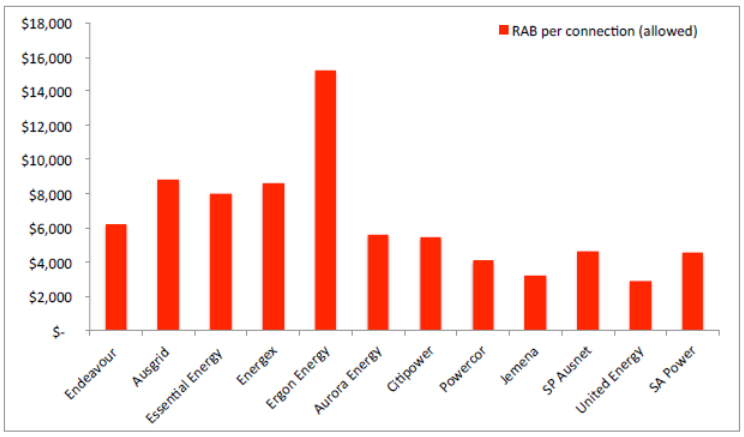
Figure 2. Average prices in 2014/15 ($/MWh)



Source: regulatory decisions, CME analysis

Figure 3 shows that a large part of the explanation of Ergon's high revenues per connection and high average prices is a regulated asset base per connection that is very much higher than that of other DNSPs

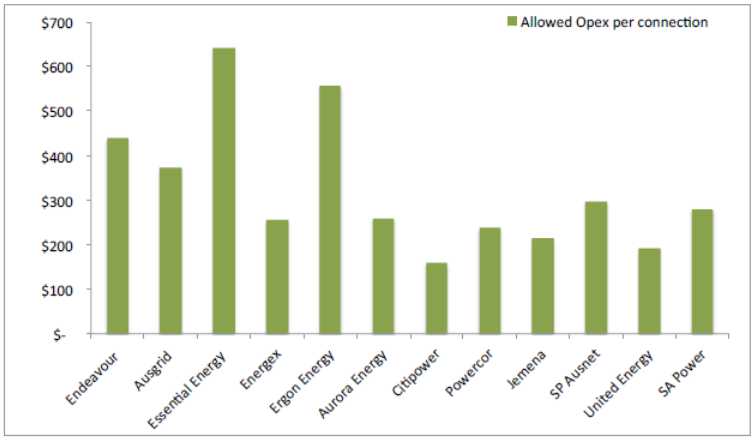
Figure 3. Regulated assets per connection in 2014/15 ($/connection)



Source: regulatory decisions, CME analysis

In addition to very high regulated assets per connection, Figure 4 shows that Ergon also has very high operating costs per connection, second only to those of Essential.

Figure 4. Operating costs per connection in 2014/15 ($/connection)

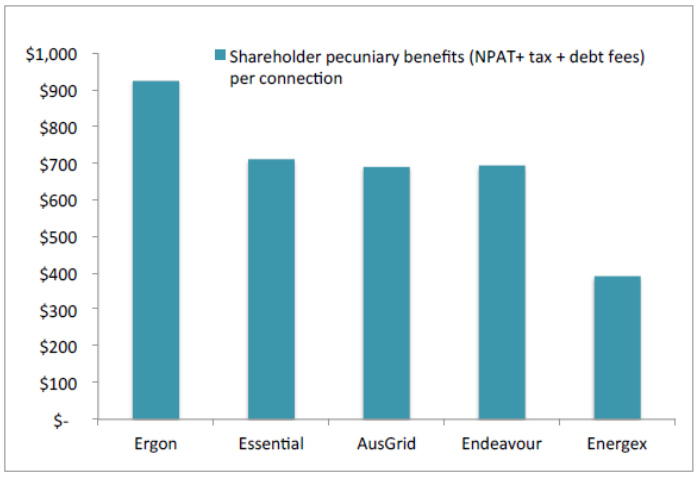


Source: regulatory decisions, CME analysis

Very high assets per connection combined with a generous allowed rate of return translates into high profits. This is shown in Figure 5.

This figure shows the financial entitlements of the mainland state governments in the NEM that own DNSPs (i.e. their entitlement to after tax profits plus debt guarantee fees plus income tax on profits). It shows that per connection, Ergon is by far the most profitable of all government-owned DNSPs. This chart is for the latest financial years for which audited data has been published. We expect that profitability in the 2013/14 financial year will have risen further.

Figure 5. Profits per connection 2012/13 ($/connection)



Source: published financial reports, CME analysis

2.2 Ergon operating conditions

Does Ergon Energy face operating conditions that are significantly more or less onerous than its peers that might explain costs, prices and profits that are higher than other DNSPs in the NEM?

Ergon does have the lowest customer density in the NEM, although not significantly lower than a cohort of peers that includes Powercor in Victoria, Aurora in Tasmania and SA Power Networks in South Australia. Ergon also has the highest proportion of customers on long rural networks. Both of these factors might explain relatively higher costs for Ergon.

However against this, 45% of Ergon's network is single wire earth return, a far cheaper technology than others. It also has a predominantly overhead network (more than 99% by length) not unlike other DNSPs that service sparsely populated areas such as SP Ausnet, Powercor, SA Power Networks and Aurora. Furthermore, Ergon has the highest energy density (MWh sales per connection) in the NEM and this would suggest lower average costs compared to networks that serve many smaller customers with lower average sales.

More generally, stepping back from the contemporary comparison, we find that in the period that Ergon's network costs have risen so much, its network density has actually improved. Even if network density might explain relatively higher costs for Ergon than other DNSPs – and we are not suggesting it does – it certainly can not explain why Ergon's costs and assets have risen as much as they have over the last decade. Low customer density can also not explain Ergon's extraordinary profitability.

2.3 Uniform Tariff Policy, CSO and Ergon's Profits

Under Queensland's Uniform Tariff Policy (UTP), non-market customers of the same class generally have access to the same regulated retail prices (notified prices)

throughout Queensland. It applies to all customers accessing regulated prices. Regulated prices are not available to large customers consuming more than 100 MWh per year in South East Queensland.

The QCA suggests that although the objective of the UTP has not been clearly defined, such policies are generally justified on equity or fairness grounds. The application of the UTP however is fairly clear: subject to transitional arrangements for various electricity users, those who consume electricity in Ergon's area of supply are able to access the same regulated tariffs in Ergon's area of supply. The higher network charges levied by Ergon, we presume, are used in the calculation of part of the Common Service Obligation (CSO) although precisely how this is done (and the CSO calculated) is not clear. The CSO is paid by the Government to Ergon.

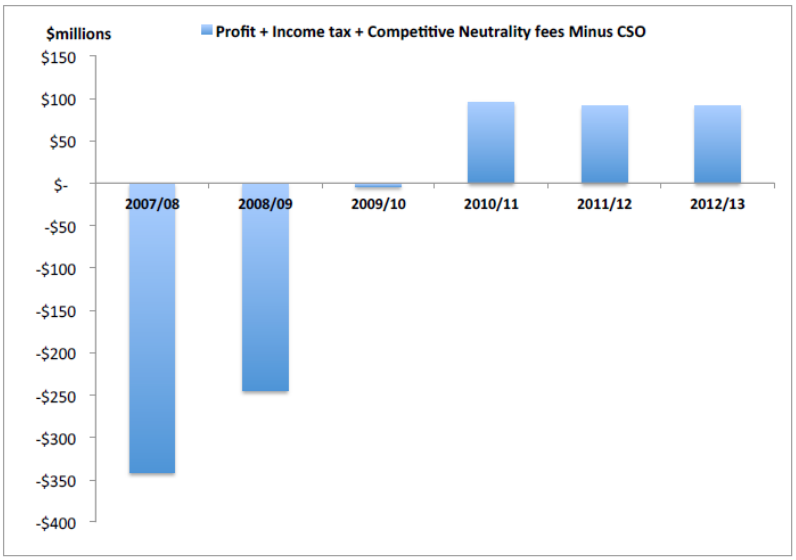
The QCA reports that the scope of the UTP might be too broad because it is also available to business customers, including very large commercial businesses and that the biggest customers of electricity receive some of the greatest benefits. The QCA suggests that some very large customers received individual subsidies worth more than $1 million each during 2012-13.

While the implementation of the UTP and the consequential CSO is reasonably clear, the detail of the CSO's calculation is not. For the past seven years the CSO paid to Ergon has varied between $585m in 2007/8 to less than half that ($252m) in 2010/11 to more than double that ($573m) in 2012/13. The annual value of the CSO does not seem to have any predictable relationship to the difference between Energex and Ergon's network tariffs as one might expect, since its main purpose is to make up for that difference.

Whatever might be the mechanics for the calculation of the CSO, it is paid by the Queensland Government to Ergon and since the Government owns Ergon, the government collects the gains in Ergon's profits that result from Ergon's receipt of the CSO. In this sense, the CSO is no more than the Government paying itself, albeit via a circuitous route. The CSP does however seem to provide an incentive for Ergon to inflate its network tariffs in the knowledge that the impact of this is not to increase prices paid by the regulated customers supplied by Ergon, but rather to increase the CSO it receives.

In Figure 6 below we show the Queensland Government's financial entitlements from Ergon (i.e. Ergon's after tax profits plus its Competitive Neutrality Fee plus its Income Tax) less the CSO it received. This moved from strongly negative in 2007/8 to stable at around $100m per year in 2012/13.

Figure 6. Queensland Government's financial entitlements relating to Ergon ($millions)



Source: published financial reports, CME analysis

The amounts in Figure 6 can be shown per connection served by Ergon, as shown in Figure 7. The numbers in this chart show that Ergon's after tax profits plus debt fees plus competitive neutrality fees less CSO receipt has been roughly constant at around $130 per connection for the last three years.

Adding the CSO per connection in 2012/13 of around $800, gives Ergon's actual net profit after tax plus CNF plus income tax of around $930 per connection as shown in Fugure 5. To put these profits per connection into context, SA Power Networks' reported net profit attributable to shareholders of $430 per connection in 2012/13 while UK Power Networks reported net profit attributable to shareholders of $100 per connection in 2012/13.

In other words, after receipt of the CSO, Ergon delivers more than twice as much to the Queensland Government per connection as SAPN delivers to its shareholders and more than nine times as much as UK Power Networks delivers to its shareholders.

Even before the CSO, in 2012/13 Ergon delivered greater financial benefit[1] per connection ($130 per connection) to the Queensland Government than UK Power Networks delivered to its shareholders ($100 per connection).

It might however be argued that this level of profit, although higher per connection is still only equivalent to a return of 2.5% on the $3700m equity in Ergon's balance sheet. Since 2.5% is far below a reasonable return on equity, by implication Ergon is returning far less than reasonable However, this criticism is fallible to the observation that $2082m of the $3715m equity in Ergon in 2012/13 is just an asset revaluation reserve rather than retained earnings or subscribed capital (it represented the accumulated upward revaluation of Ergon's assets). Adjusting for this revaluation reserve the return

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[1] This is calculated as $611m pre-tax profit plus $53m in Competitive Neutrality fee less $573m in CSO, which equals $91m.

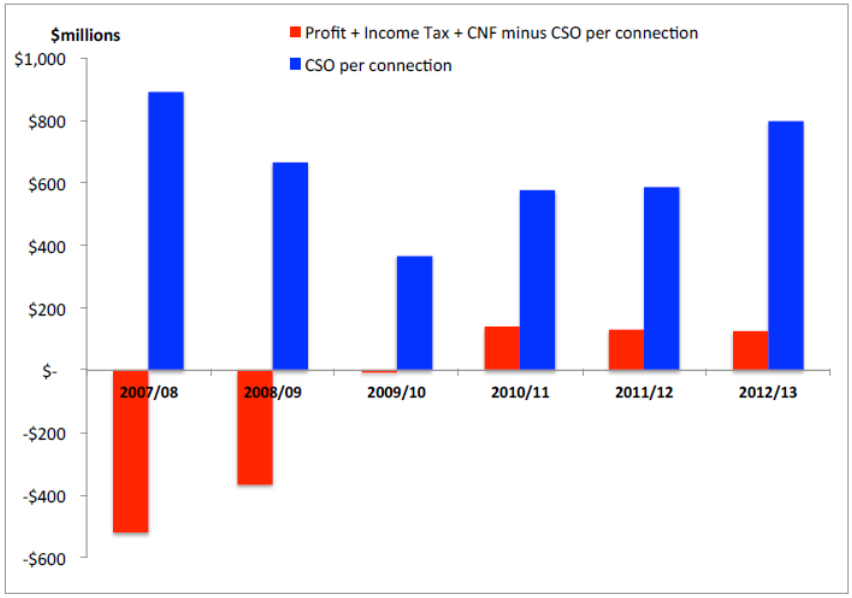
[2] If their tariff was calculated on the basis of Ergon's network charges rather than Energex's network charges.

[3] For example, the utilisation of Queensland's network has decline over the last decade as capacity has expanded has increased far faster than demand. For example Ergon's Regulatory

on subscribed and retained equity – assuming no CSO payment – rises to 5.6%. While not a fabulous rate of return on equity, it has to be questioned why much shareholders might reasonably expect much higher given Ergon's very high costs and apparent comparative inefficiency.

We are also aware that some readers might question our calculation of Ergon's profitability, i.e. that we have included the Government's receipt of Competitive Neutrality Fees and income tax equivalents in our calculation of the return on equity. We defend this on the following grounds: the competitive neutrality fee is ultimately just a fee and constitutes income to the government. It does not compensate costs incurred by the Government. Likewise the Government's receipt of income tax equivalents is a receipt that is contingent on profits and its shareholding. In this sense it is no different to any other profit and ownership-contingent return.

Figure 7. Queensland Governments' Ergon entitlements and CSO paid per connection ($/connection)



2.4 Irrigation tariffs in Queensland compared those elsewhere

We have analysed Ergon's network tariffs applicable to irrigators (Standard Asset Customer (SAC) <100MWh per annum East Region 1- EVLT1, 2014/15 - Business IBT) and compared it to the network tariffs that irrigators would pay – assuming the same consumption profile and the same average consumption as for irrigators in Queensland. The results are shown in Figure 8. It shows that irrigators in Ergon's zone 1, 2 and 3 would consistently pay more for network services[2] than they would if they were purchasing network services from network service providers that operate elsewhere in the NEM. Although this gap narrowed in 2012/13, it has widened again since then. While Ergon's network tariffs are not relevant in the calculation of the prices paid by irrigators in Queensland, they are relevant to the calculation of the CSO.

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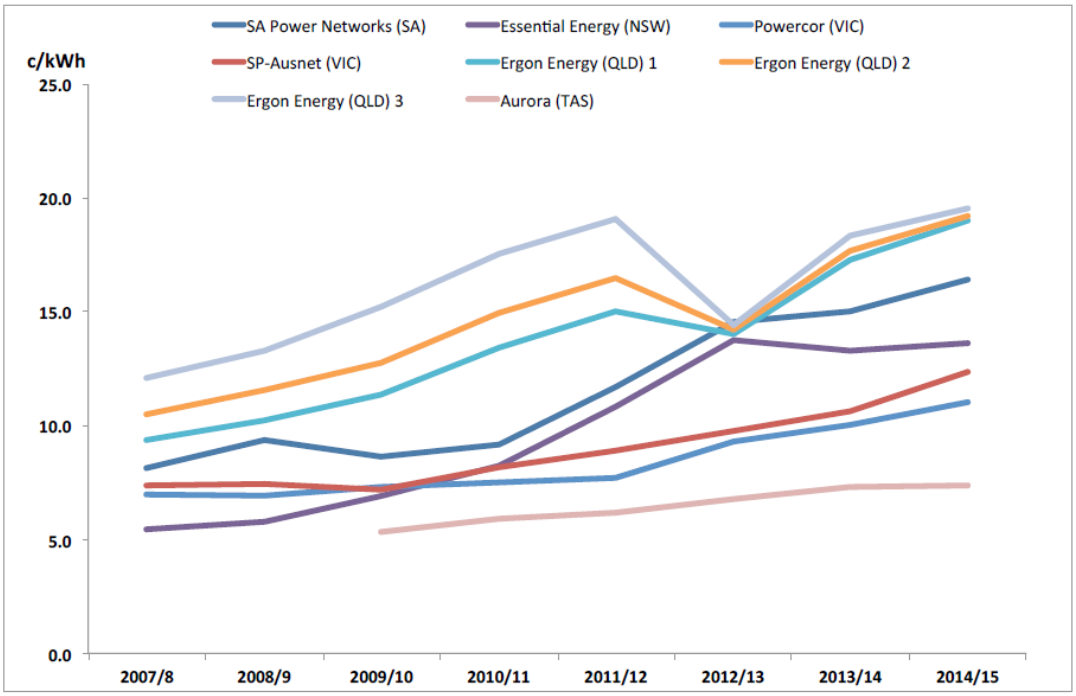
[2] If their tariff was calculated on the basis of Ergon's network charges rather than Energex's network charges.

Figure 8. Average network prices paid by irrigators in Queensland compared to prices paid in other parts of Australia (cents per kWh)



3 Critique of QCA's conclusions in relation to Canegrowers' proposals

Canegrowers has made various proposals on changes to tariffs for irrigators in Queensland. The QCA has rejected Canegrower's proposals and concluded that in 2013/14, irrigators on Tariffs 62, 65 and 66 (would be) receiving subsidies worth more than $32million. This section examines this.

Canegrowers supplied data to us for the average consumption, number and average bill of irrigators in South, Central and North tariff zones of the Eastern Region, for 2012/13. This was data that Ergon had previously supplied to Canegrowers. From these data we calculated that in 2012/13, irrigators in Queensland purchased 336 GWh from Ergon and paid $71m to Ergon for it. The tariffs were 10% higher in 2013/14 than in 2012/13 and so assuming their consumption was unchanged in 2013/14, in 2013/14 irrigators would have paid $78m in 2013/14.

Using these data we calculated the "subsidy" as a result of irrigators paying Energex rather than Ergon network tariffs was around half the amount that the QCA had calculated. This set off a process of interaction with the QCA during which the following became evident:

1. The data that Ergon had initially supplied to Canegrowers had inadvertently included GST and had excluded a reasonable amount of the revenue associated with fixed charges on Tariff 66.
2. Fourteen percent of irrigation sales on Tariff 62, 65 and 66 is for electricity sold in Ergon's Western Zone.
3. The QCA told us that the average Ergon network charge including sales on Tariff 66 and taking account of sales in Ergon's western zones was 21.4 cents per kWh.

Once adjusting for this, our estimate of the "subsidy" was $38m, compared to QCA's revised estimate of around $35m. The relatively small difference can be explained by various factors whose complexity and relative insignificance does not merit discussion. We conclude that the QCA's estimate of the "subsidy" as they have defined it, seems reasonable.

However, the information discovered through this analysis raises many significant concerns.

1. The AER's regulatory control for Ergon anticipates an average sales price for network services in 2013/14 of 8.3 cents per kWh. Yet Ergon would be charging irrigators an average price of 21.4 cents per kWh if they were paying Ergon's network tariffs. Irrigators consume on average 18.2 MWh per year, compared to average sales per customer on Ergon's network of 15.5 MWh per year. In other words, Ergon's irrigation customers are larger than Ergon's average customers but are paying around 2.5 three times Ergon's average price. How can this be? This is concerning and should be investigated.

2. Irrigators in Ergon's Western zone would be paying an average price for network services of 44.7 cents per kWh if they were paying Ergon's network tariff, while those in the east would be paying 17.2 cents per kWh in 2013/14. As shown in Figure 8, Ergon's Eastern zone prices are higher than irrigators elsewhere in the NEM are paying. Its Western Zone prices are therefore much higher than elsewhere in the NEM. While it may certainly be the case that the Western zone is sparsely populated, this is also true for other parts of Australia served by the networks show in Figure 8. How can it be, again, that Ergon's tariffs are so much higher?

Bringing these observations together with the evidence in the previous section of excessive costs and asset values, and incentives under the UTP to inflate network prices, we do not believe that Ergon's SAC <100 MWh network tariff is "cost reflective" and hence that the difference relative to Energex's 8800 network tariffs, which irrigators currently pay, might reasonably be called a "subsidy".

4 Comment on Canegrowers' tariff proposals

We have been asked to comment on Canegrower's tariff proposals to QCA. Canegrowers proposed to QCA that their electricity tariffs be reduced significantly. Underpinning Canegrowers' proposals is analysis of the price elasticity of demand. This analysis concluded that if prices were reduced, consumption would increase so that Ergon would not receive less income from the food and fibre customers to whom the reduced tariff would apply.

QCA has rejected Canegrowers' proposals on the basis that Canegrowers' price elasticity estimates are wrong and irrigators are already being subsidised. On the second of these, we disagree based on the analysis presented in earlier sections and extended in the concluding section. On the first, we cannot comment on the detail of the price elasticity calculations. Such analyses are always speculative. But this does not mean that Canegrowers' estimates are wrong: actual revenue may well increase significantly if prices reduce significantly. It would be surprising if this were not the case.

The substantial issue raised by Canegrowers' proposals is valid: electricity prices are too high and demand will decline unless this is changed. This is an issue for irrigators, many households and industrial energy users in Queensland. A loss of demand for grid-supplied electricity is a loss of utility to electricity users. This translates into an economic loss for the Queensland economy as electricity users either stop getting the benefit of their electricity consumption or if as a result of excessive charges they invest in their own production sources to meet the demand that would otherwise be supplied by the grid. Over time this can result in the worst of all worlds: an economically stranded grid-based electricity system, unmet consumer demand and possibly also large amounts of distributed generation much of which would not be needed if the grid-supplied electricity was more competitive.

It might also be argued that reducing prices will stimulate demand in a way that induces additional network investment and therefore that charging less than it costs, will result in inefficient expansion of network capacity. But there seems to be significant excess capacity in Ergon's electrical system[3].

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[3] For example, the utilisation of Queensland's network has decline over the last decade as capacity has expanded has increased far faster than demand. For example Ergon's Regulatory Information Notice data shows an average network utilization of just 43% in 2013. While this is an aggregate average, and local conditions also matter, since irrigator demand has been declining for several years it seems reasonable to suggest that there is likely to be significant localized network capacity surpluses in the feeders and shared network serving irrigators.

5 Analysis of tariff issues affecting sugar millers

Our brief for this assignment includes an analysis of the network tariffs that Queensland's sugar millers are currently paying, and how these will change when sugar millers are required to take up Ergon's Tariff 48.

To do the calculation, the Australian Sugar Milling Council obtained relevant consumption and demand data for 15 sites from its members and provided that data, anonymously, to us. These sites import around 33.4 GWh in total or 2.2 GWh on average per year and export around 567 GWh. Their non-simultaneous peak demand is around 45 MW from June to November and drops to around half that in the remaining months.

We estimate the average network charge that these millers are currently paying on Tariff 22 (large). Ergon was not able to nominate a network tariff to be used as the basis of the calculation of the network element of Tariff 22 (large). So, we have had no option but to use Energex's 8800 peak/off-peak tariff which is used in the calculation of the network tariff for small users on Tariff 22. Using the 8800 tariff, we calculate the network element of Tariff 22 (large) is on average 12.4 cents per kWh. The highest network price paid at a site is 12.9 cents/kWh and the lowest is 11.8 cents/kWh.

If these millers were to be purchasing electricity on Ergon's Tariff 48 (which is what we understand is intended to be the case after a transition period) the relevant network tariff becomes Ergon's EDHT1 tariff. We calculate that with this network tariff the average network price for millers will rise to 35.8 cents per kWh. The lowest network price at a site will be 17 cents/kWh and the highest 64 cents / kWh.

A pairwise comparison of the two tariffs for all 15 sites in total, distinguishing the payments on their various charges, is shown in Table 1 below.

Table 1. Network tariff charges on current and future tariffs.

	Tariff 22 (network)	Tariff 48 (network)
Fixed	$4,407	$1,966,193
Demand	0	$8,829,881
Consumption	$4,127,546	$237,366
TOTAL	$4,131,953	$11,033,440

The average annual consumption by millers is 2,200 MWh or 142 times higher than Ergon's average customer. Yet the average price paid by millers for network services – 12. 4 cents per kWh is 48% higher than Ergon's current average price. The transition to Tariff 48 would make the average price paid by millers for network services 4.3 times higher than Ergon's current average price. It is not clear why millers are paying 48% more than Ergon's current average energy user considering that they consume 142 times more per year. Needless to say it even less clear why Ergon is proposing to triple their network charge.

We suggest that the current average network price paid by millers – 12.4 cents per kWh – is likely to be higher (very much higher in some cases) than energy users consuming around 2.2 GWh per annum elsewhere in the NEM would be paying.

At the retail level (i.e. network plus non-network charges) the relative change between Tariff 22 and Tariff 48 is shown in Table 2 below.

Table 2. Retail tariff charges on current and future tariffs.

	Tariff 22 (retail)	Tariff 48 (retail)
Fixed	$ 8,815	$ 1,966,193
Demand	0	$ 9,715,798
Consumption	$ 10,049,540	$ 4,093,070
TOTAL	$ 10,058,355	$ 15,775,061

The relative change in charges at the retail level (from Tariff 22 to Tariff 48) is less severe than the change in network charges. However the average retail price paid by millers seems to be extraordinary. On the current Tariff 22 (large) millers are paying an average (retail) price of 30.3 cents/kWh. On Tariff 48 this will rise to 50.2 cents/kWh (with the lowest site at 33 cents/kWh and the highest site at 83 cents /kWh). By comparison, large electricity users in Victoria are currently paying around 13 cents per kWh.

Other particularly remarkable futures of the network tariff underlying Tariff 48 include that it does not provide any time-of-use differentiation and a significant proportion of the charge is fixed. It is difficult to imagine a tariff design that could be less "cost reflective" in terms of structure or level.

6 Conclusions

Value of "subsidies" to irrigators

Since Ergon revised the data that it had previously provided to Canegrowers, we agree with QCA's estimate of "subsidies" received by irrigators, as the QCA has defined this.

The AER's regulatory control for Ergon anticipates an average sales price for network services in 2013/14 of 8.3 cents per kWh. Yet Ergon would be charging irrigators an average price of 21.4 cents per kWh if they were paying Ergon's network tariffs. Irrigators consume on average 18.2 MWh per year, compared to average sales per customer on Ergon's network of 15.5 MWh per year. In other words, Ergon's irrigation customers are larger than Ergon's average customers but are paying around 2.5 three times Ergon's average price. How can this be? This is concerning and should be investigated.

Irrigators in Ergon's Western zone would be paying an average price for network services of 44.7 cents per kWh if they were paying Ergon's network tariff, while those in the east would be paying 17.2 cents per kWh in 2013/14. As shown in Figure 8, Ergon's Eastern zone prices are higher than irrigators elsewhere in the NEM are paying. Its Western Zone prices are therefore much higher than elsewhere in the NEM. While it may certainly be the case that the Western zone is sparsely populated, this is also true for other parts of Australia served by the networks show in Figure 8. How can it be, again, that Ergon's tariffs are so much higher?

Bringing these observations together with the evidence of excessive costs and asset values, and incentives under the UTP to inflate network prices, we do not believe that Ergon's SAC <100 MWh network tariff is "cost reflective" and hence that the difference relative to Energex's 8800 network tariffs, which irrigators currently pay, might reasonably be called a "subsidy".

Sugar cane miller tariffs

The average annual consumption by millers is 2,200 MWh or 142 times higher than Ergon's average customer. Yet the average price paid by millers for network services – 12. 4 cents per kWh is 48% higher than Ergon's current average price. The transition to Tariff 48 would make the average price paid by millers for network services 4.3 times higher than Ergon's current average price. It is not clear why millers are paying 48% more than Ergon's current average energy user considering that they consume 142 times more per year. Needless to say it even less clear why Ergon is proposing to triple their network charge.

The network tariff underlying Tariff 48 has very high fixed charges and no time of use differentiation. This has been described by the QCA and Ergon as a cost reflective tariff. We think it is difficult to imagine a tariff design that could be less cost reflective. Two aspects seem particularly disturbing: the lack of time of use or seasonal differentiation in demand or energy charges; and the very large increase in fixed charges. The large increase in fixed charges is highly regressive and reflects Ergon's desire to recover sunk costs through fixed charges. There is absolutely no support for

such an approach in the economic theory under-pinning the design of economically efficient tariffs[4]. This approach risks stranding the investments that customers have made. Sugar millers would be in their rights on the basis of their own welfare and on the basis of sensible economic policy to strenuously oppose the current proposals.

Community Service Obligation

It might be argued that the Community Service Obligation – the payment by the Queensland Government to Ergon in pursuit of the Government's Uniform Tariff Policy - justifies the description of the shortfall for irrigators (whatever the exact calculation may be) as a subsidy, from the Government to Queensland's rural electricity users. We do not think that this is a reasonable description of the CSO. The CSO is, in effect, a payment by the Government to itself albeit via the circuitous route of a payment to a corporation that the Government wholly owns, which improves the profits of that corporation which the Government then collects.

If Ergon did not receive any CSO payment and its network tariffs (used in regulated retail tariffs) were mainly based on Energex's (as now), Ergon would still be more profitable per connection than, for example, the privately owned distribution network service providers in Britain. As a rate of return on equity, without a CSO the rate of return on Ergon would not be high, though it would improve significantly after setting aside its asset revaluation reserve – which accounts for most of Ergon's equity but which does not represent retained profits or subscribed capital. Further improvements in returns should be possible by addressing what seem to be very high costs and low efficiency.

Canegrowers' proposals for tariff reductions

We were asked to opine on Canegrowers' proposal that its tariffs be significantly reduced. While we cannot comment on the magnitude of the reduction or the price elasticity studies supporting their proposal, their proposal for reduced rates in each exchange for higher consumption is well-founded economically. Electricity network charges in Queensland are too high and many electricity users are seeking ways to reduce consumption or produce themselves to meet their own demand. Canegrowers' proposal is one way to attempt to deal with the problem of stranded network assets.

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[4] In this regard we refer to the seminal texts: Hotelling, H. (1938). "The General Welfare in Relation to Problems of Taxation and of Railway and Utility Rates." Econometrica **6**(3): 242-269.; Coase, R. H. (1946). "The Marginal Cost Controversy." Economica **13**(51): 169-182, Houthakker, H. S. (1951). "Electricity Tariffs in Theory and Practice." The Economic Journal **61**(241): 1-25, Boiteux, M. (1960). "Peak-Load Pricing." The Journal of Business **33**(2): 157-179, Williamson, O. E. (1966). "Peak-Load Pricing and Optimal Capacity under Indivisibility Constraints." The American Economic Review **56**(4): 810-827, Turvey, R. (1968). "Peak-Load Pricing." Journal of Political Economy **76**(1): 101-113, Littlechild, S. C. (1975). "Two-Part Tariffs and Consumption Externalities." The Bell Journal of Economics **6**(2): 661-670, Joskow, P. L. (1976). "Contributions to the Theory of Marginal Cost Pricing." Ibid. **7**(1): 197-206.

However the concerns that Canegrowers have raised apply also to other electricity users served by Ergon, including sugar millers as covered in this report. Indeed the concerns also apply to households: Ergon's network tariffs for households are far higher than any other network service provider and their fixed charges as a proportion of the total bill is again much higher than any other distribution network service provider in Australia or New Zealand, Britain and Demark[5].

[5] Mountain, B. R. (2014). Network tariffs applicable to households in Australia: empirical evidence. Prepared for Uniting Care Australia. *(forthcoming)*

7 Recommendations

Problems with Ergon's asset valuation, the design of its network tariffs, the Government's tariff equalisation policy and the design and conduct of economic regulation underlie the tariff issues discussed in this report. These problems are deep-seated and will not be resolved easily. The scope of this report does not extend to making detailed recommendations, but we suggest a few issues that Canegrowers and ASMC might consider in shaping their future activities in this area.

Accountability

There seems to be a culture of blame shifting between the QCA, Queensland Government, the AER, the AEMC and consumers. It would be helpful to bring this to an end. The Queensland Government owns Ergon and determines the Uniform Tariff Policy and its implementation. While the AER has an important role in setting Ergon's maximum allowable regulated revenues, the Government is at liberty to instruct Ergon to recover less than the AER determines.

While the Government can rightly be held accountable for the outcomes Ergon delivers, it should be recognised that within the Government there are likely to be differences of opinion on some issues for example between the Treasury and the Energy ministries. Canegrowers and the ASMC should seek to ensure that their concerns capture the attention of the most senior levels of Government, where such internal conflicts can be resolved.

Consumer engagement

It is clear that Canegrowers has made extraordinary effort to engage with Ergon, the QCA and Government over a long period of time. However its concerns seem have drawn defensive responses from the industry and at times also from the QCA. A mentality described by the metaphor "the hospitals would work much better if it was not for the patients" seems to, at times, characterise Ergon's attitude to its customers.

Resource constraints have limited the ability of electricity consumers to participate effectively in regulatory debates. In desperation, quite understandably, some consumers have focussed on short-term wins. Greater organisation and professionalisation of energy consumer advocacy will offer bigger and more enduring improvements.

A Queensland Electricity Consumer Committee representing a diverse range of electricity consumers, and focussed primarily on Ergon's electricity network tariffs, at least initially, may help to deliver the necessary organisation. While establishing such a broad-based committee will consume time and resources, it has the potential to significantly improve the ability of electricity consumers to advocate their interests. The Government might be asked to fund technical and other support to ensure that the Committee is resourced to participate effectively.

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