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AUSTRALIAN ENERGY REGULATOR: ERGON ENERGY NETWORK REGULATORY PROPOSAL FOR 2025-2030

Ergon Energy Corporation Limited (Ergon Energy), January 2024: Regulatory Proposal for 2025-30

Mirabou Energy and our subsidiary company, Mirabou Energy Remote Power Systems (MERPS), are providing a submission to the Australian Energy Regulator (AER) Issues Paper (March 2024) on Ergon Energy's Ergon Energy Network Regulatory Proposal for 2025-30, January 2024 ("Ergon Energy Network's revenue proposal"). The majority of our submission is public apart from the section that is marked as commercial in confidence and not available for public release.

Mirabou's submission is set out as follows:

- Section 1 – The importance of Ergon Energy Network's (Ergon Network) revenue proposal
- Section 2 – Critical areas of concern on Ergon Network's revenue proposal and the AER's Issues Paper
- Section 3 – Mirabou's commercial in confidence matters.

The importance of Ergon Energy Network's revenue proposal

As at 1 July 2023, Ergon Network hosts approximately 234,255 solar PV systems, aggregating to installed capacity of 2,328MVA of the 780,644 total connections (30%)[1]. To achieve the policy scheduled renewable energy targets (2030, 2032 [Brisbane Olympics 2032], 2040, 2045) and net zero emissions by 2050 AEMO's draft 2024 *Integrated System Plan* (ISP) highlights that for the NEM to meet agreed emissions targets it requires the coordination of current behind the meter renewable and storage capacity in the distribution system – forecasting:

- additional 17GWs of distributed solar PV (total NEM 85GWs), and
- a further 8GW of distributed storage (total NEM 37GWs) by 2050 compared to the AEMO 2022 ISP.

The enormity of this forecast task is revealed in that the aggregate capacity of the NEM's coal and gas generators is only 34.5GWs.

AEMO's ISP focuses on the use of behind the meter customer resources, largely to be installed in distribution network systems, such as Ergon Network, to achieve 2050 net zero forecasts:

- CER renewable energy capacity shall be the largest share at 40.2%, and
- CER coordinated resources mainly battery energy storage system capacity to be the largest share at 77%.

Moreover, AEMO's draft ISP 2024 emphasis on the rate of change between 2025-30 must also be noted. Between 2025 and 2030, the forecast growth for solar PV and aggregated battery energy is:

- For solar PV the annual average growth of 9% per annum for total growth of 50% compared to annual average growth of 4% per annum for total growth of 92% between 2031 and 2051, and

[1] https://www.ergon.com.au/__data/assets/pdf_file/0003/1267221/Summary-Distribution-Annual-Planning-Report-2023.pdf, page 8.

- For aggregated energy storages[2] the annual growth rate 62% for total growth of 705% compared to annual average growth of 10% per annum for total growth of 215% between 2031 and 2051.

Mirabou considers that on this basis, the AER must ensure that Ergon Network's revenue proposal for network services between 2025-30 is 'fit for purpose' to enable the achievement of AEMO's ISP forecasts which provide a pathway to achieving net zero emissions. Importantly, the AER's approach, while being consistent with the NER, must also take account of Australian Energy Market Commission's (AEMC) current rule change processes which are intended to *Unlock CER*.

Critical areas of concern in current Ergon Energy Network revenue proposal

To understand Ergon Network's revenue proposal it is important to start with the AER's approved Framework and Approach for Ergon Network's regulatory control period for 2025-30. Table 1 outlines the Framework and Approach for Ergon Network's defined services and form of regulation and likely impact on DER / CER.

Service Classification	Definition	Approved Control Mechanism
Common distribution services	Monopoly infrastructure providing safe and reliable electricity. New for 2025-30 include: a) Stand Alone Power Systems (SAP) except Isolated Networks, and b) CER Export services.	Standard Control : Revenue cap regulation
Network ancillary services	Ancillary services but provided to individual network customers.	Standard Control : Revenue cap regulation
Metering services	Legacy metering to be standard control services and new metering to be alternative control and negotiated services	Standard control : Revenue cap regulation Alternative control and Negotiated Services : Price caps
Connection services	Alternative control and negotiated services	Alternative control and Negotiated Services : Price caps
Relevant services	Distribution Services in unregulated isolated networks	Unregulated

Table 1 – Ergon Network's Framework and Approach, Revenue Proposal and Likely impact on DER / CER[3]

A summary of Ergon Network's revenue proposal by key forecasts is outlined in Table 2.

[2] AEMO's ISP defines aggregated energy storage are those battery energy storage at customers premises that act like Virtual Power Plants (VPP).

[3] AER (July 2023), Framework and approach – Ergon Energy and Energex, Regulatory Control Period commencing 1 July 2025.

Dollar figures actual / forecast ($m)	*FY21-22 Actual*	*FY22-23 Actual*	*2025-30 Forecasts*	*Annual Ave Forecast*
Revenue - total	$1,141	nr	$7,819	$1,564
Public streetlighting revenue			$143	$29
Total Capital expenditure	$763	$1,000	$5,805	$1,161
Replace capex			$2,579	$516
Reinforce capex			$789	$158
New connections (after customer cap cons)			$321	$64
DER enablement			$63	$13
Direct capex support capex			$738	$148
ICT			$288	$58
Property			$157	$31
Fleet			$243	$49
Tools & equipment			$32	$6
Capitalised leases			$17	$3
Support costs for capex			$1,316	$263
Total Operating expenditure	$387	$487	$2,379	$476
Regulated Asset Base	$12,629	nr		

Table 2 – Ergon Network's Revenue proposal 2025-30 [4]

The principle of economic regulation of monopoly services that Ergon Network provides is to ensure that for transparent service standards the business' costs of supply are efficient which ensures that the business is consuming an efficient level of society's resources. Put another way, the economic regulation of Ergon Network must ensure that the business does not overuse[5] or underuse[6] the resources that it needs and that its prices are set in such as a way that it does not distort competitive industries that lie above or below it in the economy.

Given the central role of using CER resources to achieve net zero emissions, the AER's role of determining whether Ergon Network's requests on society's resources to provide standard control services must now explicitly consider at least the two-way economic impacts between regulated network standard control services and CER. The notable features in Ergon Network's revenue proposal focused on enabling CER include:

- Defining CER export services as a standard control service subject to its own price linked to the cost to serve revenue cap
- Introduction of dynamic connections in any part of its network excluding the Isolated Networks with a request of **$321m** for the 2025-30 for "network connections" excluding customer capital

[4] Ergon Energy Network (January 2024), Regulatory Proposal for 2025-30.
[5] Overuse is simplistic yet covers the broad spectrum of outcomes that a monopoly business may practice to 'cheat' the form of economic regulation.
[6] Underuse has two broad dimensions it covers instances where the regulator does not approve enough of society's resources for the monopoly business or when it notionally does but the monopoly business applies practices to 'cheat' the form of economic regulation by taking cost allowances imputed in revenue caps and simply not buying or creating the amount of activity originally forecast.

contributions (note in last two financial years Energy Queensland Limited the parent entity of Ergon Networks reported $183m in 'non-refundable capital contributions'[7])

- Introduction of two-way charging tariffs for customers albeit with blunted effectiveness given the Ergon Networks proposal to be able to defer customers accessing two-way charges where customers can't access dynamic connections[8]
- Including Stand-Alone Power Systems in standard control services, and
- A capital request of **$63m** for 2025-30 to integrate CER (DER) 'into the network' to resolve constraints associated with CER in terms of upgrading protection systems when there is a new fault.[9]

Mirabou considers that the AER's acceptance of Ergon Network's accepted proposal to treat the Stand Alone Power Systems located in the Isolated Networks[10] as 'unregulated services' is a significant barrier to enabling CER in these SAPS in a non- discriminatory manner[11]. Mirabou considers the AER must consider the unregulated definition particularly in light of the seemingly contrarian position in Ergon Energy's recent Ring-Fencing Waiver Application with regard to the provision of behind the meter asset solutions in Isolated Networks.

Mirabou considers that Ergon Network's revenue proposal measures to enable CER are ineffective and shall result in Ergon Network overusing society's scarce resources as well as setting electricity network prices that shall distort the economic choices of agents that operate upstream and downstream of Ergon Network. The balance of this section identifies these likely distortions and proposes solutions to be included in the AER's economic regulation of Ergon Network's cost to serve revenue caps.

Right-sizing Ergon Network's Regulatory Asset Base

Ergon Network's standard control services are provided through a capital-intensive production function, which carries the uniqueness that network asset creation occurs through a very high level of capitalisation of labour resources. Hence the reason why Ergon Network's leadership and workforce is provided with a monopoly franchise that society has entrusted it with to effectively manage both in terms of service standards but also in achieving 'least cost of supply' to ensure that suppliers and customers make efficient allocation decisions.

The emergence and significant penetration of solar PV in Ergon Networks distribution systems including SAPS at 30% of total network connections has to fundamentally alter the AER's consideration around regulatory asset base (RAB) valuation, which was $12.6 billion at the end of financial year 2021-22. Inverter connected solar PV makes Ergon Network's customers less reliant on it in the day time and also now overnight with economic battery energy storage systems (BESS), ie less dependent on Ergon Network's capital intensive production function as financially measured and reported through its RAB.

Accordingly, for the AER to ensure that Ergon Network's cost to serve revenue cap represents an efficient outcome for society and other economic agents then there must be a reconsideration of whether Ergon Network's current spatial assets are the 'optimum' size for the high penetration CER system that AEMO, and in Queensland PowerLink and Ergon Network, all support as the way forward to achieve a net zero emissions in the electricity supply system. Prior to the AER's asset roll forward guidelines and model, businesses with monopoly franchises had their overall spatial assets reviewed by independent engineers who would determine:

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[7] Energy Queensland Limited, Annual Reports financial years 2021-22 and 2022-23.
[8] Ergon Energy Network, January 2024, Tariff Structure Statement – in support of the Regulatory Determination proposal 2025-30, page 5.
[9] Ergon Energy Network (January 2024), Regulatory Proposal for 2025-30, page 27.
[10] EECL's Distribution Authority (No.D01/99) defines SAPs and the Queensland Government's construction of SAPs in Isolated Networks ensures that the service standards and customer services standards applied to EECL's services are not applied to SAPs in Isolated Networks.
[11] Please refer to our commercial in confidence section.

- Whether the common or backbone infrastructure is right sized given demand forecasts for the planning horizon
- Whether the individual infrastructure is right sized given the individual or group of customers demand forecasts for the planning horizon, and
- On a good electricity industry practice basis evaluate whether the unit asset costs for the monopoly franchise are efficient.

The process of determining Depreciated Optimised Replacement Cost (DORC) has not been applied to Ergon Network's spatial common and dedicated assets for at least a decade. With current solar PV at 30% of connections and as the largest generating source in Ergon Network's system there must be an examination of whether the RAB is actually the optimum physical size and that its value represents an outcome of an efficient production function.

Importantly, a DORC process arguably has stronger incentive features than any of the AER's existing allowance incentive schemes as it represents the ultimate regular check-in to ensure that the RAB has:

- Less gold plating of spatial network assets
- Less underinvestment in spatial network assets
- Less risk of stranding spatial network assets over the 50 year life of network assets.

Critically, the management and workforce of Ergon Networks, as the custodian of society's monopoly franchise, may need to be compensated with a higher return on capital for the perceived risks that a DORC process creates. However, the AER should consider that the likely benefits of a lower RAB and using less of society's scarce resources to build new and replace spatial network assets would outweigh this additional cost.

Moreover, a regular DORC process in determining the RAB would ensure that customers with CER are paying a tariff that reflects their actual use of system and would provide stronger incentives on Ergon Networks to achieve service standards at least cost to serve. Mirabou considers that Ergon Network's own revenue proposal and tariffs highlight behaviours that support the need for a DORC as well as changes in the existing standard service and revenue cap model.

Ergon Network's Tariff Structure Statement 2025-30

Ergon Network's tariff structure statement (TSS) for 2025-30 is notable with regard to some of its inclusions and also as a function of what the TSS hasn't addressed. Mirabou addresses these factors in this section.

While Ergon Network's TSS makes a broad statement on how it shall take account of avoided Transmission Use of System (TUOS) costs, there is no mention of how this is translated into network tariff categories particularly for those customers that have solar PV. Critically 'avoided TUOS' has been a feature in Ergon Network's service territory since the early 2000s, yet Ergon Network does not provide information to its customers, both CAC and individually calculated customers that have behind the meter resources, on the value of 'avoided TUOS' in their electricity bills.

Mirabou maintains that the AER should require Ergon Network to include in its TSS:

- forecast avoided TUOS by customer group
- an annual true-up of actual avoided TUOS by customer group, and
- that for customers with CER that at least once a year the avoided TUOS is reported.

This level of transparency would allow customers that do not have CER, predominately business customers, to make better decisions on sizing of CER assets by taking into account the benefits of avoided TUOS.

Ergon Network's revenue proposal and TSS highlights weaknesses in its application of the economic efficiency tests on its proposed tariffs by customer group. Figure 1 recreates Ergon Network's application of the avoidable cost and stand alone cost to serve tests on its Standard Asset Customers (SAC), Customer Asset Customers (CAC), and Individually Calculated Customers (ICC).

Ergon tariffs and tests												
Standalone and avoidable cost thresholds ($millions)				*Estimated average tariffs (Mwh basis)*				*Estimated average tariffs (Annual bill basis)*			
Tariff class	*Avoidable costs*	*Forecast revenue*	*Standalone costs*	*2023–24 estimate (GWh)*	*Avoidable costs*	*Revenue*	*Standalone costs*	*2023–24 estimate (connectn)*	*Avoidable costs*	*Revenue*	*Standalone costs*
SAC	687.69	1,251.88	1,263.16	***8,533***	*$ 80.59*	*$ 146.71*	*$ 148.03*	750,828	$ 916	$ 1,667	$ 1,682
CAC	74.12	78.22	1,004.79	***1,256***	*$ 58.99*	*$ 62.26*	*$ 799.74*	180	$ 412,874	$ 435,738	$ 5,597,360
ICC	58.83	61.32	437.50	***3,887***	*$ 15.13*	*$ 15.78*	*$ 112.55*	115	$ 509,758	$ 531,384	$ 3,791,064

Figure 1 – Ergon Network's application of economic efficiency tests on proposed revenue recovered from proposed tariffs

Generally, there is usually a wide band between the avoidable cost and stand-alone cost test for spatial network assets, which is verified by Energex's application of the economic efficiency tests on the revenue recovered from its proposed tariffs. However, Mirabou considers that Ergon Network's application of economic efficiency tests is not fit for purpose to support the transition to net zero emissions and to account for the value of CER to the overall electricity supply system. Firstly, Ergon Network's physical assets are less meshed than other electricity network businesses providing the opportunity for the application of the avoidable and stand-alone costs tests on revenue recovery and tariffs applied at specific geographies, arguably similar to how Ergon Network's manages and organises its operations as shown in Figure 2.

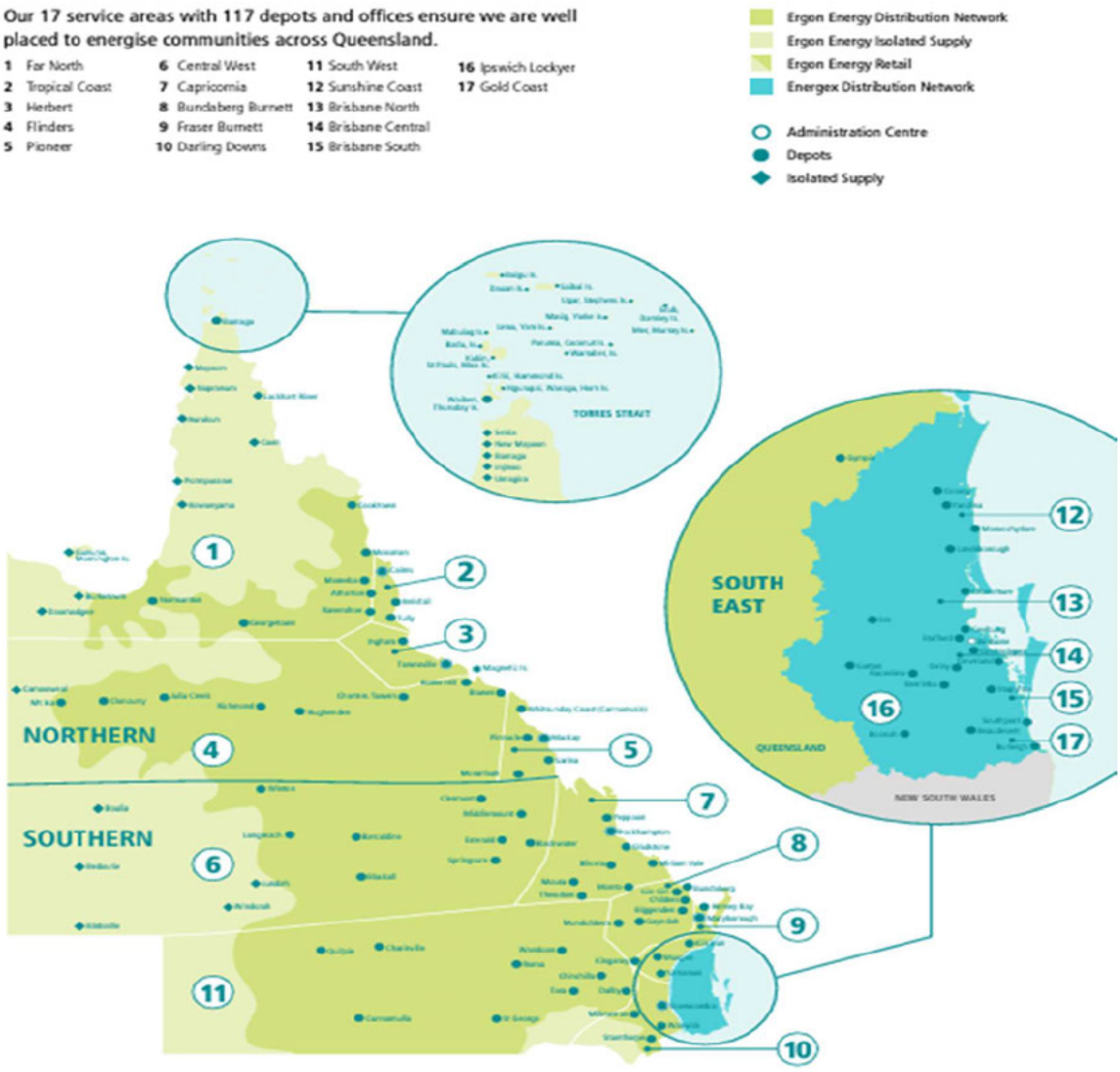

Figure 2 – Energy Queensland Limited's Ergon Energy Network and Energex operating territories

For example, there are 11 service areas within Ergon Network's operations presumably with the necessary financial reporting, asset registers and management that would provide the basis to apply the above incremental and stand-alone costs tests on revenue recovery from proposed tariffs. Were the AER to require Ergon Network to apply tariff efficiency tests by the 11 operating districts there would be greater transparency to ensure that the provision of the monopoly electricity service was not distorting the resource allocation decisions of economic agents located in these geographies.

To support the enablement of CER to achieve net zero emissions targets, Mirabou would also recommend that the AER consider requiring Ergon Networks to apply a joint stand-alone cost test to supplement the existing stand alone cost test. The explicit proposed joint stand-alone cost test would include Ergon Network's spatial network assets and customers CER behind the meter assets.

Were the AER to require Ergon Network to explicitly undertake and report the findings of these complementary efficiency tests on proposed network tariffs it would ensure that the proposed electricity tariffs are least distortionary on resource allocation decisions of agents that use Ergon Network's monopoly services. Importantly, such a change by the AER would make available better information to Ergon Network's customers to enable them to make better informed decisions on CER assets.

For example, a prospective small business facing a lower joint stand-alone cost determined tariff would be able to attribute the difference as a positive benefit within its own business case when determining the best sized CER asset.

Critically, Ergon Network's TSS provides estimates of the long run margin costs for each of Ergon Network's spatial electricity network components by voltage for Ergon West, Ergon East and Mount Isa system, which demonstrates that Ergon Network has the necessary information to undertake the proposed efficiency tests on a geographic basis (11 operating zones) and also to complete the proposed joint stand alone cost test to account for CER assets.

Dynamic connection agreements and economic regulation of Ergon Network

For residential and business customers looking to install CER assets the current process is effectively a propose-respond model, ie the customer must make application with its proposed CER assets and then either for a price cap determined fee or negotiated budget Ergon Networks shall then determine what the customer can install. The process has legal gateways and statutory timings however it represents the strongest example of asymmetric information advantage to Ergon Networks over customers looking to install CER.

All public information on network capacity and performance is not guaranteed by Ergon Network and can only be confirmed by customers (and any business partners) by 'investing' additional resources into gaining a higher level of certification by Ergon Network through the connection process. This is a disappointing outcome given the level of cost allowance for operations, ICT and other information intensive services proposed by Ergon Network.

The AER should consider requiring Ergon Network to provide guaranteed public information on its network performance and capacity by the 11 operating territories which should be considered as a 'minimum public disclosure' requirement which does not require additional cost allowances but is able to be provided within the existing revenue cap cost allowances. In addition, the AER should review the service classification of connection services to identify what truly is regulated and what could be, and is currently being, provided by suppliers under competitive procurement processes to Ergon Network.

For example, Ergon Network's connection services should only be part of the ancillary control at an efficient price for service where the service relates to a 'regulatory service' ie REIQ certification of connection plans. The AER needs to carefully consider whether the other services are better as unregulated services able to

be provided competitively by other suppliers providing they meet minimum license obligations as set out in legislation and industry standards.

Mirabou considers that this is crucial to ensuring a more timely and cost effective connection process operated by Ergon Network. The AER should consider to supplement these changes with the requirement of structural separation between delivery and regulatory approvals in Ergon Network. Crucially, the provision of more reliable minimum network information would allow customers to make better resource allocation decisions relating to CER assets while truly ensuring that customers only pay regulated prices for regulated connection services (the rest can be competitively sourced).

An example is Ergon Network's connection services is the 'do no harm analysis' on new connecting CER assets. The greater the proposed capacity size of the CER asset the do no harm analysis is often required by Ergon Network, PowerLink and AEMO, particularly if the CER asset is going to 'trade' in to the National Electricity Market (NEM). A single do no harm analysis adds considerable non-recoverable costs onto customer's investment into CER assets let alone a triplicate analyses. Additionally, Energex has no unique claim on the power engineering capabilities utilised in the do no harm analysis as there are multiple power engineering consultancies that do this analysis through standard power engineering software for the networks, AEMO and power project developers.

Finally, there is a specific principal-agent problem with Ergon Network doing and having the final regulatory approval on the findings of a do no harm analysis for a customer's proposed CER asset. Ergon Network builds, operates and runs the current spatial network assets and CER assets allow customers to use less of this service so in conducting and approving the do no harm analysis the incentive may always be to reject or recommend the minimum CER asset size as way of Ergon Network being successful in its obligation to supply reliable electricity through its current spatial network assets.

From a regulatory perspective the AER could have Ergon Network make transparent how it manages the inherent conflicts in this service, for example Ergon Network sets out an order of priority of managing the inherent conflict of objectives of reliable electricity supply and maximising CER assets to achieve net zero emissions. Another solution would be to ring-fence the personnel doing the do no harm analysis and the personnel that approves the findings and makes decisions with the customer.

Mirabou would argue that given the lack of visibility on the current performance of ring-fencing, as well as the AER approved waivers, that a more robust and effective solution would be for the AER to simply require that the approval process be done by an independent third party through service definitions.

Ineffectiveness of Ring-Fencing (identified section is Commercial in Confidence)

Ergon Networks is a part of Energy Queensland Limited (EQL) which also owns Energex Limited (south east Queensland monopoly electricity distribution services provider), Ergon Retail Limited (franchise provider in non-south east Queensland) and Yurika an un-regulated subsidiary, and EQL is owned by the Queensland Government by statute where the Shareholding Ministers are the Treasurer and Minister for Energy. The creation of EQL has resulted in less transparency in that audited financial statements are only reported at this level and not at the subsidiary level.

Economic agents that interact with Ergon Networks and its related parties both upstream and downstream must be assured that costs of supply reflected in revenue cap driven tariffs are aligned with the services which they are providing or receiving. The actual performance of the AER's ring-fencing guidelines on Ergon Network, particularly with the increasing number of AER approved waiver applications, makes it difficult for customers and suppliers to trust the prices coming from Ergon Network.

[redacted]

[redacted]

Queensland Energy and Jobs Plan and associated legislation (completely commercial in confidence)

[redacted]

If you have any questions on this submission please contact me.

Yours sincerely,

James Reynolds

CEO

Mirabou and MERPS