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Response to ERA Public Consultation

Effectiveness of the Wholesale Electricity Market 2017-18

Part 1: Business-as-Usual Matters

Standing

Community Electricity is:

- a a licensed Electricity Retailer^{**} and provider of Electricity Retail Services & Market Consultancy;
- b a member of the Market Advisory Committee for the previous 12 years; currently representing Market Customers, originally representing Market Generators;
- c formerly a member of the Access Code Development Committee (2004)
- d formerly a member of the Economic Regulation Authority's Technical Rules Committees from time to time;
- e formerly the Chair of the Balancing & Ancillary Services Expert Team of the Market Rules Development Group (2004);

****** We announce that we are closing our retail licence and ceasing our pro bono publico contribution to the public consultations of the regulatory development of the electricity market.******

If you want to be informed of our free stuff from time to time, please email us.

Introduction

The ERA has posed 15 questions for public comment. Our response is structured as two inter-linked parts addressing business-as-usual matters and the investment environment:

- Part 1: Business-as-Usual Matters, which we address primarily through responses to questions 1 to 9 plus 15; and
- Part 2: The Investment Environment, which we address through questions 10 to 14

In particular, through Part 2, we wish to call attention to dysfunction in the reform initiative, which we consider will not only deliver too little too late but will be superseded before its target commencement date by System Management (AEMO) drawing on its emergency powers to maintain system reliability & security. We consider that the reform process is excessively complex, expensive and slow, and that its un-stated priority is concealment of its true objective of justifying a wealth transfer to Synergy from the private sector. We suggest that the primary strategy of constrained network access, while a sensible concept of itself, has been distorted to this objective and is plainly not



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supported by private industry or justified by the supposed business case. We suggest that the critical failing of the reform initiative is that it ignores the immediacy of the impending ancillary services crisis, which it proposes to solve through industrial-scale reforms to be implemented years after they are needed.

Part 2 is offered in stand-alone form to facilitate contributing to the PUO's electricity market reform consultation process without the distraction of peripheral business-as-usual matters.

Assessment period

We encourage the ERA to transcend its mandate and suspend limiting its knowledge of the evolution of the market to the rear-view mirror. We recognise that the instant consultation pertains to the period FY 2017-18 but consider that our responses and supporting evidence transcend epoch and their impact is more demonstrable and relevant in recent months. In particular, daytime negative energy pricing events have become a commonplace due to the inexorable penetration of intermittent generators and baseload generators are responding to them through changed operating strategies.

In any case, in a year's time these issues will themselves have occurred within the prospective next reviewable timeframe; we consider that the ERA should help frame the solutions rather than merely commentate sagely on the problems.

Business closure

As the Market Rules and Access Code have as objectives the encouragement of competition in the electricity market, the closure of an important part of our business warrants explanation.

Our holistic business has evolved over the previous 20 years of electricity deregulation in the SWIS and comprises many components according to diverse stakeholder interests. We prospered under the original "Open Access Regime", the intermediate "Top up and Spill" regime that was the leading edge of the original Market Rules, and finally the current Market Rules.

Our operation as a virtual retailer is subject to a retail licence, has a market share of 0.01% **#1** and bears full retail commercial risk. It is our principal mechanism for innovating but also contains some heritage supply relationships to maintain our supply functionality and provision of novel services and products.

In contrast, our consulting business is our principal means of monetising our intellectual property through supporting the retail businesses of arms-length associate retailers. It has a vicarious market share fifty times bigger (0.5%) and bears no retail risk.

Our virtual retailer business is, and would likely have continued to be, a small cash cow. However, future prospects coexist with the opportunity costs of the alternatives forgone. The transaction costs of licence compliance and the procedural unfairness (lack of



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administrative natural justice) of the network regulations has recently placed our retail business comprehensively in the 'too hard basket' of a Pareto analysis.

Though it has been on the edge of the too hard basket for some time, the precipitating trigger for closure is the business-as-usual obstruction and obfuscation by Western Power of our attempts to innovate. In particular, Western Power has changed in undisclosed-ways its undisclosed-rules for obtaining access such that if we ourselves were now to apply for the access that we currently have, it wouldn't be granted on terms that we could viably meet. Further, Western Power has provided only unsubstantiated insinuations of "technical issues" creating an imperative for an Indemnifier to formally join the ETAC, additional to the usual \$50 million of insurance and the usual arrangements for prudential support. No minimum qualifications for the Indemnifier have been provided.

We contrast this with AEMO's processes, which apply published rules efficiently and dispassionately and facilitate the market aspects of our endeavours.

We provide an appendix detailing our philosophy for ceasing contributing to regulatory development.

#1 While delivering best value for our clients, we still make more absolute profit than most!

ERA Question:

4. Aside from disaggregation, what other measures could improve competitive discipline in the WEM? How would these measures work?

Procedural unfairness in the network rules

Community Electricity participates in network access matters as a pure retailer; neither an electricity producer nor an end-user. Our business model is purposely aligned with the Market Objectives. As such we have no participation in matters pertaining to network augmentation or the Access Queuing Policy; we are concerned only with the routine 'churning' of connection points supplied under standard network reference tariffs.

On our commencement as a retailer in 2013, Western Power was baffled that such a concept exists separate from a connection project, being unaware that the wholesale market was a source of electricity supply. Western Power adapted over an 8 month period to accommodate this strange anomaly that had been licensed by the ERA. There is still no application form for a retailer-ETAC. Application is by introductory email requesting the Model Access Contract (ETAC). And that is fine, as long as it works.

In our experience, we depend on both AEMO and Western Power to facilitate our competition in the market.

AEMO processes a full application for market participation in a dispassionate businessas-usual manner in a few weeks and takes account of nuances in circumstances. This



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includes determination of the required prudential support. Its staff know the rules, are empowered and assist gracefully.

In contrast, Western Power has no disclosed procedures and makes it up as it goes, adding extra burden without explanation as the inspiration takes it. For nominally identical and straightforward applications, the process takes at least 3 months, and 6 months isn't unusual.

Procedural fairness

Procedural fairness is the administrative equivalent of natural justice. It comprises amongst other things:

- unbiased assessment
- disclosed assessment criteria
- consistency across assessments
- proportion (not all retailers are Synergy)
- right to be meaningfully heard
- opportunity to remedy deficiencies by any reasonable and fit-for-purpose means
- timely and cost effective appeal process

Procedurally fair - Wholesale Market administration

We cite the Market Rules as being procedurally fair and professionally implemented.

The wholesale market is administered through the Wholesale Market Rules, which contain an "organic" mechanism for adaptation and revision.

The Market Rules pertain to the wholesale electricity market and to nothing else. They contain express Market Objectives specifying the purpose of the market and are administered as a service by a body (AEMO) that has no commercial self-interest in outcomes. Market administration is funded through transaction levies and market transactions are zero-sum, with any default being made good through further levies.

The Market Objectives are concerned with (our emphasis added):

(a) economically efficient, safe and reliable production and **supply** of electricity;

(b) encourage **competition** among generators and retailers including efficient entry of new competitors;



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(c) to **avoid discrimination against particular energy options and technologies**, including sustainable energy options and technologies such as those that make use of renewable resources or that reduce overall greenhouse gas emissions;

(d) to minimise the long-term cost of electricity; and

(e) to encourage the taking of measures to manage the amount of electricity used and when it is used;

The Market Objectives are esteemed front-and-centre in everything the wholesale market does; a compass guiding all behaviour of all participants. They are both a justification for change and a defence of the status quo.

Under the Market Rules, Western Power is merely a special class of market participant.

The Market Rules attach to a market participant through a straightforward and timely registration process, with all participants being bound by exactly the same Market Rules prevailing from time to time, albeit with fit-for-purpose provisions applying to the differing classes, tailoring the administrative burden upon them.

The Market Rules are clarified and implemented through formal procedures supported by formal documentation and subject to extensive consultation and review procedures.

The market sets prices through a combination of competitive markets, regulated mechanisms and hybrid tenders.

Regulated prices are subject to annual review of cost inputs and periodic review of processes. The ERA maintains close oversight of many key aspects. Examples include the Benchmark Capacity Price, Energy Price Caps and certain elements of Ancillary Services charges. These are relatively complex, but the annual resets facilitates administrative continuity and timeliness of cost adjustments.

"Network Objectives"

At market commencement, the original logic for separating network and the wholesale market was that both were spawned from the disaggregation of the original, vertically integrated, Western Power. It was critical that network be operated as a competitively neutral monopoly and so measures were taken to institutionalise separation of network from the state-owned generation (Verve) and the state-owned retail (Synergy).

The Access Code Objective is to promote <u>economically efficient investment in</u> and operation of and use of <u>networks</u> in order to promote competition in upstream and downstream markets (our emphasis added).

In contrast to the Market Rules, the Code Objective is an honorific administrative placeholder that is rarely discussed. Of particular concern, the Code Objective is network-centric.



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"Network Rules"

In contrast to the Market Rules, the Electricity Networks Access Code pertains to any (covered) electricity network in Western Australia; one size fits all. It applies alike to state-owned utilities and commercial enterprises for which electricity is an essential but peripheral enabler of their principal operation, the cost of which is to be minimised and protected as a source of competitive advantage.

In contrast to the Market Rules, the Access Arrangement is administered by a for-profit regulated monopoly commercially interested in outcomes and judge in its own matters. Because participant defaults diminish profit, the operator is feral in protecting its interests.

In expectation of tension between user, Regulator and service provider, the Access Code specifies some 40 times a behavioural requirement of a "Reasonable and Prudent Person". In contrast, the Market Rules contain no references to the notion. (There are however, several references requiring participants to act "reasonably".)

The Code defines "Reasonable and Prudent Person" to mean:

"acting in good faith and in accordance with good electricity industry practice."

Good electricity industry practice is defined to mean:

"the exercise of that degree of skill, diligence, prudence and foresight that a skilled and experienced person would reasonably and ordinarily exercise under comparable conditions and circumstances consistent with applicable written laws and statutory instruments and applicable recognised codes, standards and guidelines."

In everyday language, the term means "honesty and sincerity of action acting with or showing care and thought for the future".

We suggest that in administering the Market Rules, AEMO doesn't need to be required to act as Reasonable and Prudent Person because the Market Rules are procedurally fair, subject to timely oversight and the market underwrites defaults.

Conversely, requiring Western Power to act as a Reasonable and Prudent Person fails because the implementation of the rules is procedurally unfair and there is no effective oversight outside the very broad Access Arrangement resets. Western Power also distorts "Reasonable and Prudent" to mean to take no risk. On the face of it there is a dispute process, but if Western Power refuses conciliation, then the applicant is exposed to the risk of having to pay its costs. The business choice is: take on Western Power with the upside of being permitted to continue eking out a living versus suffering business wipeout and personal bankruptcy if the fix is already in or if there is an imperfection in the Code. And even if it loses, Western Power's legal costs are passed through to the market whether it is right, wrong, indifferent or just bloody-minded.



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We observe that Western Power "acting Reasonably and Prudently" has publicly and sequentially defied its regulator in respect of Access Arrangement 4 and occasioned its regulator to impose its own Access Arrangement. Amongst many other things, the regulator has published that Western Power has developed no analytical justification for novel time of use network tariffs; it has effectively guessed them. [Please see Part 2 for more information.]

We welcome the regulator to our world. We experience Western Power as acting prudently in its monopolistic profit-seeking self-interest rather than from an holistic market perspective; as a conservative risk-minimiser rather than a societal value optimiser. This manifests as an unnecessary cost of doing business and lost opportunities through barring entry and impeding innovation.

While the Access Arrangement mandates very many processes and procedures, Western Peremptory#2 Power is free to determine whether or not to develop supporting enabling procedures, to conceal them from users, to change them arbitrarily without notice, and to act as judge in its own matter. It stipulates its decisions without appeal, without providing sufficient knowledge of the criteria, or sufficient information of any non-compliance for the applicant to negotiate a remedy other than what Western Power stipulates. If the applicant had known the criteria at the outset, it might not have bothered with the application. Once the decision is imposed, the applicant doesn't know how close to compliance it actually is or if Western Power will change its mind, hike the costs involved or unveil the next layer of the pain-onion.

We suggest that the Access Arrangement should be replaced by the network equivalent of the Market Rules, as detailed above. We suggest that it is not necessary to operate the network as a for-profit company in order to return a dividend to government. There is ample precedent for simply levying a fee. We consider that this would considerably improve matters even if there was too be no content change. The transparency alone would remedy most of the inefficiencies and ineffectiveness. We suggest that the Code Objective and the Market Objectives should be integrated to emphasise the importance of behind-the-meter solutions versus power stations connected by transmission lines.

#2 peremptory

adjective

insisting on immediate attention or obedience, especially in a brusquely imperious way. *synonyms*: brusque, imperious, high-handed, brisk, abrupt, summary, commanding authoritative, overbearing, dogmatic, autocratic, dictatorial, bossy, domineering, arbitrary, arrogant, overweening, lordly, tyrannical, despotic, imperial, magisterial, authoritarian Law:

not open to appeal or challenge; final

synonyms: incontrovertible, irreversible, binding, absolute, final, conclusive, decisive, definitive, categorical, irrefutable, unconditional, unchallengeable; unappealable



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Transparency

We consider that the most potent means of improving achievement of the Market Objectives is simply to publishing everything of reasonable general interest to Market Participants except where the market would be enhanced by observing confidentiality. In respect of the state-owned utilities, the ERA should have access to all information and especially financial accounts.

We cite as an example the dissemination and user-friendly representations on the IMO-AEMO website of generation outage information. It is a little known fact that the benefits of this were astronomically disproportionate to the small costs and prima facie simplicity of the initiative:

- We suggest that the political response to the Varanus Island contingency would have been more measured and appropriate had the outage information been published at the time (it was subsequently published a few years later). We suggest that the consequent Vinalco debacle was avoidable by those who had that information.
- The initiative was central to the prospering of boutique retailers that take exposure to the spot energy price. Prior to the release of that information, they were subject to an element of 'Russian Roulette" in their commercial models - the wildcard risk of an unforeseeable energy price blow-out.

While the focus here is on the Market Rules, we consider that application of the principle of transparency to the state-owned utilities (as distinct from their "freedom of information" camouflage) would promote unprecedentedly cost-effective innovation.

While Western Power and Synergy legitimately need some confidentiality in order to operate responsibly, effectively and efficiently, we suggest that their right to conceal information enables them to avoid accountability and manipulate the market and their shareholder.

We perceive that transparency to the ERA of Synergy's Profit & Loss Statement would of itself have remedied the Tariff Adjustment Payment (subsidy) and would of itself remedy the dysfunction in the Standard Product regime.

We suggest resurrecting Rule Change RC-2014-09 (Managing Market Information), issued on 13-MAR-2015. The tale of its lamentable demise is chronicled below from the Rule Change Panel website, inclusive of a disingenuous justification:



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Final Report Published	26/08/2019	Must be published within 20 B-Days after the end of the second submission period.	
Ministerial Approval	23/09/2019	The Minister requires 20 B-Days to review the Final Rule Change Report and advise the Rule Change Panel of a decision.	
Commencement	TBA		

Documents related to this Rule Change Proposal Rule Change Notice and Proposal [251kB]

Extension Notice (8 June 2015) [93kB] Extension Notice (28 August 2015) [94kB] Extension Notice (19 October 2015) [89kB] Extension Notice (18 December 2015) [89kB] Extension Notice (27 June 2016) [89kB] Extension Notice (10 April 2017) [135 kB] Extension Notice (21 December 2017) [148 kB]

Extension Notice (17 December 2018) [153kB]

Reason for the Extension

The Rule Change Panel has identified several issues regarding the Rule Change Proposal which require further consultation and is currently preparing a call for further submissions.

The Rule Change Panel has therefore extended the timeframe for the publication of the Draft Rule Change Report until 1 July 2019 to:

- allow the Rule Change Panel to hold a further submission period while managing competing priorities; and
- allow the Rule Change Panel sufficient time to assess the Rule Change Proposal and submissions received and prepare the Draft Rule Change Report.

Further details relating to the Rule Change Proposal are available at <u>https://www.erawa.com.au/rule-change-panel/market-rule-changes/rule-change-rc 2014 09</u>.

Incentives

It is a fundamental tenet of economics that we get more of what we incentivise and less of what we tax.

We suggest that the goal of connecting to the network new generation developments would most effectively be achieved by expressly incentivising Western Power's executive management to achieve that end. We consider that the gold plating and officious obstruction would cease if their prosperity and continued employment was tied to that goal. Alternatively, if the building of unaccountable bureaucratic empires is incentivised, that is what we will get.

Issue: the future investment environment in the WEM may not be conducive to continued third-party investment. This may leave the State Government responsible for funding or underwriting future generation investments. Questions

6. Are market participants satisfied that innovation trials are sufficiently open to participation from entities independent of government?



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We note that the ERA's framing of the issue presumes continuing dominance of the traditional capital-intensive utility paradigm, which we challenge in Part 2 of our response. We suggest, instead, that the alternative to institutional capital is not only state capital but also private investments behind-the-meter. We suggest that the reforms are fatally flawed without proper recognition of the need for price signals to optimise private capital.

We take it as self-evident that the purpose of the reform ought partly to be the accommodation of futuristic innovation. In contrast, we perceive the reform process to be an attempt to extend business-as-usual for most of the remainder of the century (60 years) in respect of the planning of constrained access with an assumption of no utility scale batteries. Outside the reform process, a series of unscrutinised frolics takes place at its periphery in the exclusive reserve of the state-owned utilities.

We suggest that it is proper for government entities to conduct well-conceived innovation trials under proper accountability. We especially support in principle the various battery, microgrid and stand-alone power system innovations being trialled by Western Power. However, we suggest that where the sponsoring entity is a regulated monopoly, such as Western Power, or is acting in a market segment that is a regulated monopoly, such as Synergy and the residential market, the results should be made public and the process of selecting private sector partners should be regulated, transparent and on commercial terms.

We perceive innovation trials to be closed to private market participants except where an initiative is sponsored and overseen by Synergy or Western Power, who seem to have the freedom to partner with private entities via undisclosed selection processes.

In our experience, Western Power obstructs our initiatives to innovate, which is a barrier to us participating in the behind-the-meter market despite our proven expertise and track record in doing so.

Peer to peer trading

We note the ERA's references [our emphasis added]:

"New network services for residential customers, such as peer-to-peer trading, have developed recently and will probably continue to emerge in future. For some of these technologies, there may be barriers to entry for the private sector."

".... Western Power's knowledge of customer consumption patterns and system locations also gives it an advantage over prospective entrants to the market."

We seek clarification:



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- i. What "advantage" specifically, and over whom does Western Power possess it? Licensed generators and retailers perhaps?
- ii. What "network services" specifically?
- iii. Are these Reference Services under the Access Code and Access Arrangement 4?
- iv. If not, how are they regulated and funded?
- v. What oversight is there to prevent cross subsidy?
- vi. Is Western Power permitted to trade energy in competition with licensed retailers?
- vii. Does Western Power possess licensing exemptions?
- viii. Are peer-sellers to be licensed?
- ix. How are P2P partners selected?
- x. Is the energy trading aspect of P2P trading limited to non-contestable customers? If so, why?
- xi. What is the difference between trading of surplus residential rooftop PV and a supply to a 'peer-buyer' from a utility-scale solar PV power station?
- xii. Most importantly, what is the value-adding commercial model of P2P trading?

Notwithstanding our alarm at the blasé indifference to the potential infringement of the integrity of the deregulated electricity market and the supposed reform process, we suggest that there isn't a commercial value-adding underpinning of P2P trading, which makes this issue all the more surreal.

Referring to the ERA's Figure 3, reproduced below, we suggest that the P2P trading concept is not value-adding in respect of transactors who possess independent network connections. [It is workable for transactors "behind the meter" of a connection point, but can be performed - as it already is performed by sub-metering providers - much more simply and without blockchain.]

We reference Figure 3 of the ERA's Discussion Paper, detailing the cost structure of electricity supply:

For illustration, we reference the 2017-18 data (\$/MWh):

\$97	network	51%
\$32	capacity	17%
\$57	energy	30%
\$5.7	ancillary serves (including market fees)	3%
<u>\$191.7</u>	<u>7</u>	

TOTAL:



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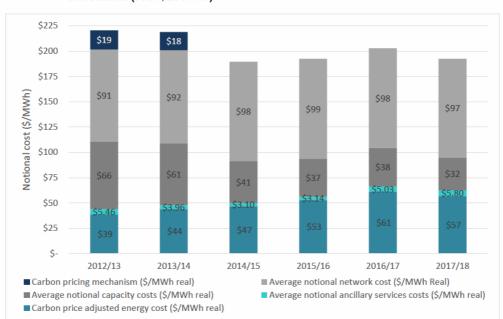


Figure 3: Notional costs of wholesale electricity supply per unit of energy consumed (real \$2017/18)

Source: ERA analysis of AEMO and Clean Energy Regulator data.

NOTES: i) this excludes the costs of the federal Clean Energy Regulations.

ii) the ancillary services cost includes the costs of administering the market, currently around \$1/MWh

For illustration of the flaws in the P2P trading concept, let's assume that Synergy charges a tariff of \$200/MWh (20c/kWh)-variable and makes \$8 margin.

When the peer-buyer and peer-seller transact, the network, capacity and ancillary services components of both buyer and seller remain the same as they would have been had the transaction not taken place (though in future the power flows might be altered due to operation of storage). Consequently, network, capacity and ancillary services remain as costs to be born by Synergy. The P2P trade pertains only to the energy component - so in the best case scenario, Synergy avoids an expense of \$57/MWh-average. However:

- i. We estimate the AEMO solar PV curve to be worth 4c/kWh average across the year.... and falling. We estimate the few hours of the middle day to be worth around 2c/kWh;
- ii. if the buyer pays more than 5.7c/kwh-average, it is worse off and won't make the trade;
- iii. if the seller receives less than the REBS payment (7c/kWh) for its export, it is worse off and won't make the trade. [Or is the REBS payment to continue regardless?]



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- iv. How is Synergy impacted by the trade? Does it lose 1kWh of volume (20c/kWh) so that the buyer and seller can be engorged by a few c/kWh each? Why would it agree to that? Perhaps as a counter-measure to Full Retail Contestability?
- v. How is Western Power impacted by the trade? Are the peers subject to a preferential network tariff, with the saving to be distributed between them? If so, where is the regulatory oversight? How does this impact on the network when scaled to the existing 1,000MW of rooftop PV? If it wouldn't be scaled, why not? How does it look when the forecasted 2,000MW is in place in 10 years time? Where are the limits? What is the future outlook for non-participating customers when retailers are locked out of participating in this mechanism? Why isn't this planned for in AA4? Why isn't it included in the business case for constrained access?

Notwithstanding that we perceive no commercial value-add for P2P trading at the residential level, we advise it is a commonplace for retailers to buy energy exported from rooftop PV installations and on-sell it to other customers. We have ourselves for 20 years specialised in integrating portfolios of distribution-connected power stations with associated-entity contestable loads, transacting only the energy. We have never received any subsidy to enable this - and we don't need one. What sort of innovation needs to be subsidised to "re-invent" existing practices with expensive technology? Archaic practitioners call it "wheeling". The SWIS had wheeling contracts 30 years ago; what's new about it? The non-commercial subsidy perhaps? Or the exclusion of private participants in supplying residences?

We further advise that blockchain technology is not necessary for the P2P concept and that ordinary interval meters are sufficient to enable it.

Issue: Wholesale electricity prices have continued to rise in spite of downward pressure from demand and fuel prices.

Issue: the WEM is highly concentrated. Synergy is dominant through its own generation plant and power purchase agreements with other generators. There is insufficient competitive discipline on Synergy to keep wholesale prices down. Infra-marginal generators, which are dispatched with bids below the balancing price, benefit from these higher balancing prices. Questions

1. What other factors may be driving up wholesale electricity prices if not demand or fuel costs?

5. What other factors should the ERA consider that may underlie wholesale price increases in the WEM?

3. Is the market applying sufficient pricing discipline on generators in light of the high level of concentration in the WEM?

One of Community Electricity's core operations is the forecasting of energy prices. The energy price forecast is the principal determinant of profitability.

We advise that energy prices are NOT a reason for us closing our retail licence.



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We suggest the following additional causes and potential mitigations of elevated electricity prices:

Unclear SRMC bidding guidelines

We suggest that the Market Rules concerning offering energy at SRMC should be clearer and enforcement action should be more timely.

We suggest that the ERA has started progressing suitable initiatives but that these are taking an unreasonably long time:

- The investigation into Synergy's pricing behaviour
- Balancing Offer Market Guidelines (for bidding at SRMC)

Investigation into Synergy's pricing behaviour

The investigation into Synergy's pricing behaviour commenced on 26-JUL-17 and is ongoing. The date of the next update was recently extended to 29-APR-19. The investigation relates to 6,000 anomalies over a previous period of 15 months (27% of offers over that time). The ERA reports that Synergy sets the Balancing Price in 80% of Trading Intervals.

The energy price is one of the key behaviour signals in the electricity market and participants depend on their ability to forecast it. Indeed, the electricity reform programme targets its long term minimisation as the core of its purpose.

The last comparable investigation into bidding behaviour was that of Vinalco and took a few years to result in a nominal fine. However, the market understood broadly what had happened and there was no dislocation to energy prices beyond the investigated behaviour which occurred during system-contingency circumstances.

We offer no comment on the appropriateness or otherwise of the bidding behaviour now under investigation because no information has been released.

However, the quality of the energy price signal has now been compromised for the last 3 years. The market does not know:

- i. if the energy prices during all or part of that period are defective;
- ii. the materiality of any defect;
- iii. whether the behaviour under investigation has ceased during the investigation;
- iv. whether the behaviour has ceased and might resume when a decision is ultimately handed down;



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Following the Vinaclo experience, the quality of the energy price could remain compromised for a further one or two years if the matter is passed to the Energy Review board.

We suggest that alongside its investigation of Synergy, the ERA should also assess the cost to the market of the process delay and lack of information, and contemplate its own role in that.

Guidelines for bidding at SRMC

The ERA tabled a discussion paper at MAC on 14-FEB-18 proposing guidelines for bidding at SRMC and has not progressed beyond calling for comment.

Our response to those guidelines is that:

- i. We support the proposed expansive definition of SRMC to include Avoidable Variable Costs.
- ii. We suggest that the definition of 'Market Power' should provide that a participant has market power if:

a) it is setting the Balancing Price; or

- b) could reasonably be expected to be setting the price but for some reason isn't;
- iii. We suggest that the proper place for the proposed interpretation of the SRMC requirements is in the market Rules via a Rule Change. We suggest that it is inappropriate for such an important issue to be referenced to an ethereal non-binding guideline whose existence would not reasonably be known to a Market Participant.
- iv. We suggest that the guideline ought to more thoroughly provide for the reasonable expectation of a generator run-time. Such an expectation is difficult to form because of systematically inaccurate operational forecasting by System Management combined with relatively long gate closures, especially for Synergy. We are concerned that where a plant is not running and is out of merit, it could credibly argue that its reasonable expected run time is starting costs plus a single trading interval for each and every interval of the Balancing Horizon. An alternative is for it to expect to run for the average run-time historically experienced in reasonably similar circumstances.
- v. We suggest that the guideline should expressly address portfolio bidding. Through this mechanism, Synergy may choose to turn off a unit and make good through the use of other units offering (via the portfolio) at the equivalent price of the cold unit. However, if the system load is subsequently unexpectedly higher and an operating unit has to be incremented, to what extent is the compensating unit(s) considered to have 'started' for the incremental amount beyond the span of the cold unit? How should this be reflected in offered prices?



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Baseload outages and turn-off

Average prices are significantly affected by the quantity of baseload outages and their seasonality; that is the system load characteristics at the time and the unit's relative importance in supplying it.

Baseload outages vary from year to year according to a unit's location in its maintenance cycle, varying between major and minor. The ERA's Table 2 demonstrates such variability between years.

We note from Table 2 that Cockburn CCGT had an abnormally high outage level (45%) last year which would have elevated prices in that year.

Table 2 also indicates that Bluewaters 2 was off for 56% MW-equivalent in FY 17-18, which would have elevated prices in that year, and its subsequent return would have reduced them.

In recent months (not shown in Table 2) there is evidence of generators timing outages to coincide with low load periods when there is otherwise a high likelihood of negative prices occurring. This was most evident in December.

While we recognise that that this is a normal, desirable market outcome, we suggest that it needs to monitored to prevent gaming; if a generator envisages that it will benefit from switching off from time to time, it might lower its standards for applying for planned outages in order to avoid having to switch on for brief periods between turn-offs.

Baseload turn off

We show below the operating performance of three Synergy generators over the last three months, from the AEMO website, where we have highlighted periods where the units were available but not running. The integration of these periods with actual outages is also potentially revealing.

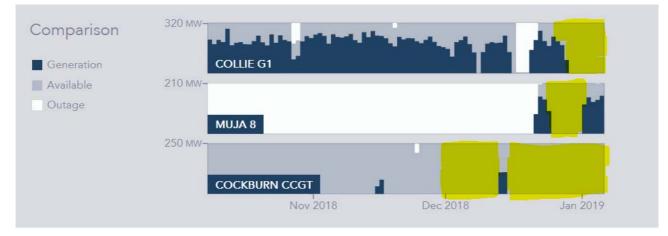
It is seen that Collie (320MW-coal) was on outage just before Christmas and then shut down for a week ('available' but not operating).

Muja 8 (210MW-coal) was on outage for most of the previous 3 months and was shut down over the holiday after having run for a few days.

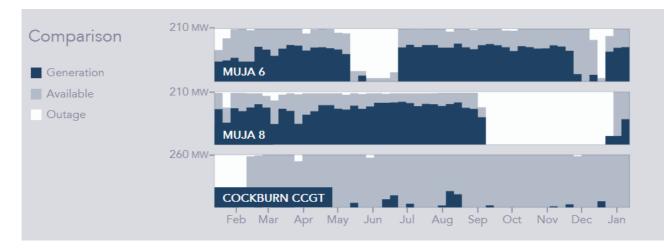
Cockburn (250MW- high efficiency gas) is run only occasionally during peak demand; 'available' for all three months, but has actually operated for only a few days.



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The equivalent 12 month chart is also instructive, showing that Cockburn is rarely operated despite being ostensibly available. The shutdown of Muja 6 (220MW-coal) over the recent holiday is also seen.



Systematically biased inaccuracies in system load System Management's forecasting

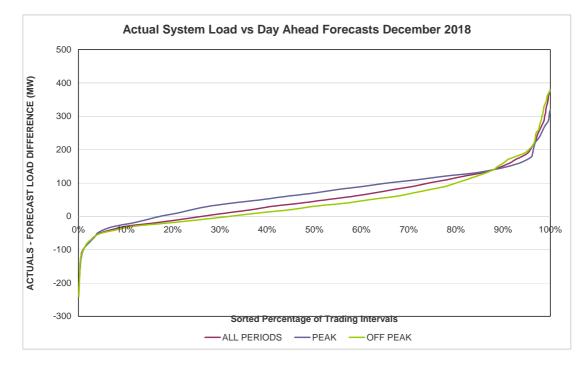
We routinely track the inaccuracy of System Management's interval-ahead and day-ahead system load forecasts as an input to our energy price forecasting for pricing retail customers.

We observe the RMS by trading interval of the interval-ahead load forecast since JUL-2017 to be 50MW and 120MW respectively for the day ahead Off Peak and Peak periods.

The following chart shows a representation of the day-ahead inaccuracy throughout December 2018.



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An unbiased forecast would be 'high' to an equivalent extent to being 'low' and would intersect the x-axis at 50%. There is clearly a systematic bias to the high side.

The further chart shows the RMS deviation for each weekday trading interval in December for day-ahead and hour-ahead.

It is notable that in the day-ahead case, the direction of the RMS is to the high side in every trading interval.

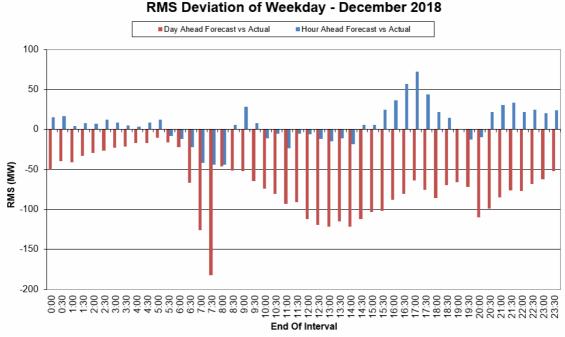
In contrast, the hour-ahead inaccuracies are chunked according to time periods; too high for the morning peak and too low for the evening peak.

We suggest that inaccuracy in the day-ahead forecast impacts STEM prices and that a systematic bias to the high side increases them.

Similarly, hour-ahead inaccuracy impacts the Balancing price and additionally complicates the dispatch of ancillary services.



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Note: we have added a direction indication to the RMS - negative values denote that the forecast was higher than actuals

We suggest that the materiality of this should be investigated. We perceive that the planned reforms intend to fix this problem before OCT-2022. We suggest that earlier action is needed. We consider that the STEM was not available to us as a cost-effective hedging mechanism throughout December and January; combined with the dysfunction of the Standard Products, small retailers had no choice but to take full balancing exposure during the first two months of the Hot Season.... and continuing.

Unnecessarily early Balancing Gate closure

We support Perth Energy's Rule Change Proposal RC-2017-02 to shorten the Balancing gate closure. Shorter gate closure facilitates generator dispatch closer to real time and gives more certainty of prices and quantities, thereby enhancing participation of private generators in the market.

The rule change was submitted on 4-APR-2017 but has been subject to a series of delays. The current schedule provides for a final report to be issued by 26-AUG-2019, but this is a placeholder that is rolled forward as each extension notice rolls out, as shown in the following screenshots from the Rule Change Panel website:



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Draft Rule Change Report Published	01/07/2019	The timeframe for publishing the Draft Rule Change Report was further extended in accordance with the Extension Notice published on 17 December 2018.
Second Submission Period	01/07/2019 - 29/07/2019	The submission period is at least 20 B-Days from the publication of the Draft Report.
Final Rule Change Report Published	26/08/2019	The Final Rule Change Report must be published within 20 B-Days after the end of the second submission period.
Commencement	ТВА	

Documents related to this Rule Change Proposal

Rule Change Notice and Proposal [423kB PDF] Extension Notice (22 May 2017) [96kB PDF] Extension Notice (24 July 2017) [137 kB] Extension Notice (24 October 2017) [137 kB] Extension Notice (21 December 2017) [149 kB] Extension Notice (17 December 2018) [153kB]

Reason for the Extension

To further progress this Rule Change Proposal, the Rule Change Panel requires AEMO's assessment about the impact that a 30-minute Balancing Gate Closure would have on AEMO's systems and the dispatch process, and about the impact of alternative options such as a 60-minute or 90-minute Balancing Gate Closure.

The Rule Change Panel has also identified several material and complex issues that require further assessment before a draft decision can be made.

The Rule Change Panel has therefore extended the timeframe for the publication of the Draft Rule Change Report until 1 July 2019 to:

- allow AEMO to assess the impact of the proposed changes; and
- allow the Rule Change Panel sufficient time to undertake the necessary investigation and analysis while managing competing priorities.

Issue: as the penetration of renewable energy behind the meter increases, it is altering the load profile serviced by generators in the WEM. This alteration has the potential to increase costs.

Question

2. Do market participants consider generators are changing their bids into the balancing market to recover higher start-up and shut down costs over shorter run times?

We acknowledge the ERA's analysis and its finding that there is no evidence of material changes to run times.

However, we suggest that actual operational run times aren't the issue; rather, it is the means by which "theoretical" run-times within the Balancing Portfolio are converted into price offers that have to be lodged subject to a 4 hour gate closure (compared to 2 hours for private generators and Perth Energy's proposed reduction for all generators).

In particular, we perceive price outcomes to become distorted around the morning and evening peaks, and occasions when baseload units are available but not running.



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We cite as an example:

30-DEC-18 Collie (340MW) and Muja 8 (210MW) offline but available. No material outages Modest evening peak

<u>SOI</u>	System Load (MW)	<u>NSG (MW)</u>	LSG(MW)	Balancing Price
				<u>\$/MWh</u>
10.00	2.1.()	222	1 0 2 2	0.4
19:30	2,166	233	1,933	96
19:00	2,122	219	1,903	55

We invite explanation of how a 33MW (1.7%) increase in load for scheduled generation over 30 minutes reduces the Balancing Price from \$96/MWh to \$55/MWh (43%) when there is 550MW (25%) of baseload offline but available.

7. To what extent do market participants rely on, or derive benefit from, the electricity statements of opportunity in planning and investment decisions?

The ESOO is extremely important for:

- forecasting the evolution of the Reserve Capacity Price
- monitoring and understanding market trends and new developments
- generation planning

Further to Part 2 of our response, we consider that the ESOO should be expanded to make an holistic behind-the-meter assessment.

8. Should market participants signal intended or probable plant retirements at least three years in advance, as has been suggested in the National Electricity Market; or, should the market operator undertake its own analysis of the probable plant exit dates?

9. If not advanced notice of plant retirements, what other mechanisms could be used to signal investment opportunities and improve the operation of the capacity mechanism?

Generator retirements are central to forecasts of energy prices and therefore managing them is of critical importance.

We suggest that both approaches are important, with the signalling of retirements being critical. AEMO's analysis helps understand what can be expected during the phase-out.



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We support the PUO's draft recommendation to require generators to provide at least 3 years' notice. We additionally suggest that penalties should be incurred for non-compliance with the notice period.

As matters stand Synergy can arbitrarily and spontaneously control the capacity price to any level it chooses up to the cap by retiring selected generating units. The PUO proposed to recommend remedying that in its draft capacity market recommendations paper, but the market needs to ensure it follows through.

We observe that the retirement of the South West Cogen was organised as a mysterious disappearance that in the fullness of time was revealed to be retirement. Knowledge of its withdrawal from service manifested in the form of a Forced Outage on AEMO's outage information graphics, posted a few weeks at a time. There was no prior signal to the market and not even an acknowledgement after it had retired. One of the impacts of its removal from the Balancing Portfolio was reduced frequency of occurrence of negative pricing events, which elevated prices. It also elevated the capacity price.

As matters stand, the market is exposed to the risk that one day one or more Muja units will be posted as a Forced Outage for a few weeks. There's nothing remarkable about that.... until it just doesn't return to service.

10. To what extent do policy uncertainty and behind-the-meter changes in generation and storage influence decisions to develop projects in the WEM?

We consider this to be a profound question but as framed it only skirts the real issues.

On the face of it the importance of behind-the-meter initiatives is superseded by more dominant impediments which include, amongst other things:

- network access is critical to generator development but has been tangled in the uncertainty and confusion of the market reform process for the last 5 years with no prospect of a basis to commence planning until 2022 at the earliest.
- new generator developments that do not receive subsidy are dependent on investment grade offatkers taking their output at sufficient price and these are largely already subscribed (except for that state itself...)

While these issues are sufficient to impair development of generation projects, we consider that there is a more profound change taking place. While the market reforms have correctly identified the future dominance of intermittent, renewable, generators, they continue to be premised on the traditional capital-intensive transmission-connected utility paradigm. We consider that the reforms are misplaced and should focus on issuing price signals to optimise the replacement of institutional capital by private, behind-themeter, capital.

Please see the accompanying companion response (Part 2) for a comprehensive analysis.



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12. Do market participants consider the investment environment in the WEM will improve or worsen over the short to medium term? If so, what factors will drive this change?

We suggest that the WEM investment environment has been dysfunctional and ineffective for the last decade and, while it is unlikely to worsen, it is also unlikely to improve.

While Synergy's generation fleet ages and units could be retired or breakdown summarily, we observe that no new scheduled generation project has been committed for the last 10 years and AEMO's 2018 Expression of Interest process identified zero MW of prospective scheduled generation projects. Five years into the Electricity Market Reform programme, we perceive no reason for this to change.

Please see Part 2 of our response for a comprehensive analysis.

13. What is the likelihood that the State Government will need to invest to replace generation assets?

This question is profound in its irony. The objectives of the Electricity Market Review were largely to remove from government the burden of underwriting new generation developments by attracting to the market participants with investment grade balance sheets. We perceive that the reforms, such as they stand after 5 years of expense and activity , have comprehensively failed this standard.

Please see Part 2 of our response for a comprehensive analysis.

14. What could organisations such as the ERA, AEMO, Western Power and the State Government reasonably do to improve the investment environment?

Please see Part 2 of our response for a compendium of suggestions.

Issue: the cost of operating, administering and regulating the WEM has doubled in real terms over the last 10 years in response to increasing market complexity. The current market reform program will increase market fees further in real terms.

Questions

15. Do market participants consider that market operation, administration and development expenditure is delivering the benefits anticipated? If not, is the market and its electricity consumers failing to secure the benefits because of structure, governance, lack of competition, or scale?

We emphasise that AEMO' Allowable Revenue charges have NOT contributed to our market exit.



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Context

The reduction of administration costs was an objective of the original Electricity Market Reform and the strategy chosen was the abolition of the Independent Market Operator (IMO), its replacement by AEMO, and establishment of the Rule Change Panel.

While this is trumpeted as one of the reform's few achievements to date, we consider it to be the reform's biggest mistake.

Previously, the IMO had maintained a Market Evolution Plan that had been very successful in cost-effectively improving the market. The IMO was also proactive in proposing and stewarding rule change proposals.

We consider that the IMO was truly independent (per the "I" in its name) and acted in the best interests of the Market Objectives.

Most importantly, we consider that the IMO was an effective counterweight to the state's conflict of interest between the pursuit of a more efficient economy through best practice energy prices and the profit-interests of the state-owned utilities, Western Power and Synergy. This conflict was institutionalised by combining in one person the ministries of treasury and energy, which also initiated the Electricity Market Reform.

Not only have administration costs blown out since replacement of the IMO, but the costs to the market contemplated here by the ERA do not include:

- the PUO's direct costs of the reforms. While these aren't published (another potential benefit of transparency), we expect that they at least double the figure that the ERA is contemplating here;
- participant's direct costs of the reform programme;
- the consequences of cancelling ready-to-go remedies. At the instigation of the market review, the IMO's evolution programme was suspended along with a dozen or so rule change proposals in development. Those rule changes were materially very similar to the direction to date of the reform process. With the pace of reform being so slow, some of the suspended changes are now being implemented some 5 years after being suspended and still 3 or 4 years before any prospective remedy is likely to be realised from the reform programme.
- the continuing conflict of interest between low energy prices and the financial returns of the state-owned utilities, which is a primary influence on the electricity market, is now unrestrained;
- The reform process has now created a situation where the Rule Change Panel has limited resources to progress rule change proposals and no authority to initiate them, AEMO has limited budget to contribute, and the ERA has been inactive in



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that venue. The PUO has initiated some very necessary rule changes in recent months but this is the exception as it prefers to address matters via the broader former measures, with the attendant delay to 2022 and possibly beyond.

The current situation

Notwithstanding whether or not the market has the ideal model, it is what it is. We suggest that as a general principle AEMO should be properly funded to perform its functions and that those functions should serve the Market Objectives.

AEMO's Allowable Revenue (AR) is nominal in the cost structure; in the ERA's Figure 3 it is bundled as part of the much larger Ancillary Services cost which in combination comprises only 3% of the total. AEMO's cost is around 0.5%.

Cost is what we pay, value is what we get.

We suggest that the principal value-add the market expects from AEMO is to dispassionately further the Market Objectives.

We suggest that value is enhanced by AEMO being resourced to properly participate in the business-as-usual development of the market, including the rule change process. We suggest that it should also be properly resourced to dispassionately advise government on the reform programme and, separately, to implement the outcomes of that programme.

We emphasise that advising on reform and implementing it are separate matters. The market gets best value from AEMO when it provides a professional opinion on the holistic appropriateness of reforms rather than merely acquiescing to ill-considered political whim.

We support and admire AEMO's soul-searching and management of total costs, but we caution against allowing the costs of reform implementation to crowd out legitimate spending in business-as-usual and value-adding areas. We consider that AEMO should not be an apologist for the reform implementation and that the costs of implementation should be separately identified and quarantined from normal operations & reform advisory. If the market is to be compelled to fund the reforms against its will, we suggest it is AEMO's duty to memorialised the implementation costs and indicate the costs of alternative scheduling scenarios; faster and ill-defined costs more.

We suggest that insofar as the implementation detail is not specified then AEMO shouldn't include it in the AR5 application, but should separately apply for the necessary funds - and the government can either fund it from tax revenue or take its chances in the ensuing review by the ERA and public consultation.

We refer AEMO to Part 2 of our response to the consultation and observe that AEMO is silent on what we consider to be the fatal flaw in business case for constrained access: the assumptions that utility scale batteries are excluded from the power system for the next 60 years.... while asking for \$50 million to implement too little too late.



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APPENDIX

Community Electricity's exit from contributing to the regulatory development of the wholesale market - alas, it's no longer personal.

If you know us at all, dear reader, you know you can ask us any question you like and we'll reframe it to a broader perspective that reveals truths, humour and philosophy beyond what you thought you wanted and might actually prefer not to know.

A well-lived life integrates a network of balanced and reinforcing virtues that include vocation, reward, contribution and relevance. For most of us, vocation and reward are achieved through a career of 'jobs'. The profound transcend this to include contribution and relevance, some of us as entrepreneurs, some as intra-preneurs within institutions.

The charitable aspects of our contributions rely on context and feedback governed by one of life's wisdoms:

the beneficiaries of our generosity have to want it for themselves more than we want it for them

We perceive the SWIS electricity market to be a profound trust, inanimate of itself but the duty of a trustee in the service of our community. We consider that shortly after sham-deregulation had commenced in the late 1990s, the trusteeship was given form by a properly functioning political system championed by the then energy minister, Eric Ripper. His successors would do well to re-read his election manifesto for energy and recall that he actually implemented it. [Email us if you want a copy.]

Eric created the Electricity Reform Task Force of 2000, followed by the Electricity Reform Implementation Unit and the trusteeship was conferred on Steve Edwell and Dora Guzleva. Steve and Dora really wanted Eric's vision manifested and defined the trust through the wholesale rules Market Objectives. In time, the trusteeship passed to Allan Dawson and John Kelly at the IMO (via Patrick Peak and Troy Forward, of course).

The trust inspired Community Electricity's corporate mission, our motto and our participation in the market.

For the best part of a decade, the IMO progressed a Market Evolution Plan under the guidance of its Market Advisory Committee. Though comprised of competing industry participants, all members of the committee carried equal weight and largely observed the constitution to set aside their corporate interests and act in the best interests of the Market Objectives. This was imperfect and there was policy drift, but there was a vivacious trust that wanted for itself, accepted all assistance in developing and all things were possible. The trust was sustained through the policy and leadership void memorialised by the Strategic Energy Initiative 2031, issued in August 2012 only 18 months before radical reform began. The gods laughed, but at least it did no harm:



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http://www.parliament.wa.gov.au/publications/tabledpapers.nsf/displaypaper/3814884 cb40c9855a62ad8d948257a770006602d/\$file/4884.pdf

Then suddenly, the state government merged the ministries of treasury and energy and reforms were instituted to replicate the eastern market's optimisation-throughcompetitive-self interest. This ended up half-pregnant, the IMO was dissolved, and the 800lb gorillas were unchained.

While the functions underpinning the trust continue in name, the policy space is now populated by acolytes of the state-owned utilities, and the institutionally profound were shepherded into bureaucratic silos.

The trust lost its nurture and withered.

We perceive that market participants now have no venue to manifest their caring. The profound still find meaning in their vocation and its rewards, but there is now nothing to want for itself more than they want for it.

The profound on the private side are left to conclude that the market's price signals are intended, that their commercial operations should be governed by those signals, and that their personal doubts are misplaced. At that, the gods weep.

For our part, Community Electricity amused providence with a business model as a virtual electricity retailer. Providence took pity on our naivety and corrected the vword..... we are now a vicarious retailer providing retail consultancy to boutique retailers that provide us with our desired risk-adjusted return while they themselves take the risk & reward of traditional retailing, minus our fee.

Notwithstanding our bountiful suggestions for improvement, the SWIS market in its current form is "good enough" for boutique retailers and they will prosper. And all the more so as the "reforms" proceed (quiet, please, you gods) and we help them arbitrage practical outcomes versus institutional bumbling.

Our corporate interests were previously best served by aligning ourselves with the Market Objectives. Alas, they are now best served by vacating the administration and frustration of a commercial model that depends on "naked success" and switching to serving those that themselves depend on that same naked success. The hoary old entrepreneurial cliché is true: don't recoil at the problem, grasp the opportunity. It is on that basis that we now close our direct retail operation. At a stroke, the strategic threat and administrative burden that once was Western Power becomes a source of competitive advantage through helping others navigate it.

Western Power's culture is the only constant in this market, but it is no worse than it has always been and isn't the primary cause of our exit. That said, one of the principal benefits of exiting is to cease depending for our existence on its arbitrary graces and to greatly reducing having to directly deal with it at all.



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So, alas, it's no longer personal; henceforth, we're just a different aspect of the problem, following the price signals set by the policy makers... and alert to the strategic issue that when they work out the lights might go out, they are likely to institute a panic fix.

Accordingly, we shall cease offering our suggestions in the public forums and thereby cease diluting our strategic property and reduce our exposure to the risk of being sued for talking truth to power.

Still, you've got to laugh, haven't you?

If you want to be informed of our free stuff from time to time, please send us an email.

Contact

For further information or comment, please contact:

Dr Steve Gould

8 February 2019