

Tuesday, 12 June 2018

Attention: Elizabeth Walters
Economic Regulation Authority
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Dear Elizabeth,

Submission to the ERA draft decision on the proposed AA4.

Summit Southern Cross Power Holdings Pty Ltd (SSCPH) is a significant and long-term investor in the WEM, with an interest in the effective operation of the market, including the adoption of efficient and transparent pricing signals.

SSCPH commends the ERA on its draft determination. It is a considerable body of work to prepare, with many interrelationships and competing interests to contend with, and where the ERA's scope to determine outcomes is limited by the rigidity of the Access Code. SSCP notes that the Access Code has not been reviewed since its inception in 2004. And while the amount of reviews in the electricity sector appears endless, it is important the Access Code is reviewed prior to the next access arrangement. The transformation underway in the energy sector requires new regulatory structures to enable it to be managed efficiently. The Access Code plays an important role in this regard.

This submission to the draft determination points out some of the failings of the current regulatory arrangements; makes some observations around potential improvements in efficient allocation of costs to some tariff classes – and some recommendations for review prior to a final determination; and provides high level comment on the failings of Western Power, in the view of SSCP, to prudently manage the network to the benefit of all customers.

If you have any queries regarding the content below, please contact me to discuss.

Yours sincerely,

Shane Cremin
GM Commercial & Strategy

THE CURRENT APPLICATION OF THE ACCESS CODE AS A MEASURE OF RISK WEIGHTED RETURNS

The National Electricity Objective, contained in the National Electricity Law, is:

to promote efficient investment in, and efficient operation and use of, electricity services for the long term interests of consumers of electricity with respect to:

- *price, quality, safety and reliability and security of supply of electricity*
- *the reliability, safety and security of the national electricity system.*

This contrasts with the Code Objective of the Access Code, which is:

to promote the economically efficient

- *investment in; and*
- *operation and use of,*

networks and services of networks in Western Australia in order to promote competition in markets upstream and downstream of the networks.

Promoting competition in markets, with the implicit flow-on benefits to consumers, is a noble aim. But compared with the National Electricity Law, it does not explicitly focus the long term objectives on creating the best outcome for consumers. In the SWIS, who decides what investment should be made and where it should occur, to promote competition? What competition should be promoted? In an electricity sector where the state government owns the network provider as well as the dominant utility – which has, if anything, being restructured to lessen competition in recent times, this objective seems a poor driver for efficient investment to the benefit of consumers.

Getting the overarching objective of operating and investing in the network correct is important going forward – especially for the transmission network. The SWIN faces a structural reorientation. The baseload generation in Collie and Kwinana is relatively swiftly being displaced by lower-cost renewable energy generation. Where transmission was previously built to accommodate the fuel located in the Collie coalfields, it will need to be reconstructed to utilise the large renewable resources north (and east) of Perth.

But the reconfiguring of the transmission grid will need to occur within a declining demand paradigm. Who pays for the new investment? And should existing investment continue to earn returns and be depreciated, even as the utilisation of those assets declines?

Certainly, the current measure of the asset base, by rolling forward the existing capital base, will become less justifiable going forward. This spreads the returns of both the existing network, servicing the less utilised generation being displaced, as well as the new network, required to meet changing generation sources, over a lower demand base. It would appear that an Optimised Deprival Value methodology for setting the asset base may be more appropriate, where previous but now under-utilised investments are devalued over time.

Assessing the efficiency of new investments is problematic. Network, and particularly transmission investments are very long-lived. An efficient investment today may not be so in the future – and vice versa. Companies in competitive environments will often reassess the book value of assets according to changing market dynamics. Under the current access arrangement, once assets are built and assessed as efficient investment, they remain so, earning regulated returns and being depreciated

for their useful lives. This might be better managed on a rolling basis, where, as in competitive markets, the assets are revalued from time to time. The Optimised Deprival Value methodology of setting an asset base could again be a more appropriate mechanism in this regard.

Finally, the concept of the Market Risk Premium, and the development of the WACC in general, is econometric in principle. This is a necessity for the mechanism which sets regulated returns. It affords investors some certainty over the metrics that make up their WACC, which underpins much of the rationale for investing in regulated assets. Other revenue setting mechanisms in the Access Code are also mechanical in their operation. The Access Code is thus predisposed to awarding theoretical risk premiums without allowing any 'judgement' on whether those premiums are justified by actions. These narrower interpretations are better aligned with earning returns on the distribution network, where capital investment is more evenly spread over multiple users and performance standards, or actions, more easily defined and measured. But the risk-reward of transmission investment decisions is different. As in many markets, when demand continually increases, investment risks tend to be lower. But when demand declines – and markets face other coincident structural changes, a more robust mechanism to determine the efficiency (or value) of investments is required.

THE NFIT AS A MECHANISM FOR TRANSFERRING RISK TO AND WEALTH FROM EXISTING USERS

The current arrangements for allocating new investment to the asset base require review. Network owners should be incentivised to make efficient investment where prudent. However they should not be able to completely de-risk substantial investments before they are made. This merely transfers the risks to network users. And in the event the investments are not efficient, then transfers wealth from users to the network owner.

Applying for a pre-approval of the NFIT for a substantial investment, coupled with the current inter-access arrangement roll forward method for determining the asset base, de-risks the investment. The network owner places the onus on the ERA to determine whether the investment is efficient or not. The ERA typically relies on ex-ante forecasts, produced by Western Power, that are likely to be favourable to the project. They also come under pressure from invested stakeholders, often including the government of the day, when assessing the investment. The ERA is not well placed to manage this risk assessment. The technically and commercially competent network owner is better placed to assess the likelihood of making returns on its investment.

But the threat of not having the investment approved under an ex-post NFIT, and the investment not added to the asset base, makes the stakes high. This is a risk common to competitive markets (where book values can vary with market dynamics), and should be borne by a prudent network operator earning an adequate regulated return on equity. But it likely promotes conservatism, which could lead to under-investment, which can be just as inefficient as over-investment¹.

Introducing a mechanism for a more dynamic assessment of investment efficiency (or assessing the book value of the network on a regular basis) might eliminate this binary decision around whether

¹ A case could be made for assessing underinvestment from network operators, where network efficiency is decreased and customer costs higher than they otherwise would have been if the network operator had made prudent investments.

investment is deemed efficient or not. This could produce a return profile to the network operator more in line with one it might experience were it subject to competition and other market forces.

One element of the NFIT which confers a clear wealth transfer between a specific set of users and Western Power (and/or another set of users²) is the Net Benefits test. Net benefits justify an investment via the transfer of value (benefits), above the counterfactual case, to users. This is typically the case where those connected to the grid will consume energy at a lower price than if the network investment did not proceed. However, there are some network users that do not consume energy – they produce it. The addition of lower cost generation resulting from new network investment is a threat to existing generators, rather than a benefit. Yet if the ‘net benefits’ associated with the network investment is applied across all tariff classes, then this results in a clear transfer of wealth from existing generators, which experience no benefit, to the new generators or loads that do not having to pay the full cost of the network investment. It is also a transfer of wealth from existing generators to Western Power.

While reform of the Access Code is likely required to change how the asset base is determined and investments are (re)valued over time, the issue of allocating a portion of the revenue allowance attributed to ‘net benefits’ to generators, via transmission entry tariffs, can and should be addressed in this AA4 determination.

THE MWEP

Stage 1 (southern section) of the Midwest Energy Project (MWEP) is a prime example of the difficulty in making long-term efficient investment with the certainty of receiving a return on that investment. In that case, Western Power sought a pre-approval from the ERA that the investment would meet the conditions of new facilities investment and be added to its asset base.

In its draft determination, the ERA stated³:

An outcome of including the investments in the capital base at this stage would be to transfer the ex-ante risks associated with achieving a return on the new investments – from Western Power to existing customers. The Authority’s view is that these risks should be borne by the new loads that would benefit from the new assets, or by Western Power, rather than by existing customers.

The ERA went on to pre-approve the NFIT application in its final determination, granting \$181M of incremental revenue and \$233M of Net Benefits, together above the \$378M projected cost of the project. This investment now forms part of the asset base which Western Power derives its target revenue from customer tariffs.

S SCPH makes two observations on different aspects of this determination where risks might have been inappropriately transferred to existing users. The first is the potential that the ERA made an incorrect determination in its original assessment of the Incremental Revenue; the second is that the nature of allocating the costs of Net Benefits is incompatible with efficient cost recovery.

² Such as new loads or generators enabled by a network investment

³ Draft Determination on the New Facilities Investment Test Application for the Mid West Energy Project (Southern Section), 14 November 2011, pg 3

Incremental Revenue – was the assessment correct?

The ERA cannot have access to all relevant information ex-ante. The nature of the pre-approval itself requires the ERA to make assessments on the veracity of certain undertakings being correct, or the likelihood or forecasts eventuating. What happens when, in hindsight, a determination to pre-approve an investment under the NFIT is shown to be flawed? The result is that wealth is transferred from existing users to either new users, Western Power, or both.

In the final determination for MWEF, \$181M of incremental revenue was approved. The ERA specifically excluded all new mid-west block loads with the potential to connect except for Stage 1 of the Karara project, or 120MW at 70% capacity factor⁴, determining that:

The forecast of the amount of new load likely to connect to the new assets is important - if the forecast incremental revenue measured at existing prices fails to materialise due to a shortfall in load, network users could potentially incur the costs of the augmentation over and above any actual net benefits.

Incremental revenue should have been predicated on only the 102MW (up to 120MW) Stage 1 forecast demand of the Karara mine (referred to by Western Power as its Central Demand Scenario). However, as indicated in the Regulatory Test submission, the 132kV network, subject to a Technical Rules derogation (subsequently approved by the ERA for both interim 132kV supply, as well as final 330kV supply), suggested that up to 95MW of Stage 1 load could be met from utilising the existing network.

Indeed, Gindalbie Metals Limited, the ASX listed developer of the Karara mine, made several announcements to the market around the ability of its Stage 1 development to be fully supported by the existing 132kV network (i.e. without the requirement to construct the MWEF). The following, a corporatefile.com.au Open Briefing with Gindalbie then-CEO Garret Dixon, advised⁵:

corporatefile.com.au

The WA Government has deferred allocating budget funds for a proposed 330kv power line upgrade from Pinjar to Geraldton. What impact does this have on the power supply for the Karara Iron Ore Project...?

CEO Garret Dixon

For the start-up of Karara essentially none. Under our power solution for Karara, we have signed a 15-year supply deal with the State Government's power generation arm Verve Energy. This contract will provide power for our initial 10Mtpa start up plus also go a long way towards the first of possible expansions to 16mtpa of iron ore production. There is an existing network of 132kv power lines all the way to Geraldton that form part of the power grid which services Perth and the South West of WA. Under our original Bankable Feasibility Study we planned to build another 132kv power line from Karara to Eneabba, to connect into that existing power grid. With the Government's previous commitment to upgrade the power line to Geraldton to a 330kv line, the Karara Joint Venture made the decision to upgrade our plans and build our own 330kv line from Karara to Eneabba, which would

⁴ Final Determination on the New Facilities Investment Test Application for the Mid West Energy Project (Southern Section), 27 January 2012, pp 23-25

⁵ Gindalbie Metals Limited ASX Announcement 18 May 2009

give us the power infrastructure to expand the project to 30 million tonnes per annum. Our current plans for that 330kv line still remain and we will simply connect into the power grid at Eneabba. The existing power grid should be able to provide all the power we need for our 10Mtpa start-up, although we may need to look at having some temporary additional generation on site to cater for periods of high demand from the power grid

The statement, along with several others^{6 7 8}, confirm Gindalbie's view that not only was the existing 132kV system adequate for its Stage 1 development, but that it had made the decision to upgrade the base case 132kV supply (Eneabba to Karara mine site) to 330kV in order to front-load capital expenditure for future expansion and greater project returns⁹:

However the 330kV transmission line now being built, and budgeted for in the revised \$1.975 billion construction cost estimate announced in May, will provide Karara with enough transmission capacity to underpin production of more than 36Mtpa...

...The project is also ideally placed for potential expansion, thanks to the decision to invest in much of the additional infrastructure upfront. The cost and time savings as a result of this strategy will be significant, ultimately reducing expenses and improving project returns

Western Power, who referred to its 'extensive consultation program [with Karara] over an extended period of time'¹⁰, would have been acutely aware of the ability of Karara Stage 1 to have the substantial majority of its load met by the existing 132kV network, with a reliability report¹¹ provided to Karara in March 2010.

In assessing the Incremental Revenue proposal in Western Power's NFIT submission, it appears that the ERA has assumed the Western Power position that all of the demand from the Stage 1 Karara load (the only relevant block load under the Central Load case scenario used to determine NFIT), should be deemed as incremental tariff revenue. There is a clear case, given the position of both Western Power and Karara (Gindalbie), that a non-covered service provided by the existing transmission system would be capable of meeting the majority of the requirement for the Stage 1 Karara load. In this case, incremental revenue should be assessed as only that tariff revenue received by Western Power which was additional to the revenue that would be received under the non-reference service, and which would be required by Karara to meet its Stage 1 demand as a covered service. It is likely that such incremental revenue would have totalled substantially less than \$181M.

Additionally, it could be argued that the upgrade of supply to 330kV, to meet future stages of the Karara project, was above the scope required to provide a covered service for Stage 1 of the project (as required to meet the ERA's NFIT assessment).

The result of these potential inconsistencies or oversights in the incremental revenue assessment of the NFIT application is:

⁶ Gindalbie Metals Limited ASX Announcement 3 August 2009

⁷ Gindalbie Metals Limited ASX Announcement 25 May 2010

⁸ Gindalbie Metals Limited ASX Announcement 22 September 2010

⁹ *ibid*

¹⁰ Karara Mining Limited 120MW Connection Submission for Exemption from Technical Rules, 7 May 2012, pg 17

¹¹ *Ibid*, WP document DM # 6978882 'Karara Mine Interim Supply Reliability Review', March 2010 (document not in the public domain)

- It is likely that users of the network have paid to upgrade the supply to the Karara project from an adequate non-reference service, which the ASX listed customer was prepared to invest significant capital to advance its project development, to a covered service; and
- It is likely that users have subsidised the potential future expansion of the project.

In the case where the Karara project is not expanded, or other large block loads do not connect to the network, then further incremental revenue will not be received and Western Power will have transferred wealth from customers to both Karara and itself¹². And the counterfactual, where the Stage 1 Karara load connected to the existing network with minimal augmentations, would have resulted in greater utilisation of the network and lower transmission tariffs for existing customers.

Transmission assets are very long-lived and, while the time-value of future benefits will diminish the later they are received, the investment may still yet prove to be economically efficient. MWEP is easily the most substantial investment by Western Power under the regulated Access Code provisions to date. The point of addressing this particular case ex-post is to illustrate the large risks being transferred by Western Power to its customers. Whether efficiently made or not, Western Power continues to earn substantial revenues from this investments¹³.

SSCPH contends that a case could be made for a review of the assessment of \$181M of incremental revenue allocated to the MWEP and hence added to the Western Power asset base.

Net Benefits – do existing generators receive any net benefit?

The ERA assessment of the MWEP NFIT considered the net benefits that accrued to users. In its final determination, the ERA approved \$233M of net benefits, largely due to enabling the connection of new renewable energy projects (wind farms) in the northern region of the SWIS and the subsequent lower energy costs which are enjoyed by consumers.

This discussion will not go into the process of determining net benefits, which relies on a number of assumptions and forecasts, other than to point out Western Power's continued inability over a sustained period of time to connect the majority of prospective new renewable generators without a requirement for significant additional investment, even after the completion of the MWEP.

Assuming the \$233M of net benefits an 'efficient investment', the question arises as to how those benefits are passed through to consumers. Western Power's tariffs are set via a complex arrangement whereby the allocation of allowable target revenue is attributed to a number of cost pools¹⁴. Cost pools, at least for the transmission network, are derived using the Gross Optimised Deprival Value (GODV) for the suite of assets contained within that pool, as a proportion of the total

¹² Where Western Power now enjoys the substantial benefit of a return on its investment as well as the depreciation of the assets.

¹³ It should be noted that at the time, there was a very high degree of confidence, from Western Power and others familiar with the sector, that the large Extension Hill project would also commence. And it is likely that it was only through an extraordinary set of circumstances (a corruption and murder scandal in China) that this project did not progress. But this only serves to highlight the issue of risk transfer. Had Western Power constructed MWEP under the assumption that Extension Hill (and others) would also connect, which almost certainly would have allowed it to meet an ex-post NFIT test, then Western Power would have borne the risk of the demise of the Extension Hill project, rather than its customers.

¹⁴ <https://www.erawa.com.au/cproot/18326/2/13.%20Appendix%20F.4%20-%202018-2019%20Price%20List%20Information.pdf>

asset pool. The proportion of allowable revenue attributed to the cost pools is then spread over tariff classes in a manner specified in the Price List Information details¹⁵.

There is however some tariff classes where it is clear that the customers within that tariff class do not benefit from a large portion of 'net benefits' of the type assessed under the NFIT. While it could be argued that every different tariff class derives a varying degree of value from such net benefits, a clear distinction can be made between generators and loads. Loads will eventually benefit from lower cost of supply. Generators do not¹⁶. In fact, existing generators are typically disadvantaged by lower-cost, new entrant generation.

Increasing the generator network tariffs (such as the TRT2 tariff, for transmission connected generators) is a transfer of wealth from existing generators to:

- the generators connecting to the new transmission assets;
- the loads that require the new transmission assets; and
- Western Power.

There is a likely requirement for further network augmentation in the north-country region to connect the long queue of new renewable projects. It is also likely that 'net benefits' will play a role in the assessment of those future augmentations, where the benefits of connecting new low-cost generation will be attributed to end users. It is thus important that the ERA makes a distinction between which tariff classes the net benefits accrue to, otherwise this transfer in wealth may become significant over time.

PRICE LIST INFORMATION – ELIMINATION OF WEALTH TRANSFERS

SSCPH believes that a wealth transfer is occurring from those customers on the transmission entry (TRT2) tariff class and those on the distribution entry (RT11) tariff class (smaller) to Western Power. This is due to the allocation of net benefits attributed to transmission investment costs being included in the transmission cost pools – principally the Use of System cost pool.

Western Power's methodology for deriving tariff structures is complex and requires modelling (using T-Price). Cost pools are dependent on the GODV of specific assets and the transmission target revenue – which itself is based on an assessment of the depreciation, return on investment and other associated costs of the specific assets. This circularity makes it difficult to determine the quantum of target revenue that is impacted by the misallocation of net benefits. The proposed 2018-19 Price List Information shows the TRT2 tariff class contributing \$50.9M and the RT11 tariff class \$1.3M to the \$319M transmission revenue target¹⁷.

SSCPH suggests that an assessment is undertaken by the ERA to identify the transmission target revenue derived from a return on the assets; depreciation; operating costs; and any other component of the target revenue associated with the net benefits attributed to MWEP. Recovery of this revenue should then be excluded from the TRT2 and RT11 tariff classes.

¹⁵ ibid

¹⁶ TUOS charges do not apply to generation in the NEM, so this issue is likely unique to WA's SWIS within Australia.

¹⁷ These figures would include all transmission cost pools, not all of which would contain misallocated net benefits

GENERAL OBSERVATIONS OF INVESTMENT DECISIONS BY MONOPOLY SERVICE PROVIDERS

The principles of investment efficiency are by nature econometric. For better or for worse, they do not tend to include broader objectives, such as development policy or the promotion of regional activities. But decisions to invest – and apply the relevant Regulatory and NFIT Tests, lie solely with the network provider¹⁸. There is a risk that the network provider has a propensity for some investments and not others – whether they are efficient or not.

Take the MWEP. At the time of the investment, the Government of WA, also the owner of the network provider, had clear policy (and political) objectives to grow the regional mid-west magnetite sector to feed the signature Oakajee Port development. The government allocated significant state finances in several budgets for the MWEP development. And while this funding was subject to necessary regulatory approvals (e.g. NFIT), it was clear that Western Power had a mandate from its owner to progress the investment case.

Outside of the prospective loads in the mid-west, and Western Power itself, one of the main beneficiaries of the MWEP was the also-state government owned Verve Energy (now Synergy). Verve Energy had struck a long-term electricity supply deal with the Karara Mining project. It was also the developer of significant potential renewable generation assets in the region – including the 250MW Warradarge Wind Farm, which is now seeking final connection agreements with Western Power to the 330kV MWEP augmentation.

However, Western Power has many hundreds of MWs more of renewable generation developments, large and small, seeking connection in the north-country region. Many of these generators have been waiting years to connect. The fact that they have not been able to should not be ignored. Using MWEP as a guide, there is likely to be significant net benefit from adding low-cost renewable generation in the region. It is thus likely to be economically efficient to enable these generators via investment (either in new network capacity or via non-covered services). By not connecting these willing customers, Western Power is potentially denying all of its customers these net benefits¹⁹. It should also not be overlooked that the entity to be most disadvantaged by the connection of new low-cost generation is the government-owned Synergy, whose existing generation fleet and long-dated electricity and fuel supply contracts would likely be impaired.

A valid question that should be asked is: Would a grid operator, in a competitive environment, delay formulating connection capability for so long, to the detriment of its consumers? If it wanted to remain in business, then it would not. In a regulated setting however, it appears that it can do so, whilst continuing to earn pre-determined equity returns.

SSCPH contends that Western Power's failure to connect significant quantities of new renewable generation is contrary to the Access Code objective of '*promot[ing] competition in markets upstream and downstream of the networks*'; as well as being contrary to the National Electricity Objective of '*[being in the] long term interests of consumers*'.

¹⁸ A potential third party network provider must duplicate the existing network, or at the very least, negotiate terms of integration with it, to build competing infrastructure. This affords the incumbent monopolist a significant barrier to new entry.

¹⁹ Excepting those existing generators on transmission entry tariffs