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Dear Mr Khan

## **IMPROVING ACCESS TO THE WESTERN POWER NETWORK**

Thank you for the opportunity to provide feedback on proposed reforms to improve access to Western Power's network, as outlined in the consultation papers *Implementing a Constrained Network Access Regime* and *Allocation of Capacity Credits in a Constrained Network*. This submission is provided in response to matters raised in these consultation papers.

Synergy considers it is unable to provide feedback in respect of the third consultation paper, *Modelling the Impacts of Constrained Access*, at this time because it contains assumptions the weight, utility and impact of which cannot be determined until the results are published. Synergy intends to provide further feedback to the Department of Treasury on the modelling outcomes during subsequent consultation.

Electricity markets globally are experiencing transformational change as a result of rapid developments in technology, decentralisation of generation sources, and evolving customer participation and expectations in the market, amongst other drivers. The impact of these changes is potentially more pronounced in a small and isolated system, such as the South West Interconnected System (**SWIS**). Market participants must adapt and innovate to remain viable under these changing conditions.

The Government of Western Australia meanwhile continues to face considerable budget challenges. Public expectations of government financial discipline are accordingly increased, making it more critical than ever for Synergy and other government trading enterprises to be efficient and innovative in their operations, and leverage their assets for the demonstrable benefit of the public.

Synergy broadly supports the overarching intent of adopting constrained network access and the associated Wholesale Electricity Market (**WEM**) reforms to improve efficiency and move toward a level playing field for all market participants. These reforms could assist in optimising or deferring costly network investment and the removal of some WEM obligations that are reducing Synergy's and other market participants' operational efficiency. The broader suite of

WEM reforms may also expand opportunities for other participants to offer services where they are able to do so, such as ancillary services, all of which ultimately benefit customers by maintaining a reliable energy supply and reducing inflationary pressure on tariffs.

However, the reforms should be developed in consideration of the substantial changes that are expected to emerge in the SWIS and must be fit-for-purpose in that context. For example, with diminishing off-peak load as a result of renewable energy penetration (particularly the daytime load from rooftop solar photovoltaic systems) and increased market volatility, scheduled generators that are currently relied upon to provide network and system stabilising services will face increasing difficulty covering their costs and may not have sufficient capacity for the necessary ancillary services requirements.

New market design elements will therefore be required to safeguard the system's security and reliability in the transition to an increasingly distributed, decarbonised and competitive electricity market.

Given the financial constraints faced by the state and others in the sector, it is vital that any reform initiatives are subjected to a thorough cost-benefit analysis. Reforms should only be developed in consideration of delivering quantifiable benefits and measured against the potential costs that may be incurred across the entire supply chain.

While Synergy broadly supports the adoption of constrained access and associated WEM reforms, it considers Treasury could improve the current proposals by considering:

- a hybrid approach allowing for both bilateral renegotiation of access contracts and a legislative intervention deadline;
- a market based approach to any compensation paid, using the 'causer pays' principle, similar to the approach proposed for capacity credit accreditation;
- modelling security constraint equations and the impacts of demand response and smaller distributed energy resources for capacity accreditation;
- adopting facility bidding and co-optimisation of energy and ancillary services markets as co-requisites; and
- reducing WEM-specific abuse of market power provisions, as Australian competition law provides ample protection and more certainty for market participants.

Further details on these suggested improvements are contained in the following sections.

## **1 Network connection and access arrangements**

Reforming the network connection and access arrangements to adopt constrained access is important for generation businesses to connect new generation, particularly future renewable energy projects, as Western Australia contributes to the Australian Government's commitment to the Paris Agreement.

Constrained access also has the potential to reduce or defer capital expenditure on the network, and therefore reduce inflationary pressure on electricity costs for customers if the deferred investment forms a material portion of the overall network investment plan and the benefit flows through to customers. However, it should be noted that network augmentation will still be required irrespective of adopting constrained access to alleviate constraints arising as the location of generation changes over time, particularly driven by the penetration of renewable energy projects, which are more location dependent.

To support the objective of benefits flowing through to customers, the guiding principles of the proposed reform should fundamentally support the *Electricity Networks Access Code 2004*

objective, “to promote competition in markets upstream and downstream of the networks” (cl. 2.1). The guiding principles therefore need to balance the interests of the network operator, generators and retailers, including consideration of generation and retail supply contracts that currently rely on unconstrained access to supply customers.

Synergy notes Treasury’s intent is for changes to the Access Code, Standard Electricity Transfer Access Contract, Applications and Queuing Policy, Transfer and Relocation Policy, and Technical Rules to be considered under Western Power’s fifth access arrangement; however, these instruments may also be triggered for review under the fourth access arrangement depending on the timing of amendments to the Access Code.

Synergy would be pleased to participate in the power system security and reliability framework review that Treasury has indicated will commence in 2018.

### *1.1 Managing existing generation firm access rights*

Treasury’s preferred approach for a legislative intervention to extinguish provisions in access contracts would improve confidence for the government that these reforms occur, and do so within the necessary timeframes. However, it could also decrease confidence for generators as to the nature of the changes in their respective access contracts.

Instead, Treasury could consider a hybrid approach whereby generators would be allowed a specified time to renegotiate their access contracts with Western Power in the first instance until a point at which the legislative intervention is given effect for any access contracts not renegotiated.

Under this approach, market participants would have an opportunity to reduce their exposure to contractual uncertainty while the legislative intervention would still be retained to ensure confidence for the government that renegotiations occur within the required time and as an incentive for generators and Western Power to ensure renegotiations are concluded.

Litigation costs for both access holders and Western Power are likely to be considerable for all approaches to transitioning to constrained access.

Where legislative intervention is required, to the extent possible it should preserve all current rights and entitlements of unconstrained capacity holders and impact only those provisions inconsistent with constrained access. It would be beneficial to define for participants what constitutes inconsistency to assist in their bilateral negotiations and the principles to which Western Power should adhere in renegotiations given the likely imbalance of negotiation position.

In addition to Treasury’s proposed guiding principles for the approach, and consistent with the overarching Access Code objective, appropriate principles for the future detailed design of the reforms should include:

- mechanisms to ensure the pass through of any network savings derived from constrained access to retailers and end customers;
- ensuring retailers’ rights to request and choose covered services is maintained;
- ensuring retailers’ or customers’ adoption of behind the meter or non-network solutions and innovations are not encumbered by constrained access; and
- supporting solutions that avoid increasing the network regulated asset base to minimise costs for customers.

Synergy would be pleased to provide more detail on these principles and implementation approaches during the detailed design phase. In particular, entitlements to receive a covered

service, network charges under constrained access and the implications for behind the meter renewables and non-network solutions warrant further investigation during detailed design.

## *1.2 Mechanism to provide transitional assistance*

Constrained network access may expose Synergy, and thus the state, to potential costs in the event constraints limit Synergy's ability to service its generation or retail contracts. The focus of Treasury's proposal for transitional assistance appears to be generators rather than retailers. The impact on retailers from the proposed move to constrained access should also be considered.

Retailers may be able to mitigate risks of being unable to service specific retail loads as a result of network constraints if there is sufficient lead time between legislation passing parliament, giving certainty of the change, and the implementation of constrained access. Treasury's current proposal for legislation to pass parliament in 2019 and constrained access to commence in October 2022 should give retailers sufficient time to ensure constrained access is factored into most electricity supply contracts, where necessary.

Despite this, some electricity customers or retailers with longer term contracts based on the existing access regime may still be disadvantaged by the proposed changes. If the legislation is delayed in passing parliament, consideration may need to be given to deferring the commencement timeframe.

A market based approach to compensation is likely to be the least cost to the government and thus the least impact on the state budget position. However, using the existing constrained off approach would base compensation on market share, thus generators and retailers with no impact on constraints (due to being located in different part of the network) would still be responsible for contributing toward compensation.

Rather, Treasury could consider an approach to implement 'financial priority rights' for energy market revenue consistent with the proposed priority rights for capacity credits, which that discussion paper suggests is economically efficient and adopts the causer pays principle.

For example, formerly unconstrained generators ('priority generators') that lose physical priority in the energy market would be paid the difference between their offer price and the balancing price. A new entrant generator that is dispatched would be paid the unconstrained generator's offer price. If the priority generator was not going to run in any event, the new entrant generator would be paid the balancing price.

This approach would promote economic efficiency by providing the effect of locational price signals and allowing for hedging against the risk of losing priority to constrained generators. It is also similar to a proposed approach considered by the Australian Energy Market Commission in 2015 when it contemplated the introduction of optional unconstrained access in the National Electricity Market, but without many of the more expensive aspects of that approach.

As with any approach, this would require further design consultation with market participants.

Treasury could also consider amendments to the Access Code. For example, the Economic Regulation Authority could be explicitly required to consider whether network constraints are relieved when assessing Western Power's capital costs and the new facilities investment test. This would have a net benefit for consumers through deflationary pressure on energy prices.

## **2 Wholesale Electricity Market arrangements**

### *2.1 Security constrained market design*

A security constrained market design is a necessary co-requisite to a constrained network access regime. The market dispatch engine should be capable of dispatching minimum stable loads, facilitating possible future locational pricing and supporting the co-optimisation of ancillary services and energy markets.

Moving to a new, Perth-based reference node would decrease loss factors for retailers and increase loss factors for generation businesses. This will require that contracts be reopened and adjusted, incurring administrative and legal costs. It is unclear whether the benefits to the state through reduced whole of system costs or increased efficiency would be delivered by changing the reference node at this time.

If these benefits are not demonstrable, it may be preferable to consider agreeing a new reference node when the market has matured and diversified sufficiently so as to support moving to locational pricing at the same time.

### *2.2 Facility bidding for all market participants*

Consistent with moving to a position where it is treated the same as other participants, Synergy supports adopting facility bidding for its generation fleet. However, there will be significant costs (which may or may not exceed the benefits of facility bidding) the state must bear to implement this reform and there will be co-requisite reforms necessary to deliver any benefit from facility bidding, primarily the co-optimisation of energy and ancillary services markets (discussed in detail in the subsequent section).

Synergy commissioned independent analysis in 2017 to determine the cost to the state of transitioning to facility bidding. The assessment estimated the cost would be approximately \$40 million, while implementation would take at least four years to complete.

This timeframe was based on a window of opportunity starting in early 2018 and concluding late 2022. Given the installation of data, communications and metering systems infrastructure necessary for facility bidding would need to align with Synergy's planned outage scheduling to avoid capacity refund costs (escalating the estimated total cost of implementation), and given the beginning of the notional window has already passed, Synergy will be significantly challenged to complete the required works within the proposed date for facility bidding.

Synergy is exploring possibilities with Treasury and AEMO regarding approaches to minimise implementation costs. However, it is nevertheless essential that, in the context of the prevailing state budget constraints, the costs of Synergy adopting facility bidding are balanced against the expected whole of system benefits expected to be achieved from the reform.

Further, the aim of adopting an approach that minimises facility bidding implementation costs should not be undertaken at the expense of the reforms being incomplete or partial reforms that risk further legacy restrictions on Synergy or other market participants in the future.

### *2.3 Co-optimisation of energy and ancillary services*

Co-optimisation of energy and ancillary service markets is an essential co-requisite to implementing facility bidding and constrained network access. Unless ancillary services and energy markets are co-optimised, that is, provision of spinning reserve and load rejection reserve services is made competitive, facility bidding would result in a net loss of efficiency from a whole of system perspective due to the loss of de-facto co-optimisation between energy and ancillary services that currently takes place within Synergy's portfolio.

The growing volume of distributed and intermittent generation capacity and resultant decrease in daytime load for load following generators may diminish the number of generation businesses able to economically sustain assets that can offer these services. The design of the ancillary services markets must consider this risk.

For example, ancillary services markets may need to include mechanisms that require generators to be dispatched out of merit order to provide ancillary services in instances where insufficient volumes are offered in the market. In this case, consideration should also be given to how to efficiently compensate these generators.

Synergy's fleet has historically been used to provide spinning reserve and load rejection reserve services. Under this arrangement Synergy considers that it may currently be under-compensated for the ancillary services it provides. As a result, Synergy expects that, similarly to the introduction of the load following ancillary services market, the costs of spinning reserve services will likely increase as the true costs of these services are reflected in market bids rather than via the current regulated pricing regime; as in a true market, a provider of these services would recover the costs.

The design of the co-optimised ancillary services market and dispatch engine should aim to mitigate this risk by ensuring ancillary service providers are remunerated efficiently and sufficient supply of these services is made available. These design elements will be required to safeguard the system's security and reliability from deteriorating in the transition to an increasingly distributed, decarbonised and competitive electricity market.

It is not yet clear to Synergy that the adoption of the National Electricity Market Dispatch Engine would necessarily provide the best approach for the WEM. Treasury should consider consulting with stakeholders on the business case for its adoption versus other alternative options.

#### *2.4 Other complementary reforms*

Concurrently with adopting facility bidding, it would be prudent to review existing market power mitigation mechanisms to ensure they are necessary and, if so, efficient. For example, the obligation for generators potentially able to exercise market power to bid into the WEM at their short run marginal cost (**SRMC**) is likely to be more unnecessary with the implementation of facility bidding. If the current definition of SRMC is retained, generators would be unable to cover the costs of operating their generation assets.

Synergy considers that provisions under the *Competition and Consumer Act 2010* (Cth), which apply to all market participants, already provide adequate protection against the risk of exercise of market power.

Constrained access may also exacerbate the exposure of generators in the short term energy market (**STEM**) if its design remains unchanged. Network constraints could lead to substantial variances between STEM prices and balancing prices, which market participants that do not bid based on SRMC could exploit. As such, with less reliable forecasts, generators may be increasingly exposed to retailers arbitraging their day-ahead position.

While beyond the scope of the proposed constrained access reforms, there are several other complementary reforms that would improve the operation of the WEM. Synergy would be pleased to discuss these improvement opportunities further with Treasury.

### **3 Accreditation of capacity in a constrained network**

Synergy broadly supports the proposed approach for accrediting capacity in a constrained network by minimising the total amount of generation constrained overall. Using an approach

similar to the Generator Interim Access arrangement will also minimise the change from the existing arrangements and the risk associated with the change. Synergy also supports the proposed first-come first-served basis for assigning capacity priorities.

There are several changes that could be considered to improve the proposed accreditation method. Assigning capacity priority rights for 15 years, rather than the proposed 10 years, would mean the allocation method is consistent with the method used for the calculation of the benchmark reserve capacity price, whereby investments are amortised over a period of 15 years. Using 15 years would still balance providing investment certainty for incumbent generations with investment opportunities for new generators.

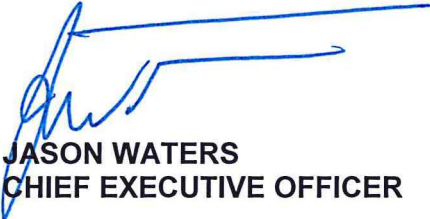
Including modelling of security constraint equations, while adding complexity to the modelling exercise, is important for determining physical constraints in the network. Demand response and distributed energy resources under 10 MW should also be included in the modelling. Excluding any of these would distort the allocation of capacity credits relative to the physical capacity of the network and may create an incentive to invest in unnecessary capacity.

Allowing capacity priority rights to be traded between market participants may also enhance investment opportunities for new generators by improving exit signals for relatively inefficient generators. For example, if the value of the incumbent generator's remaining priority rights exceeds its forecast for revenue it would receive before the end of its asset life, this generator would be incentivised to sell its priority rights to a more competitive generator.

Given the proposed additional round of network constraint modelling, extension to the capacity certification method and that new entrant generators will not know the final network constraint modelling result, it may be beneficial for market participants to have the option for their reserve capacity security to be conditional upon certain constraint modelling outcomes to reduce their risk exposure.

Should you wish to discuss these matters further, please contact Mr Benjamin Hammer, a/manager, policy, on 08 6282 7392 or [benjamin.hammer@synergy.net.au](mailto:benjamin.hammer@synergy.net.au).

Yours sincerely



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