

12 October 2018

Public Utilities Office

By email to PUOSubmissions@treasury.wa.gov.au

Submission to the Public Utilities Office on the paper: *Implementing a constrained network access regime*

Introduction

Perth Energy submits this paper in response to the Public Utilities Office's (PUO) paper on the proposed implementation of a constrained network access regime for the South West Interconnected System (SWIS) in the south west of Western Australia.

Perth Energy supports the formal implementation of a constrained network access and dispatch regime in the SWIS. The current limitations on generators' ability to connect to the network means there is in effect already a constrained access regime in place for certain types of new generation. We believe formalising the constrained access regime is an important step towards greater network utilisation and more efficient investment in generation and the network.

Nevertheless, we are concerned that one of the key objectives for moving to constrained access was that it would increase network capacity available and allow more generators to connect. The results of the modelling show that this will not occur.

The case for constrained network access

Through the first round of consultation, Perth Energy along with other market participants highlighted that the impacts of the transition to security constrained economic dispatch should be analysed and shared with stakeholders. We therefore welcome the PUO's paper highlighting the findings of this analysis.

We were pleased to note the PUO's initial quantification of \$279 million of benefits to customers from the transition to a fully constrained network access regime over 60 years. However, updated modelling outcomes published on 1 October 2018 shows that the net impact has increased to \$500 million. The



reason the PUO provides for this increase is that it has “consulted with individual generators on their specific modelling results and with Western Power.”¹

Perth Energy is disappointed that no further explanation for the variance is provided. Moreover, we are concerned about the magnitude of the variations in the initial modelling outcomes and the updated outcomes. For example, the total market payments (and therefore net impact) have more than doubled from \$288 million in the initial modelling to \$800 million. Similarly, the expected payments to existing generators has doubled. This degree of variation gives rise to significant concerns about the robustness and reliability of the model.

We assume that the expected increase in network capacity has not been shown in the modelling because different types of plant tend to locate in the same location² so there is limited locational diversity. This means that, without upgrades to the transmission network to accommodate all of the energy from each plant type at one time, the constraints will continue to bind and limited reductions in energy costs will result.

While Perth Energy supports the transition to a constrained network access regime, we are concerned that the PUO is relying on modelling that:

- should only be relied upon for general, rather than specific facility-based, modelling of the WEM;
- includes incorrect and often unreasonable assumptions for specific facilities;
- is not transparent in its design;
- includes assumptions that are inconsistent with other areas of the PUO’s industry reforms; and
- includes scenarios that are misleading, including for example, the “unconstrained access scenario”.

We have provided an overview of our concerns with the EY modelling in Attachment A.

We question whether the overall cost of the reform package, of which this forms a part, can be justified on the benefits established to-date. The PUO has not modelled the cost of the reforms, including the costs associated with the systems and processes required to facilitate a constrained network access regime. As such, it is not clear that the move to a fully constrained access regime is the more efficient way forward.

We reiterate our position that a zonal or regionally-based network access and market model would better optimise the benefits with the cost of implementation.

Implementation of constrained access

The PUO has considered several options for implementing constrained access and we are encouraged that the PUO has taken on board feedback from market participants and is no longer seeking to introduce legislation to amend terms and conditions of contracts.

¹ Page 1, Information Sheet: Improving access to Western Power’s network, Public Utilities Office, 1 October 2018, available at: https://www.treasury.wa.gov.au/uploadedFiles/Site-content/Public_Utility_Office/Industry_reform/Information-sheet-Modelling-outcomes-constrained-access.pdf

² For example, wind farms locate where wind is abundant but gas plants need to be near pipelines.



We acknowledge that the transfer of a physical right to a financial right as proposed by the PUO (i.e. pay compensation to market participants with affected facilities) appears to be the simplest, effective approach.

Perth Energy agrees that if only a limited number of facilities are affected by the implementation of constrained access, an administrative, one-off payment, rather than market-based arrangement is prudent. However, we are concerned that there may be additional and as yet unspecified payments required under the PUO's approach. In its paper the PUO states [emphasis added]:

*The quantum of transitional assistance would be based **initially** on the individual generator's results under the market modelling exercise undertaken by the Public Utilities Office.³*

The fact that that the quantum of transitional assistance would only be *initially* based on the modelling exercise implies that there are further charges to follow. We request the PUO specifies the nature and quantity of these charges.

We are also not comfortable that the EY modelling is sufficiently robust to be used to determine an amount of financial compensation for the removal of existing generators' network access rights. We consider the EY modelling is unreliable and has insufficient granularity to be able to determine the compensation costs with a reasonable degree of accuracy.

Participants with affected facilities should be compensated for the actual amount of lost revenue resulting from the introduction of reform initiatives such as constrained network access. This should include each of the various revenue streams.

These revenue impacts can only be calculated via detailed and meaningful engagement with the affected participants. The EY modelling may give a high level indication at best, but they must not be relied upon to determine compensation payments.

We highlight that the revenue impacts on market participants are unlikely to be known at this stage, because the broader market design still in its infancy. These impacts must be identified and calculated by the PUO in due course, and more importantly, before any view on the reasonableness of the transitional arrangements can be formed by market participants.

Given the weaknesses of the modelling and significance of the impact, we urge the PUO to reconsider basing compensation costs and any financial transactions on the outcomes of the modelling undertaken by EY.

Funding transitional assistance

The PUO has not provided a proposed approach of funding the necessary transitional assistance in the paper, but highlighted in the public forum this is an area that it would consider public submissions on.

Perth Energy believes the cost of the implementation of constrained access must be borne by the State Government. The PUO could recommend that the value of the transitional assistance should offset prior years' dividends from Western Power, to the extent that:

³ See page 23, of the PUO's paper.



- it received capital contributions for customer specific works upon connection of unconstrained facilities; and
- it has, and will continue to (unless the assets are re-valued or de-valued reflective of their ongoing relevance) recover tariffs from customers and end-users who are no-longer receiving a service.

The remainder of the costs should be borne by State Government, as it is the State Government that is driving the industry reforms.

We acknowledge there is an argument for costs being passed on to the end-use customers. However, given the preference for the transitional assistance is that it should be an administered, one-off payment, we note retailers and/or customers will not have the ability to make this financial contribution up-front. Any arrangement to recover the costs is likely to be complex, and the allocation of costs and benefits is likely to be arbitrary.

We welcome further discussion with the PUO and Western Power on these matters, as the timeframe provided for this consultation has been inadequate to provide sufficiently considered feedback on the varying issues.

Should you have any questions or comments on Perth Energy's submission, please do not hesitate to contact me on (08) 9420 0308 or p.peake@perthenergy.com.au.

Regards

A handwritten signature in blue ink, appearing to read 'Patrick Peake'.

Patrick Peake

General Manager, EMR, Regulation

A long, horizontal, handwritten flourish or signature in blue ink.



Attachment: Comments on EY network constraint modelling

Perth Energy has reviewed the modelling report and outcomes the Public Utilities Office (PUO) published on 1 October 2018 as part of its consultation on the paper: *Implementing a constrained network access regime*.

While we note the PUO has not requested feedback on the modelling or its outcomes, Perth Energy has provided comment on the basis that it is expected to influence the amount of transitional assistance provided to affected generators. Under certain implementation options, this will directly affect our costs, and those passed onto our customers.

The following sections outline each of our concerns in-turn.

Scenarios modelled

Treatment of constraints

We note that one of the key assumptions not explicitly addressed by the PUO is the treatment of existing constrained generators (i.e. those with post-contingent runback schemes) in the unconstrained scenario. The PUO appears to include the cost of providing the generators in the generator interim access (GIA) solution with unconstrained access, but notes:

*Existing access rights that permit AEMO to curtail the output of generators in specified conditions remain unchanged (for example due to a post-contingent runback scheme). Where a generator's output is curtailed outside of the dispatch process to manage system security, a generator will not be entitled to a financial payment for being constrained off.*⁴

We highlight that, without the removal of the existing post-contingent runback schemes, the unconstrained scenario remains constrained – as it currently is. This is not unconstrained access, and cannot be used to compare with a fully constrained, purely economic dispatch outcome. It will also diminish the overall effectiveness of the market and any benefits likely to be attained.

Zonal or regional constraints

We maintain that other options to those modelled by the PUO remain viable and should have been assessed. Specifically, in our initial submission, we proposed that a zonal or regionally-based constraint model could be introduced to better optimise the benefits with the cost of implementation. The PUO has not assessed this option, despite it being a more measured approach, and arguably more suited to the size and design of the WA network and market.

Quantity of capacity

Moreover, the various scenarios of plant entry and exist patterns do not reflect what we would consider reasonable. The PUO should have developed more realistic high and low case scenarios based on real-world assumptions to provide market participants a more useful range of outcomes (e.g. a low carbon emissions scenario).

⁴ See page 21, of the PUO's paper.



Location of new capacity

EY models the installation of 335MW of wind generation in the Eastern Goldfields. This region has very limited dispatchable generation and is connected to the rest of the SWIS by a single circuit transmission line. It is questionable that this level of additional intermittent capacity could be added without major investment in the transmission system but these costs appear to have been ignored.

Assumptions

Energy price decreases

One outcome that seems counter-intuitive is that none of the low operating cost coal fired plant is being closed in the various scenarios. This coupled with significant investment in wind, and continued investment in behind-the-meter solar PV should show prices decreasing. However, the modelling shows balancing market prices increasing. This should be explained or corrected.

Input costs

The cost assumptions for OCGTs⁵ are not realistic.

The financial life of an OCGT is given as 30 years which, given the current developments in technology such as batteries, is unrealistically long. Investors and financiers will finance plants over a period not longer than 15 years.

The annual fixed variable costs for a gas turbine is reduced to \$4,000 per kW per year compared to the Benchmark Reserve Capacity Price determination of around \$30,000. Even if the fixed network charges are removed there are still major costs including operating and maintenance of \$14,000 and insurance of \$5,000. We cannot see any cost savings that could reduce our variable costs to anywhere near \$4,000.

This leads to the modelling showing that 250MW of OCGT will enter service in 2022-23 which is inconsistent with actual outcomes. No new OCGT has been installed since 2012 despite the capacity price being well above the modelled assumptions.

Transmission use of system charges

We question whether the current transmission use of system charge is expected to remain in place. The charges do not appear to have been removed for the purposes of the EY modelling, however, a reference service is no longer being provided.

Perth Energy recommends that the TUOS charge is removed from the costs modelled.

Sensitivities

With the significant differences in input assumptions, we consider sensitivity testing is prudent. However, EY has not indicated what degree of error bounds should be applied to the results of their modelling. For example, energy price savings are only in the order of \$2-3 per MWh on a base of around \$55 so it is unclear whether this is really a significant difference.

⁵ See page 36 of EY's technical report.



Sensitivities must be presented to assist market participants in making their own assessment.

Inconsistency with other industry reforms

We note that the WEM workstreams (wholesale market design and capacity mechanism design) of the industry reform program overlap with this network access workstream.

The Reserve Capacity Mechanism (RCM) workstream is focused on two major perceived issues:

- the continuing excess of generation capacity; and
- non-retirement of older plant.

The recently proposed RCM changes are intended to address these matters but the EY modelling shows that there will be substantial excess capacity in the SWIS throughout the coming 10 years and no plant retirements.

We are concerned that the EY modelling does not consider the proposed changes to the RCM as the two are intrinsically linked – the need for increased network access is driven by plant entries and exits.

The PUO need to determine the impact of the proposed RCM changes on the network access modelling outcomes.

Similarly, the RCM workstream recommends that demand side management will be paid the same capacity price as generation. The EY modelling indicates a capacity price of around \$90,000 per MW per year. This price would justify a substantial increase in investment in demand side resources in the SWIS, which would in-turn change both the capacity and energy prices. This is also not factored into the EY modelling.