Economic Regulation Authority 4th Floor Albert Facey House 469 Wellington Street, Perth

publicsubmissions@erawa.com.au 14th Jun 2018

To Senéad Mangan

Subject: Draft Decision on Proposed Revisions to the Western Power Network Access Arrangement – AA4

Thank you for the opportunity to comment.

My comments to the Draft Decision are attached to this Submission DD-TWO

The objective of my comments is to minimize the cost of electricity to the large and small consumers, regardless where these cost savings fall. My focus is on elements of the proposed AA4 design, the changes of which would in my opinion, lead to the quickest reduction of the price of electricity to WA consumers and a fairer allocation of costs to causers, decision makers and beneficiaries of these decisions.

Kindly refer to the attachment.

Yours sincerely,



Continued on attachment

Attachment 1: Stephen Davidson, Submission TWO (General Comments & Comments on Issue 13), 11 December 2017, General Comments, page 8:

Stephen Davidson, Submission TWO (General Comments & Comments on Issue 13), 11 December 2017, General Comments, page 8, end, after '*In conclusion*', (typos removed):

Page 8, end, after '*In conclusion*':

Table 13, row exclusions, should be amended by deleting four exclusions (1st, 2nd, 3rd and 4th), and

Table 13, row definitions, should be amended as follows:

- Delete two bullet points above the formula.
- Delete the Western Power proposed formula
- Amend the denominator in the Western Power formula for calculation of the system minutes:

Σ MWh of Unserved Energy x 60 (in minutes)	(in minutas)
System Peak Load in MW at the Time of Interruption	
 Delete all four bullet points below the formula. Insert one bullet point: "Period of the interruption starts when the loss of supply occurs and ends when Western Power restores supply to the last customer who lost the supply")

In paragraph 953 on page 215 of the Draft Decision, the Authority states:

"The ERA has not been able to assess the compliance of the formula proposed by Mr Davidson with the requirements of the Access Code. The ERA has previously considered the existing formula to be reasonable and sufficiently detailed and complete to enable a user or applicant to determine the value of the reference service at the reference point".

Due to the limited time available at the time, it was not possible to provide detailed justification for the above proposed. I will now address the feedback and justify my reasoning behind the newly proposed formula and explain how, in my opinion, its results send a better 'value-for-money' signal to users and prospective applicants, as well as how it better contributes to the Code Objectives.

The rationale is that one should observe the event from the customer's perspective, and at the instant in time when that customer lost its electricity supply. The principal measure should be the percentage loss of the electricity supply experienced by the customer. If the supply is completely interrupted, then it should be measured and reported as 100% (loss of supply).

Since, we do not have individual MW measurements across the SWIS (Individual Load in MW at the Time of Interruption), the best we can do is to use the SWIS system load as the denominator, and as the proxy for the relative severity of the loss-of-load event (System Load in MW at the Time of Interruption).

The newly proposed denominator (Load in MW at the Time of Interruption) gives a much more accurate measure of the relative severity of the loss-of-load event at the time of the

interruption (than its Western Power proposed counterpart - System Annual Peak Load in MW). Here is why.

There are 2x8760=17,520 half-hour trading intervals in the WEM in WA (and 12x8760=105,120 five-minutes trading intervals in the NEM). The power system peak MW load in each trading interval is known and it should be used as the denominator or the relative severity of the loss-of-load event (System Load in MW at the Time of Interruption) that occurred in that trading time interval.

In the SWIS, in 17,519 out of 17,520 WEM trading intervals the newly proposed denominator (System Load in MW at the Time of Interruption) provides more accurate measure of the relative impact of the loss-of-load event than that Western Power proposed (System Annual Peak Load in MW).

During only one trading interval each year both denominators give the same result, when the SWIS system load reaches its annual peak.

In addition, use of the "System Load in MW at the Trading Interval at Time of Interruption" allows for immediate (at the end of the trading interval) calculation of the performance indicator (ie there is no need to wait for several months for the annual system peak load to occur, before the Western Power's formula can be used).

The specific requirements for service standards for each reference service are stipulated in clause 5.6 of the Access Code to be: (a) reasonable, and (b) sufficiently detailed and complete to enable a user or applicant to determine the value (represented by the reference service) for money (at the reference tariff).

In regards to the Code Objectives, the newly proposed formula, with the denominator "System Load in MW at the Trading Interval at the Time of Interruption", captures more unique features of the SWIS power system operation, hence it is a more sophisticated / accurate measure (than that proposed by Western Power). This additional information adds to granularity and richness of the calculated performance indicator(s), that allows for more informed decision making, and ultimately better promotes 'competition in markets upstream and downstream of the networks'.

The 2nd bullet point after the formula, sentence commencing with "*MWh unsupplied…*" makes no sense for the interruptions of up to one minute durations (see the 1st bullet point above the formula, in the Western Power proposal), because the SWIS system load cannot change materially within a minute.

The Western Power proposed amendment to the 1st bullet point above the formula to limit the service standards to interruptions of less than one-minute duration, is unfair to customers, it is misleading as it unreasonably and seemingly surreptitiously lowers the Western Power's service standard obligations without any reduction in price of electricity. In the process they forgot to read the 2nd bullet point after the formula, creating the contradiction. No professional engineer would do so.

In addition, it is obvious from the previous two paragraphs that Western Power either do not understand (engineering side of) what they are doing, or they are deliberately trying to trick the Authority and its customers.

The process would be fairer and more transparent if there is an obligation for a Chartered Professional Engineer to sign off Western Power's submission for its technical content.

In conclusion, may I repeat here, for ease of reference:

Table 13, row exclusions, should be amended by deleting four exclusions $(1^{st}, 2^{nd}, 3^{rd} \text{ and } 4^{th})$, and

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- Amend the denominator in the Western Power formula for calculation of the system minutes:

Σ MWh of Unserved Energy x 60	(in minutos)
System Peak Load in MW at the Time of Interru	otion (in minutes)

- Delete all four bullet points below the formula.

- Insert one bullet point: "Period of the interruption starts when the loss of supply occurs and ends when Western Power restores supply to the last customer who lost the supply"
- Insert one not

Please revise accordingly Recommended Amendment 22 on page 216 of the Draft Decision.