

Submission to Economic Regulation Authority

Review of Horizon Power's Service Standards that apply under the Electricity Industry (Network Quality and Reliability of Supply) Code 2005

Horizon Power welcomes the opportunity to provide comment and input into the Economic Regulatory Authority's (Authority) development of Service Standards applying to Horizon Power and the benefit this will provide to Horizon Power's customers.

Horizon Power notes the proposed Service Standards are related, in many cases, to standards applicable to Western Power. Whilst Horizon Power understands the requirement for the Authority to review the appropriateness of Horizon Power's standards against Western Power under the Code, Horizon Power is of the view a more appropriate benchmark against which to compare Horizon Power's requirements are the relevant Australian, or where applicable, International Standards.

Horizon Power is a vertically integrated energy business operating in all four traditional areas of the supply chain, being generation, transmission, distribution and retail, for the delivery of electricity to customers in regional Western Australia. Western Power is an electricity networks corporation, responsible for the distribution and transmission of electricity in the south west of Western Australia.

Horizon Power and Western Power systems differ in many ways, not the least of which are geography and network interconnectivity. For example, the loss of a generator on an interconnected system may have no affect on customers, where the opposite is true for most of Horizon Power systems. Unlike interconnected systems with multiple generators, Horizon Power's network performance on its non-interconnected systems is closely linked to the performance of the generator. SCONRRR definitions specifically exclude supply interruptions for generation faults, something that may require redress when prescribing suitable standards to apply to Horizon Power.

Western Power can report meaningfully under the categories: CBD, Urban Areas and Other areas. For the purposes of revised Service Standards, Horizon Power considers it more meaningful to report under the categories: large non-interconnected, small non-interconnected, rural and North West Interconnected System (NWIS).

Also of importance to Horizon Power is to ensure that there is no conflict between differing requirements of the Reliability Code. There may be differences between standards that apply to the operation of a network or system and what Horizon Power may seek to apply to a customer. This is primarily in the area of power quality standards. Technical specifications for customers or generators connecting to a network need to be tighter than the network operating parameters to ensure the network operator has sufficient flexibility to ensure a positive outcome for all network users.

1) The structure of the voltage fluctuation standards applying to Horizon Power under the Reliability Code should be aligned with the structure applying to Western Power under the Technical Rules (Table 2).

For planning purposes it is necessary to apply desired criteria in conformance with a standard rather than those that may apply to a particular organisation. AS/NZS 61000.3.7 covers planning criteria for Medium and High Voltage and provides the basis for calculating Low Voltage planning parameters. Table 2 conforms with the requirements of AS/NZS 61000.3.7 as it pertains to Medium and High Voltages and should be adopted as the basis for system planning for those voltages.

Western Power's Technical Rules (2.2.3(b)) also include a percentage of time where voltage must lie within acceptable parameters. A similar measure should also be determined for Horizon Power based on an appropriate Australian or International Standard.

It should be noted 'flicker' is not monitored on a continuous basis. When required, portable equipment is used at a customer's premises to test and resolve a particular issue. The number of customers that this type of issue affects is minimal. Any move to monitor on a continuous basis, and across each of Horizon Powers systems from the customer perspective would require a significant capital outlay. The corresponding benefit to Horizon Power customers is expected to be modest given the numbers involved.

2) Undertake an assessment of what the appropriate voltage fluctuation benchmarks applying to Horizon Power should be. Note that this recommendation recognises that it may be appropriate to set different benchmarks applying to Horizon Power compared to the benchmarks applying to Western Power under the Technical Rules.

Horizon Power recommends the use of Australian (or International) Standards as the basis for determining appropriate benchmarks for Horizon Power's systems, particularly the smaller systems that are more sensitive to customer loads.

3) Amend the Reliability Code to define separate voltage harmonic compatibility standards for distribution networks and transmission networks.

Horizon Power recommends the Reliability Code should reflect the requirements of the relevant Australian (or International) Standard.

As with "flicker", harmonics are not monitored on a continuous basis. When required, portable equipment is used at a customer's premises to test and resolve a particular issue. The number of customers that this type of issue affects is minimal. Any move to monitor on a continuous basis, and across each of Horizon Powers systems from the customer perspective would require a significant capital outlay. The corresponding benefit to Horizon Power customers is expected to be modest given the numbers involved.

4) Undertake an assessment of what the appropriate voltage harmonic benchmarks applying to Horizon Power under the Reliability Code should be.

Horizon Power recommends the use of Australian (or International) Standards as the basis for determining appropriate benchmarks for Horizon Power's systems.

5) Amend the Reliability Code to include voltage frequency standards applying to Horizon Power based on the standards applying to Western Power under the Technical Rules

Horizon Power is of the view voltage frequency standards should be developed and included in the Reliability Code based on the nature and type of systems owned and operated by Horizon Power and the relevant Australian Standard.

With the exception of the North West Interconnected System (NWIS), Horizon Power's systems are characterised by small, single power stations. Therefore, disturbances on Horizon Power's systems tend to have a disproportionate impact compared to large, interconnected systems. In order to enhance reliability of supply, Horizon Power permits system frequency to vary outside normal operating parameters, under abnormal operating conditions, for brief periods.

Therefore, Horizon Power recommends that the Reliability Code should not be modified to align with standards that apply to Western Power. Further, Horizon Power takes the view that the Reliability Code should not be overly prescriptive and that tighter measures for voltage frequency, should they be required, would better reside in a form of Technical Rules specifically drafted for and aligned with the individual nature and type of systems operated by Horizon Power.

6) Undertake an assessment of what the appropriate voltage frequency benchmarks applying to Horizon Power under the Reliability Code should be

Horizon Power recognises the need to use Australian (or International) Standards as the basis for determining appropriate standards for Horizon Power's systems.

7) Amend the Reliability Code to include steady state voltage standards applying to Horizon Power.

Horizon Power agrees with the proposal to amend the Reliability Code to establish appropriate standards to amend the requirements of the Electricity Act 1945. Horizon Power believes these changes reside in the Reliability Code as they are generic to all systems, unlike frequency. Standards already exist in draft form for the NWIS (Draft NWIS Technical Rules – as agreed between Horizon Power and Rio Tinto which are based on Australian Standards).

8) The steady state voltage standards in the Reliability Code applying to Horizon Power should prescribe different benchmarks for distribution and transmission networks.

Horizon Power recommends the use of Australian (or International) Standards as the basis for determining appropriate standards for Horizon Power.

9) Amend the Reliability Code to include negative phase sequence voltage standards applying to Horizon Power.

Horizon Power is comfortable with an amendment to the Reliability Code to include negative phase sequence voltage standards where prescribed standards are consistent with Australian (or International) Standards and are measured from the busbar.

It should be noted that Horizon Power does not systematically measure negative phase sequence voltages and is currently unable to measure on the NWIS.

10) Undertake an assessment of what the appropriate negative phase sequence voltage benchmarks applying to Horizon Power under the Reliability Code should be.

Horizon Power recognises the need to use Australian (or International) Standards as the basis for determining appropriate standards for the varying types of Horizon Power systems.

11) Amend the Reliability Code to include temporary overvoltage standards applying to Horizon Power.

Horizon Power agrees with the amendment of the Reliability Code to include overvoltage standards consistent with Australian (or International) Standards, modified appropriately for each of Horizon Power's systems.

12) Undertake an assessment of what the appropriate temporary overvoltage benchmarks applying to Horizon Power under the Reliability Code should be.

Horizon Power recommends the use of Australian (or International) Standards as the basis for determining appropriate standards for the varying types of Horizon Power systems.

13) The Reliability Code should not define transmission reliability benchmarks applying to Horizon Power. Note transmission network reliability will be measured through the implementation of appropriate distribution reliability standards.

As Horizon Power has a number of High Voltage customers on the NWIS it is appropriate to apply transmission reliability benchmark. Horizon Power also takes the view, as a customer in its own right supplied by various transmission networks, that all owners of transmission assets should be measured against those standards.

14) The reliability standards in relation to the interruption of supply to individual customers that apply to Horizon Power under the Reliability Code should remain unchanged.

Horizon Power is of the view targets should reflect the level of service that could be expected based on similar system types throughout the State. On large, interconnected systems such as the NWIS and the larger non-interconnected systems such as Broome, Esperance (Urban areas) and Carnarvon, customers expect a level of service equivalent to that received on the South West Interconnected System (SWIS) Urban areas. Longer rural feeders, given their exposure to the elements are more likely to experience a higher number of interruptions.

Given Horizon Power operates across the entire value chain (generation to retail) there is merit in tightly defining the circumstances that require payment to a customer where supply is interrupted for a duration exceeding 12 hours. The Code could be amended to specify standards based on feeder and outage definitions as determined by SCONRRR.

Horizon Power also advises that it does not have systems in place that will definitively establish whether an individual customer has been without supply. Horizon Power utilises information at the feeder level to determine outage durations.

15) Amend the distribution reliability standards applying to Horizon Power in the Reliability Code to include both SAIDI and SAIFI standards.

Horizon Power agrees both SAIDI and SAIFI standards should be established and refer the Authority to the table under Recommendation 16.

16) The Reliability Code continue to define distribution reliability standards for particular areas of the State

Horizon Power agrees there is justification for distribution reliability standards to differ between varying geographical areas of the State based on system type, environmental and climatic conditions. On large, interconnected systems such as the NWIS and the larger regional towns such as Broome, Esperance (Urban areas) and Carnarvon, customers expect a level of service standard similar to that received on the SWIS Urban areas. Customers on longer rural feeders (up to and exceeding 200km) and the more isolated regional towns, not serviceable within the time periods expected where resources are available close at hand to rectify problems, are perhaps more accommodating of longer outages.

Horizon Power has undertaken considerable work in this area and provides the following classification for the consideration of the Authority. The average SAIFI across the systems meets the 290 minute standard currently required by the Reliability Code.

DEFINITIONS	TARGETS	
	SAIDI	SAIFI
NORTH-WEST INTERCONNECTED SYSTEM. The interconnected system connecting Port Hedland and Karratha load areas with multiple generation sources.	190	2
LARGE NON-INTERCONNECTED SYSTEMS. A system that has a single generation source and a local maintenance depot or contractor located in the town.	250	5
RURAL SYSTEM. The long rural feeders with low customer density located at Esperance, Hopetoun and Kununurra.	400	16
SMALL NON-INTERCONNECTED SYSTEMS. A system that has a single generation source and has no local maintenance support in the town. Maintenance support may be from an HP depot or contractor located some distance from the town requiring several hours travelling.	400	16
HORIZON POWER TOTAL	290	6.5

Includes Generation, Transmission and Distribution

In addition to setting standards that align with the expectations of our customers, Horizon Power is of the view the differential standards also permit focus to be retained on individual supply centres rather than attainment of standards by addressing issues only within larger supply centres as may occur if an average across all supply centres is utilised.

17) Undertake an assessment to determine whether the number of areas of the State prescribed in the Reliability Code could be usefully expanded to align the distribution networks operated by Horizon Power with the discrete communities that they serve.

Horizon Power can provide additional supporting information with respect to the proposed table and is willing to work with the Authority to further refine the standards as required.

18) Amend the Reliability Code to include distribution reliability standards based on the SCORRRR feeder classifications, and a separate reliability standard for the whole of each distribution network operated by Horizon Power.

Horizon Power agrees utilising SCORRRR definitions is useful in benchmarking and comparing Horizon Power's performance against that of other utilities. However, this may not equate to the level of service that Horizon Power's customers expect and, in many cases when applied to Horizon Power on a system by system level, may result in a lower level of service than that currently stipulated in the Reliability Code.

Consequently, Horizon Power is of the view that only one Service Standard should be established however Horizon Power should report against both that Service Standard and the SCORRRR feeder classification to permit benchmarking of Horizon Power's performance.

As indicated in Recommendation (16) above, Horizon Power agrees Service Standards should be set on a system by system basis in order to apply a consistent standard across our varying service areas and to ensure a focus on all systems.

19) The definition of SAIDI and SAIFI in the Reliability Code applying to Horizon Power is to be consistent with the definition of the SCORRRR Normalised Distribution Network – Unplanned data set.

Horizon Power agrees that for the purposes of benchmarking and comparison of Horizon Power's performance against other utilities, the SCORRRR Normalised Distribution Network – Unplanned data set provides an appropriate definition.

In determining the Service Standard Horizon Power should attain for delivery to customers in the system classifications identified under Recommendation 18 above, Horizon Power is of the view the definition of SAIDI and SAIFI should exclude outages from the following events:

- those caused by an exceptional natural or third party events that Horizon Power cannot reasonably be expected to mitigate by prudent asset management , including vehicle or other mobile equipment, flood, cyclone or storm, wilful damage or customer equipment
- those caused by planned maintenance

but should include generation caused events.

20) Amend the Reliability Code to require Horizon Power to provide details of each interruption excluded from the calculation of the Normalised Distribution Network – Unplanned data set, including a description of the event and the amount of SAIDI and SAIFI.

Horizon Power agrees a report identifying all outages experienced would be useful and the Reliability Code should be amended to capture this information.

21) Amend the Reliability Code to include two reliability standards applying to Horizon Power that measure interruptions in the distribution network caused by unplanned outages in the transmission networks that supply those distribution networks:

- SAIDI – unplanned transmission outages; and
- SAIFI – unplanned transmission outages.

Horizon Power agrees it may be useful to gather this information but that systems are not in place, nor planned, to facilitate the capture of data at this level at this time.

22) Amend the Reliability Code to include compulsory service standard benchmarks applying to Horizon Power

Horizon Power is supportive of compulsory benchmarks that provide for a predetermined level of service for our customers where those benchmarks are tied to processes to determine levels of funding for the requisite infrastructure required to meet those benchmarks.

23) Undertake an assessment of what the appropriate value of power quality and distribution reliability benchmarks in the Reliability Code applying to Horizon Power should be.

Horizon Power agrees an assessment should be undertaken and would appreciate the opportunity to participate.

24) The requirement for distributors and transmitters to publish reliability reports complying with Schedule 1 of the Reliability Code is to be retained.

Horizon Power is comfortable with the requirements of Schedule 1 to publish reports however is concerned at the cost incurred in having these reports independently audited on an annual basis and the duplication of reporting required under both the Reliability Code and the Authority's Compliance Manual requirements.

Horizon Power contends audits are an essential part in ensuring compliance however, an annual audit is an unnecessary cost burden. Consideration should be given to requiring audits on a two or three year cycle in order to provide sufficient assurance that systems and processes of reporting are in place to provide a reliable level of reporting.

25) Amend Schedule 1 of the Reliability Code to align with the amended service standards in Part 2 of the Code resulting from this review.

Horizon Power agrees any amended Service Standards will have consequential amendments to Schedule 1 reporting requirements.

26) The implementation of the recommendations in the report on the current review is to take place as soon as practicable after the date that the Authority approves an Access Arrangement and Technical Rules for the South West Interconnected System operated by Western Power for the period commencing July 2009.

The review of matters arising from this Discussion Paper should not be deferred in the manner recommended. Review and establishment of Service Standards is closely aligned to the development of Asset Management Plans required to close gaps between expected and actual performance. Horizon Power's funding model, (the Tariff Equalisation Fund), is reset, in accordance with legislative requirements, in the first half of 2009 for a period of five years. Should establishment of revised Service Standards identify a need to modify asset management plans, this may necessitate a variation to Horizon Power's funding requirements, the opportunity for which would not occur under current processes until 2014.

27) The Minister publish a notice in the Government Gazette fixing the date to commence future reviews of the standards that apply to Horizon Power beyond 2009 to commence as soon as practicable after the date that the Authority has approved an Access Arrangement for the South West Interconnected System operated by Western Power. This is subject to the period between the approval of future Access Arrangements being less than five years

Horizon Power is supportive of the principle of establishing the next review date well in advance, though is concerned at the need (as established by the Regulations) to commence the review after completion of Access Arrangements with Western Power. Horizon Power is also concerned that any future reviews be planned so as to permit an appropriate amount of time for other regulatory processes to be undertaken in an orderly fashion.