

# Application for exemption from certain requirements of the Technical Rules submitted by Western Power

Meadow Springs Zone Substation

Issues Paper

June 2015

Economic Regulation Authority

WESTERN AUSTRALIA

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## Contents

<b>Invitation to make submissions</b>	<b>1</b>
<b>Introduction</b>	<b>2</b>
<b>Exemptions from Technical Rules</b>	<b>2</b>
<b>Western Power's Application</b>	<b>3</b>
<b>Matters to be considered</b>	<b>4</b>

## Invitation to make submissions

Interested parties are invited to make submissions on the Authority's issues paper by **4:00 pm (WST) Thursday, 2 July 2015** via:

Email address: [publicsubmissions@erawa.com.au](mailto:publicsubmissions@erawa.com.au)

Postal address: PO Box 8469, PERTH BC WA 6849

Office address: Level 4, Albert Facey House, 469 Wellington Street, Perth WA 6000

Fax: 61 8 6557 7999

### CONFIDENTIALITY

In general, all submissions from interested parties will be treated as being in the public domain and placed on the Authority's website. Where an interested party wishes to make a submission in confidence, it should clearly indicate the parts of the submission for which confidentiality is claimed, and specify in reasonable detail the basis for the claim. Any claim of confidentiality will be considered in accordance with the provisions of *Electricity Networks Access Code 2004*, sections 14.12 to 14.15.

The publication of a submission on the Authority's website shall not be taken as indicating that the Authority has knowledge either actual or constructive of the contents of a particular submission and, in particular, whether the submission in whole or part contains information of a confidential nature and no duty of confidence will arise for the Authority.

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## Introduction

1. Western Power has submitted an application to the Authority for exemption from compliance with clause 2.5.4(b) (i.e. the Normal Cyclic Rating (**NCR**) Criterion<sup>1</sup>) of the Technical Rules with respect to capacity requirements at the Meadow Springs zone substation. The application is made under section 12.40 of the *Electricity Networks Access Code 2004 (Access Code)*.

## Exemptions from Technical Rules

2. Technical Rules consist of the standards, procedures and planning criteria governing the construction and operation of an electricity network and are required under the Access Code for all covered networks. The Authority first approved and published Western Power's Technical Rules on 26 April 2007 which became effective from 1 July 2007. Revisions to the Technical Rules were approved by the Authority on 10 November 2011 and took effect from 23 December 2011.
3. Under section 12.40 of the Access Code a service provider may apply to the Authority for an exemption from one or more requirements of its technical rules which apply to the service provider and all applicants, users and controllers of the covered network.
4. Section 12.41 of the Access Code requires the Authority to determine an application as soon as practicable as a reasonable and prudent person on reasonable technical and operational grounds and having regard to the effect the proposed exemption will have on the service provider and users of the network and any interconnected network. The Authority must grant the exemption if it determines that in all the circumstances, the disadvantages of requiring compliance with the Technical Rules are likely to exceed the advantages.
5. Under section 12.43, an exemption:
  - may be granted for a specified period or indefinitely;
  - may be subject to any reasonable conditions the service provider considers fit, in which case the network persons must comply with the conditions, or may be unconditional; and
  - may be varied or revoked by the service provider after reasonable notice to the network persons.
6. Under section 12.46, the Authority may consult the public in accordance with Appendix 7 of the Access Code. Section 12.44 requires the Authority to notify the service provider of its determination within 45 business days of receiving the application, if it has consulted with the public, and 25 business days if it has not.
7. Under section 12.42, the Authority may refer a service provider's request to a technical rules committee established by the Authority and request its advice on the application. If it seeks advice from the technical rules committee then, subject to complying with the specified time limits, the Authority must have regard to that advice in making its determination.

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<sup>1</sup> The NCR criterion permits the loss of a portion of power transfer capacity at a submission following the unplanned loss of a supply transformer.

8. Section 12.47 of the Access Code requires the Authority to publish a notice giving details of any exemption.

## Western Power's Application

9. Western Power submitted an application for an exemption to the Authority on 15 May 2015.
10. The application is for a temporary exemption from compliance with clause 2.4.4(b) of the Technical Rules (i.e. NCR) for the Meadow Springs zone substation. The exemption will apply until the completion of Stage 2 of the Mandurah load area investment strategy, or unless otherwise revoked under the provisions of the Code.
11. The exemption is requested as Western Power's 2014 load forecasts indicate the NCR capacity of the Mandurah and the Meadow Springs zone substations in the Mandurah load area will be exceeded within the five year outlook. The Mandurah zone substation has forecast non-compliance exposure with the NCR Criterion from 2016/17 and the Meadow Springs zone substation has forecast non-compliance exposure with NCR Criterion from 2015/16.
12. Western Power studies, using a deterministic approach, have shown that in order to maintain compliance obligations at both substations, the required network investment option (Mandurah Extension Project) would involve significant substation augmentation at Mandurah. The project cost estimate is \$27 million.
13. Western Power has undertaken a cost benefit analysis using risk-based planning techniques. Based on this analysis, Western Power proposes deferring the Mandurah Extension Project to 2019/20 and, instead, bringing forward capacity expansion at the Meadow Springs substation to 2016/17. The Meadow Springs expansion project cost estimate is \$9.2 million.
14. Western Power has proposed the following two staged approach to address the emerging capacity constraints in the Mandurah load area being:
  - Stage One – Meadow Springs Expansion Project in 2016/17 which will have partial compliance recovery; and
  - Stage Two – Mandurah Expansion Project in 2019/20 which will achieve full compliance recovery.
15. The revised strategy represents a pathway towards compliance as Western Power aims to minimise the risk of over-investment in the face of potential variability in forecast demand.
16. Western Power has noted that the impact on its compliance, reputation and financial risk exposure will be reduced by obtaining an exemption. It also considers there is no foreseeable adverse impact on the existing level of safety and reliability to other network users.

## Matters to be considered

17. In considering whether to approve Western Power's applications for exemption from certain aspects of the Technical Rules, the Authority must, having regard to the effect the proposed exemption will have on the service provider and users of the network and any interconnected network, grant the exemption if it determines that in all the circumstances, the disadvantages of requiring compliance with the Technical Rules are likely to exceed the advantages.
18. Western Power notes that operating an NCR substation above its NCR capacity effectively increases the utilisation of the transformers within the substation thereby increasing the quantity of load (and customers) at risk following the unplanned loss of a supply transformer. The load at risk above NCR capacity is in addition to the 'permitted' loss of a portion of the power transfer capacity that may be lost under the NCR Criterion. The unserved energy expected to occur during the exposure (non-compliance) period defines the cut-off limits and acceptable level of risk.
19. Western Power notes the variation in risk above present levels is not expected to be significant. This is because the deterministic compliance levels, which will eventually be breached, can be expected to be exceeded for relatively short periods of time.
20. The impact of the work program intended with gaining this exemption will see little impact on service standard benchmarks. Western Power also notes that the safety risk and environmental risk is unaffected by this exemption and remain low. The customer risks or reliability of supply is assessed to remain medium and network risk is assessed to remain low.
21. Overall, Western Power considers that in this case, the advantages of operating with the exemption outweigh the disadvantages of requiring full compliance.

Submissions are invited from interested parties on Western Power's application, in particular regarding:

- Whether there are any reasonable alternative options which would be compliant with the Technical Rules; and
- Whether the proposed exemption will materially impact the safety and reliability of the Western Power network.