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7 October 2009

Mr Lyndon Rowe
Chairman
Economic Regulation Authority
Level 6, 197 St Georges Terrace
Perth WA 6000

Dear Lyndon

**REQUEST FOR WAIVER OF REGULATORY TEST
NEW TRANSMISSION WORKS TO SUPPLY BINNINGUP DESALINATION PLANT**

In accordance with the requirements of the Electricity Networks Access Code 2004, I am pleased to submit Western Power's request to waive the application of the regulatory test to a major augmentation of the transmission network south of Perth.

The augmentation comprises a new 330/132kV transformer at Kemerton Terminal and a new 132kV transmission line from Kemerton to the Water Corporation's new desalination plant at Binningup.

The estimated cost of this work is approximately \$50M. Under Chapter 9 of the Code, any transmission network augmentation over \$30M must be submitted to the Authority for assessment against the requirements of the Regulatory Test, which may be waived in specific circumstances.

An electronic version and one printed copy of the submission document are enclosed. I confirm this submission is suitable for publication by the Authority.

I believe this submission demonstrates that it is appropriate to waive the application of the regulatory test for this particular network augmentation, and Western Power looks forward to the Authority's confirmation of this.

Yours sincerely,

**PHIL SOUTHWELL
GENERAL MANAGER STRATEGY & CORPORATE AFFAIRS**



Submission to the Economic Regulation Authority

REQUEST FOR WAIVER OF REGULATORY TEST

*Installation of a second 330/132 kV transformer at Kemerton Terminal and
construction of a 132 kV transmission line to supply Binningup Desalination Plant.*

DATE:

7 October 2009

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safe reliable efficient

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1 Introduction

Western Power requests that the Authority waive the application of the regulatory test in respect of the proposed major augmentation to supply a new desalination plant at Binningup. The proposed augmentation would not result in a net increase in cost to other network users and hence it is appropriate to waive the application of the regulatory test under the provisions of Section 9.23(d) of the Electricity Networks Access Code 2004 (the Code).

The Water Corporation proposes to install a second desalination plant at Taranto Road, Binningup, about 50 km north of Bunbury. Western Power has been requested to provide a power supply to the desalination plant.

To supply the Binningup desalination plant will require Western Power to undertake a major augmentation of the network. The nearest connection point is at Kemerton Terminal, about 10 km from Binningup. Table 1 shows the expected demand and the estimated service date.

Table 1: Forecast demand requirements of the Desalination Plant

Stage	Estimated service date	Demand increase	Total demand requirements
1	July 2010	25 MW	25 MW
2	2017	30 MW	55 MW

Western Power, in partnership with the Water Corporation, has investigated various options to address the forecast load requirements of the Binningup desalination plant. These options are provided in the NFIT pre-approval request, which will also be submitted in the near future. The most appropriate option to meet the demand is the construction of approximately 10 km of 132 kV transmission line from Kemerton Terminal to Binningup desalination plant and the installation of a second 330/132 kV transformer and associated works at Kemerton Terminal. The reinforcement is required by June 2010. The proposed major augmentation is estimated to cost \$50.4 million including contingency.

1.1 The regulatory requirements

Under section 9.2 of the Code a service provider must not commit to a major augmentation before the regulatory test is satisfied. Section 9.2 is reproduced below.

No major augmentation without regulatory test determination

9.2 A service provider must not commit to a major augmentation before the Authority determines, or is deemed to determine, under section 9.13 or 9.18, as applicable, that the test in section 9.14 or 9.20, as applicable, is satisfied.

The Code defines an augmentation to the network to be a major augmentation where the investment exceeds \$30 million (CPI adjusted) for transmission assets. The definition of a major augmentation is reproduced below.

“**major augmentation**” means an augmentation for which the new facilities investment for the shared assets:

- a) exceeds \$10 million (CPI adjusted), where the network assets comprising the augmentation are, or are to be, part of a distribution system; and

- b) exceeds \$30 million (CPI adjusted), where the network assets comprising the augmentation are, or are to be, part of:
 - i) a transmission system; or
 - ii) both a distribution system and a transmission system.

As the cost of the proposed transmission augmentation exceeds \$30 million (CPI adjusted), it is classified as a major augmentation and as such is required to satisfy the regulatory test.

1.1.1 Waiver requirements

Under certain circumstances the Authority may form a view to waive the application of the regulatory test. This is captured in section 9.23 of the Code, reproduced below.

Regulatory test may be expedited, otherwise modified or waived

9.23 If the *Authority* forms the view that the application of the *regulatory test* under sections 9.10 to 9.14 or sections 9.15 to 9.22 in respect of a proposed *major augmentation* would be contrary to the *Chapter 9 objectives*, including because:

- a) there are no, or it is unlikely that there are any, viable *alternative options* to the proposed *major augmentation*; or
- b) the nature of the proposed *major augmentation* is such that significant advance planning is required and no *alternative options* exist; or
- c) the nature of the proposed *major augmentation*, or part of it, is such that it should be submitted to the Independent Market Operator established under the *Electricity Industry (Independent Market Operator) Regulations 2004*, or
- d) the nature of the funding of the *proposed major augmentation* means that the *proposed major augmentation* will not cause a net cost (measured in present value terms to the extent that it is possible to do so) to those who *generate, transport and consume* electricity in the *covered network* and any *interconnected system*

then the Authority may, by publishing a notice:

- e) expedite or otherwise modify the application of the *regulatory test* in respect of the *major augmentation* to the extent the *Authority* considers necessary to meet the *Chapter 9 objectives*; or
- f) waive the application of the *regulatory test* in respect of the *major augmentation* if the *Authority* considers it necessary to do so to meet the *Chapter 9 objectives*.

The Chapter 9 objectives are reproduced below.

Objectives of this Chapter 9

9.1 The objectives of this Chapter 9 (“**Chapter 9 objectives**”) are:

- a) to ensure that before a service provider commits to a proposed major augmentation to a covered network, the major augmentation is properly assessed to determine whether it maximises the net benefit after considering alternative options; and
- b) to provide an incentive to a service provider, when considering augmentation to a covered network, to select the option (which may

involve a major augmentation or may involve not proceeding with an augmentation at all) which maximises the net benefit after considering alternative options; and

c) to minimise:

- i) delay to projects and other developments; and
- ii) administrative and regulatory costs; and
- iii) any other barriers to the entry of *generators* and *consumers* into the electricity market,

arising from the application of the regulatory test.

Part (d) of clause 9.23 is relevant to this request for waiver. Details are set out in Section 3.

1.1.2 **Anti-avoidance provisions**

Sub-chapter 9.3, anti-avoidance provisions are reproduced below.

Subchapter 9.3 – Anti-avoidance provisions

9.27 The Authority may by notice to the service provider deem:

- d) any two or more augmentations to constitute a single augmentation; or
- e) any augmentation to constitute any two or more augmentations; or
- f) any activity which has been attributed to an augmentation to be attributed to a different augmentation; or
- g) any combination of sections 9.27(a), 9.27(b), or 9.27(c), in which case the deeming has conclusive effect for the purposes of this Chapter 9.

Western Power has examined the proposed major augmentation and other works proposed in its 2009 Annual Planning Report and has determined no other planned augmentation would influence or be affected by this request for waiver.

2 Background

Kemerton Terminal is located in the Bunbury load area. Most of the existing lines were built in the 1960's and were designed to supply relatively small loads distributed over a large geographical area. The network has limited capacity for transferring large amounts of power due to thermal and voltage limitations influenced mainly by the capability of the 132 kV network.

The proposed augmentation is the installation of a second 330/132 kV transformer at Kemerton Terminal, the establishment of a 132 kV switchyard at Kemerton Terminal and the installation of approximately 10 km of 132 kV transmission line from Kemerton Terminal to the Binningup desalination plant.

2.1 The proposed major augmentation

The proposed major augmentation consists of several separate elements of work as shown in table 2. Each element has been considered separately so as to provide an appropriate consideration of those factors that are relevant to the request for waiver.

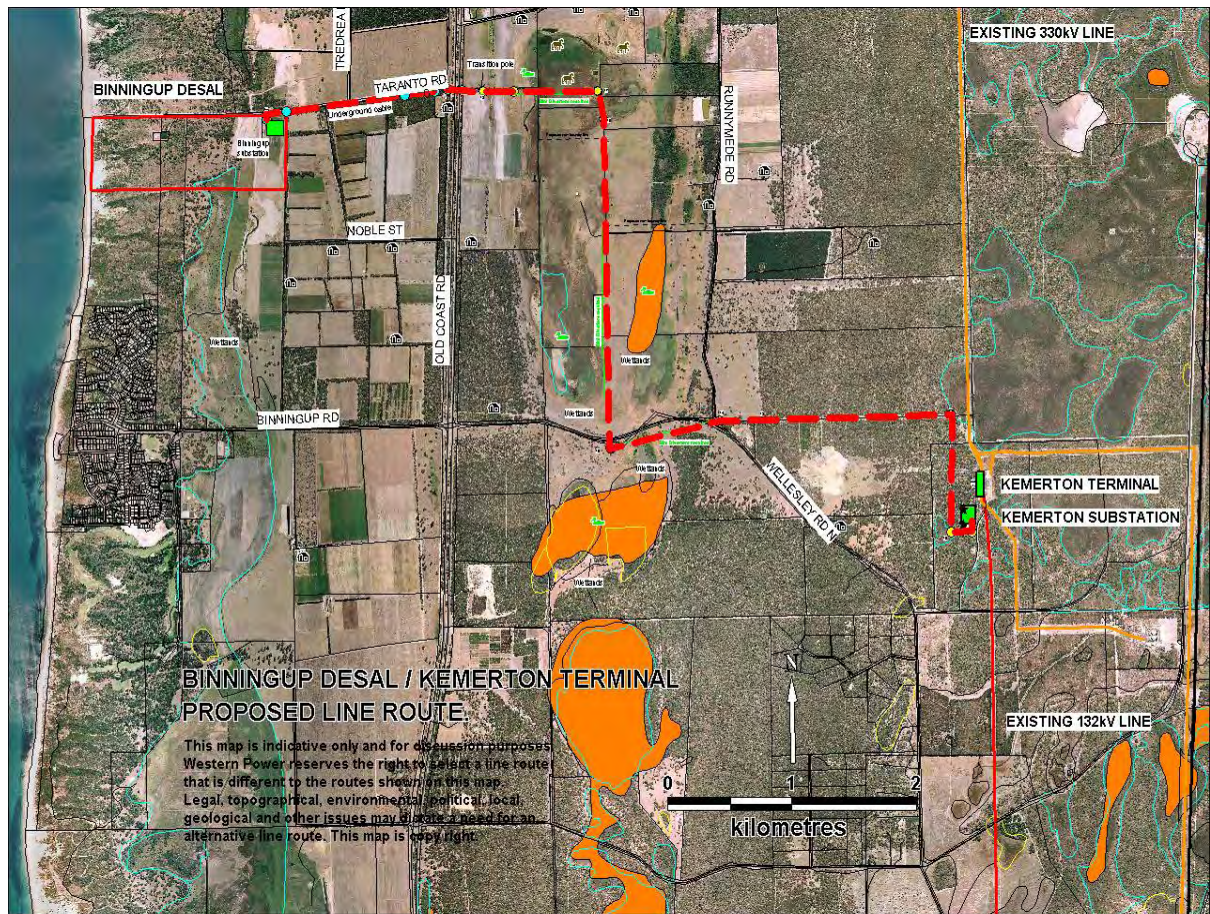
These elements of the proposed major augmentation are discussed in sections 2.2 to 2.5 below.

Table 2: Elements of the proposed major augmentation

Element
Binningup 132 kV substation works
Binningup substation to Kemerton Terminal transmission line
Kemerton Terminal connection of the transmission line
Kemerton Terminal works

Figure 1 shows the proposed route of the transmission line from Binningup to Kemerton Terminal.

Figure 1: Proposed route of the Binningup – Kemerton Terminal transmission line



2.2 Binningup 132 kV substation works

The proposed work at the Binningup desalination plant substation is needed to connect a 132/11 kV transformer to the 132 kV network at an estimated cost of \$3.3 million. The augmentation is a direct result of load requirements of the Binningup desalination plant and as such all costs for construction of this element of the major augmentation will be allocated to the Water Corporation and funded through a capital contribution in accordance with Western Power's Capital Contribution Policy.

Under section 9.23(d) of the Code, a waiver may be sought where the funding of the proposed major augmentation means that the proposed major augmentation will not cause a net cost (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system.

As the cost of this element of the proposed major augmentation will be fully funded by the customer, the requirements of section 9.23(d) of the Code are met in respect of this element.

2.3 Binningup substation to Kemerton Terminal transmission line

The proposed works comprise the construction of approximately 10 km of single circuit 132 kV transmission line, of which approximately 2 km will need to be installed as underground cable (with agreement of the Water Corporation), between Binningup and Kemerton Terminal. The total cost of this part of the proposed major augmentation is \$16.6 million. The augmentation is a direct result of load requirements at the Binningup desalination plant and as such all costs for construction of this element of the major

augmentation will be allocated to the Water Corporation through a capital contribution in accordance with Western Power's Capital Contribution Policy.

Under section 9.23(d) of the Code, a waiver may be sought where the funding of the proposed major augmentation means that the proposed major augmentation will not cause a net cost (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system.

As the cost of this element of the proposed major augmentation will be fully funded by the customer, the requirements of section 9.23(d) of the Code are met in respect of this element.

2.4 Kemerton Terminal connection of the transmission line

This element of the major augmentation relates to the assets required to connect the 132 kV transmission line at Kemerton Terminal.

The augmentation is a direct result of load requirements at the Binningup desalination plant and as such all costs for construction of this section of the major augmentation will be allocated to the customer through a capital contribution of \$1.5M for the connection assets, in accordance with Western Power's Capital Contribution Policy.

Under section 9.23(d) of the Code, a waiver may be sought where the funding of the proposed major augmentation means that the proposed major augmentation will not cause a net cost (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system.

As the cost of this element of the proposed major augmentation will be fully funded by the customer, the requirements of section 9.23(d) of the Code are met in respect of this element.

2.5 Kemerton Terminal works

Western Power has undertaken analysis of the future load growth requirements in the area of Kemerton Terminal and proposes that the most cost effective solution is to bring forward the installation of the second transformer and additional switchgear at Kemerton Terminal from November 2013 to 2011.

Binningup desalination plant is scheduled to take supply from July 2010 and the scheduled date of completing Kemerton Terminal works will be in 2011. To maintain an N-1 security standard at Kemerton Terminal station to existing customers until the Kemerton second transformer is operational, Water Corporation has agreed to the Binningup desalination plant being an interruptible load for the interim period.

Under normal load growth scenarios a second transformer and 132 kV switchyard at Kemerton substation would be required by November 2013. The second transformer would have sufficient capacity to serve the long term needs of Binningup desalination plant along with the needs of the regional forecast.

To establish the additional incurred cost of bringing the installation forward, Western Power has undertaken an economic analysis of two scenarios. Namely:

1. Installing the second transformer and undertaking the associated works in 2011.
2. Installing the second transformer and undertaking the associated works as planned by November 2013.

The calculation was carried out using real costs based on 2009 dollars and a discount rate equivalent to the current value of WACC of 6.76% real pre-tax.

The results of the NPC evaluation are given in Table 3 below.

Table 3: NPC evaluation of advancing the installation of a second transformer at Kemerton Terminal

NPC evaluation	Date	NPC (million)
Scenario 1: Cost to establish the second transformer and associated works in 2011	2011	29.0
Scenario 2: Cost to establish the second transformer and associated works in 2013.	2013	24.0
Cost of advancing the installation of the second transformer		5.0

The option of bringing forward the installation of the second transformer and associated works is a direct result of load requirements at the Binningup desalination plant and as such the brought forward costs will be allocated to the Water Corporation through a capital contribution in accordance with Western Power's Capital Contribution Policy.

Under section 9.23(d) of the Code a waiver may be sought where the funding of the proposed major augmentation means that the proposed major augmentation will not cause a net cost (measured in present value terms to the extent that it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system.

As the brought forward cost of this element of the proposed major augmentation will be fully funded by the customer through a combination of a capital contribution and ongoing network access charges, the requirements of section 9.23(d) of the Code are met in respect of this element.

3 Conclusion

The proposed major augmentation including the cost of advancing the works at Kemerton Terminal is fully funded by the customer and hence there will be no net increase in costs to other covered network users. Therefore the requirements of section 9.23(d) of the Code are met and Western Power requests that the Authority waive the regulatory test in respect of this major augmentation.

Table 4 summarises the basis on which Western Power seeks that the Authority waives the application of the regulatory test.

Table 4: Summary of waiver request

Element name	Cost	Basis for waiver
Binningup 132 kV substation works	\$3.3M	Fully funded by customer – no net increase in cost to other network users
Binningup substation to Kemerton Terminal transmission line	\$16.6M	Fully funded by customer – no net increase in cost to other network users
Kemerton Terminal works for connection of the transmission line	\$1.5	Fully funded by customer – no net increase in cost to other network users. .
Brought forward costs of the Kemerton Terminal works	\$5.0M	The brought forward costs are allocated to the customer – no net increase in cost to other network users