

Supplementary Submission to the Economic Regulation Authority

**REQUEST FOR WAIVER OF REGULATORY TEST**

Major Augmentation to Great Southern transmission network to supply the Southdown Mine

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Supplementary to submission dated 14 June 2011

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## 1. Introduction and Executive Summary

Western Power refers to the Authority's request of 1 July 2011 for further information to support the aspect of its submission dated 14 June 2011 seeking a waiver of the regulatory test based on clause 9.23(d) of the *Electricity Networks Access Code 2004* (**Code**). Other aspects of the Code upon which the application for waiver was based were clauses 9.23(a), (b) and 9.1(c) of the Code, each of which are capable of independently forming grounds for waiver.

Specifically, the Authority has requested Western Power's assessment of:

- (a) the costs that will be funded by the Southdown Joint Venture (**SDJV**); and
- (b) to the extent that any costs are not funded by the SDJV, evidence to demonstrate that these costs will not result in a net cost to those who generate, transport and consume electricity on the network.

This supplementary submission will demonstrate that the major augmentation will not result in a net cost (measured in present value terms where it is possible to do so) to those who generate, transport and consume electricity in the covered network and any interconnected system for the following reasons:

- (a) The SDJV will, subject to its project proceeding, fund any costs associated with the major augmentation which do not meet the new facilities investment test (**NFIT**) under the Code, in accordance with Western Power's Contributions Policy under its Access Arrangement (**AA**);
- (b) The NFIT is designed to ensure that costs relating to a new facilities investment may only be added to the capital base and form the basis of charges to those who generate, transport and consume electricity on the covered network where they:
  - (1) do not exceed the amount that would be invested by a service provider efficiently minimising costs; and
  - (2) either:
    - (i) will be recovered through anticipated incremental revenue;
    - (ii) provide a net benefit in the covered network over a reasonable period of time that justifies the approval of a higher reference tariff; or
    - (iii) are necessary to maintain the safety or reliability of the covered network or its ability to provide covered services;

- (c) The undertakings of the SDJV and the operation of the NFIT will ensure that there is no net cost to those who generate, transport and consume electricity on the covered network; and
- (d) Western Power has and will continue to use reasonable and prudent measures to ensure that those costs which are incurred in respect of the new facilities investment comprise the amount that would be required by a prudent service provider acting efficiently in accordance with good electricity industry practice seeking to achieve the lowest sustainable cost of providing covered services to the SDJV as considered in light of the Chapter 9 objectives and project requirements.

## 2. Major Augmentation

The major augmentation forming the basis of the waiver request comprises the following elements:

Description of Works	Deadline	Amount (\$M) (Base)
An 87.5 kilometre double circuit 330 kV transmission line (twin conductor per phase) from Muja to Kojonup (utilising the existing circuit 81 easement) and a 188 kilometre single circuit 330 kV transmission line (twin conductor per phase) from Kojonup to Southdown	March 2014	379.5
The removal and rehabilitation of the current 81 line easement between Muja and Kojonup	2016	8.0
<b>TOTAL</b>		<b>387.5</b>

## 3. Costs to be funded by the SDJV

### 3.1. Submission

Western Power confirmed in its first submission that (paragraphs 4, 46(d)):

*The SDJV has...agreed that if the Southdown Project proceeds, the SDJV will meet any capital contributions required under Western Power's Contributions Policy comprising the costs associated with the major augmentation which do not meet the requirements of the [NFIT]..."*

This is further supported in section 4 of the SDJV's letter annexed to that submission which also indicates that the contribution of the SDJV is premised on the project proceeding. That letter provides that ability of the project to proceed is linked to construction taking place within a certain timeframe so that the SDJV can take advantage of the favourable pricing window for magnetite. The letter concludes that the application of the regulatory test and its associated delay would, by failing to meet the preferred construction timeframe, threaten the viability of the project.

### **3.2. Contributions Policy**

The Code provides that the objective of the Contributions Policy is to strike a balance between the interests of contributing users, other users and consumers, and to not constitute an inappropriate barrier to entry (section 5.12 of the Code).

In approving the Contributions Policy which forms part of Western Power's AA, the Authority has confirmed its compliance with the above objectives.

Under the Contributions Policy, Western Power is entitled to request a contribution from an applicant in relation to matters including the following as it relates to new facilities investment:

- (a) those capital costs incurred in relation to works required to provide covered services which do not satisfy the NFIT;
- (b) all other sums referred to in clause 5.2 of the Contributions Policy including, inter alia:
  - (i) the cost of works to provide connection assets (clause 7.1);
  - (ii) associated non-capital costs efficiently incurred (clause 7.2);
  - (iii) works over and above the standard works which are attributable to the requirements of the applicant (clause 7.3); and
  - (iv) costs relating to compliance with the technical rules (clause 7.4(a)).

Western Power is also entitled to obtain security for the applicant's new revenue anticipated to be received from the provision of covered services (clause 4.3).

By utilising the Contributions Policy as the basis for requesting a contribution from the SDJV in relation to the proposed major augmentation, Western Power is ensuring that the interests of the SDJV as compared with other users on the network are appropriately balanced, and that costs that are solely attributable to the SDJV or that do not otherwise meet the requirements of the NFIT for the major augmentation are allocated to the SDJV.

Western Power's first submission indicates that both a single circuit 330 kV transmission line (twin conductor per phase) utilising an indirect new easement from Muja to

Southdown, and the proposed major augmentation would meet the SDJV's project requirements.

Western Power is obliged to ensure that those contributions payable by an applicant under the Contributions Policy represent the lowest sustainable cost of providing the covered services sought (see clause 3 of the Contributions Policy).

The options study which was annexed to the first submission confirms that the major augmentation utilising a double circuit line is initially more expensive than utilising a single circuit line (\$387.5 million as compared with \$364.1 million in base costs). The difference in these costs is shown in the study to be brought-forward costs which would have been incurred by Western Power in any event in undertaking reinforcements to the network necessary to enable Western Power to continue to provide covered services within safety and reliability requirements.

In considering the various options, the study also confirmed the double circuit line, when combined with the planned reinforcement works for the remainder of the network, generated a net saving of up to \$19.9 million (NPV) in future investment costs.

Considered in this context, rather than resulting in a net cost to those who generate, transport and consume electricity on the network, the early investment in the double circuit line as part of the major augmentation will generate a net saving. Other benefits, including environmental benefits and the stimulation of projects along the new transmission line path, are also generated as a result of proceeding with the proposed major augmentation.

Other steps which Western Power will take to maximise the efficiencies of undertaking the major augmentation, as detailed in paragraph 4.2 below, will also ensure that this net saving is preserved.

### **3.3. *Contracts***

As outlined in the SDJV's supporting letter annexed to Western Power's first submission, Western Power and the SDJV are progressing negotiations in relation to an electricity transfer access contract which will include provision for the payment of contributions in accordance with the Contributions Policy, and any associated securities.

## **4. Other costs, which will not result in a net cost**

### **4.1. *Operation of the NFIT***

The purpose of the NFIT is to ensure that only those costs which are efficiently incurred by a service provider in relation to a new facilities investment and which otherwise are offset by any anticipated incremental revenue, a net benefit to users or the need to maintain the capacity of the network to provide covered services within safety and reliability requirements, are added to the capital base and form the basis of charges to users of the network. On a prima facie basis, if only those costs which are ultimately

added to the capital base are efficiently incurred and entirely offset by benefits, there can be no net costs to those who generate, transport and consume electricity on the network as a result.

While Western Power has not yet undertaken the work required to complete an NFIT assessment of the major augmentation, a preliminary outline of the approach that will be taken is given below. These statements will, however, be modified as costs estimates are further refined, load forecasts for the remainder of the network are improved, contracts are concluded and further certainty regarding project delivery is obtained.

#### **4.2. *Efficiently minimising costs***

This aspect of the NFIT is concerned with ensuring that the most appropriate option has been selected to meet the requirements associated with reasonable forecasts in the growth of covered services.

Western Power's first submission establishes on a prima facie basis that the undertaking of the major augmentation is necessary to meet the requirements of the project. In the absence of alternative options (either demand side management or onsite generation), the first submission concludes that a major augmentation is the only viable option and that the application of the regulatory test and its associated delay may be fatal to the project itself, contrary to the Chapter 9 objectives.

The study annexed to the first submission sought to identify the optimal configuration for the major augmentation to ensure that it efficiently minimised costs when considering the overall needs of the network in the medium to long term, while meeting project requirements.

The study confirmed that by utilising a 330 kV transmission line (twin conductor per phase), the network would:

- (a) have greater thermal and voltage capacity to meet the project and other system requirements;
- (b) have additional capacity for increased load or other connections;
- (c) not require major reinforcement works at Muja or reactive compensation at Southdown; and
- (d) minimise line losses.

The study concluded that, while the final form of the reinforcement works had not been resolved at this stage, the choice of major augmentation as described in paragraph 2.1 above met project requirements while optimising the efficient options available to Western Power in pursuing any reinforcement works in the medium to long term to meet future load, safety and reliability requirements. In this way, the proposed new facility exhibits economies of scale having regard to system growth and load forecasts.

The study also confirmed that, to the extent that the major augmentation initially costs more than the alternative single circuit option considered in the study, these additional costs comprise brought-forward costs that would have been incurred by Western Power in any event in undertaking reinforcements to the network necessary to meet future load, safety and reliability requirements. Further, the study confirmed a net saving in pursuing the major augmentation proposed rather than a net cost when considered in context of the overall cost of undertaking both the major augmentation and reinforcement works.

As the growth and load forecasts are further refined and the viability of the project being delivered is confirmed, Western Power will be in a position to progress its assessment of compliance with this aspect of the new facilities investment test. Western Power also intends to commission an independent review of these forecasts to ensure the accuracy of those costs proposed to be included in the capital base in a manner consistent with its approach to the NFIT assessment of the Mid-West Energy Project.

In undertaking the major augmentation, Western Power will also use the following measures to ensure that costs incurred are efficiently minimised:

- (a) designing an appropriate procurement and implementation strategy which will be based on competitive tendering to promote value for money outcomes; and
- (b) Western Power has already commissioned an independent review by an engineering consultant of project costs contained in its first submission and verified their accuracy and suitability.

To the extent that the costs incurred in respect of the major augmentation exceeds this aspect of the NFIT requirements, both as a result of the specific requirements of the SDJV and its project timeline, these costs will be met by the SDJV through a capital contribution. The extent of the SDJV's contribution will be secured through appropriate contractual and security measures.

#### **4.3. *Estimated incremental revenue***

While the terms of the electricity transfer access contract are yet to be finalised, the requested Contract Maximum Demand indicates that the project will generate material incremental revenues which will be secured through appropriate contractual and security arrangements as a pre-condition to the major augmentation proceeding.

This incremental revenue will partly recover the investment cost associated with the major augmentation for the purposes of this aspect of the NFIT.

It is not possible to forecast any incremental revenue from other prospective users at this time. Unless such users' applications to connect to the proposed transmission line achieve the requisite degree of certainty, they will not be factored into the contribution calculation or the incremental revenue calculation for NFIT purposes. In such a case,

users subsequently obtaining the benefit of the SDJV's contribution to the major augmentation will be subject to rebate requirements under the Contributions Policy.

The refinement of project costs and load forecasts, which Western Power will ensure is independently verified, together with any connection applications or increased CMD requests from other new and existing users, will enable Western Power to prepare a more detailed and accurate estimate of incremental revenue and the extent to which it will recover the costs of the major augmentation.

Western Power will also be in a position, in connection with the upcoming review of its AA, to provide a more accurate indication of tariffs which will be applicable to the SDJV and other users, which will in turn affect the incremental revenue assessment.

#### **4.4. *Net benefit***

Western Power intends to engage an independent consultant to assess the net benefit to those who generate, transport and consume electricity on the network as a result of the major augmentation for the purposes of NFIT.

Western Power believes that its approach to assessing the net benefits likely to be generated as a result of the major augmentation will be comparable to the analysis of net benefits undertaken in respect of the Mid-West Energy Project. In this regard, an independent consultant was commissioned to quantify benefits related to generation and the associated competition benefits to electricity consumers. Western Power also conducted internal studies into losses, the long term capital expenditure profile and other network related benefits.

Western Power, in a manner consistent with the RIT-T Cost Benefit Analysis Grid Australia Handbook (March 2011) will consider the materiality of certain issues in assessing net benefits associated with the major augmentation, including:

- (a) changes in generator fuel consumption (including changes in carbon costs);
- (b) changes in costs for parties, other than Western Power, due to:
  - (i) differences in the timing of new plant;
  - (ii) differences in capital costs; and
  - (iii) differences in operational and maintenance costs;
- (c) differences in the timing of transmission investment (which is addressed in paragraph 4.5 below);
- (d) changes in network losses;
- (e) competition benefits; and

- (f) any additional option value (to the extent that the augmentation may represent a strategic investment that can allow Western Power to minimise its long-term costs).

Western Power's work to date indicates that the potential net benefits generated by the major augmentation could be significant because:

- (a) as provided in paragraph 4.5 below, when combined with reinforcement works planned for the Great Southern network, it will enable a net saving of up to \$19.9 million in future investment costs when compared with a base case option. These savings will be passed onto those who consume electricity on the network and are unlikely to result in a net increase in reference tariffs which are required to be justified for the purposes of this aspect of the NFIT;
- (b) by utilising a 330 kV transmission line (twin conductor per phase), the network would have minimised line losses on the network; and
- (c) the major augmentation will, by increasing the available overnight load capacity, enable more efficient generator dispatch which will result in cost savings and a downward pressure on the marginal cost of generation.

#### **4.5. *Safety and reliability and ability to provide covered services***

The question relevant to the safety and reliability criterion of the NFIT are whether the new facility is necessary to maintain the safety and reliability of the network or its ability to provide covered services. In this regard, it is relevant to consider:

- (a) Statutory requirements such as the technical rules under the Code;
- (b) Industry best practice standards; and
- (c) Statutory requirements for human and environmental safety.

As confirmed in the options study, Western Power, regardless of the Southdown Project, had planned to undertake reinforcement works to the Great Southern portion of the network to ensure that it continued to meet safety and reliability requirements and provide covered services in a manner consistent with good electricity industry practice and the technical rules under the Code. This is also confirmed by existing network support service options which are being pursued in Albany to extend the life of the existing network to 2016, but beyond which only a major augmentation will suffice to address medium to long-term load forecasts together with technical requirements.

By incorporating into the major augmentation a double circuit 330 kV line between Muja and Kojonup, this aspect of the future reinforcement works will have already been undertaken. In addition to the \$19.9 million in potential savings (compared with the base

case option) generated as a result of this integration between the major augmentation and the reinforcement works, further benefits will accrue to those who generate, transport and consume electricity on the network. Thus, the major augmentation will:

- (a) ensure that Western Power can maximise cost efficiencies associated with future reinforcement works that are planned to meet safety and reliability requirements for the Great Southern network;
- (b) maximise the utilisation of its assets in accordance with industry standards;
- (c) minimise environmental impacts; and
- (d) address landowner and health concerns associated with the routing of the major augmentation (as confirmed in the consultation summary annexed to the first submission).

The value of these benefits as they concern safety and reliability (including works planned to maintain required safety and reliability levels for the network) and the ability to provide covered services will be factored into the NFIT assessment of the major augmentation.

Once further planning is undertaken with respect to reinforcement options (as noted in the options study) and load forecasts and cost estimates are refined (including through the engagement of independent consultants, Western Power will be in a better position to allocate a value to this aspect of the NFIT.

## **5. Conclusion**

This supplementary submission has shown that, for the purposes of section 9.23(d) of the Code, a waiver of the regulatory test is justified as there will be no net cost to those who generate, transport and consume electricity on the network resulting from the proposed major augmentation. This is because:

- (a) The NFIT will insulate the users of the network from costs which are inefficiently incurred, or those which are not otherwise offset by incremental revenue, net benefits to users or the necessity of the works in maintaining covered service provision within required safety and reliability requirements. If only those costs which are ultimately added to the capital base are efficiently incurred and entirely offset by benefits, there can be no net costs to those who generate, transport and consume electricity on the network as a result.
- (b) Western Power will also be taking specific measures such as competitive tendering in order to ensure that costs incurred in respect of the major augmentation represent the lowest sustainable cost of providing covered services while also meeting project and network requirements.

- (c) Any costs which do not meet the requirements of the NFIT will be met by the SDJV through a capital contribution under the Contributions Policy, subject to the project proceeding. Once again, users will be insulated from these costs.
- (d) Costs associated with the major augmentation which exceed project requirements (the double circuit versus the single circuit options between Muja and Kojonup) comprise costs which would have been incurred by Western Power in any event in order to continue to provide covered services on the network within safety and reliability requirements. They cannot therefore be seen as resulting in a net cost to users. Indeed, they generate a net saving in future investment costs of up to \$19.9 million which will in turn be passed on to users of the network.