Notice

Invitation for submissions

Proposed 330 kV South West transmission reinforcement

DATE:

12 September 2007

DOCUMENT PREPARED BY:

Western Power
GPO Box L921, Perth WA 6842
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safe reliable efficient

1 Summary

The purpose of this document is to inform the public and interested parties about Western Power's proposal to rebuild an existing 132 kV line at 330 kV from Collie to Eastern Terminal. The public are invited to make submissions to Western Power regarding alternative economic options to the proposed augmentation. Western Power welcomes feedback on the contents of this public notice, particularly from parties who are considering connecting into the Western Power transmission network. This project will reinforce the power supply to the Perth metropolitan area.

This invitation addresses the technical and economics of the preferred option. A separate line route and site selection process is being conducted. If you have questions regarding the line route or substations please address them to:

Adrian Stubbings (Project Officer)
Phone: (08) 9326 4726
Fax: (08) 9225 2604
Email: adrian.stubbings@westernpower.com.au

The South West Interconnected System contains significant generation located in the region south of Perth. This generation wheels most of its power into the Perth metropolitan area. Therefore a high volume of energy is transported through the 330 kV transmission network. Recent developments have seen new power stations established along the coastal plain in the area between Bunbury and Kwinana. These new power stations have increased the loading of the 330 kV bulk transmission network between the south west and Perth.

Studies show that from late 2010 onwards the transmission network will not have sufficient capacity to accommodate the forecast increase in South West generation. It is forecast that, should any one of the four 330 kV transmission lines supplying the Perth metropolitan area be forced out of service, the increased power transfer on each of the lines would cause the voltage level within the network to fall below acceptable limits. Hence, the security of the supply will deteriorate.

Western Power has considered 10 major options to solve the capacity constraints in the South West region. These options include transmission, generation and demand side management solutions. Independent consultants, ACIL Tasman and SKM (Sinclair Knight Merz) have evaluated Western Power's improvement options. ACIL Tasman has concluded that the new 330 kV line from Collie to Eastern Terminal by 2011 (Option 6) is the solution that provides the greatest economic benefit.

SKM has reviewed the options and concluded that option 6 is the best technical and economic solution.

This proposal will be subject to review by the Economic Regulation Authority (ERA) under the New Facilities Investment Test (NFIT) and the Regulatory Test. The Regulatory Test requires that a range of network and non-network alternatives (such as a demand side management initiatives or alternative generation solutions) have been properly evaluated and that the proposed network investment is the most efficient outcome.

On the basis of ACIL Tasman's evaluation, Western Power believes the proposed 330 kV transmission line is the best economic solution that will provide transmission capacity to support the connection of new generating plant to the south and east of Perth.

Stakeholders are encouraged to submit an alternative proposal. Western Power will evaluate all proposals before submission of its final recommendation under the regulatory test.

2 Purpose

This document has been prepared to provide information on:

- network constraints in the South West region;
- options considered; and
- the preferred 330 kV transmission line option.

This document:

- seeks alternative proposals to alleviate the network constraints as required by the Electric Networks Access Code 2004; and
- invites stakeholders to make submissions to Western Power regarding alternative options or provide opinions on the proposed 330 kV transmission line.

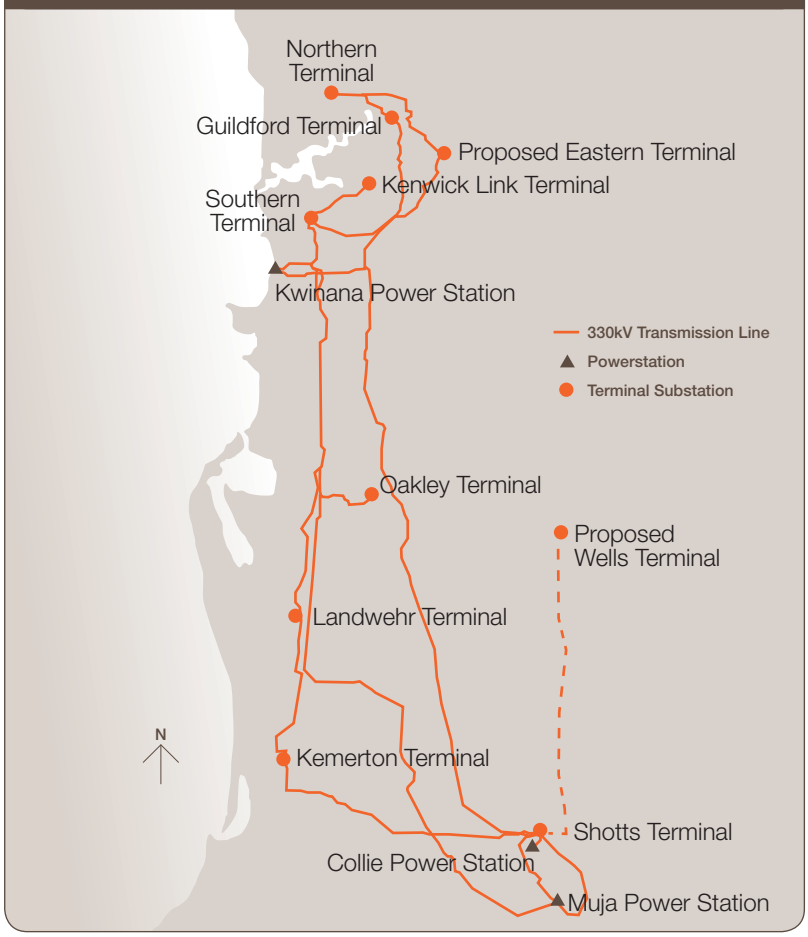
3 Background

The existing 330 kV bulk transmission network supports the transfer of large volumes of power from generation sources located in the region south of Perth to the large centre based in and around the Perth metropolitan areas. The loading of this these lines from the southwest are nearing their limits.

An electricity demand forecast and an energy forecast are published annually in July by the Independent Market Operator (IMO). These forecasts are for the entire South West Interconnected system (SWIS) load for the next 10 years. This demand forecast is used by the IMO to determine the minimum acceptable level of generation that must be connected to the network each year to reliably supply the forecast load.

The forecast electricity demand for the SWIS indicates that substantial amounts of new generating capacity will be required in the future. If this new generating capacity were to locate and connect to the network south or east of Perth, the 330 kV bulk transmission network would be loaded above its capacity. The majority of access applications that Western Power is currently assessing indicate that there are strong prospects for new generators to locate in this region. Western Power has identified and assessed a number of alternatives for enhancing the bulk transmission network to accommodate the new generation.

Figure 1: This diagram shows the appropriate Eastern Terminal. It is proposed to reconstruct a line from Wells Terminal to Eastern Terminal.



Options considered

Western Power has identified a total of 10 improvement options to address the power supply capacity constraints in the South West region. These are:

Transmission solutions:

1. Establish a 330 kV transmission line from Landwehr Terminal to South East Terminal.
2. Establish South East Terminal and reinforce Landwehr Terminal.
3. Establish South East Terminal and provide additional reactive support at Guildford Terminal.
4. Installation of SVC at Northern Terminal to defer option 2.
5. Series compensation of the 330 kV bulk transmission network.
6. Establish a 330 kV transmission line from Collie to Eastern Terminal.
7. Installation of SVC at Northern Terminal to defer option 6.
8. Establish a 500 kV transmission link to the metropolitan area.

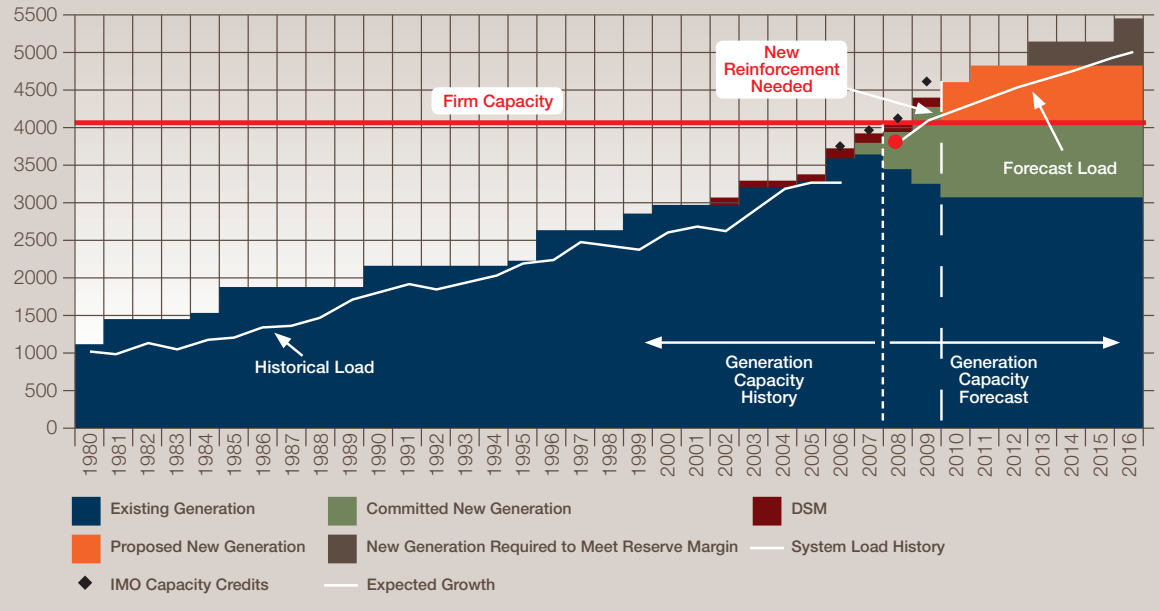
Generation solutions:

9. More Northern generation in the northern part of the SWIS in the metropolitan area.

Other solutions:

10. A demand management program to reduce peak demand.

Figure 2: This diagram shows the forecast system load and the expected capacity constraint on the 330 kV system



Load reductions that can be achieved through demand management (option 10) are unlikely to be sufficient to defer the network expansion even under low growth scenarios. For this reason Option 10 is not supported.

The existing network is currently constrained by a lack of transmission infrastructure needed to support generation growth in the South West of Australia. Western Power has commissioned ACIL Tasman to assess potential generation options to support increased power demand within the network.

ACIL Tasman has based their assessment on the following generation scenarios:

(i) Generation in the South West region with a transmission reinforcement (Options 1-8)

(ii) Generation in the metropolitan area near the major load centre without transmission augmentation (option 9)

Generation option 9 is not a favoured solution as it constrains the generation and fuel competition in the market. This would result in higher electricity cost passed on to consumers. This option also creates a barrier for the entry of South West renewable generation.

To facilitate development of the market and community and continual long-term growth, Western Power believes that a transmission reinforcement is required.

ACIL Tasman has also reviewed the above transmission options and concluded that a new 330 kV line from Collie to Eastern Terminal by 2011 (option 6) is the best economic solution. This option also offers improved security of supply to Wells Terminal and Boddington Gold Mine.
The reinforcement will support forecasted load growth in the metropolitan area and allow connection of conventional and renewable generation in the South West. ACIL Tasman concluded that the preferred South West augmentation is likely to maximize net benefit.

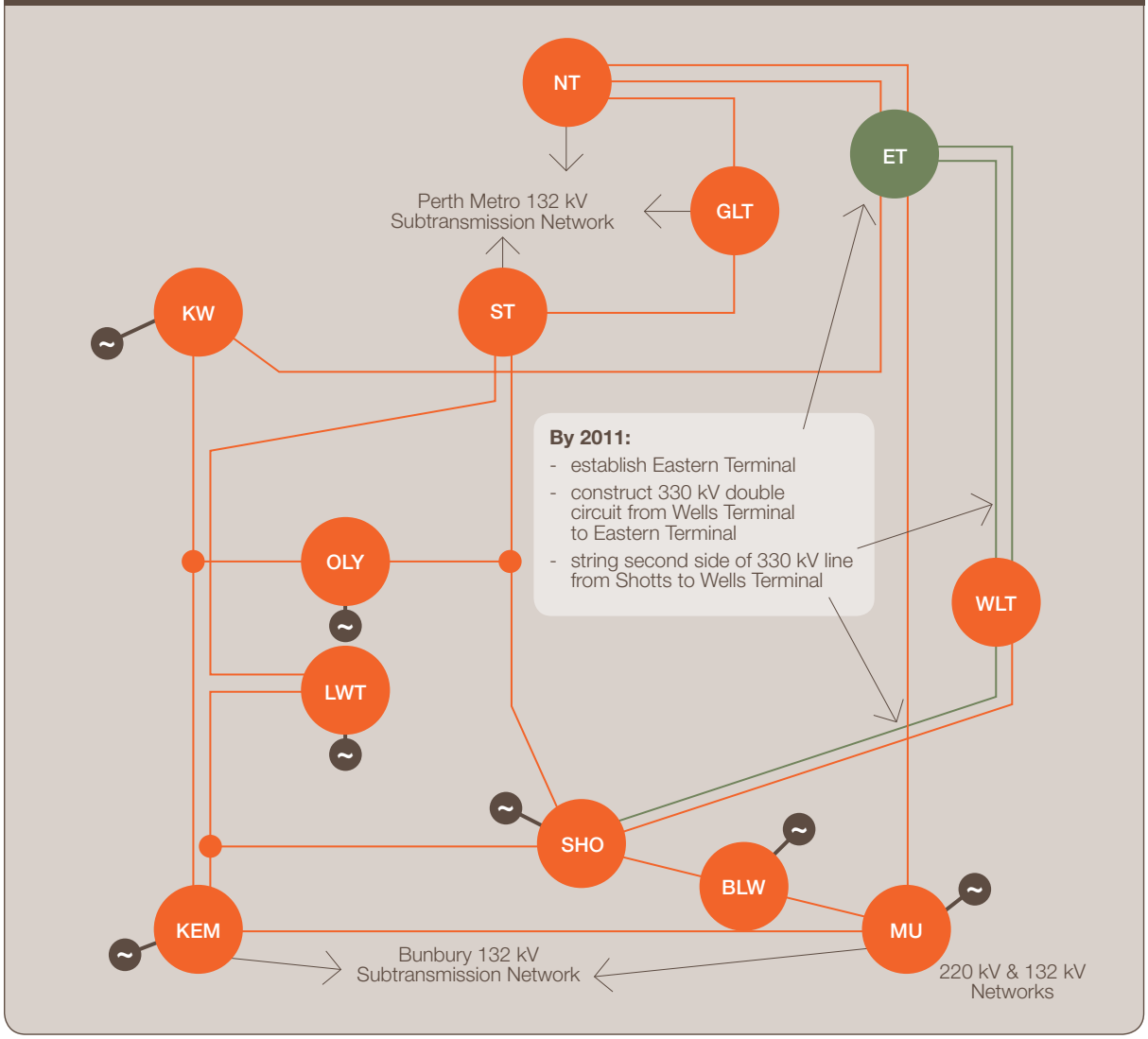
The deferral of this reinforcement would cause a capacity constraint in the South West region by the end of 2010.

4 Proposed 330 kV transmission line to Eastern Terminal

The project

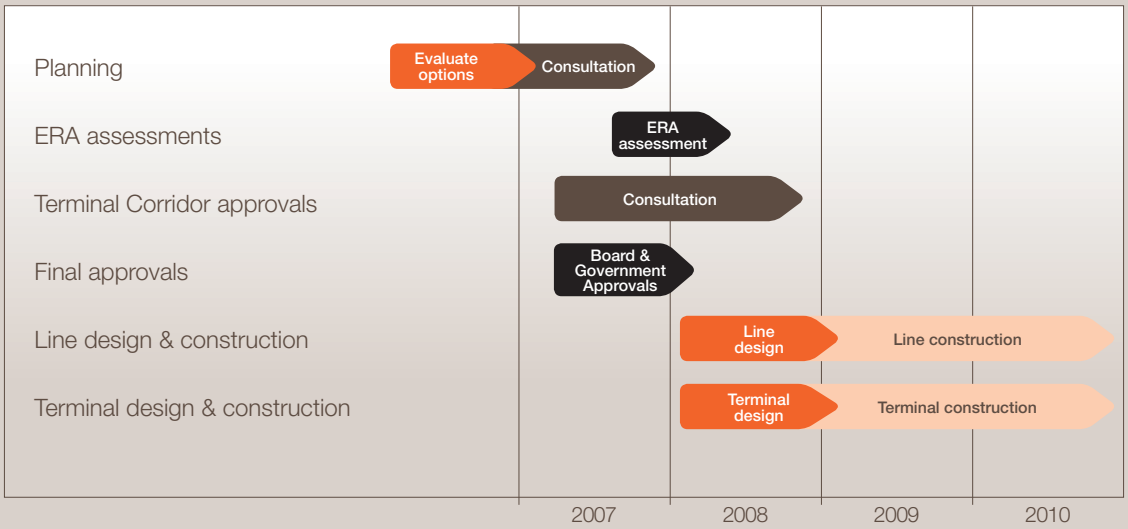
To achieve the best economic development of the generation market, it is essential that the bulk transmission network be reinforced. Western Power's preferred option is to establish a new 330 kV transmission line from Shotts Terminal (near Collie) to Wells Terminal and to Eastern Terminal. This option requires a switching station at Eastern Terminal. Eastern Terminal will need to be cut into two existing 330 kV transmission lines - Kwinana (KW) to Northern Terminal (NT) and Muja (MU) to Northern Terminal (NT). The second side of the Shotts Terminal will be strung to Wells Terminal 330 kV double circuit transmission line. A new 90 km long double circuit 330 kV transmission line will be constructed between Wells Terminal and Eastern Terminal.

Figure 3: Proposed 330 kV transmission line



Proposed timeline (Subject to ERA approval)

Proposed timeline	
August 2007 - September 2007	Board submission
May 2007 - Septmber 2007	Consultant evaluation
May 2007 - September 2007	Consultant's report
August 2007 – January 2008	ERA assessment
September 2007 - October 2007	Public consultation
September 2007	Public forum
September 2007 - October 2007	Assess public submissions
By October 2007	Board approval
October 2007	Finalise regulatory assessment report, considering public submissions
October 2007	Regulatory assessment submission
October 2007 - November 2007	Regulatory assessment process
By January 2008	Board and Final approval
December 2007 - January 2008	Ministerial approval



Expected benefits

Expected benefits of the proposed improvements to the transmission network:

- Maximises net benefit to consumers.
- Creates extra capacity for new generation to be connected in the South West region.
- Enhances generation and fuel competition.
- Facilitates the entry of South West renewable generation.
- Enhances network efficiency decreasing greenhouse gas emissions.
- Facilitates the development of power station sites remote to the metropolitan area.

Other facts at a glance

- Independent evaluation of the reinforcement options for the Regulatory Test and NFIT has been commissioned. After considering submissions from public consultation, the final augmentation proposal will be lodged with the ERA.
- The proposed 330 kV transmission line length is approximately 165 km.
- The total cost of the project is expected to be in the order of $180 million.
- The new line will allow the connection of new generation sources in the South West.

Why public consultation is needed

The Electricity Networks Access Code 2004 requires Western Power to undertake a public consultation process for each major network augmentation.

The objective of the Code is to:

- Inform the public, customers and interested parties about the proposed transmission line;
- Ensure that all credible alternative options are considered and compared with the proposed improvements; and
- Ensure that all opinions and comments are summarised and included in the Regulatory Test Submission as required by the Electricity Industry Act 2004.

It is essential that Western Power has regard to those views and alternative options and gives reasonable consideration to any information obtained under the consultation process when forming its view and conclusion.

This invitation addresses the technical and economic aspects of the preferred option. A separate line route and site selection process is being conducted. If you have questions regarding the line route or substations please address them to:

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Email: adrian.stubbings@westernpower.com.au

5 Invitation

Western Power encourages submissions from stakeholders, in particular where parties consider that there may be an alternative option to the proposed reinforcement and where parties are considering connecting to the network.

Comments and submissions should be in either both printed and electronic form and should be received by Tuesday 9 October 2007[1], addressed to:

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Network Planning & Development
Western Power Corporation
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Perth WA 6842

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Fax: (08) 9218 5167
Email: laurie.curro@westernpower.com.au

Alternatively, submissions can be sent to the following email address:

charlotte.nash@westernpower.com.au

Confidentiality

In general, all submissions from interested parties will be treated as being in the public domain and placed on either the Western Power's or Economic Regulation Authority's web site.

If an interested party wishes to make a confidential submission, it should clearly indicate the confidential sections of their submission and outline in reasonable detail the request for the confidentiality.

The receipt and publication of any submission on Western Power's or the ERA's web site shall not be taken as indicating that Western Power or the ERA have knowledge, either actual or constructive, of the contents of a particular submission and, in particular, whether the submission in whole or in part contains information of a confidential nature and no duty of confidence will arise for the Western Power or the ERA in these circumstances.

General inquiries
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[1] 'Electricity Industry Act 2004' requires that for the first round public submissions the time for the making of submissions must be: (a) at least 10 business days; and (b) no greater than 20 business days after the invitation is published, and must be at least 10 business days after any issues paper was published under clause A7.4.