



Department of Treasury and Finance
Government of Western Australia

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Mr A Butcher
Acting Director - Electricity Access
Economic Regulation Authority
6th Floor
Governor Stirling Tower
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Dear Mr Butcher

WESTERN POWER'S PROPOSED NETWORK ACCESS ARRANGEMENT

The Department of Treasury and Finance (DTF) is pleased to submit the following comments to assist the Economic Regulation Authority (ERA) examination of the Network Access Arrangement proposed by Western Power (WP). The issues highlighted in this submission are expenditure constraints, Weighted Average Cost of Capital (WACC) and pricing signals.

CAPITAL CONSTRAINTS

In WP's Network Access Arrangement submission to the ERA, WP has detailed a number of cost drivers in the forthcoming access arrangement period that suggest that transmission and distribution capital and operating expenditures will need to increase.

Throughout Part B and Part C of WP's *Access Arrangement Information for the South West Interconnected System owned by Western Power Corporation*, WP states that one of these cost drivers, on both capital and operating expenditure, is the "impacts of previous budget constraints". That is, budget constraints in particular have resulted in substantial amounts of replacement capital expenditure not being undertaken.

As a Government Trading Enterprise (GTE), WP operates at arms length from Government and has considerable management autonomy. Consistent with GTE governance arrangements, the Government has not imposed any real operating expenditure constraints on WP and WP has been free to allocate expenditure to recurrent items. In the 2005-06 Budget, WP forecast \$156 million in recurrent expenditure on the electricity network in 2005-06, which compares to network operating expenditure of \$135.4 million in 2000-01. Total network operating expenditure is \$625 million over the budget period 2005-06 to 2008-09.

WP's capital expenditure program does have a significant impact on the Government's whole of government financial targets, in particular, maintaining the net debt to revenue ratio at or below 47%. For this reason, the Government requires new capital expenditure proposals to be considered and formally approved. In the past this process has been undertaken for a vertically integrated business, comprising networks, generation, regional and retail initiatives. While the budget has been developed for specific initiatives, WP has had the flexibility to allocate capital expenditure within the approved limits as priorities change over the year. This has been reflected in network capital expenditure spending being higher than initially approved in three of the last five years (see Table 1). As a result, WP's Network Access Arrangement submission claims relating to budget constraints on the network should not be accepted at face value. WP's total capital budget has traditionally underspent and therefore, there has been some capacity for networks to spend more.

In the last two years the Government has recognised the need for a significant increase in capital works, both on transmission and distribution, for the State's electricity network. Over the budget period 2005-06 to 2008-09, WP will be investing \$1.6 billion in the transmission and distribution network, out of its total capital expenditure budget of \$2.1 billion. This compares to \$1.2 billion to be invested in the transmission and distribution network in the 2004-05 Budget (2004-05 to 2007-08).

This funding represents a substantial stimulus and is focused on improving the quality, reliability and safety of supply in both regional and metropolitan areas, and on meeting customer driven demand for new facilities and connections.

Over the budget period this operating expenditure program will allow WP to target improved safety in the high and extreme fire zones in the South West Integrated System, which include approximately 300,000 customers. WP expects this program to:

- eliminate any vegetation initiated fires in these zones within two years;
- reduce the number of pole top fires by 15% in these zones over the budget period; and
- reduce the number of pole top failures leading to fire and public safety risks in these zones by 20% over the planning cycle.

Further, it is anticipated that the combined network operating and capital expenditure will:

- enable the achievement of a 25% improvement in the reliability of electricity supplies over the next four years; and
 - eliminate 90% of all outages caused by the failure of overloaded transformers.
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The following table details WP's current approved and actual network capital expenditure.

Table 1: Western Power – current approved and actual network capital expenditure (\$ million)

	Budget Papers Proposal (cash)					2005-06 Forecasts (cash)				
	1999-00 \$M	2000-01 \$M	2001-02 \$M	2002-03 \$M	2003-04 \$M	2004-05 \$M	2005-06 \$M	2006-07 \$M	2007-08 \$M	2008-09 \$M
Network – Budget Approved	180.9	170.0	197.1	202.3	221.4	274.6	400.4	382.1	393.7	426.8
Network – Actual	165.7	202.1	184.3	228.6	229.6	349.6	-	-	-	-
Variance	-15.2	32.1	-12.8	26.3	8.2	75.0	-	-	-	-
Western Power – Budget Approved	261.8	276.4	386.0	444.3	417.1	418.6	599.4	507.0	514.1	518.7
Western Power – Actual	212.8	268.9	349.9	451.4	315.9*	422.9	-	-	-	-
Variance	-49	-7.5	-36.1	7.1	-101.2	4.3	-	-	-	-

* The decline from Budget is mainly the result of planned generation capital expenditure being expensed rather than capitalised, and decreased capital expenditure spent on the Emerging Business Unit.

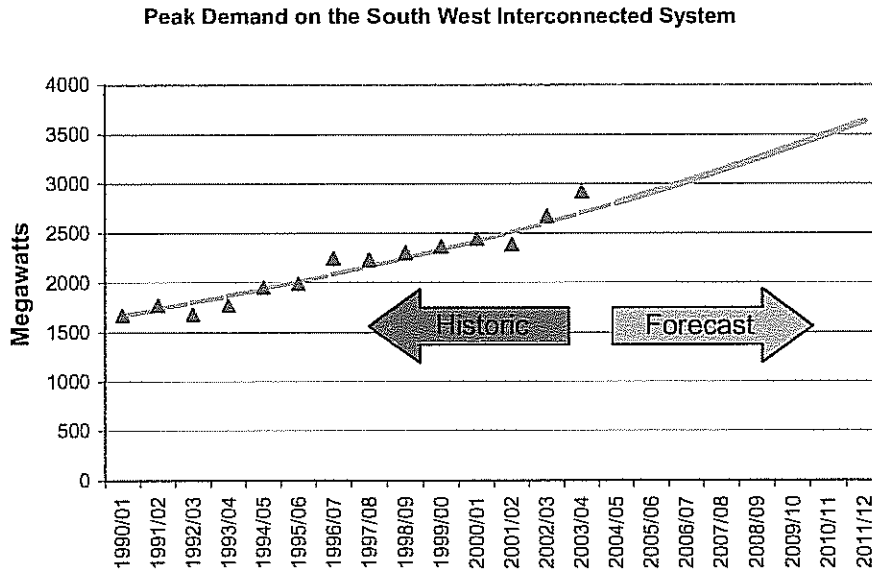
WEIGHTED AVERAGE COST OF CAPITAL

The DTF notes WP's proposed WACC of 7.3% pre-tax real. We note that this is higher than the ERA's *Advanced Determination of a WACC Methodology* (6.5% pre-tax real) and other recent decisions. The WACC is clearly important for tariff setting purposes and it is appropriate that WP be able to earn a rate of return commensurate with its risks. Such a determination will appropriately encourage investment in essential infrastructure. In this regard, we encourage the ERA to critically assess the WACC parameters proposed by WP.

PRICING POLICIES

As you are well aware, the Government's electricity reforms have been introduced to promote sustainable lower electricity prices in Western Australia. When reviewing and considering WP's proposed tariffs the DTF encourages the ERA to be conscious of this goal and particularly the need to avoid price shocks between succeeding years as per section 7.4(d) of the *Electricity Networks Access Code 2004*.

One of the most pressing concerns in the electricity market is the growing use of air-conditioning and Western Australia's unprecedented high levels of population growth, which have greatly increased the peak period electricity load. Office of Energy (OoE) research has found that over the past five years, peak demand has grown on average by 5% per annum, compared to an overall electricity usage increase of only 3.5% per annum. Looking forward, the increased penetration of air-conditioners and high population growth are expected to lead to peak demand growth in excess of economic growth.



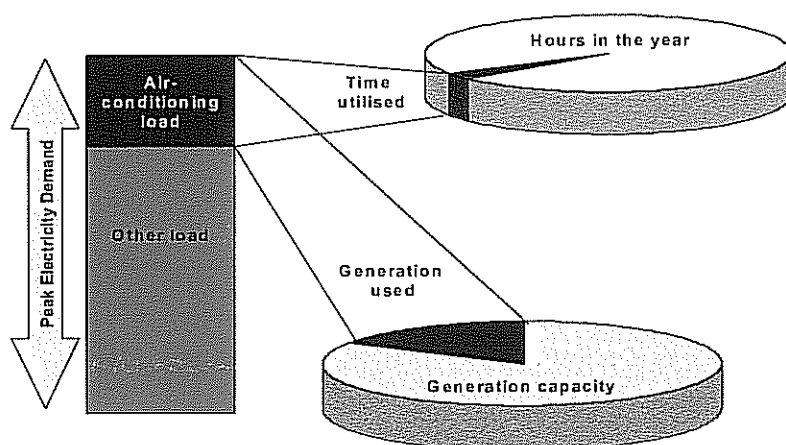
Source: Office of Energy

As a result of the high levels of load growth, WP has a substantial amount of new distribution assets to construct, now and over the course of the forthcoming access arrangement period. In addition, there is a substantial amount of augmentation work required on existing distribution feeders, as well as zone substation integration to cater for the additional load.

As you are aware, a number of distribution network design standard enhancements were recently incorporated in the proposed Technical Rules for consideration by the Technical Rules Committee. Should these changes be endorsed by the Committee and included in the approved Technical Rules, a substantial increase in forecast distribution capital expenditure would result. However, WP has noted that despite the increase in required capital expenditure, the overall financial effect of these changes is for tariffs to actually decrease due to the additional associated capital contributions and the new pricing approach of including capital contributions as revenue.

Currently, the high infrastructure and running costs of providing electricity at peak periods are not recovered in the amounts paid by customers because of flat tariff rates. That is, consumption in off-peak times cross subsidises peak time consumption. It has been estimated that the top 20% of demand (600MW) occurs for only 135 hours every year and the top 260MW for only 24 hours. 600MW of generation and network capacity represents approximately \$2 billion of infrastructure.

Both in Western Australian and in other Australian states, residential air-conditioning contributes a major and rapidly growing part of peak electricity demand. For weather sensitive demand, air-conditioning usage is a major contributor and accounts for more than 25% of peak demand.



Source: Office of Energy

This rapid increase in the use of air-conditioning is significantly affecting the cost of maintaining a reliable electricity supply. Compared to the cost of infrastructure to support this demand, the cost of an air-conditioner is fairly low. OoE research has found that an air-conditioner costing around \$1000 (around 2 kW input power) could require around \$6000 of expenditure on new generation and network infrastructure to enable it to be used whenever required, however rarely that may be. It should be noted that this cost is not recovered in the amounts consumers pay for electricity used by air-conditioners.

The OoE, WP and Sustainable Energy Development Office have begun demand management programs with the intention of reducing this peak demand. Some of the options seen as cost effective to reduce sizeable peak demands include peak period pricing and interruptible loads.

While peak period pricing is mainly a retail pricing issue and not directly part of the ERA's review of WP's Network Access Arrangement, in the medium-term, peak period pricing has potential and warrants further investigation. Peak period pricing or cost reflective pricing, aims to reduce the total cost of a utility's infrastructure by shifting some of the use of a utility's service from peak times to different times when that service is not in high demand. A decrease in total supply cost is possible because often a significant percentage of a utility's capital budget is used for providing infrastructure capacity (networks and generators) capable of meeting peak demand. If prices correctly signal the change of costs between peak and non-peak periods, peak pricing can assist in a more efficient allocation of resources.

Yours sincerely

David Smith
EXECUTIVE DIRECTOR
ECONOMIC

10 November 2005