

19 August 2011

Ms Sara Procter  
Assistant Director  
Economic Regulation Authority  
PO Box 8469  
PERTH BC WA 6849

BY EMAIL: [publicsubmissions@erawa.com.au](mailto:publicsubmissions@erawa.com.au)

Dear Sara

**Re: Draft Report – Inquiry into the State Underground Power Program Cost Benefit Study**

Thank you for the opportunity to provide comment on the draft report for the State Underground Power Program Cost Benefit Study.

The Western Australian Local Government Association and its members support the State Underground Power Program and notes the significant net benefits achieved by the program over the past fifteen years.

We are disappointed with the limited time provided for consultation on the Draft Report, particularly given the length of time over which the inquiry has run. Unfortunately within the time available we have not been able to consult widely with Local Governments concerning this Draft Report and the potential implications if its recommendations were adopted by the State Government.

It is our view that some important considerations, many of which are noted in the Draft Report are not adequately reflected in the overall conclusions and recommendations. These issues are outlined below.

**Equity**

In the Draft Report, the Economic Regulation Authority claims that consideration of equity issues in relation to the Underground Power Program are outside the Terms of Reference for this Inquiry<sup>1</sup>. However, we note that the Terms of Reference include, “an analysis of the distribution and timing of benefits”<sup>2</sup>. This appears to have been interpreted to refer only to the distribution of benefits between property owners, Western Power and the wider community. However, it could also include

---

<sup>1</sup> Economic Regulation Authority, Inquiry into the State Underground Power Program Cost Benefit Study: Draft Report p viii

<sup>2</sup> ibid p1

distribution of benefits between those who have already received financial support to implement underground power, and those still waiting their turn to do so. It could also be extended to refer to the distribution of benefits between property owners within a project area.

***It is our view that important equity considerations, both between previous and future beneficiaries of the State Underground Power Program and between beneficiaries of the program at a point in time require rigorous consideration in the final report.***

### **Equity Between Previous and Future Beneficiaries**

The State Underground Power Program has operated for over 15 years. During this time projects have been successfully implemented across a range of locations in Perth and regional areas. As has been highlighted in the Draft Report, over this time taxpayers and electricity consumers have contributed toward the development and expansion of the Western Power network, including the progressive placement of distribution infrastructure underground. To date the opportunity has been more attractive in those areas with relatively higher property prices. This is not surprising given both the potential realisable benefits to property owners in those areas and the likely capacity to pay. However, given that the scheme has to date provided a public subsidy in these areas, it is counter-intuitive that as the program is potentially extended to areas with lower property values and lower private benefits that the public contribution should decrease. There needs to be specific consideration of the equity implications of changes to the funding arrangements for future programs.

The Underground Power Projects currently being developed have a total cost of around \$12,000 per property. If, hypothetically, the ratepayer contribution was increased from the current 50% to 75%, their contribution would be \$9000. Based broadly on the implicit value identified in the report this would be an attractive investment only for the owners of properties valued at more than around \$500,000 (1.8% of the sales value of \$500,000 equals \$9000). This is above the current median property price in Perth<sup>3</sup>. Given that this implicit value will be realised in the future and is subject to market risk, the property value threshold beyond which the assumed rational ratepayer would vote in support of investment is higher than this. Furthermore, for a project to be supported by a clear majority of property owners making a 75% contribution to the cost, the median property value in the project area would need to be well above this \$500,000 level. More than two thirds of Perth suburbs have a median house price of less than \$600,000<sup>4</sup>. These are not confined to the outer suburbs where underground power is generally already installed, but includes many middle ring older suburbs.

### **Equity Between Property Owners Within A Project**

As highlighted in the Draft Report, retrospective underground power provision has some public good characteristics in that it is not possible to supply this service to some, but not all property owners in

---

<sup>3</sup> [www.reiwa.com.au](http://www.reiwa.com.au)

<sup>4</sup> *ibid*

a defined area. The market value of properties within any given Underground Power Program area can vary significantly.

While the use of a hedonic pricing model provides a useful tool to assess the benefits of underground power overall, it does not provide a practical tool for determining the share of costs amongst the participants (each individual property owner), Western Power and the wider community.

If the project costs borne by property owners are based on the value of benefits achieved by some median or average property owner in the project area, then approximately half of the property owners will be disadvantaged by implementation of the project (their costs will outweigh their benefits). To avoid this, the charge per property would need to be set equal to the assessed benefits to the lowest value property in the proposed program area. Given that it is impractical to undertake these kinds of programs at a very small scale this approach may result in it being extremely difficult to fund projects, despite a net benefit to the majority of property owners in the area and the community at large.

The issue of equity between participants is not just of theoretical interest. One of the practical challenges facing Local Governments implementing underground power projects is to appropriately and equitably recover the costs from participating landholders. Approaches used by Local Governments to distribute the costs include the use of Special Area Rates – in which case the share of project costs met by each property owner is related to the value (Gross Rental Value) of the property assessed by the Valuer General. While this may be correlated with the market price of the property, this approach means that neighbours could well pay a significantly different amount for the same service. Furthermore, the assessed value of a property may not be well correlated with capacity of the property owner to pay. The alternative approach used by Local Governments, the use of a Service Charge, results in most property owners contributing equally to the costs (with adjustments for multi-unit dwellings etc). Both approaches have significant weaknesses in terms of equity between participants in a project.

### **Analytical Methodology**

The exclusion of commercial properties from consideration in the beneficiaries of an underground power program is surprising given that they are included in and receive benefits from underground power. Arguably power supply reliability and quality is of greater value to businesses than to residential consumers as production and trading losses can be substantial and may extend well beyond the time of any interruption while operations are restarted.

The impact of including house sales data from greenfields developments which were required to install underground power is not identified in the report. This may be important as the data provided shows that while 50% of the Perth power distribution network is underground, only around 10% of this is as a result of the State Underground Power Program.

Furthermore the report, *Estimating the Capitalised Value of Underground Power in Perth* does not provide any information regarding whether the capitalised value of underground power has changed over time and whether there is a trend. It is unclear, for example whether the estimated capitalised benefits are growing or shrinking over time. This is an important consideration if this type of approach is to be used to change the design of future schemes.

### **Unquantified benefits**

It appears from the draft report that the quantified benefits attributed to Western Power are limited to the avoided maintenance costs. This omits other potentially important cost savings or revenue earning impacts including:

#### a) Service Standard Payments

In 2009/10, 112,396 small use customers experienced power supply interruptions of more than 12 hours continuously<sup>5</sup>. If all eligible customers claimed a supply interruption this would have had a cost impact to Western Power of some \$9 million. Although Western Power reports that only 34,151 payments for supply interruptions were actually made, this potentially reflects lack of awareness of eligibility to claim these payments. While Western Power notes that this level was substantially higher than the previous years due to the storm events of March 2010, it would be useful to estimate the counter-factual – what the Service Standard Payments and repair costs may have been had significant undergrounding of the network, particularly in the suburbs to the west of the Perth CBD not been undertaken over the previous 15 years. While such storm events may not occur every year, there needs to be a probabilistic approach taken to consider the potential financial impact which is not easily reflected in comparing maintenance costs of above and underground power distribution networks.

#### b) Service Standards Adjustment Mechanism

Under its access arrangement, Western Power is subject to a service standard adjustment mechanism which provides a financial reward or penalty based on the utility's performance over the access arrangement period. The duration and frequency of interruptions on the distribution network appear to be an important component in the formula for this incentive. Western Power has calculated the financial reward for 2009/10 to be approximately \$19 million<sup>6</sup>.

To the extent that others (property owners and the State Government) contribute to the capital cost of placing electricity distribution infrastructure underground, this provides an additional benefit to Western Power enabling it to achieve the performance benchmarks or improvements.

---

<sup>5</sup> Economic Regulation Authority, March 2011, 2009/10 Annual Performance Report Electricity Distributors p4

<sup>6</sup> Economic Regulation Authority, October 2010, Western Power's Access Arrangement Service Standard Performance Report 2009/10

### c) Renewal Costs

In some situations the implementation of new underground power infrastructure eliminates the need for Western Power to replace old overhead distribution infrastructure that has reached the end of its service life. If not for the undergrounding project Western Power would have borne the entire cost of progressive renewal of this equipment, rather than 25% of the total cost of the undergrounding program. In considering the benefits to Western Power of a particular project, the significantly deferred renewal cost should be considered. This will not be identified if average costs for maintaining above and below ground networks are compared in order to determine the savings to Western Power

### **Other Matters**

The Draft Report proposes that in future Local Governments may contract directly with Western Power for the provision of underground power within their jurisdiction. The Discussion Paper prepared by the Economic Regulation Authority notes the very significant increases in cost per property over the life of the underground power program to date and attributed this to increases in labour and material costs. It is our view that the design of the administrative and structural arrangements for placing Western Power infrastructure underground should be driven by the need to obtain the lowest life-cycle costs for implementation. The very small number of contractors operating in Western Australia with the capability to undertake this work should be considered in this context and steps taken to ensure that all stakeholders achieve best value for money in delivering this program.

### **Conclusion**

Quantification of the positive benefit cost ratio of this program, noting that some benefits are difficult or impossible to quantify, provides a strong argument for its continuation. However, as attempts are made to extend the program through those, primarily lower property price suburbs that have not been serviced to date, it would seem inequitable that the contribution from the Government and Western Power be reduced.

We remain of the view set out in our submission on the Discussion Paper, that the identification of project areas based on those parts of the network in greatest need of renewal based on poor performance and age provides a basis for the future development of the State Underground Power Program. The opportunity for property owners in an area to contribute financially in order to bring forward this program should be provided.

We are happy to discuss any matters raised in this response with you further as necessary.

Yours sincerely

Ian Duncan  
A/Executive Manager, Infrastructure