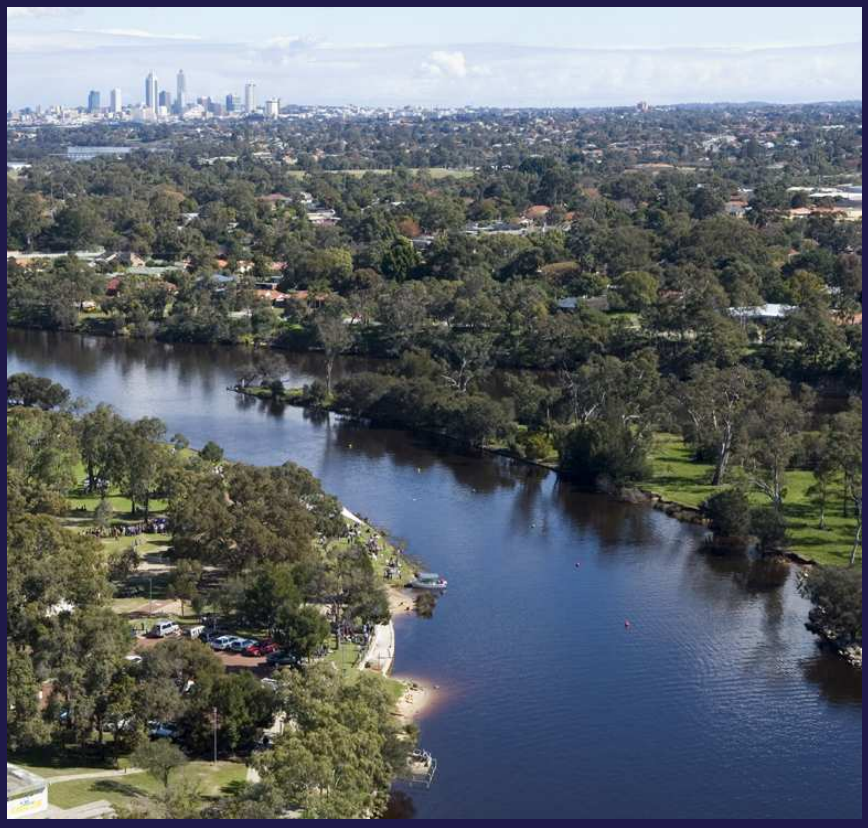
EMRC

Advancing Perth's Eastern Region

Regional Submission
To the Economic Regulation Authority WA



Issues Paper:
Inquiry into State Underground Power Program Cost Benefit Study

TEL (08) 9424 2222 FAX (08) 9277 7598 EMAIL mail@emrc.org.au WEB www.emrc.org.au

Executive Summary

The Eastern Metropolitan Regional Council (EMRC) was established to act on behalf of its six member Councils – the Town of Bassendean, Cities of Bayswater, Belmont and Swan, and the Shires of Kalamunda and Mundaring. The Region comprises over 300,000 residents and is a major economic generator for the State containing Perth's major transport – air, road and rail - links as well as major engineering and manufacturing companies. The Region's output produces 10.7% of the State's GDP[1] and provides over 107,000 jobs[2], making it the State's second largest employment hub next to the Perth CBD. The Region supplies over half of these jobs to people living in the western coastal and southern regions of Perth.

Whilst Perth's Eastern Region is a key success factor to the State's economy the Region also contains a population that is ranked in the lowest socio economic groupings according to the Socio-Economic Indexes for Areas (SEIFA) when compared to all other local government regions in the Perth metropolitan Area.[3]

In August 2008, prior to the last state election, the City of Bayswater wrote to all Local Governments Authorities state-wide to seek support for the provision of underground power to be fully funded by the State Government. The thrust of this campaign was to gauge support for the recognition that as the provision of power is an essential service the supply of the entire power infrastructure including a program to move away from overhead cabling to underground services should be the full responsibility of the State. As power infrastructure is a state asset it seems appropriate that the State should be responsible for the appropriate upgrading and maintenance of the infrastructure.

The City of Bayswater received responses from 14 Local Government Authorities of whom nine were supportive of the State Government fully funding underground power, four had not committed support at this point and 1 was against the proposal. Even though this is a relatively small sample of Local Governments, it does signify that there is generally a level of local government support for change to the funding policy of the State Underground Power Program (SUPP).

This problem is further exacerbated by the fact that the State is not maintaining the current power delivery infrastructure to appropriate standards which has been evidenced in a number of reports to date.

Furthermore analysis of the SUPP program to date shows that within Perth's Eastern Region the SUPP has not been able to equitably accommodate the 300,000 residents living in this Region of the Perth metropolitan area. Of the 39 Metropolitan Regional Projects (MRP) undertaken up to and including Round Four, only one project has occurred within Perth's Eastern Region and of the 28 Local Enhanced Projects (LEP) a total of one has been completed in the region[4]. A second in Belmont has been abandoned because of cost escalation and a third in Bayswater is being reviewed by Council due to substantial cost escalations over the original project estimates.

Given these statistics it is difficult to argue that the State Government has implemented a service that is accessible to all members of its community. Given that all members of the community have indirectly contributed to 50% of this program through public contributions, the allocation of SUPP funding today is questionable. In essence it could be argued that the SUPP, in its current form – using the beneficiary pays' principle - further disadvantages certain

[1] REMPLAN January 2010, *Compelling Economics,* Bendigo, Victoria
[2] REMPLAN January 2010, *Compelling Economics,* Bendigo, Victoria
[3] Profile.id 2010, *.id consulting,* Collingwood, Victoria, viewed 03 August, <http://www.id.com.au/profile/emrc>
[4] Western Power 2010, *Western Power,* Perth, Western Australia, viewed 03 August 2010, <http://www.westernpower.com.au>

communities and supports the wealthier sectors of the community as can now be evidenced by the communities that have been successful in the program to date. Furthermore if this is the case, it could be argued that the additional value that underground power potentially adds to a property (which can range from 1.25 - 5%) is another way that the State is assisting the high valued real estate areas of Perth to become even more highly valued and this was part funded with taxpayers' dollars.

The following table identifies the number of programs that have been undertaken in the various metropolitan and country regions since the program's commencement.

Local Government Regions*	**No of MRP Projects Allocated[5]**
Country Regional WA	2
South Metro Region	11
Western Metro Region	12
North West Metro Region	9
South West Metro Region	4
Perth's Eastern Region	1

EMRC member Councils have advised the following in relation to their status with the SUPP:

- The **City of Belmont** confirmed they had made submission for areas in three of the four rounds of funding and were successful in one MRP and one LEP. With respect to the LEP project this was awarded in 2007 and due to the City's ranking of eighth out of eight has meant that the proposed works would not commence before November 2010. The estimated cost at the commencement of the EOI was in the vicinity of $500,000. In June 2010 the City was advised that the cost had escalated from $500,000 to $850,000 – over a 60 percent increase. This escalation cost issue has resulted in the City of Belmont resolving not to proceed with the LEP project.
- The **Shire of Mundaring** has not applied for the major residential component as it is not affordable to the community when considering a minimum 50% contribution;
- The **Town of Bassendean** has not placed any power underground as part of the SUPP. However, in 2005 Council conducted a community survey regarding the undergrounding of power and subsequently noted the preferred community interest for underground power being Ashfield, Bassendean and Eden Hill and resolved that in 2009/10, the Town would submit an Expression of Interest application.

  To support the Town's proposed expression of interest application, Council conducted an additional community survey in 2009 to determine the level of interest in undergrounding of power. Based on the community feedback, Council resolved to submit two Expression of Interest applications for Round 5 of the Undergrounding of Power Program.

  The Australian Bureau of Statistics Socio Economic Index indicates that the Town of Bassendean is the 4th most disadvantaged local authority in Western Australia. Round 5 Expression of Interest guidelines state that the Western Power/Office of Energy Steering Committee is keen to provide equitable access to the underground power program.

  The Office of Energy/ Western Power Steering Group advised that the two expressions of interest applications had progressed past:

* Regions were designated as per their membership to Regional Councils (i.e. Cambridge and Victoria Park are classified with North Metro as they are members of the Mindarie Regional Council).
[5] Western Power 2010, *Western Power,* Perth, Western Australia, viewed 03 August 2010, <http://www.westernpower.com.au>

- Stage One; which involved considering potential benefits of proposals in terms of energy security and network reliability; and
- Stage Two; that evaluated proposals in terms of their feasibility, having regard to factors such as suitability of ground for drilling, amenity improvements and proportion of commercial properties.

The two expressions of interest applications achieved Stage three status; that would involve an independent community survey to determine the level of rate payer support, however Western Power/ Office of Energy Steering Group advised in May 2010 that due to the different Socio Economic Index indicators for the two submissions that two different ratepayer contributions would be required, therefore create considerable confusion. The Western Power/ Office of Energy Steering Group therefore requested that one of the Expressions of Interest applications be withdrawn. Council considered the request and withdrew one of the Expression of Interest submissions.

The Western Power/ Office of Energy Steering Group will now survey the Ashfield residents to determine the level of ratepayer support and pending the outcome of the independent Community Survey, the Minister for Energy will announced the areas that will have underground power;

- The **City of Bayswater** applied for round four in both categories of MRP but was unsuccessful, however, approval for a project in the LEP was successful and the Council is currently deliberating on this proposal due to the costs. The original proposal indicated a cost in the vicinity of $380,000; however the design estimate indicated a cost of over $1.1m with the state contribution being capped at $250,000. This resulted in a potential ratepayer contribution in excess of 75% for the project. It should be noted, however, that Bayswater Council did take part in the Town of Vincent's Round Three as a small part of it fell on the border for some 73 City of Bayswater properties;
- The **Shire of Kalamunda** applied for funding in Round Two. Approximately 425 residents in Gooseberry Hill were surveyed and the residents did not support paying for the service. An application was made to the Office of Energy in Round Three of LEP for the undergrounding of the Kalamunda Town Centre and that application was not successful.
- The **City of Swan** advised that underground power was the subject of a report to Council in 2005 and at that time it was estimated that the total cost of undergrounding power throughout the City of Swan was $50.6million excluding high tension power lines and the rural parts of the City. Furthermore, given that underground power was not a part of the Council's Strategic Plan nor had any funds been set aside in its Principal Activity Plan or 10 year Financial Plan the Council consequently resolved not to fund the undergrounding of power in residential areas throughout the City at that time.

It is also noted that competition within the funding rounds by Local Government is intense, for example in Round Three, 76 expressions of interest (EOI) were submitted from 20 Local Government Authorities and only 18 projects were selected. In November 2005, the Underground Power Steering Committee received 89 Expression of Interest proposals from 21 Western Australian local governments to participate in Round Four Major Residential Projects in the Underground Power Program. Early in March 2006, the Steering Committee assessed each proposal against critical power system and feasibility criteria and 7 were shortlisted for the Minister to approve.[6]

[6] Office of Energy, *Office of Energy,* Perth, Western Australia, viewed 03 August 2010, <http://www.energy.wa.gov.au/3/3226/64/major_residenti.pm>

In conclusion the EMRC and its member Councils make this submission to the Inquiry on the grounds that we believe the SUPP has failed to deliver benefits to this region of Perth to date and will continue to advocate for a more equitable approach to the supply of underground power for our communities.

Summary of Recommendations

1. That a revised SUPP ensures its processes are streamlined in order to ensure appropriate funding responsibility, fast-tracked construction and avoid cost escalations.
2. That a revised SUPP ensures greater input from Western Power in relation to it estimations and that they are based on Net Present Value calculations to promote a more realistic up-front estimation on the order of cost.
3. That a revised SUPP contains a provision of funding to Local Government to undertake community consultation and Expression of Interest processes.
4. That a revised SUPP utilise Cost Benefit Analysis (CBA) as is being proposed but applies it to a Long Term Asset Replacement Program that incorporates best practice asset management principles and recognises the responsibility of the asset owner.
5. That a revised SUPP be developed within a broader joint trenching policy context that incorporates high-speed broadband and a smart energy grid.
6. That aerial bundled cabling is incorporated into a revised program to cater for outer metropolitan areas such as the Perth Hills.
7. That the State Government recognises and accepts that it is the main benefactor of SUPP and accept a greater share of responsibility for funding the program.
8. That further research be undertaken to quantify if underground power does provide a tangible benefit in increased real estate values, and if this value will be sustained.
9. That the State Government/Western Power undertakes an extensive study to evaluate the costs of upgrading its overhead power pole system and maintaining it to the mandatory requirements plus including an estimation of the costs of potential litigation and risks associated with the existing infrastructure versus the cost of laying underground power.
10. That this study also provide for a range of funding options planned over a long term horizon and that the study is then made available for a community wide discussion to gauge the sentiment of the community towards a long term fully funded program for underground power.
11. That Ratepayers Surveys for Round 5 are not distributed in August but in the period between October and June to avoid conflict with the range of charges being applied to ratepayers at that time of the year.
12. That equity and responsibility issues are clearly taken into account in any approach adopted.
13. That the State Government considers the SUPP as an action to mitigate against climate change and sets this in a broader policy context.
14. That the State Government investigates a range of alternative options for funding the SUPP that more adequately recognises the responsibility of the asset owner and moves away from the existing piecemeal approach.
15. That the State Government recognises that the provision of SUPP is an essential service and a strategic infrastructure asset that needs to be funded via a more equitable funding model that recognises the responsibility of the asset owner.
16. That the State Government investigates and develops a funding model that is seen to be largely funded by the State as the asset owner and service provider and accessible to all ratepayers.

Questions Arising from the Issues Paper

1. Do the current methods used to evaluate and select underground power projects have an impact on the cost of undergrounding?

Yes.

The current method of evaluation and selection of underground power projects is not responsive to the needs of Local Government or to the community. The process may take up to 3 years before a decision to grant the project is made by the Minister. During that time the cost escalations can reach up to 60 percent more that the original estimates. [7] Local Government is required to undertake consultation with its ratepayers and gain their support and this process requires that the order of cost be indicated at the early stages of the project proposal – it is not ethical for Local Government and/or ratepayers to be bear the cost escalations simply because of a process of selection that is not time sensitive.

In the case of pensioners and low income earning ratepayers, the problem is further exacerbated as they do not have the financial means to meet these cost escalations unless in the instances where the Local Government is prepared to charge their portion into the rate the pensioners then become eligible for the pensioners rebate of 50%. Unfortunately there are very few Local governments that take this approach. When the elderly in our community are confronted with unexpected costs they will feel the effects of this through increased stress levels and impacts on their health and well being, which is a hidden cost.

Evaluation and selection needs to occur expeditiously and ratepayers need to be made aware earlier rather than later if cost escalations are likely otherwise the program needs to have a buffer whereby cost escalations are absorbed by the State, and not Local Government or its ratepayers.

Ultimately the program needs to be reengineered into a more efficient process in order to minimise cost escalations, otherwise it needs to be restructured into a program that is not underpinned by a competitive voluntary process but rather by a comprehensive long term capital work rolling program that is planned out and delivered. This model is being utilised by the Water Corporation in its deep sewage program and a comparison of equity and efficiency should be drawn between the two programs to identity which approach lends itself to the greatest level of efficacy.

Recommendation:

1. That a revised SUPP ensures its processes are streamlined in order to ensure appropriate funding responsibility, fast-tracked construction and avoid cost escalations.

2. Is the current method of calculating the costs of underground power appropriate?

No.

The costs of calculating underground power are typically based only on unit costs and are generally not site specific. In addition, the estimations of the order of costs are usually done in

[7] City of Belmont 2010, letter, Ref 124/003, 27 May

the early stages of the projects and this does not take into account cost escalations over time. Hence the actual costs are not being identified until a contract is let. The shift from this method to using a Net Present Value under the proposed Cost Benefit Analysis (CBA) is a step in the right direction.

Furthermore, under the existing arrangements there is no consideration of the costs that a Local Government (LG) will bear to undertake the preliminary assessments and community consultation required to gain community support.

For example the cost to plan, develop, print, distribute and analyse the responses from a community consultation process across a MRP of up 1000 households is considerable. The process requires LG officer/s to liaise with Western Power to develop the initial report to Council to seek Council approval to enter into the process. It then requires a series of meetings with Western Power to agree on the survey instrument. It requires a skilled officer with research ability to develop the survey and arrange for the approvals and advertising processes to occur. On average the total cost to local government to coordinate an underground power EOI process would be in the vicinity of $30,000 and if the projects do not go ahead these costs are sunk costs incurred by Local Government.

There needs to be more support given to Local Government to undertake the feasibility components of the process with their communities, otherwise the program needs to move away from a competitive model to a planned out rolling program of works that is made financially accessible for all members of the community.

Recommendations:

2. That a revised SUPP ensures greater input from Western Power in relation to it estimations and that they are based on Net Present Value calculations to promote a more realistic up-front estimation on the order of costs.

3. That a revised SUPP contains a provision of funding to Local Government to undertake community consultation and Expression of Interest processes.

3. Is the proposed approach to the cost benefit study appropriate?

The proposed approach to cost benefit study is thorough and serves the purpose it is designed for under a program that is principally competitively based and oversubscribed. The question that needs to be clarified is whether the CBA will be ultimately driven by benefits or rather by cost and who can afford to pay?

Given the Issues paper states that “the CBA is not without limitations and does not readily take equity or benefits distribution into account” is a point of concern particularly when the spread of successful MRP programs to date has been so severely skewed towards suburbs of high socio economic status as opposed to areas of poor reliability (i.e.: City of Swan experience May 2009 as a case in point).

The real issue at hand is that the SUPP model and its fundamental principles are wrong. The SUPP needs to move away from a “beneficiary pays” model to a mixed model that places a much greater emphasis on the State responsibility as asset manager, capacity to pay and reliability factors.

One approach could simply be a 20 year rolling capital works program, as is occurring with the Deep Sewage program being delivered by Water Corporation. This approach is planned considered and everyone in the community knows exactly when they will get the deep sewage through, thus equity and community acceptance can be accommodated in such a model.

Note: Sydney Cables Down Under has developed credible funding alternatives that address the equity issues, including exempting pensioners and those who already have underground cabling, and that show that the benefits of underground cabling outweigh the costs in the longer term.

Recommendation:

4. That a revised SUPP utilise Cost Benefit Analysis (CBA) as is being proposed but applies it to a Long Term Asset Replacement Program that incorporates best practice asset management principles and recognises the responsibility of the asset owner.

4. What are the alternatives to underground power?

For most of the Perth metropolitan area which lies on the Swan Coastal Plains, underground power is the best option for power supply and should be a major policy platform for the State Government. In fact it was welcoming to hear, on the 28 May 2009, at the Legislative Assembly Estimates Committee, the Hon. Colin Barnett, MLA, WA Premier and Minister for State Development, made the following statement in relation to SUPP.

> "*This is an important program. Some members with long memories might remember that I had a bit to do with the start of it. The objective of it, which was endorsed during the previous government, was to put underground 50 per cent of Perth's power lines by 2010 and to make comparable achievements in regional areas, although that has been lagging. I am a great fan of the project and I think it has been very well done, although there have been problems. It has been cut back from time to time, which has caused continuity problems for contractors who have substantial investments in the drilling equipment and the like. We are very keen on the project and have put additional money into it in the forward estimates. I hope that if the economic environment and* ***our revenues improve we can substantially boost the underground power project. We need to drive it aggressively*****."**

Given the support the present Government is demonstrating toward underground power it is timely for a review of the policy funding framework in order that consideration is given by the State to exploring an alternative funding policy based on asset owner responsibility, the "Capacity to Pay" principle and a structured rollout to underground power.

Another opportunity for Perth would be to accelerate its underground power program in partnership with the National Broadband Network Company who is in the process of rolling out high speed fibre across Australia. A co-location of telecommunications fibre with underground power would then facilitate the ability to develop and implement a "smart energy grid" for the entire South West Interconnected System (SWIS) area.

In relation to the Perth Hills where undergrounding is often impractical because of the granite rock formations and harsh landscape it is recommended that aerial bundled cabling (ABC) be undertaken particularly in areas of high blackout or fire vulnerability. This would address several issues being experienced in the Perth Hills Region.

ABC is not currently an option available under the State Underground Power Program and should be considered more thoroughly for these fire prone regions.

The benefits of ABC include:

- Relative immunity to short circuits caused by external forces (wind, fallen branches), unless they abrade the insulation.
- Can stand in close proximity to trees and will not generate sparks if touched.
- Simpler installation, as crossbars and insulators are not required.
- Less cluttered appearance.
- Can be installed in a narrower right of way.
- Reduced transmission losses (on AC lines), due to closer spacing of the conductor.
- At junction poles, insulating bridging wires are needed to connect non-insulated wires at either side. ABC can dispense with one of these splices.

Recommendations:

5. That a revised SUPP be developed within a broader joint trenching policy context that incorporates high-speed broadband and a smart energy grid.

6. That aerial bundled cabling is incorporated into a revised program to cater for outer metropolitan areas such as the Perth Hills.

5. Have all the costs and benefits of underground power been identified?

There have been additional costs outlined in Questions 1 and 2 – namely escalated costs, and the cost associated with managing the consultative processes which is borne by Local Government.

The benefits to Local Government predominantly lie in the tangibles such as reduced tree pruning costs and power reliability whereas benefits to the State include:

- An increase in network stability during storm, bushfires and other environmental events.
- A reduction of costs in corrective emergency repairs as a result of storms, bushfires and other environmental events (i.e. 60.5% of maintenance expenditure for 2007/08 as per Western Power's Annual Report).
- An increase in network reliability through reduced power outages.
- A reduction in line pole and pole-top maintenance costs.
- A reduction on line pole inspections costs.

In terms of the intangibles the Valuer General states that property values with underground power can increase from between 1.25 – 5%, but whilst there is still no quantitative evidence of this being the case then the only value to the resident is the aesthetics of not having wires traversing the streets.

If the property value benefit could be quantified and realised then it would provide a much greater incentive for property owners to want to invest in underground power, and this additional value could be incorporated into funding options for property owners who wish to defer the cost of undergrounding power until the property is sold.

Recommendations:

7. That the State Government recognises and accepts that it is the main benefactor of SUPP and accept a greater share of responsibility for funding the program.

8. That further research be undertaken to quantify if underground power does provide a tangible benefit in increased real estate values, and if this value will be sustained.

6. What are the most important benefits of underground power?

Underground power can assist the transmission of power across:

- Densely populated urban areas.
- Areas where land is unavailable or planning consent is difficult.
- Rivers and other natural obstacles.
- Land with outstanding natural or environmental heritage.
- Areas of significant or prestigious infrastructural development.
- Land whose value must be maintained for future urban expansion and rural development.

These benefits are all benefits that will accrue to the State in undertaking its role of caring for and developing land.

Some other advantages of underground power cables:

- Less subject to damage from severe weather conditions (lightning wind and freezing).
- Greatly reduced emissions, into the surrounding area, of electromagnetic fields (EMF). All electric currents generate EMF, but the shielding provided by the earth surrounding underground cables restricts their range and power.
- Underground cables need a narrower surrounding strip of about 1–10 meters to install, whereas an overhead line requires a surrounding strip of about 20–200 meters wide to be kept permanently clear for safety, maintenance and repair.
- Underground cables pose no hazard to low flying aircraft or to wildlife, and are significantly safer as they pose no shock hazard (except to the unwary digger).
- Much less subject to conductor theft, illegal connections, sabotage, and damage from armed conflict.
- A reduced requirement for tree pruning allowing enhanced streetscape.
- Reduction of safety hazard associated with power poles in roadside clear zones.

In conclusion the greatest tangible benefits outlined above indicate that the greatest benefactor is the State Government and its utilities in achieving the role they are charged with.

7. Are there any negative impacts resulting from underground power in the SWIS?

The only negative impact will be the community backlash if underground power is not made more widely available to regions of lower socio economic status, but this will likely play it self out in the political arenas particularly after extreme climate change events become more frequent in the future.

Investment in underground power is a mitigating action for future disasters. For example the recent Toodyay fire event in the summer of 2010 is a case in point. The legal issues that arose for Western Power and the State Government provide a prelude and a warning of what if likely to eventuate in the future if the issue of aging power infrastructure is not addressed quickly.

Whilst the evidence in this event did not conclude Western Power to be at fault, it was a very fine line that was drawn and a strong indicator that the existing overhead infrastructure is potentially Western's Power biggest risk factor. Especially when it has been reported that Western Power is not adequately maintaining the existing infrastructure to appropriate standards.

The Round 5 Western Power / Office of Energy underground power ratepayer survey is due to be distributed in August 2010. Concern has been expressed by Local Governments who submitted Expression of Interest applications that the timing of the Round 5 Western Power / Office of Energy underground ratepayer survey should be delayed by 2 months. The reason being is that in July / August each year the State Government utility service charges such as water, gas and electricity are sent out and this year there are significant increases and also at this time of the year Local Government Rate Notices being distributed. Ratepayers receiving the Western Power / Office of Energy underground survey are more than likely to provide a negative response to the overwhelming demand on ratepayer financial capacity to pay for the undergrounding of power.

Recommendations:

9. That the State Government/Western Power undertakes an extensive study to evaluate the costs of upgrading its overhead power pole system and maintaining it to the mandatory requirements plus including an estimation of the costs of potential litigation and risks associated with the existing infrastructure versus the cost of laying underground power.

10. That this study also provide for a range of funding options planned over a long term horizon and that the study is then made available for a community wide discussion to gauge the sentiment of the community towards a long term fully funded program for underground power.

11. That Ratepayers Surveys for Round 5 are not distributed in August but in the period between October to June to avoid conflict with the range of charges being applied to ratepayers at that time of the year.

8. What approach should be taken to undergrounding – the optimised or the like-for-like approach?

The optimised approach should be taken given its greater efficacy, however it should be integrated with decisions around equity to ensure that there is a fairly even distribution being rolled out across all populated areas so we can move away from a program that concentrates it efforts along the coastal affluent populations.

Recommendation:

12. That equity and responsibility issues are clearly taken into account in any approach adopted.

9. Is the existing funding arrangement, which is based on a beneficiary pays' approach, appropriate?

No.

The SUPP funding policy framework has to date, essentially been based on the "beneficiary pays principle" and is largely a voluntary and competitive model.

This means that those who can afford to pay and see benefit will take advantage of the service. Therefore, it would appear that the SUPP, under its current funding policy framework, is not supportive of ratepayers in areas of lower socio-economic means such as Perth's Eastern Region simply because a majority of ratepayers do not have the financial capacity to enter into a 50 (or 35) per cent payment arrangement with their Council. When analysing the progress to date of the SUPP, the areas that have received underground power are generally areas of affluence which has enabled these local government areas to obtain agreement from the majority of their ratepayers because those ratepayers generally have greater financial means.

The Index of Relative Socio-Economic Disadvantage (SEIFA) classifies all 30 metropolitan Local Governments by their relative level of socio-economic disadvantage. This index indicates that Perth's Eastern Region has four out of its member Councils ranked in the bottom ten most disadvantaged areas and two are in the lower mid range of the index[8]. This means that Perth's Eastern Region has the greatest level of disadvantaged ratepayers across the entire metropolitan area and for this reason alone it is timely and prudent for the State Government to review how it applies its funding policy in the future to better assist areas of greatest disadvantage.

SEIFA index of disadvantage[9] Local Government Areas in the Perth Statistical Division (ranked from greatest to least disadvantaged)	**2006 SEIFA index of disadvantage**
Kwinana (T)	958.1
Belmont (C)[#]	**964.7**
Armadale (C)	985.8
Bassendean (T)[#]	**987.1**
Fremantle (C)	997.6
Victoria Park (T)	1002.4
Gosnells (C)	1003.5
Swan (C)[#]	**1004.4**
Bayswater (C)[#]	**1010.2**
EMRC area	**1014.1**

[8] Profile.id 2010, *.id consulting,* Collingwood, Victoria, viewed 03 August, <http://www.id.com.au/profile/emrc>
[9] Profile.id 2010, *.id consulting,* Collingwood, Victoria, viewed 03 August, <http://www.id.com.au/profile/emrc>
[#] Four of the six Local Government Authorities in Perth's Eastern Region are in the ten lowest ranges of the SEIFA Index.

Another major driver for pursuing underground power is the future impacts that ever increasing storm severity will have upon overhead power supply infrastructure. The initial support for underground power was born from the impact of severe storms that occurred in 1994 and the State recognised back then how underground power was a major solution to assist with mitigation from power disruptions during storms. It should again be seen as a key climate change adaption risk management strategy and communities should be entitled to this level of assurance for continuation of supply of future power services.

Whilst climate change will continue to have severe impacts on local communities the cost of climate change adaptation has been left with Local Government and communities. To date there has been little or no leadership from the State Government to bring about a whole of government policy in this regard and each level of government is waiting direction from the Federal Government until action is taken. The State Government through its SUPP can show its leadership in this area through direct action by ensuring reliable power supplies through the provision of a state wide approach for underground power that provides funding on the basis of responsibility and affordability.

In NSW a local MP has suggested a levy over a 40 year period be imposed on all households excluding pensioners and people with existing underground power and a charge against motor vehicle registrations be implemented because of the road safety benefits derived from not having power poles along roadsides.

A voluntary and beneficiary pays approach to underground power creates serious economic inequities which can only be avoided through a comprehensive and managed program of works which are predominantly funded by the asset owner. The current piecemeal approach to the SUPP increases costs given that economies of scale are lost and also limits opportunities to optimise the system which in turn diminishes benefits to the community.

The beneficiary pays approach diminishes the responsibility of the asset owner and has obviously discriminated against people of lower socio economic means and should be replaced with a financial model that provides a greater level of contribution from the asset owner and a range of options for people of lower socio economic means to be enabled and encouraged to opt into the program.

In summation of the above comments when the tangible benefits are weighed up (see Question 5 and 6) it would show that the State Government is the greatest benefactor of underground power and hence should bare the majority of the costs.

Recommendations:

13. That the State Government considers the SUPP as an action to mitigate against climate change and sets this in a broader policy context.

14. That the State Government investigates a range of alternative options for funding the SUPP that more adequately recognises the responsibility of the asset owner and moves away from the existing piecemeal approach.

10. Who benefits from underground power?

Ratepayers, community, businesses and governments all benefit from underground power, however the level of benefit derived will differ for each party and some benefits will be quantifiable whilst others are subjective and qualitative.

A householder will benefit because the likelihood of blackouts from storm activity is considerably lessen by underground power. Whilst this is a benefit to ratepayers it is difficult to put a cost to this benefit because the costs of a blackout in the households will vary considerably from household to household and from blackout to blackout. The resident will also benefit from improved amenity associated with removal of overhead power lines.

The impact on local communities from power supply disruption can range from loss of food as refrigeration is not available through to increases in crime as security systems fail and communities are in darkness and also severe heath risks from loss of heating or cooling, particularly for those citizens that are vulnerable such as the young and the elderly. An example of a significant power outage occurred in May 2009 throughout the City of Swan during severe storms and a resultant blackout. Residents reported that they went without power for a number of days before power was restored.

Furthermore most ratepayers believe that they pay dearly for a reliable power supply, especially in light of substantial service cost increases and feel the responsibility of supply should rest with Western Power to ensure power supply reliability and safety.

The provision of power is a strategic state infrastructure asset. The risk factors associated with reported inappropriate maintenance practices and power disruption are extensive ranging from social issues to economic decline and as such the State should be taking a much greater share in the responsibility for the provision of improved services to the community through underground power.

Underground power not only improves the amenity of suburbs and potentially lifts property values; it is a major contributor to assist in the mitigation of power failure from increased storm activity, fire damage, accidents that are associated with overheads power poles and cabling. For these reasons the State needs to re-consider its funding model for retrofitting underground power and recognise that this infrastructure is an asset that is owned by the State and should be provided by the State through a more aggressive installation and better funded program.

Although, it has been indicated in numerous reviews that underground power adds between 1.25-5% extra resale value to a property there is no specific real estate data that quantifies this and hence it's difficult to realise this value as a quantifiable benefit until further research is undertaken.

So in conclusion it stands to reason that the greatest benefactor of tangible benefits from underground power is the State Government.

Recommendation:

15. That the State Government recognises that the provision of SUPP is an essential service and a strategic infrastructure asset that needs to be funded via a more equitable funding model that recognises the responsibility of the asset owner.

11. What is the appropriate share of funding for underground power projects?

Given that the State and to a lesser degree land owners are the key benefactors of the SUPP it would appear appropriate that the costs should be borne proportionately by both parties. However, home owners of low socio economic means must be given a financial safety net so that they can enter into the program. This infers they should pay a nominal amount based on their capacity to pay and they should also be given long term options to pay off their contributions. Another option would be to offer a deferred payment scheme to pensioners so that they can pay off their component when they sell the property of pass it on through their wills. This is a similar process used by Local Governments where pensioners can opt to defer their annual rates payments.

In determining the financial contributions to be borne by various parties the question needs to be further explored and needs input from those directly concerned. Firstly the responsibility of the asset owner needs to be clearly defined. Secondly, a deeper discussion in the community is needed to find out what is considered to be the most appropriate proportions that the different stakeholders should be contributing. This is not a question that public servants should be speculating upon.

There are many options that can be incorporated into the SUPP to make it financially accessible for the poorer members of our community, including principally more appropriate asset owner responsibility. These options need to be developed and offered as a means to making SUPP a viable program that is accessible to all members of the community not just the wealthier.

Recommendation:

16. That the State Government investigates and develops a funding model that is seen to be largely funded by the State as the asset owner and service provider and accessible to all ratepayers.

Summary of Recommendations

1) That a revised SUPP ensures its processes are streamlined in order to ensure appropriate funding responsibility, fast-tracked construction and avoid cost escalations.
2) That a revised SUPP ensures greater input from Western Power in relation to it estimations and that they are based on Net Present Value calculations to promote a more realistic up-front estimation on the order of cost.
3) That a revised SUPP contains a provision of funding to Local Government to undertake community consultation and Expression of Interest processes.
4) That a revised SUPP utilise Cost Benefit Analysis (CBA) as is being proposed but applies it to a Long Term Asset Replacement Program that incorporates best practice asset management principles and recognises the responsibility of the asset owner.
5) That a revised SUPP be developed within a broader joint trenching policy context that incorporates high-speed broadband and a smart energy grid.
6) That aerial bundled cabling is incorporated into a revised program to cater for outer metropolitan areas such as the Perth Hills.
7) That the State Government recognises and accepts that it is the main benefactor of SUPP and accept a greater share of responsibility for funding the program.
8) That further research be undertaken to quantify if underground power does provide a tangible benefit in increased real estate values, and if this value will be sustained.
9) That the State Government/Western Power undertakes an extensive study to evaluate the costs of upgrading its overhead power pole system and maintaining it to the mandatory requirements plus including an estimation of the costs of potential litigation and risks associated with the existing infrastructure versus the cost of laying underground power.
10) That this study also provide for a range of funding options planned over a long term horizon and that the study is then made available for a community wide discussion to gauge the sentiment of the community towards a long term fully funded program for underground power.
11) That Ratepayers Surveys for Round 5 are not distributed in August but in the period between October and June to avoid conflict with the range of charges being applied to ratepayers at that time of the year.
12) That equity and responsibility issues are clearly taken into account in any approach adopted.
13) That the State Government considers the SUPP as an action to mitigate against climate change and sets this in a broader policy context.
14) That the State Government investigates a range of alternative options for funding the SUPP that more adequately recognises the responsibility of the asset owner and moves away from the existing piecemeal approach.
15) That the State Government recognises that the provision of SUPP is an essential service and a strategic infrastructure asset that needs to be funded via a more equitable funding model that recognises the responsibility of the asset owner.
16) That the State Government investigates and develops a funding model that is seen to be largely funded by the State as the asset owner and service provider and accessible to all ratepayers.

For further information please contact:

Rhonda Hardy
Director Regional Services
Eastern Metropolitan Regional Council
Tel: (08) 9424 2208

Email: rhonda.hardy@emrc.org.au