# Western Power's Fifth Access Arrangement Review

## Submission to the Economic Regulation Authority

Created: Date 2021

Version 1.0

Last Reviewed: 20 April 2022

## Acknowledgement

The WA Local Government Association (WALGA) acknowledges the Traditional Owners of the land and pays respects to Elders past and present.

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## Introduction

The Western Australian Local Government Association (WALGA) is the peak industry body for Local Government in Western Australia. The Association is an independent, membership-based organisation representing and supporting the work and interests of 138 Local Governments in Western Australia.

The Association provides an essential voice for over 1,200 elected members and approximately 22,000 Local Government employees as well as over 2.5 million constituents of Local Governments in Western Australia. WALGA also provides professional advice and offers services that provide financial benefits to the Local Governments and the communities they serve.

This submission responds to an invitation from the Economic Regulation Authority to contribute some Local Government perspectives to the review of Western Power's proposed Access Arrangements 2022/23 – 2026/27 and the Issues Paper published by the Economic Regulation Authority.

## Street Lighting

The asset base includes approximately 274,000 streetlights that are operated and maintained by Western Power. In some respects, Western Power recognises Local Governments as the "customer" for street lighting services although this relationship is not clearly defined. The financial relationship for operation and maintenance of street lighting is between Local Government and Synergy.

### Reference Service

Western Power propose to amend the Reference Service A9 to require that streetlights are maintained to the design standard that existed at the time of their installation. It is argued this clarifies that Western Power is not responsible for delivering lighting that meets current standards, as would be done when maintaining other assets such as transformers, insulators etc.

The proposed change does not improve clarity.

Western Power practice over a long period has been to replace luminaires with different luminaires. Figure 1 is an illustrative example that shows (left to right) a decorative fitting, an LED and a HID Roaster. Each of these luminaires has a different design performance. The optics are different and will produce a different illumination footprint. Each replacement fitting does not perform photometrically in the same way as the original being replaced; therefore the design is being modified. It is very difficult to determine what the original design standard was, and it is not Western Power practice to measure and demonstrate that following maintenance lighting meets the original or any other Standard in terms of illuminating the desired areas (AS/NZS 1158) and avoiding spill lighting (AS/NZS 4282 – Control of the obtrusive effects of outdoor lighting).

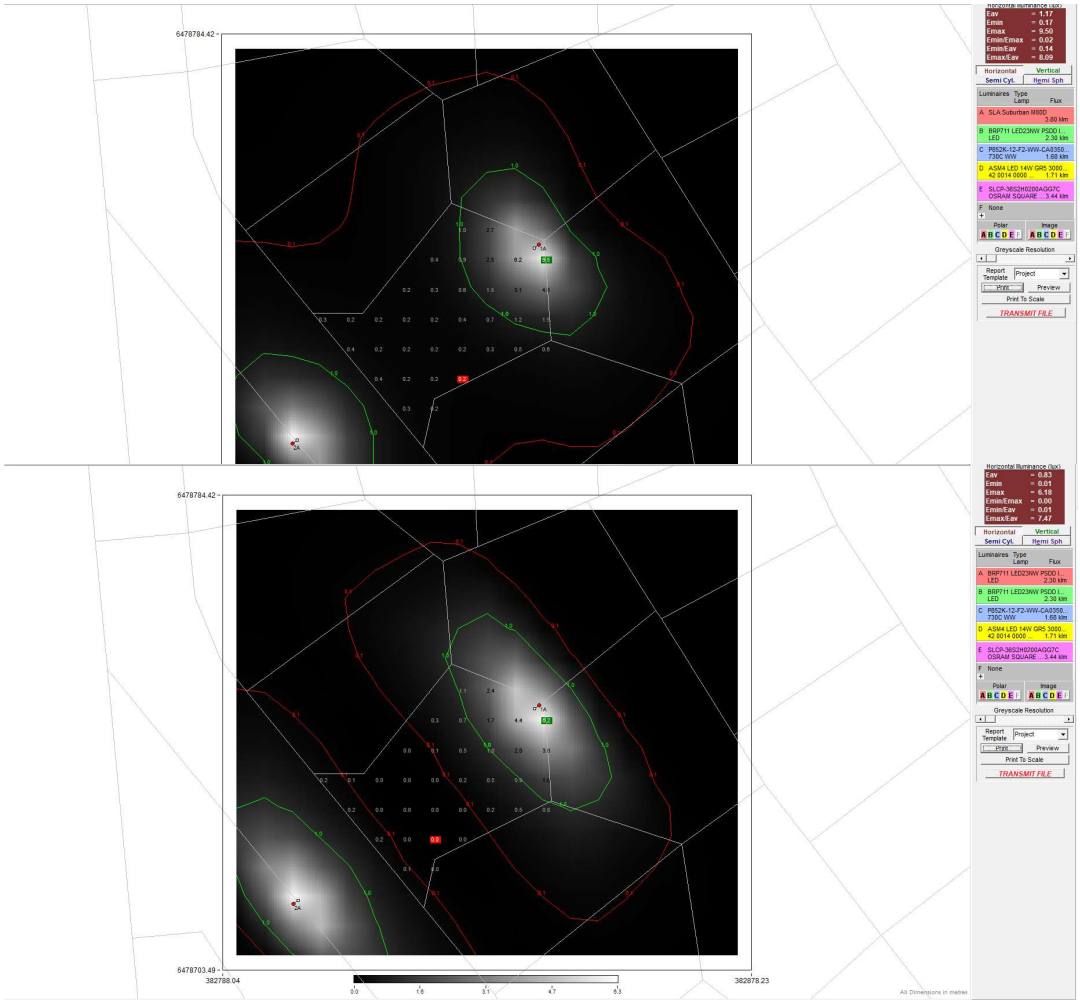
Figure 1: Example showing a luminaire installed by the land developer initially and then replaced by Western Power with two different types of luminaires over time.

Western Power refers complaints from the public regarding over-lighting and under-lighting to the Local Government, despite the fact that the Local Government has no control over changes to the lighting as a result of installing different luminaires or globes, or assurance that the design performance meets the original design or current standards. The proposed change to the Reference

Service definition makes it even more difficult to assess whether the service standard has been delivered.

Figure 2 illustrates that the 20-watt LED standard replacement for an 80-watt mercury vapour luminaire does not deliver the same lighting performance. This standard replacement luminaire does not equal the light output of the luminaire it replaces and, depending on pole spacing, is most unlikely to meet current public lighting standards (AS/NZS 1158). The original mercury vapour was providing 0.17 Lux while the replacement is providing 0.01 Lux.

Figure 2: Lighting output of an 80 watt mercury vapour and 20 watt LED street light from the standard Western Power range.



**Recommendations**

The Reference Service A9 must provide clear accountability for the performance of the lighting with reference to AS/NZS 1158 and AS/NZS 4282.

### LED Streetlight Replacement Strategy

The proposed Access Arrangement 2022/23 – 2026/27 details a new proposal, aligned with the Western Power Corporate Strategy, to replace all streetlights with LEDs by 2029. It is proposed that this will be achieved by using screw in LED lamps in existing fittings and accelerating the current replacement rate by replacing the lamp whenever any of the luminaire components fails that require a technician to service the light. There has been no demonstration of the lighting output provided by such lights, and the pricing tables proposed do not include any services that correspond to the listed light types with an LED installed.

The additional lamp replacements are estimated to add $4.5 million per year to the maintenance costs during AA5. The published assessment only identifies two options, replace like for like (which is not feasible as the globes cannot be procured or imported) and the proposed reactive replacement with LED globes. The lifecycle cost and performance of a range of other options is not demonstrated. Local Governments are very concerned that this piecemeal approach has not been rigorously and independently verified to provide the lowest lifecycle cost and an acceptable quality of lighting.

**Recommendations**

Investigate and publish the photometric performance standards of the proposed LED lamps installed across the range of luminaires. These should be compared with both the performance of the existing lights and the current Australian Standards.

Independently verify and demonstrate that the proposed approach to install LED globes in a wide range of existing luminaires is an optimal solution.

Review and publish tariffs for the new light types (ie 42w CFL luminaire with LED lamp) that reflect the reduced energy consumption and maintenance costs.

### Smart Controlled Streetlighting

The Access Arrangement proposed by Western Power includes significant investment in SCADA and smart metering. The business case for including smart controllers in future streetlight deployments is not identified as a proposed investment in the coming regulatory period. Smart controllers avoid the need for night-time inspections, that would be required to comply with the Australian Standards, and importantly provide the opportunity to trim and dim lighting to reduce energy use and increase the life of the luminaire. Additionally smart controlled lighting allows regional and remote towns to capitalise on the growing astro-tourism industry, potentially dimming town lighting during events.

**Recommendation**

Investigate whether smart controlled street lighting provides the most cost effective way of delivering street lighting services over the lifecycle of the assets.

## Underground Power

Ratepayers have contributed approximately $275 million to the cost of underground power retrofit projects delivered by Western Power since the mid-1990's. Local Governments use powers available under the Section 6.38 of the *Local Government Act 1996* to collect contributions from ratepayers in project areas and provide extended repayment terms.

It has been demonstrated over a long period of time that underground electricity distribution results in:

- More reliable power supply, particularly during storm events;
- Better quality power supply, leading to reduced damage to electrical appliances;
- Improved public safety due to less opportunity for contact with live wires and elimination of vehicle collisions with non-frangible poles.
- Eliminating pole top fires that typically occur following extended dry periods and eliminating the maintenance that is required to clean insulators;
- The opportunity for increased tree canopy in road reserves to improve visual amenity, reduce heat island effects and improve air quality;
- Reduced vegetation management costs that are otherwise required to keep trees clear of overhead power lines.

Replacing overhead electricity distribution poles and wires with underground infrastructure is supported in many communities. However, the costs being passed on to ratepayers continues to increase.

Local Government support the opportunity to work with Western Power to evaluate the opportunity to provide underground power, rather than invest in renewal of overhead infrastructure. The avoided costs faced by Western Power through replacing aged overhead distribution infrastructure with underground power should consider the future focussed benefits of underground power including the ability to accommodate distributed energy from roof-top solar, electric vehicle charging loads and control of loads on the network.

### Electric Vehicles

The Western Power proposal highlights that underground power will play a key role in supporting the future uptake of electric vehicles by enhancing capacity on the distribution network to accommodate charging services. This additional future focused benefit should be included in the assessment of Western Power avoided costs that arise from conversion to underground power.

## Safety

The large investment in pole replacement through the last access arrangement period has been observed to reduce the number of incidents, including fires, caused by poles falling. Local Governments support this investment continuing.

Local Governments in rural Western Australia have reported an upward trend in the number of pole top fires through the latter part of the AA4 period. There is a concern that the proposed reduction in the volume of silicone treatments and the increased cost of these treatments due to the requirement to apply the treatment only on de-energised lines will lead to a decrease in network performance. From the customer perspective the proposed approach will result in:

- more planned outages (to undertake the work);
- more pole top fires (due to less treatments); and
- higher costs.

**Recommendation**

That Western Power be required to investigate and demonstrate alternative ways of mitigating the risk of pole top fires including reviewing the choice and design of insulators.

## Communication with Customers

There is a widely acknowledged trend to accessing information via websites and social media. This will require changes to the way in which Western Power communicates with its customers.

However, in managing this transition it is critical to be aware that currently telecommunications services are largely dependent on continuity of power supplies. The experience during and following natural disasters is that broadband and mobile telephone services fail as a result of loss of power supply at the base station, telephone exchange or the premises. In these circumstances Western Power will have limited ways of achieving one-way or two-way communication with customers. At least until greater resilience in the telecommunication systems can be achieved, it will be important for Western Power to maintain significant capacity to communicate via a range of channels.

# Network Reliability

## Performance Measurement

Parts of Western Australia appear to experience significantly lower electricity network reliability than most. Despite recent investments, the Mid West region including Kalbarri continues to report frequent outages, as does the Upper Great Southern, Southern Wheatbelt and parts of peri-urban Perth.

As the network performance generally meets customer expectations there is significant risk that areas with much poorer performance are not recognised and the incentives to address this not provided through the access arrangement.

### Recommendation

Performance measures focussed on reliability in those parts of the network consistently delivering less reliable supply should be considered.

## Exclusions

The draft Access Arrangement proposes that time when Western Power crews are unable to access a site due to a Total Fire Ban be excluded from the performance measures.

Work can be carried out by, or on behalf of a public authority during the period of a Total Fire Ban in accordance with an exemption issued under s.22C of the Bush Fires Act 1954. A range of conditions need to be complied with and a prudent operator would adopt additional risk mitigation measures. However, given that Total Fire Bans have been applied in parts of the State for multiple, continuous days the proposal to exclude days with Total Fire Bans will not encourage Western Power to develop innovative ways to mitigate risks and provide service during times when customers are particularly sensitive to loss of supply as was seen during the Christmas 2021 period.

The ability of Western Power to undertake some operations is also impacted by Machinery Movement bans, and the ability to adequately mitigate the risks in these circumstances needs to be considered.

### Recommendation

Establish incentives that recognise there are situations where the ability of Western Power to restore services is adversely impacted by factors outside of its control such as an on-going emergency, but that these incentives do not discourage innovative ways to restore power during a Total Fire Ban.

## Infrastructure Related Services

Local Governments regularly need to engage Western Power to relocate their infrastructure to enable works in the road reserve to proceed. Western Power does not permit others to initiate or manage work on its assets, and hence Local Governments are captive to whatever prices are charged by Western Power for this work. These costs have and continue to increase steeply. As an example, a Local Government may need to disconnect and reconnect an unmetered supply should one of their light poles need replacing. Previously this was a standard service with a cost of around $600. A change of internal policy now requires that this go through the full design process (Application Fee $497; Design Fee $1320 +; Actual work as per quotation). There is no opportunity to negotiate or obtain competitive pricing for any of these services.

As these are not defined services there is no performance standard. The amount of time required to complete various works is variable and unpredictable from a customer perspective.

**Recommendation**

That the ERA create a service definition and review the pricing regime for standard infrastructure services such as connect / disconnect; pole or dome relocation considering whether the delivery model is efficient.