

Flying Minute: Western Power Access Arrangement Review Submission (05-001-03-0019 ID)

By Ian Duncan, Executive Manager Infrastructure

Cr Paul Kelly declared an interest in this item and did not vote.

That the submission to the Economic Regulation Authority concerning the proposed Western Power Access Arrangement 2022-23 – 2026/27 be endorsed.

RESOLUTION 214.FM/2022

CARRIED

Executive Summary

- The Economic Regulation Authority (ERA) is seeking submissions from stakeholders concerning the Access Arrangement proposed by Western Power, that will govern services offered, prices charged, capital and operating expenditure over the five years from 2022/23 – 2026/27.
- The ERA has published a Discussion Paper and held a stakeholder briefing. In addition, Local Government representatives attended a briefing from Western Power.
- A submission has been prepared that identifies matters that require further review and investigation by the ERA particularly relating to streetlighting, safety (pole top fires), network reliability performance measurement and pricing for infrastructure related services.
- Strong support for the proposed network initiated underground power program is offered. Underground power has been demonstrated to offer significant benefits and delivering this in a way that avoids Western Power incurring significant renewal costs to old overhead infrastructure enables residents to face lower costs.
- The draft submission was considered and supported by the Infrastructure Policy Team.
- Submissions close on 20 April 2022.

Attachment

- Western Power's Fifth Access Arrangement Review: Submission to the Economic Regulation Authority

Policy Implications

This submission is aligned with the endorsed [policy positions](#):

- Streetlighting December 2017 – 126.6/2017
- Underground Power December 2020 – 145.6/2020

Background

Western Power operates a regulated electricity network. An access arrangement approved by the Economic Regulation Authority (ERA) sets out the services, terms and conditions, including prices, for Western Power's customers. Local Governments are not direct customers for most services but engage with Western Power in ways that are unique to the sector including streetlighting, underground power and relocation of infrastructure. The approved prices Western Power charges for operation and maintenance of streetlights comprises the majority of the Synergy tariff set by the State Government.

The next Access Arrangement will cover the period 2022/23 to 2026/27. The ERA's review is intended to ensure that Western Power invests in and operates the network as efficiently as possible for the



long-term benefit of electricity consumers. Western Power must also maintain security, reliability and safety and take account of the environmental consequences of energy supply and consumption.

Comment

The Access Arrangement proposed by Western Power primarily focuses on responding to State Government policy in relation to sustainable energy. The key matters addressed in the WALGA submission to the ERA are:

1. Streetlighting

The submission seeks further consideration by the ERA of the proposed change to the Reference Service definition, to require that streetlights are maintained to the design standard that existed at the time of their installation rather than the current lighting standards. The current Access Arrangement requires streetlighting to be maintained to current lighting standards. While fixed pole spacing means that it is not feasible to meet current standards in all circumstances, reference to standards existing at some unknown time in the past does not provide a sound basis for Local Governments to work with Western Power to address inadequate lighting and spill lighting, which both lead to complaints from residents.

The Access Arrangement proposed by Western Power introduces a strategy to use LED replacement globes in existing luminaires that would currently use mercury vapour, CFL, metal halide or high-pressure sodium lamps. There has been no consultation with Local Governments or information provided concerning the quality of lighting and lifecycle costs that will be achieved using this approach. The proposed Access Arrangement does not list proposed pricing for streetlights with this combination of technologies. Consequently, it is critical that much more information is provided to the ERA and that it is demonstrated that this approach is both cost effective and deliver a level of lighting that is acceptable to Local Governments.

2. Underground Power

The Access Arrangement proposes that \$440 million, net of capital contribution of \$241.9 million (that will be raised from residents through their Local Government or from the State Government), will be spent over five years to underground 875 kilometres of existing overhead electricity distribution lines. This will underground sections of the network where it is cost comparative relative to upgrading the overhead distribution network. This represents a marked acceleration in the program of underground projects relative to the past five years.

The Local Government submission supports prioritising placing electricity distribution infrastructure underground rather than upgrading poles and overhead wires when significant renewal work is required. Where undergrounding can be achieved cost effectively it represents a once in an asset life opportunity to markedly improve the streetscape and capture a wide range of benefits. The submission supports the ERA valuing forward looking benefits from undergrounding distribution infrastructure, such as the ability to accommodate more roof top solar power and electric vehicle charging.

3. Safety

Silicone treatments are currently used to reduce the incidents of pole top fires. In the draft Access Arrangement, Western Power proposes to reduce the volume of silicone treatments and incur increased costs in total, due to a change in policy or regulation that requires these treatments be applied only to de-energised lines. Local Governments in peri-urban and regional areas have raised concerns about an increase in pole-top fires. The submission requests that the ERA seek from Western Power alternative approaches to efficiently mitigate the risk of pole top fires, rather than accept the increased risk.

4. Customer Communication

The submission acknowledges that social media and websites have an increasing role in communication with customers. The Local Government submission highlights that telecommunications infrastructure is critically dependent on power supplies, so Western Power cannot rely on customers having access to internet-based communications during periods of power outages and some capacity for traditional communication arrangements must be maintained.

5. Network Reliability

The Local Government submission highlights that the network wide reliability performance measures do not highlight or provide incentives for Western Power to address the much poorer performance that occurs in parts of the network. It is recommended that focused performance measures be investigated. It is also identified that the blanket exclusion of periods of Total Fire Ban from the performance measures provides no incentive for Western Power to develop safe ways of working under exemptions that are available, and so potentially better meet customer expectations under these circumstances.

6. Infrastructure Related Services

The submission calls on the ERA to review and if necessary, set efficient prices for defined Western Power services such as connection / disconnection and relocation of poles, stays or domes.

FLYING MINUTE OUTCOME

Poll created: 14/04/2022 at 9:14am

Poll closed: 20/04/2022 at 12:00pm

Total invited to survey: 22

Total finished survey: 15

Endorse the Recommendation: 12

Endorse the Recommendation subject to comment below: 3

Do not endorse: 0

First Name	Last Name	Completed Date
Carol	Adams OAM	20/04/2022 7:30
Phillip	Blight	20/04/2022 6:35
Laurene	Bonza	Support – Infrastructure Policy Team
Ruth	Butterfield	20/04/2022 11:47
Carl	Celedin	14/04/2022 15:02
Cheryl	Cowell	Not completed
Frank	Cvitan	Not completed
John	Daw	17/04/2022 19:59
Tony	Dean	14/04/2022 12:57
Catherine	Ehrhardt	Not completed
Russ	Fishwick	19/04/2022 11:46
Logan	Howlett JP	18/04/2022 20:36
Mark	Irwin	Not completed
Paul	Kelly	<i>Declared an interest and did not vote</i>
Peter	Long	19/04/2022 13:07
Chris	Mitchell JP	Support – Infrastructure Policy Team
Chris	Pavlovich	Not completed
Les	Price	19/04/2022 19:35
Michelle	Rich	20/04/2022 10:29
Helen	Sadler	14/04/2022 19:51
Ken	Seymour	Not completed
Stephen	Strange	Support – Infrastructure Policy Team
Doug	Thompson	Not completed

Responses

(12) Endorse the submission: Laurene Bonza, Chris Mitchell JP, Stephen Strange, Tony Dean, Carl Celedin, Helen Sadler, John Daw, Logan Howlett JP, Carol Adams OAM, Ruth Butterfield, Russ Fishwick, Peter Long

(3) Endorse the submission subject to comment below: Phillip Blight, Les Price, Michelle Rich

(0) Do not endorse

Comments

Les Price on 19/04/2022 19:35

The imposition on residents to bear the financial burden of the cost of underground power infrastructure is a burden they should not be saddled with. Much, if not all, of the work will be carried out outside the residential boundary. The State has a responsibility to provide a service which residents are currently paying for. I would not support an Access Agreement which seeks to recover costs from Local Governments or their residents. The State has a serious budget surplus and has the financial resources to pay for such infrastructure.

Phillip Blight on 20/04/2022 6:35

I believe that Western Power should be "Required" to improve their pole top insulation to prevent pole top fires and to improve the overall maintenance of the network. In the advent of astro tourism something could also be mentioned about future light pollution mitigation.

Michelle Rich on 20/04/2022 10:29

Question more so than comment. Where does or does the maintenance of infrastructure in relation to tree pruning fall under this arrangement or is it covered under another arrangement?

Ruth Butterfield on 20/04/2022 11:59

recommend that we object to the piece meal, globe replacement ("Corn Cob") of LEDs (without replacing the luminaire); also referencing a partnership program where local governments can invest. The transparency elements around street lighting costs could be strengthened and the point made that the minimalist approach to replacing globes will in fact cost local government more in the long run. Page 11. Also perhaps we should recommend a performance measure be put in place regarding the time taken to move poles (required by LG roadworks etc) as the delays cost LG significant \$\$.

Secretariat Comment

Underground Power

All of the projects to place electricity distribution infrastructure underground will be inside the residential boundary. Residents have always contributed at least the cost of the new connection from the street to the house, when underground power is installed. Although underground power distribution is the current standard in residential areas, in most cases it remains more expensive to install, than to keep progressively maintaining overhead wires and poles. The proposed position seeks to maximise the contribution Western Power can make to a project. There is a separate advocacy position seeking that the State Government continue to contribute at least 25% of the cost of these conversion projects as it has done for more than 25 years.

Safety

The submission has been amended such that WALGA recommends the Economic Regulation Authority requires a response from Western Power regarding the proposed approach and cost of mitigating the risk of pole top fires.

Streetlighting

An additional sentence has been added to the submission highlighting the economic and social benefits through astro-tourism that can be achieved where smart, controlled streetlighting is provided.



The Local Government position in relation to the proposed piece meal globe replacement is unclear as there has been no information provided to the sector by Western Power about the lifecycle costs of this approach compared with alternatives. Local Governments will ultimately pay these costs through the regulated tariff.

Some additional sentences have been added to this section, highlighting the concern about the piecemeal approach to globe replacement resulting in higher lifecycle costs.

Infrastructure Services

In response to previous submissions the Economic Regulation Authority has been unwilling to consider service or price regulation in relation to services such as moving poles. The submission has been amended to seek that the ERA regulate these monopoly services which would establish service standards and prices.

Western Power's Fifth Access Arrangement Review

Submission to the
Economic Regulation
Authority

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).



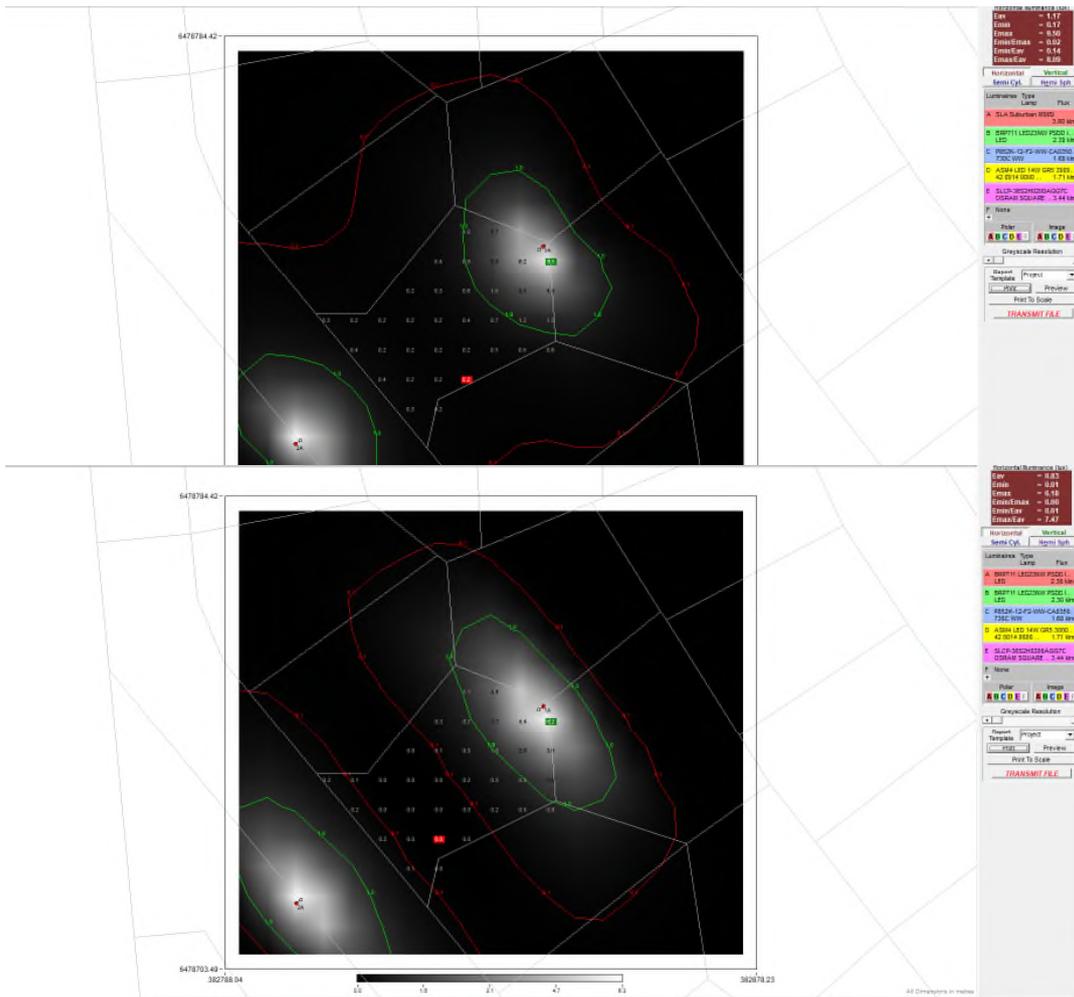
Figure 1: Example showing a luminaire installed by the land developer initially and then replaced by Western Power with two different types of luminaires over time.

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.