



Western Power Proposed Access Arrangement 2017-2022

Submission to the Economic Regulation Authority

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1. Introduction

The Western Australian Local Government Association (WALGA or ‘the Association’) is the peak organisation for Local Government in Western Australia. The Association is an independent, membership-based group representing and supporting the work and interests of 136 mainland Local Governments in Western Australia, plus the Indian Ocean Territories of Christmas Island and Cocos (Keeling) Islands.

The Association provides an essential voice for more than 1,200 Elected Members, approximately 14,500 Local Government employees, and the 2.4 million constituents that they serve and represent. The Association also provides professional advice and offers services that provide financial benefits to the Local Governments.

WALGA is grateful for the opportunity to provide a submission to the Economic Regulation Authority (ERA) on Western Power’s Proposed Access Arrangement for the period 2017-2022. Local Government has a keen interest in Western Power’s Access Arrangement both as a significant consumer of electricity, and through its role in the provision of street lighting.

WALGA understands that the intent of the Access Code is to ensure that Western Power operates as it would within a competitive market.

However, the sector has concerns that the current arrangements are not operating effectively in some cases. In particular, Western Power still has significant market power in relation to the provision of street lighting services, which is delivering poorer outcomes for local communities.

From the perspective of Local Government, the next Access Arrangement should look to:

- Put in place a clearer basis of service, more robustly defining the street lighting services that Western Power provides and including agreement on technology choice;
- Progress accelerated LED replacement during the early part of this Access Arrangement in recognition of the 2020 implementation date of the Minamata Convention;
- Progress negotiations with Local Government for the incorporation of smart controls in street lights; and
- Secure greater price modelling and maintenance data disclosure to help build confidence in pricing, service levels and technology choices.

Findings and Recommendations

- *The independent assessment of Western Power’s operating expenditure provides greater confidence that the AA4 proposal is efficient.*
- *Street lighting services should be examined by an independent body and benchmarked against other providers in the National Electricity Market to determine whether these are being delivered efficiently.*
- *WALGA supports Western Power’s proposed approach to investing in the network in AA4, with a focus on areas of above average growth and improving outcomes for customers that are connected to the less reliable parts of the network.*
- *WALGA supports the prioritisation of the replacement of wooden poles that are located in extreme/high bushfire risk zones or high risk public safety zones.*
- *Emerging technologies should continue to be trialled throughout AA4.*
- *Options to accelerate the adoption of LED technology should be progressed in the coming regulatory period. Western Power should progress accelerated LED replacement negotiations in anticipation of investment during the early period of the Access Arrangement. All new street lighting installations connected to the Western Power network should utilise LED technology.*
- *The ERA should examine the option to introduce Peer to Peer trading in the SWIS during the coming regulatory period.*
- *The real costs and benefits from seeking to reduce peak demand needs to be clearly understood and the responsiveness of customers to time-of-use based tariffs needs to be reliably forecast in order to assess whether there are net benefits in investing in advanced metering technology at this point in time.*
- *Provision should be made within the coming regulatory period to adopt a new metering type based on metering-grade chips within smart street lighting controllers and similar devices.*
- *Given the strong demand for the SUPP, the increased investment proposed during AA4 is considered to be appropriate.*
- *LEDs should be the default lighting option that is introduced for all street lighting that is replaced, including those changed under the SUPP.*
- *The current approach to tax recovery on gifted assets and relocations means that the entire incidence of the tax is borne by a single entity, and can have significant distortionary effects.*

- *For Local Governments, the viability of projects with significant public benefits, such as street lighting upgrades and asset relocations (particularly those that are initiated as a result of road safety upgrades), be affected by the inclusion of tax recovery costs.*
- *WALGA supports recovering the tax liability as a cost of business from all customers.*
- *The ERA should examine the merits of adopting the same approach used in the AER jurisdictions with respect to tax recovery on gifted assets.*
- *The RAB is not adjusted to take into account changes in street lighting infrastructure when assets owned by Western Power move into Local Government possession and vice versa, which could provide an inaccurate reflection of the street lighting network.*
- *The ERA should further examine the street lighting component of the RAB, and make the results publically available.*
- *Further examination of the estimated annual percentage change in electricity bills for all distribution customers is needed, particularly in relation to the anticipated 19% increase in 2018-19.*
- *WALGA is supportive of the move towards LED lighting as part of Western Power's replacement strategy, to the extent that this will provide significant benefits to the community and assist to reduce street lighting costs which are paid by Local Governments.*
- *Given the efficiencies associated with LED luminaires, it is expected that this will reduce Western Power's operating costs and revenue requirement as a result of the associated lower electricity consumption, maintenance costs and extended operating life associated with the more efficient technology. WALGA would expect to see this reflected in any future Price List.*
- *WALGA is seeking further transparency in relation to the components of asset charges for each type of luminaire.*
- *The existing service standards for street lighting are not comprehensive, and fail to take into account issues such as light levels and spillage.*
- *WALGA considers that this should be addressed through the introduction of a Public Lighting Code, which is overseen by an independent body.*
- *Considering a customer's portfolio of exit points is a positive step that would allow Local Governments to bundle their electricity usage across sites, including street lighting, and for many Councils would enable them to choose their electricity supplier for street lighting services.*
- *Contestability of public lighting maintenance services is necessary to provide Councils with a greater capacity to manage their street lighting network for the benefit of their local*

community. Options should be examined in AA4 to provide choice of maintenance supplier.

- *Greater transparency and regulatory oversight is needed in relation to customer-funded relocation or upgrade of Western Power assets.*
- *Western Power should be required to discount the cost of street lighting removal and upgrades that are customer funded by the recognised depreciation of the asset.*

2. Local Government Context

The Local Government sector is a substantial user of electricity. It is estimated that the sector spends more than \$50 million on contestable electricity per annum, \$60 million on non-contestable energy and a further \$45 million on street lighting.

As well as being a major electricity user, the provision of public lighting is a core role for Local Governments which delivers benefits to the community in terms of safety, security and amenity. Local Governments are the customer for nearly 260,000 street lights operated by Western Power in the SWIS service area. It is estimated that the sector pays in excess of \$45 million per annum for street lighting services, including the cost of energy provided by Synergy.

Local Government's role in the provision of street lighting makes it a unique customer group for Western Power. However, street lighting issues tend to be overlooked given that the street lighting assets represents a relatively small proportion of Western Power's regulated asset base.

Local Governments have for some years raised concerns in relation to the provision of and market for street lighting, particularly with regards to the current lack of contestability in maintenance services, poor service levels and difficulties in introducing new technologies such as LED luminaires and smart controllers. These issues are discussed in more detail later in the submission.

WALGA's view is that challenges with street lighting result for two fundamental underlying causes.

- There is virtually no defined basis of service, either in regulation or in the form of binding service level agreements for street lighting in Western Australia; and
- There is currently no competitive market for street lighting provision and therefore a lack of alignment between the objectives of Local Governments and Western Power. Under the current arrangements, Western Power maintains street lights vested in it by Local Governments and replaces them when no longer serviceable. As a result, Local Governments have no meaningful ability to influence the level of services or cost of existing lighting, or the adoption of new technologies.

WALGA considers that a detailed examination of the street lighting market is needed as part of the ERA's consideration of Western Power's proposed Access Arrangement. The sector considers that the next Access Arrangement should look to:

- Put in place a clearer basis of service, which better aligns the needs of Western Power and Local Governments. This should include a more robust definition of the street lighting services that Western Power must deliver and puts technology choice where it more appropriate belongs, in the hands of parties responsible for providing the service to the community;
- Put in place specific mechanisms to progress accelerated LED replacement negotiations as soon as a new portfolio of LEDs is adopted;
- Progress negotiations to introduce smart control technology; and

- Make transparent price modelling and maintenance data to help build confidence in pricing, service levels and technology choices.

3. Proposed Changes to Western Power’s Access Arrangement

Western Power Operating Expenditure

The transfer of regulatory responsibility for Western Power to a national regime under the Australian Energy Regulator (AER) was expected to deliver efficiencies due to the higher levels of scrutiny through the AER’s benchmarking process.

The AER is required to publish an annual benchmarking report, which examines the relative efficiency of the distribution and transmission electricity network service providers that it regulates. The report is then used to assist with regulatory decision making.

Although this reform is not proceeding at this point in time, it is encouraging that Western Power has engaged an independent economic consultant in an attempt to benchmark its current operating expenditure. As set out in the supporting information, this has led to a reduction in Western Power’s base year costs by more than \$120 million. This is a positive step, and provides greater confidence that the AA4 proposal is efficient.

Given the lack of transparency in relation to street lighting services, WALGA considers that it would be beneficial to conduct a similar independent study into Western Power’s performance in relation to street lighting services.

Findings and Recommendations

- *The independent assessment of Western Power’s operating expenditure provides greater confidence that the AA4 proposal is efficient.*
- *Street lighting services should be examined by an independent body and benchmarked against other providers in the National Electricity Market to determine whether these are being delivered efficiently.*

Capital Investment

It is recognised that Western Power’s capital investment plans have a significant impact on its required revenues under the Access Arrangement. WALGA believes that in determining the appropriate level of capital investment, the ERA should take into account:

- the current condition of Western Power’s network and the implications for safety and security of supply;
- the changing economic environment and the implications for electricity demand; and
- the emergence of new technologies that will reduce demand on the network or allow demand to be managed more effectively to minimise long term capital costs.

Against these principles, WALGA supports Western Power's proposed approach to investing in the network in AA4, with a focus on areas of above average growth and improving outcomes for customers that are connected to the less reliable parts of the network.

WALGA also supports the prioritisation of the replacement of wooden poles that are located in extreme/high bushfire risk zones or high risk public safety zones.

New Technologies

During the AA3 period, Western Power undertook several trials of emerging technology, including battery storage trials in Perenjori, and testing a standalone power system in Ravensthorpe. WALGA considers that these emerging technologies could prove to be beneficial to Local Governments, particularly those in regional areas of the state. WALGA supports Western Powers plans to continue trialling non-network solutions and technology over the AA4 period.

A further priority for Western Power should be to facilitate the adoption of lower cost, more reliable and more energy efficient street lighting technologies, such as LEDs and smart controls, during the upcoming regulatory period.

Unlike other technologies that are currently being tested by Western Power, LED technology is no longer new, and does not require the same type of trial phase and testing that is currently under way with other technologies. LED has been found to deliver a range of benefits.

- *Economic* – Switching to energy efficient lighting can deliver savings through lower energy use, and longer life spans which reduce operation and maintenance fees. Traditional light sources have spot failures averaging around 10% per year, and lamps need to be replaced every 3-4 years in order to achieve the design lighting output. In comparison, energy efficient lights (such as LEDs) have an extended compliant operating life of 15-20 years with a very low failure rate. Despite the moderately higher capital costs, the overall business case is now highly compelling and, as a result, LED street lights are being deployed widely around world in large accelerated replacement programs.
- *Environmental* - Street lighting represents the single largest source of carbon emissions for Local Governments. The primary environmental benefit associated with energy efficient lights is their lower carbon emissions as a result of their lower energy use. In their analysis of sustainable street lighting, IPWEA (2014) suggested that if energy efficient street lights were widely deployed in Australia, carbon emissions could be reduced by at least 47%. Other environmental benefits include a reduction in mercury pollution and control of light pollution.
- *Community* - The community safety benefits associated with improved public lighting include increases in road safety and personal safety. LEDs provide a high quality white light with high colour rendering properties, which improves driver reaction times to hazards and the ability of pedestrians to discern oncoming pedestrian facial features and intentions; thereby avoiding and reducing accidents.

These benefits have meant that LED technology has been introduced broadly in other jurisdictions both globally and in Australia.

Many electricity distributors and Councils across the country have switched a significant proportion of their street lights to energy efficient LED technology and are continuing this renewal. The City of Sydney was the first City to initiate bulk change over, commencing its LED street lighting project in 2012. In Victoria, the Municipal Association of Victoria's (MAV) Street Lighting Program has resulted in 72 out of the 79 Victorian councils completing a bulk changeover project of lighting on residential roadsⁱ. Over the lifetime of the lights, the Program is estimated to result in savings of up to 45% on the capital costs of lights, approximately \$340 million in electricity and maintenance costs and a reduction in greenhouse gas emissions of 1.21 million tonnes of carbon dioxide.

LED luminaires have also been introduced in WA outside of the SWIS. In 2011 with the advent of the Community Energy Efficiency Program, WALGA developed an alliance with Horizon Power, the City of Karratha, the Town of Port Hedland and the Shire of Ashburton, to install LED street lighting as part of the Pilbara Underground Power Project in areas which historically had high rates of maintenance. A total of 674 LED lights were installed, with initial figures from Horizon Power indicating energy and cost savings of \$42,400 per year, energy savings of 801,290 MJ per year and carbon abatement of 233 Tonnes CO₂^e per year. ⁱⁱ

Although LED street lighting could deliver broader benefits if introduced into the SWIS, Local Governments do not have the ability to progress these changes given that the majority of Western Australia's street lighting infrastructure has been gifted to Western Power. Within the current regulatory arrangement Western Power has no incentive to introduce more energy efficient technologies given that it may not recognise the economic or community benefits, and it may be worse off financially as a result of the lower electricity consumption, maintenance costs and extended operating life associated with the more efficient technology. As a result, progress towards the widespread adoption of LED technology has been slow. In this area the regulatory regime does not effectively reflect societal needs or provide incentive to achieve the lowest net societal cost.

WALGA considers that all new street lighting installations, including replacement luminaires on existing installations, and all new street lighting in subdivisions, connected to the Western Power network, should utilise LED technology.

It is a positive step that Western Power has now included 22W LED lamps in its street lighting range, and has indicated in the proposed Access Arrangement that it is likely that it will commence replacing failed lights with LEDs.

However, given that existing mercury vapour lights generally become very dim, rather than fail totally and the current policy is to replace lights only on failure this will be an incremental process and will mean that progress towards adopting this technology is slow. Western Power should progress accelerated LED replacement negotiations in the short term and offer Local Government choices (as would occur in a competitive market) on fair and equitable terms including choice regarding technologies and ownership model.

Local Government also considers that steps towards the introduction of Smart Grid technology should be taken during the coming regulatory period. In particular, a priority should be the introduction of Peer to Peer trading into the SWIS. This would deliver considerable benefits for Local Governments and other organisations that generate renewable energy by enabling them to feed energy back into the grid. For example, if a Local Government has excess renewable energy generating capacity at one site, or access to a third party renewable energy source, this would enable them to trade power across their organisation and ensure that a larger portion of their demand is serviced by renewable energy.

Findings and Recommendations

- *WALGA supports Western Power's proposed approach to investing in the network in AA4, with a focus on areas of above average growth and improving outcomes for customers that are connected to the less reliable parts of the network.*
- *WALGA supports the prioritisation of the replacement of wooden poles that are located in extreme/high bushfire risk zones or high risk public safety zones.*
- *Emerging technologies should continue to be trialled throughout AA4.*
- *Options to accelerate the adoption of LED technology should be progressed in the coming regulatory period. Western Power should progress accelerated LED replacement negotiations in the short term and offer Local Governments choices regarding technologies and ownership models on fair and equitable terms. All new street lighting installations connected to the Western Power network should utilise LED technology.*
- *The ERA should examine the option to introduce Peer to Peer trading in the SWIS during the coming regulatory period.*

Metering

A key platform of Western Power's proposal is to change the default replacement meter from basic meters to advanced meters. Western Power intends to deploy advanced meters and the associated communications infrastructure over the next 15 years, including 355,000 new and replacement meters during the AA4 period.

Local Governments are in some respects similar to small and medium sized businesses with regard to electricity usage. However, they typically have many sites spread across their jurisdiction. Consequently, streamlined metering and billing systems offer some administrative efficiencies.

It is not possible to comment on the economic merit of investment in time-of-use metering in the absence of reliable tariff forecasts for different time periods. The real benefits from adjusting peak demand needs to be clearly understood and the responsiveness of customers, including Local Governments, to time-of-use based tariffs needs to be reliably forecast in order to assess whether there are net benefits in investing in advanced metering infrastructure at this time. The nature of Local Governments services (such as public lighting, recreation facilities, etc.) means that they have limited ability to adjust their electricity usage patterns.

To the extent that such an assessment shows that real benefits will be delivered and that time of use metering can ensure the more effective management of peak demand and put downward pressure on network prices, this is supported by WALGA.

For Local Governments, a key issue that is not addressed in the proposed Access Arrangement is in relation to metering for street lighting. Street lights are either connected to the network as Unmetered Supply and maintained by the Local Governments, or maintained by Western Power with capital, operating, energy and renewal costs invoiced through Synergy.

While this arrangement has been in place for a long time, it is not fit for purpose and will become increasingly inappropriate during the coming regulatory period. The current practice assumes a known (lab tested) and constant load operating over a known period of time. This is inaccurate for three underlying reasons.

- *Inventory Inaccuracy* - The inventory of street lights is often inaccurate because of the challenges in validating and updating a large stock of comparatively low-value assets. The number of parties providing input can also lead to inconsistencies in the data.
- *Load Inaccuracy* – Under the Unmetered Supply approach, the original energy consumption of a luminaire is measured to a high degree of accuracy in a National Association of Testing Authorities accredited laboratory. However, over time, a number of factors can mean that this estimate becomes increasingly inaccurate. These include: the ageing of lamps, electrolytic capacitors and other components; the introduction of varying models of luminaires over time, each with slightly different load characteristics; and the failure of some lights.
- *Switching Inaccuracy* - Most current street lighting is switched on and off with the use of circuit timers or individual photocells. Over time, photocells accumulate dirt on their optical window and the photosensitive components change their sensitivity. This results in lights not turning on or off at the assumed time. In cases of complete photocell failure, luminaires default to staying on 24 hours leaving assumed energy consumption out by more than 50% on average.

WALGA considers that provisions for the adoption of a new metering type based on metering-grade chips within smart street lighting controllers and similar devices should commence during the coming regulatory period.

Smart street lighting control systems are now widely available and deployed around the world that allow much more flexible and nuanced use of public lighting. Beyond being able to dramatically improve the accuracy of metering for small dynamic loads like street lighting, facilitating their introduction in Western Australia would have a wide range of other benefits for Western Power, for Local Governments and for the community including facilitating a range of other smart city technology in the public domain.

Findings and Recommendations

- *The real benefits from adjusting peak demand needs to be clearly understood and the responsiveness of customers, to time-of-use based tariffs needs to be reliably forecast in order to assess whether there are net benefits in investing in advanced metering technology at this point in time.*
- *Provision should be made within the coming regulatory period to adopt a new metering type based on metering-grade chips within smart street lighting controllers and similar devices.*

State Underground Power Program

WALGA supports Western Power's ongoing commitment to the State Underground Power Project (SUPP). Given the strong demand for the program and high levels of investment by Local Governments, the increased investment in the SUPP during AA4 is considered to be appropriate. This will provide Western Power with new assets to replace old infrastructure and significantly lower maintenance costs, particularly following storm events.

The SUPP represents an ideal opportunity to accelerate the adoption of more energy efficient street lighting technology. Now that they are available as part of Western Power's standard lighting options, WALGA considers that LEDs should be the default lighting option that is introduced for all street lighting that is replaced including those changed under the SUPP. LED lighting has been included in the underground power system designs being completed in the Town of Cambridge and City of Stirling. Seventeen underground power projects across eight Local Government areas in the Perth metropolitan area were announced in January 2017. These projects will be constructed between 2018 and 2021.

Findings and Recommendations

- *Given the strong demand for the SUPP, the increased investment proposed during AA4 is considered to be appropriate.*
- *LEDs should be the default lighting option that is introduced for all street lighting that is replaced including those changed under the SUPP.*

Capital Contributions

Under the Australian Accounting Standards, gifted assets are treated as assessable income. As a result, gifted assets increase Western Power's National Tax Equivalent Regime payments to the State Government. As part of Western Power's Third Access Arrangement, the ERA ruled that it is more appropriate for these costs to be passed onto the customer requesting the work. Western Power has since commenced recovery of the tax on capital contributions from 5 January 2015 at a rate of 13.9% for industrial and commercial projects.

Local Governments are affected by this policy as they pay the cost of relocations and gift street lights to Western Power. It is common for Local Governments to make capital contributions to utility infrastructure providers as a result of asset relocations, which are required when Local

Governments seek to improve the safety or efficiency of the road network through installation of roundabouts, traffic signals, turning lanes or road widening.

Generally, the Association supports the use of upfront charges for the costs of infrastructure built specifically for new developments. This ensures the application of the user pays principle and the achievement of efficient outcomes since development proponents will choose the most cost-effective areas for development.

However, the Association does not support the tax costs resulting from capital contributions being recovered from the entities that make such contributions. In doing so, the entire incidence of the tax is borne by these entities and their customers. This is not necessarily an efficient outcome and is likely to have significant distortions on activity. For example, the viability of projects with significant public benefits, such as street lighting upgrades and asset relocations (particularly those that are initiated as a result of road safety upgrades), will be affected by the inclusion of tax recovery costs and therefore may not proceed.

An example of this issue was the LED streetlight retrofit project in the Shires of Esperance and Leonora. This project was partially funded by the Federal Government through the Community Energy Efficiency Program (CEEP), and was to replace 2,281 existing street lights with energy efficient LED lamps.

The unforeseen tax implication resulting from the transfer of ownership of LED lights from the Shire of Esperance and the Shire of Laverton to Horizon Power was a considerable hurdle for the project. The tax of 13.9% would have had an impost of close to \$800,000, and without an exemption being granted from the Minister, would have derailed the project given that CEEP program guidelines precluded the use of CEEP funds to cover the related tax costs associated with gifting street lights.ⁱⁱⁱ

Further, when seeking to install 400 LED lights in an area in the City of Kalgoorlie as part of the project, the failure to receive a Ministerial exemption in related to the gifted assets tax liable to Western Power led to considerable delays, and eventually prevented this aspect of the project from proceeding.^{iv}

Recovering the tax liability as a cost of business from all customers should have minimal distortionary impacts on the economy. Existing customers would be affected less by price changes, because demand for existing services will be more inelastic than demand for new services and the price change for these customers will be relatively small since Western Power's tax costs can be recovered from a larger group of customers.

The Association understands the ERA's decision on the treatment of capital contributions is not consistent with what occurs in other jurisdictions. For example, the Australian Energy Regulator (AER) makes an allowance for tax costs in the infrastructure provider's overall revenue requirement, which potentially enables these costs to be recovered from all users.

The ERA should examine the merits of adopting the same approach used in the AER jurisdictions.

Findings and Recommendations

- *The current approach to tax recovery on gifted assets and relocations means that the entire incidence of the tax is borne by a single entity, and can have significant distortionary effects.*
- *For Local Governments, the viability of projects with significant public benefits, such as street lighting upgrades and asset relocations (particularly those that are initiated as a result of road safety upgrades), is affected by the inclusion of tax recovery costs.*
- *WALGA supports recovering the tax liability as a cost of business from all customers.*
- *The ERA should examine the merits of adopting the same approach used in the AER jurisdictions.*

Revenue Requirement

Regulated Asset Base (RAB)

The Regulated Asset Base is a particularly important input that is used to determine Western Power's target revenue calculation.

WALGA has concerns that that RAB as it currently stands may not be a true reflection of Western Power's asset values with respect to street lighting, and could act as a barrier to the introduction of more energy efficient lighting options.

In calculating the RAB, Western Power uses a "roll forward" method which uses the opening RAB at the start of AA3, and adjusts this to take into account capital expenditure (net of contributions) and disposals.

While this approach is sound in principle, WALGA understands that the RAB is not adjusted to take into account changes in street lighting infrastructure when assets owned by Western Power move into Local Government possession and vice versa. This could result in the RAB providing an inaccurate reflection of the street lighting network, and if overstated, will make it challenging to write-off existing, inefficient lighting options to replace them with more efficient technologies.

Further, while street lighting is valued separately from other assets, it is understood that no consideration has been given to the breakdown of the street lighting RAB amongst dedicated wiring, dedicated street lighting columns, brackets or luminaires, or differences between luminaire types and ages.

WALGA considers that the ERA should further examine the street lighting component of the RAB, and make the results publicly available.

Findings and Recommendations

- *The RAB is not adjusted to take into account changes in street lighting infrastructure when assets owned by Western Power move into Local Government possession and vice versa, which could provide an inaccurate reflection of the street lighting network.*
- *The ERA should further examine the street lighting component of the RAB, and make the results publicly available.*

Pricing

WALGA considers that the price impact on customers for the use of Western Power's network as set out in the proposed Access Arrangement do not appear to represent a price shock, with the estimated impact on distribution tariffs to average 3.38% across the AA4 period. However, it is recognised that Western Power's network tariffs represent only a portion of the electrify bill paid by consumers and that these are determined by the retailer, and in the case of non-contestable customers, by the State Government.

Although the final prices paid by consumers are out of Western Power's control, it has provided an estimated of the expected impact of its network tariff increases on the average customer's electricity bill.

On the basis of these estimates, WALGA is seeking further detail on the estimated annual percentage change in electricity bills for all distribution customers. In particular, WALGA considers that the ERA should investigate the anticipated 19% increase in 2018-19. This projection is at odds with all other estimates, and may have been provided in error.

If this is not an error, WALGA is concerned about the impact of this projected increase, given that residential and small business consumers are expected to face increases of 2.5% and 4% respectively. This would mean that the bulk of this increase will be borne by larger users – including some Local Governments. This is a significant increase in a single year and would have a substantial impact on those affected.

In relation to street lighting, WALGA considers that it is reasonable that RT9 has been retained from AA3. WALGA notes that Appendix F4 states that there are two factors that are likely to change Western Power's approach to street lighting:

- Significant improvements in LED technology and affordability mean that it is likely that Western Power will commence replacing failed lights with LEDs. Western Power is currently undergoing a tender evaluation process, which will be used to determine a new replacement strategy.
- The Australian government is currently considering ratifying the Minamata Convention on Mercury, which is a global treaty to protect human health and the environment from the adverse effects of mercury. This could have significant impacts on the range of streetlights Western Power can offer.

As outlined above, WALGA is supportive of the move towards LED lighting to the extent that this will provide significant benefits to the community and assist Local Governments to reduce their street lighting costs.

Amongst other things, the Minamata Convention includes the phase out and phase down of mercury use in a number of products. Should the Australian Government ratify the Minamata Convention, this will have significant implications given that approximately 58% of street lights in the SWIS use mercury vapour lamps. The Minamata Convention specifically bans the manufacturing or importation of mercury vapour lamps from 2020 necessitating a mass conversion of these particularly inefficient luminaires by that time or shortly thereafter.

Given that it is too soon to assess what will need to change in this Access Arrangement, provision needs to be made to re-examine these issues when further information becomes available as part of future Price List determinations.

Given the efficiencies associated with LED luminaires, it is expected that this will reduce Western Power's operating costs and revenue requirement as a result of the associated lower electricity consumption, maintenance costs and extended operating life associated with the more efficient technology. WALGA would expect to see this reflected in any future price list. However, it is recognised that any bulk changeovers would add to costs in the short term.

In relation to asset charges, WALGA understands that these differ between the size and type of luminaire, and is based on the annualised cost of capital and maintenance associated with each.

According to the 2018-19 Price List, asset prices are generally lower for most street lighting types, but not for LED (which is unchanged). While the lower prices for most assets will benefit Local Governments (to the extent that these are passed through to retail tariffs), the price falls for older asset types may make the business case to transition to more energy efficient lighting more difficult.

WALGA is seeking further transparency in relation to the components of asset charges for each type of luminaire.

Findings and Recommendations

- *Further examination of the estimated annual percentage change in electricity bills for all distribution customers is needed, particularly in relation to the anticipated 19% increase in 2018-19.*
- *WALGA is supportive of the move towards LED lighting as part of Western Power's replacement strategy, to the extent that this will provide significant benefits to the community and assist Local Governments to reduce their street lighting costs.*
- *Given the efficiencies associated with LED luminaires, it is expected that this will reduce Western Power's operating costs and revenue requirement as a result of the associated lower electricity consumption, maintenance costs and extended operating life associated*

with the more efficient technology. WALGA would expect to see this reflected in any future Price List.

- *WALGA is seeking further transparency in relation to the components of asset charges for each type of luminaire.*

Service Standards

Western Power proposes that the minimum service standard benchmark for street lighting will not change from AA3, and is set to align with the 2017 Electricity Distribution Licence Performance Reporting Handbook.

While Western Power is currently meeting its service standard benchmark for street lighting in relation to repair timeframes, WALGA considers that this is not a comprehensive measure of performance for street lighting services.

By basing the service standard benchmark on repair timeframes, Western Power is not assessed against other important service issues, such as overall outage rates, light levels and spillage. This is a key issue given that 58% of the street lighting network comprises mercury vapour bulbs, which do not fail but gradually dim over time. As a result, a significant proportion of the street lighting network is not likely to be meeting standards for light levels. Further, Western Power has unilaterally discontinued some programs that have contributed to it meeting existing services standards in previous access arrangements, such as the bulk lamp replacement program, and night patrols on main roads.

The service standards should be updated to reflect these issues and ensure that Western Power is meeting the minimum compliance requirements with AS/NZS 1158. WALGA considers that this should be addressed through the introduction of a Public Lighting Code, as has occurred in other jurisdictions including Victoria and New South Wales.

A Public Lighting Code would essentially serve as a binding regulation which sets out clear expectations around service levels. It would be a mechanism to address service issues by better aligning the interests of Western Power and Local Governments. At present, Western Power aims to maximise its returns from the street lighting network, and to reduce associated risks. By contrast, Local Governments have a wide range of objectives on behalf of the community, including improving public amenity and safety, reducing greenhouse gas emissions and energy consumption, and minimising costs. To ensure compliance with the code, it is important that it is overseen by an independent body.

Findings and Recommendations

- *The existing service standards for street lighting are not comprehensive, and fail to take into account issues such as outage rates, light levels, light spillage and overall compliance with minimum requirements of Australian Standards.*
- *WALGA considers that this should be addressed through the introduction of a Public Lighting Code, which is overseen by an independent body. A Public Lighting Code would*

essentially serve as a binding regulation which sets out clear expectations around service levels and consequences of non-performance.

Policies and contracts

The applications and queueing policy (AQP) sets out the processes, procedures and requirements for customers seeking and obtaining access to the Western Power Network, and is used by Western Power to manage customer access applications.

As part of its proposal for AA4, Western Power is proposing to amend the AQP to align it with the *Electricity Corporations (Prescribed Customers) Order 2007*, which it states provides that a customer is contestable where it has a portfolio of exit points and one or more of the exit points exceeds the 50 MWh threshold. Under the current AQP, the customer is only be considered contestable (and, therefore, able to purchase electricity from retailers other than Synergy) at the exit point that exceeds 50 MWh, but not at the other exit points.

Local Governments have a number of different sites, some of which consume enough electricity to meet the contestability threshold, while others do not. In particular, street lights are considered to be individual exit points, and therefore are not contestable. Considering a customer's portfolio of exit points would allow Local Governments to bundle their electricity usage including for street lights across sites, and for many Councils would enable them to choose their electricity supplier for street lighting services and other electricity usage. It is estimated that there are more than 80 Local Governments in the SWIS which have the potential to benefit from this move.

Competition in the street lighting market will improve Local Governments' ability to manage their street lighting costs, and choose the electricity retailer that best meets their needs. Competition between retailers would deliver a number of benefits from lower retail prices, improved services, and alternative products. These types of benefits have been seen in other markets which have become contestable in recent years. In the National Electricity Market, for example, street lighting for each Local Government falls under one National Metering Identifier and the entire load is contestable.

Findings and Recommendations

- *Considering a customer's portfolio of exit points is a positive step that would allow Local Governments to bundle their electricity usage across sites, including street lighting, and for many Councils would enable them to choose their electricity supplier for street lighting services.*

Other Issues

Street Lighting Maintenance

Local Governments have raised concerns that Western Power has market power in relation to the provision of street lighting maintenance services.

Western Power provides maintenance on street lighting as part of its reference services. Western Power has control of the poles that street lights are attached to and do not allow third parties to access these. This prevents Local Governments from using third party service providers that may provide alternative or cheaper service offerings.

WALGA considers that contestability of public lighting maintenance services is necessary to provide councils with a greater capacity to manage the street lighting network for the benefit of their local community. Options should be examined in AA4 to provide choice of maintenance supplier.

As outlined earlier, an important first step towards this relates to the asset charges for each type of luminaire. Greater transparency of the components of the asset charge will help Local Governments to better understand the true cost of maintenance.

Findings and Recommendations

- *Contestability of public lighting maintenance services is necessary to provide Councils with a greater capacity to manage their street lighting network for the benefit of their local community. Options should be examined in AA4 to provide choice of maintenance supplier.*

Customer Funded Works

A further issue for Local Governments relates to the requirement to fund considerable works to relocate or upgrade Western Power assets.

From a Local Government perspective, customer funded works are generally relatively low scale, low impact projects, which could be delivered at lower costs if competitive contracts were in place.

However, Western Power policy prevents Local Governments from engaging accredited contractors to do this work, potentially as part of larger contracts. There is neither transparency nor regulatory oversight of this, which is unacceptable from a Local Government perspective.

These issues are likely to become a growing problem going forward, given that many Local Governments are now considering large scale customer funded underground power projects to meet ratepayer demand. The sector is concerned that Western Power's Customer Funded Works model cannot deal with the magnitude of these projects.

WALGA considers that the ERA should consider a mechanism that, with proper planning and notice periods in place, to ensure Western Power provides clear and consistent pricing models for large scale underground power projects being funded by Local Governments that recognise these cost benefits.

This should include a discount to the cost of street light removal and upgrades, in reflection of the recognised depreciation of the asset. Currently, the street light tariff paid by local authorities includes a component to cover the depreciation of the asset, recognising that

Western Power will meet the cost of replacement of the asset at the end of life. Where local government funds new works, such as bulk streetlight upgrades, the asset is renewed at the cost of the local authority, while the funds collected by Western Power, for the purpose of renewing the asset, are retained by Western Power. The collected funds should be applied against the asset when they are renewed by an external party, or against the cost of removal of the asset, when it is no longer required.

Local Governments are also concerned that the Terms and Conditions used by Western Power in relation to Customer Funded Works are considerably different to those works undertaken as part of the State Underground Power Program. The sector is seeking consistency in Western Power's dealings with both levels of Government on this issue.

Findings and Recommendations

- *Greater transparency and regulatory oversight is needed in relation to customer funded relocation or upgrade of Western Power assets.*
- *Western Power should be required to discount the cost of street lighting removal and upgrades that are customer funded by the recognised depreciation of the asset.*

ⁱ Ironbark Sustainability, 2016. <http://www.ironbarksustainability.com.au/lighting/mav-street-lighting-program/>

ⁱⁱ WALGA, 2016. WA Rural & Regional LED Streetlighting Retrofit.

ⁱⁱⁱ Goldfields Voluntary Regional Organisation of Councils, 2016, *Unlocking the potential of energy efficiency within local governments: LED streetlight retrofit project Final Report*.

^{iv} Goldfields Voluntary Regional Organisation of Councils, 2016, *Unlocking the potential of energy efficiency within local governments: LED streetlight retrofit project Final Report*.