8 August 2018

Sebastian Roberts
General Manager, Networks
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3001
emailed to: NSW2019-24@aer.gov.au

Dear Mr Roberts,

**Re: Ausgrid Public Lighting Pricing Proposal 2019-24**

Thank you for the opportunity to comment on the public lighting aspects of Ausgrid's Regulatory Proposal for 2019 – 24. SSROC makes this submission in its roll of managing a Street Lighting Improvement Program on behalf of 29 councils served by Ausgrid in metropolitan Sydney, the Central Coast and the Hunter. These councils encompass approximately 90% of all the 250,000 street lights in Ausgrid's distribution area and about 40% of all the street lighting in NSW.

While most NSW public lighting is owned by DNSPs, it is councils which are empowered to provide this vital public service for the community. Councils must decide what areas of the public domain to light, to what level and in what manner to light it. In having responsibility for providing this service, councils have a consequent duty of care to ensure that it is delivered efficiently and effectively. Under Ausgrid's proposal, councils will spend more than $250,000,000 in the coming regulatory period on capital, maintenance and network distribution charges for public lighting. Councils therefore have a strong interest in this public lighting pricing determination by the AER and, at a time of rapid change in public lighting technology, a strong interest in the assumptions about technology embedded in Ausgrid's pricing proposal.

I would like to firstly acknowledge the significant effort that Ausgrid has made:

1. to improve the transparency of its public lighting proposal to the AER including most importantly providing working opex and capex models for consideration;
2. to conduct pre-submission consultation to walk SSROC through an early version of its pricing model and to seek feedback; and
3. to conduct transparent 2017 LED pricing negotiations during the inter-regulatory period which again involved disclosure of working pricing models and a willingness to

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fundamentally reconsider historic pricing assumptions (as noted by Ausgrid in Attachment 8.07 Section 4.3).

SSROC therefore commends Ausgrid's approach to the 2019-2024 pricing review as a significant improvement on previous pricing reviews. The increased disclosure and revised approach in this review serves to increase trust in both Ausgrid's pricing proposal and the review process. Public lighting customers across multiple jurisdictions have previously struggled with heavy redactions in non-working pricing models, unstated assumptions and generally asymmetric and incomplete information being available. This has resulted in highly contentious reviews and low confidence in previous pricing decisions amongst customers.

SSROC and councils may disagree with some aspects of Ausgrid's current proposal but are this time in a position to argue more cogently about the reasons and make positive suggestions about areas for improvement during the course of this pricing review.

Having reviewed Ausgrid's Regulatory Proposal and associated attachments on public lighting, SSROC asks the AER and Ausgrid to give consideration to following key points:

## 1) LOWEST TOTAL COST OF OWNERSHIP NOW CLEARLY DELIVERED WITH LED TECHNOLOGY

As acknowledged by Ausgrid in Attachment 8.07 Section 1.2 of its submission, *"LED technology provides significant reductions in energy consumption and minimises the life cycle costs ultimately borne by public lighting customers".* This is consistent with Commonwealth-sponsored work undertaken by the Institute of Public Works Engineering Australasia in their Street Lighting & Smart Controls Programme Roadmap[1] which found broadly that LED lighting achieved at least a 25% reduction in total long-term costs of ownership as compared to legacy public lighting technologies.

Non-LED public lighting, whether used for new or replacement lighting, can no longer be considered an efficient investment by DNSPs and continued installation of these legacy lighting technologies is not in the long-term interests of public lighting customers. SSROC therefore views that any public lighting proposals for use of non-LED technology as standard default lights are now inconsistent with the National Electricity Objective and should not be considered by the AER for approval in this next regulatory period.

In this context, SSROC welcomes Ausgrid's statement in its Regulatory Proposal Section 8.1.1 that, *"Ausgrid has adopted LED luminaires for all of its new and replacement installations."* However, while a range of LED pricing proposals are included in Ausgrid's submission, SSROC does not believe that this statement is currently correct nor does the proposal achieve this as an objective.

Noting the points above about the economic efficiency of LEDs and Ausgrid's stated objective to adopt LED luminaires for all new and replacement lighting (which councils strongly support), SSROC requests that Ausgrid withdraws pricing proposals for non-LED lighting and ensures in its revised proposal that LED pricing proposals are made for:

- **LED floodlights** which are not currently included in Ausgrid's proposal (only legacy lighting pricing proposals are included in Attachment 8.09 capex calculations);

[1] http://www.slsc.org.au/slsc-publications/slsc-roadmap

- **LED decorative lights** which are not currently included in Ausgrid's proposal (only legacy lighting pricing proposals are included in Attachment 8.09 capex calculations);
- **LED lights for main roads** which are included in Ausgrid's pricing but which SSROC queries in that:
  - LED technology proposed by Ausgrid and its pricing proposal is based on a 2014-15 Networks NSW Tender which only sought trial volumes of LEDs for main roads;
  - Neither councils nor NSW Roads & Maritime Services (which has a jurisdictional and financial interest in main road lighting) have been given an opportunity to comment on an updated specification for main road LEDs;
  - No subsequent open tender has been staged by Ausgrid for main road LEDs despite written undertakings to council General Managers to stage such a procurement process by mid-2017; and
  - Public lighting customers have not been given an opportunity to agree to new main road LED technology and pricing as an output of such a tender process.

Councils wish to ensure that main road LED offerings in particular are updated as quickly as possible to ensure both technical and commercial currency. SSROC and councils would therefore be pleased to work with Ausgrid on an updated main road LED specification as a matter of urgency.

## 2) TESTING OF REASONABLENESS OF THEORETICAL FAILURE RATES REQUIRED

As per Attachment 8.11, Section 2.4, Ausgrid has adopted theoretical lamp failure rates in preference to basing its modelling three other possible approaches modelled in Attachment 8.10. SSROC does not necessarily object to this but is unclear from the information provided by Ausgrid whether the modelling outputs based on theoretical lamp failure rates are broadly consistent with the total actual field repairs (eg whether total assumed repairs based on theoretical failure rates broadly equal total lamp failures + total photocell failures + total failures from all other causes excluding all failures resulting in capital replacements).

SSROC's understanding is that total annual fault rates (excluding luminaire faults resulting in capital replacements) are average 7.3% per annum in recent years and that this is declining with LED adoption increasing. However, SSROC cannot readily determine the implied total annual fault rates based on Ausgrid's modelling approach using theoretical lamp failure rates.

Of particular note are extraordinary maintenance price increases proposed for the following lamp types due to the assumed theoretical fault rates being applied in the model:

| LAMP TECHNOLOGY | 2018/19 PRICING | PROPOSED 2019/20 PRICING | PERCENTAGE INCREASE |
|---|---|---|---|
| **TF2*20** | $58.13 | $96.32 | $66% |
| **MBF1*250** | $54.45 | $127.61 | 134% |
| **MBF1*400** | $54.45 | $127.61 | 134% |
| **MBF1*42** | $44.40 | $51.08 | 15% |

Where very high theoretical fault rates of 15-46% per year appear to have been assumed for some legacy technologies in Attachment 8.10, SSROC queries whether there has been mathematical distortion created by declining populations.

Given the magnitude of some prics movements and the lack of a clear link to overall actual fault rates, SSROC believes that the reasonableness of Ausgrid's theoretical fault rates should be tested by the AER and SSROC would welcome further explanation from Ausgrid on this aspect.

## 3) PRICE IMPACTS UNCLEAR FOR CUSTOMERS

With the large maintenance price increases noted for some lamp types above, the price impacts of Ausgrid's proposal on individual customers are unclear. SSROC requests that the AER considers the potential for price shocks and would welcome further information from Ausgrid on this aspect.

## 4) NIGHT PATROLS NEEDED ON ALL MAIN ROADS

Night patrols are currently costed by Ausgrid for major traffic routes only and not for all main roads (category V lighting) as required under AS/NZS 1158 and hence required to maintain compliance with the NSW Public Lighting Code.

AS/NZS 1158 reasonably requires night patrols of all category V lighting both because of a lack of natural reporting parties on almost all main roads and because of the greater public safety risks of lighting outages on such roads.

SSROC believes that Ausgrid needs to patrol all category V lighting to achieve compliance with the NSW Public Lighting Code and this should therefore be included in its pricing model. Further, spreading the cost of night patrols across all lighting in its pricing model in Attachment 8.10 creates an inappropriate price distortion between residential and main roads.

## 5) LARGE COLUMN PRICING MOVEMENTS WARRANTS FURTHER REVIEW

Ausgrid capital charges for underground supplied dedicated street lighting columns increased by more than 100% in 2014/15 and are now proposed to decrease just over 25%. While welcoming the proposed decrease, SSROC questions the very large price movements for these high capital cost items.

SSROC has recently staged a tender for councils for a range of steel columns matching Ausgrid specifications as well as for the services of Accredited Service Providers able to install columns to Ausgrid specifications. Based on this, SSROC is of the view that current Ausgrid column charges are far too high and should be cut by something closer to 50%.

SSROC notes the high percentage of such columns in the Central Coast and Hunter. Councils in these regions face dramatically higher street lighting costs over time as large numbers of columns gifted by developers reach the end of their useful life and migrate to Ausgrid-funded columns. SSROC therefore encourages the AER to review this particular issue in some detail given the large price movements.

## 6) NEED FOR REVIEW OF CLAIMED RAB VALUES IN THE CONTEXT OF MINAMATA

In the context of the Minamata Convention which bans the production of mercury vapour lamps in most lamp producing countries from 2020, there is a specific need to review the RAB value claimed by Ausgrid with respect to its large legacy of mercury vapour lighting. Specifically, consideration should be given by the AER and Ausgrid as to whether an asset write-down is warranted due to obsolescence.

SSROC notes that:

- Ausgrid has one the of highest RAB values claimed for its public lighting assets yet, still has one of the largest remaining populations of obsolete mercury vapour lights on its roads that, in the case of main roads in particular, other utilities stopped using up to three decades ago.
- As the Commonwealth Department of the Environment and Energy recently reported[2], *"Global demand for HPMV lamps has significantly decreased as a result of countries ratifying the Convention: manufacturers in these countries are already switching to new lamp technologies. Australia does not manufacture HPMV lamps and some lamp importers are already reporting that sourcing these lamps is becoming challenging as a result of curtailed production overseas."* Irrespective of whether Australia now ratifies the Minamata Convention, the sourcing of mercury vapour lamps in the next few years looks increasingly challenging.
- Obsolescence and changes in technology are valid considerations under NSW ODRC guidelines in reconsidering the valuation of electricity distribution assets.
- When the AER did consider the RAB value of Ausgrid's street lighting assets in 2009, it proposed a substantial write-down. While this was overturned on appeal to the Australian Competition Tribunal, it was not the merits of the write-down that were overturned but the power of the AER to make this change under the transitional rules that applied at the time that were found to be lacking.
- Neither IPART (under its 'light-handed' approach in previous decisions) nor the AER (following the Australian Competition Tribunal decision of 2010 under transitional pricing rules) have been free to properly consider the fair value of historic Ausgrid street lighting assets at any point during past determinations.

  In view of the implications of the Minamata Convention and the clear technical obsolescence of the large legacy of Ausgrid mercury vapour lighting, the AER should carefully consider what scope it has to review Ausgrid's claimed RAB value prior to finalising this determination.

## 7) NEED FOR ENERGY ONLY TARIFF (eg 'RATE 3')

Ausgrid mentions in its proposal that customers have the option of installing lighting as a privately metered installation however, in a practical sense, this presents a significant barrier to future competition. Councils have advised SSROC that the typical cost of a secure metering enclosure in the public domain with associated footings and conduit is around $50,000. This cost frequently exceeds the net present value of the future energy charges for the lights to be connected to that meter. Metered lighting installations are

[2] The Minamata Convention on Mercury: What it means for Australian Street Lighting, Department of the Environment and Energy July 2018

therefore considered prohibitively costly by councils and only used when no other reasonable alternative exists.

Ausgrid used to offer an energy-only tariff where the light was on the public lighting inventory for energy billing purposes only and customers owned and maintained the luminaire. Some 'Rate 3' lights remain on Ausgrid's network and this tariff exists at other distributors.

SSROC supports the classification of public lighting by the AER as an Alternative Control Service but believes that a 'Rate 3' tariff is required to facilitate future competition in lieu of an approved small load metering regime that recognises the metering capabilities of smart street lighting controls. If the AER genuinely wishes to facilitate such competition, it should consider requiring that a 'Rate 3' tariff be offered by Ausgrid and other utilities.

## 8) OTHER ISSUES

SSROC has identified some more minor issues in the Ausgrid submission about the assumed LED maintenance cycle (various shown as 5 and 6 years), the flat assumed costs of PE cells across substantially different technology types and the apparently inconsistent assumed visor failure rates. SSROC will take these matters up directly with Ausgrid to seek clarification or revision prior to revised submissions.

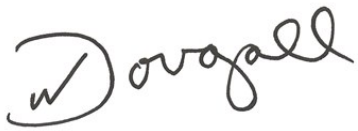
## 9) PRICING OF NEW TECHNOLOGIES IN THE INTER-REGULATORY PERIOD

A transparent and AER-approved pricing model with all formulas, associated assumptions and inputs visible to customers presents the best possible path to facilitating quick approval of new lighting technologies and pricing during the inter-regulatory period. SSROC can envision that reliance on such a transparent model would work well for approving new LEDs.

A more challenging issue is the forthcoming adoption of smart controls. Smart controls offer a variety of installation, asset management and maintenance cost savings but recognising these benefits would require changing a range of modelling assumptions. With large-scale mercury vapour installations coming in the 2019-2024 regulatory period, a mechanism to agree on the pricing and cost benefits of smart controls is needed. SSROC would be pleased to work with the AER and Ausgrid over the coming months to explore possible solutions that minimise complexity and delay for all parties while sending good pricing signals for important new technology that is being widely adopted overseas.

SSROC would welcome further discussion with Ausgrid and the AER on all of the above issues.

Yours sincerely,



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