



# Public Lighting Service Framework

August 2023



**Empowering** South Australia

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## Executive Summary

Public lighting is important for maintaining a safe visual environment for pedestrian, cyclist and vehicular movement during times of inadequate natural light. It is an essential service that promotes the safety of communities and roadway users and builds and creates a sense of place and presence.

SA Power Networks provides public lighting services to Councils and State Government agencies across the state. The delivery of public lighting services requires the ongoing maintenance, inspection, and operation of public lighting installations, and the design, procurement and construction of new public lighting installations as requested by public lighting customers.

The purpose of the document is to outline the levels of service SA Power Networks aims to deliver to customers and stakeholders and provide an overview of the public lighting services. It is intended to act as a high-level document outlining our commitment to working with key stakeholders to ensure we deliver public lighting services that our customers value.

The provision of public lighting services, and associated maintenance and replacement responsibility, is determined in accordance with asset ownership and arrangements in place with public lighting customers.

Public lighting customers can choose which service offering best suits their circumstances, including who funds the initial asset installation, future replacement, and depending on the tariff arrangement who is responsible for the operational maintenance of the assets once installed.

SA Power Networks' pricing proposal has been developed to continue to provide this flexibility in service offerings to our customers. The tariffs vary according to asset ownership and responsibilities with customer having the choice for higher or lower tariffs for capital and operational responsibility inputs.

SA Power Networks will continue to work with public lighting customers to undertake a number of strategies and initiatives to improve our public lighting services and ensure we deliver services that our customers value.

## Glossary

<b>ACS</b>	Alternative Control Services
<b>AER</b>	Australian Energy Regulator
<b>Cat P lighting</b>	Lighting designed principally for local roads to provide a safe and comfortable visual environment for pedestrian movement at night
<b>Cat V lighting</b>	Lighting designed principally for vehicular traffic eg traffic routes
<b>CLER</b>	Customer Lighting Equipment Rate
<b>Complex Fault</b>	Complex Fault means faults: <ul style="list-style-type: none"> <li>i. Where a site-specific traffic management plan and an additional dedicated traffic control crew are required; and/or</li> <li>ii. Where a specific authority for road occupancy is required; and/or</li> <li>iii. Where identification of an underground fault is required; and/or</li> <li>iv. Where access to private property is required.</li> </ul>
<b>DNSP</b>	Distribution Network Service Provider
<b>EO</b>	Energy Only
<b>ESCoSA</b>	Essential Services Commission of South Australia
<b>GSL</b>	Guaranteed Service Levels
<b>HID</b>	High Intensity Discharge
<b>Lamp</b>	Light globe
<b>LED</b>	Light Emitting Diode
<b>LGA</b>	Local Government Association
<b>Luminaire</b>	A complete lighting unit consisting of a lamp or lamps together with the housing designed to distribute the light, position and protect the lamps and connect the lamps to the power supply.
<b>NDS</b>	Negotiated Distribution Services
<b>PLAB</b>	Public Lighting Asset Base
<b>PLC</b>	Public Light Customer
<b>PLWG</b>	Public Lighting Working Group
<b>Public Lighting</b>	Any infrastructure that provides lighting for public areas including Streetlights and car park lighting.
<b>Public lighting customers</b>	Customers to whom we provide a public lighting service – predominantly Councils and State Government
<b>SAPN</b>	SA Power Networks
<b>SLO</b>	Single Light Out
<b>SLUOS</b>	Streetlight Use of System
<b>TFI</b>	Transferred Infrastructure

# 1. Introduction

Public lighting is important for maintaining a safe visual environment for pedestrian, cyclist and vehicular movement during times of inadequate natural light. It is an essential service that promotes the safety of communities and roadway users and builds and creates a sense of place and presence.

Public lighting services are defined as:

- The design and construction of new public lighting assets;
- The operation of public lighting assets, including handling enquiries and complaints about public lighting, and dispatching crews to repair public lighting assets;
- The maintenance, inspection, and repair of public lighting assets;
- The alteration and relocation of public lighting assets; and
- The management of public lighting assets, including renewal.

These services will provide a reliable and appropriate visual environment for pedestrians, cyclists and vehicles on our public roads and in public places.

## 1.1. Purpose of this document

The purpose of this document is to:

- Outline the levels of service SA Power Networks aims to deliver to public lighting customers.
- Provide an overview of the public lighting services and relationships.
- Detail the responsibilities of SA Power Networks and public lighting customers.

The framework is intended to act as a high-level document outlining our commitment to working with public lighting customers to ensure we deliver services that they value.

## 1.2. Relationship to other documents

There are a number of key documents relating to public lighting and the key purpose of other documents is outlined below.

### ***Tariff Agreement***

The commercial arrangements agreed between public lighting customers and SA Power Networks in respect to the ongoing provision and maintenance services are set out in the Tariff Agreement.

The Tariff Agreement includes (where relevant) the Construction Agreement, which covers the supply and installation of new lights.

### ***Network Information for Customers and Contractors (NICC402)***

The NICC provides an overview of the SA Power Networks requirements for a public lighting extension or upgrade that will be connected to SA Power Networks distribution network.

More information on design of public lighting proposals can be found in TS 101: Public Lighting – Design and Installation.

## 1.3. Our vision

SA Power Networks' primary objective is to deliver an excellent public lighting service that our public lighting customers value.

We will achieve this by:

- Developing a collaborative approach with our public lighting customers to understand their needs;
- Ensuring a coordinated approach to public lighting;
- Building relationships and trust through ongoing engagement with our public lighting customers;
- Delivering public lighting services that align with customer expectations and meet agreed levels of service; and
- Investigating and facilitating the adoption of emerging and smart technology.

## 1.4. Overview of SA Power Networks and its public lighting services

SA Power Networks provides public lighting services to Councils and State Government agencies across the state. The delivery of public lighting services requires the ongoing maintenance, inspection, and operation of public lighting installations, and the design, procurement and construction of new public lighting installations as requested by public lighting customers. These services are provided on a on a fee (tariff) basis depending on the service level required.

## 1.5. Legislative requirements and standards

### **Local Government Act 1999**

A Council's functions under the Act include providing:

- (a) services and facilities that benefit its area, its ratepayers and residents and visitors to its area; and
- (b) infrastructure for its community and for development within its area (including infrastructure that helps to protect any part of the local or broader community from any hazard or other event, or that assists in the management of any area).

One component of the infrastructure provided by councils in discharge of these functions is public lighting along streets and in other public spaces. Councils also have functions and powers with respect to undertaking roadwork, including the installation of street lighting.

### **Australian Standard AS/NZS 1158**

AS1158 is the standard for roads and public spaces and provides guidance on the design, manufacture and installation of road lighting for the safe use of roads by pedestrians, cyclists and vehicles.

Lighting is designed and installed based on the requirements of the responsible road authority including Councils and the relevant Government Departments. The road authority is responsible for the design and classification and the level of compliance to the standard based on their risk assessment.

### **Highways Act 1926**

Section 26 (11) of the Act states:

*If the Commissioner installs or causes the installation of street lighting in a district in the exercise of the Commissioner's powers under this section, the Commissioner may require the council to pay to the Commissioner for payment into the Highways Fund (by payments made at times specified from time to time by the Commissioner) half of the reasonable costs paid by the Commissioner to an electricity entity for the operation and maintenance of the lighting.*

## 1.6. Responsibilities

The majority of public lighting services in South Australia are provided by SA Power Networks, as the electricity distribution network service provider, with some services provided directly by public lighting customers.

At the highest level, the public lighting customer decides the lighting output required at any given location, designs/ pays for a lighting design to achieve this lighting level and then constructs/ pays for a third party to

construct the lighting. Although the asset may remain customer owned, depending on the tariff arrangement the public lighting customer may be required to engage with SA Power Networks to maintain or modify the light.

The provision of public lighting services, and associated maintenance and replacement responsibility, is determined in accordance with asset ownership and arrangements in place with public lighting customers.

SA Power Networks has funded the installation and provides a full maintenance service for approximately 85% of installed public lighting assets (poles and lights), with these lights charged SA Power Networks (SAPN) or Street Light Use of System (SLUOS) pricing. Public lighting customers or developers may fund the installation of new lights and gift the installed lights to SA Power Networks following completion, we will then assume full maintenance responsibility for the assets, including responsibility for future replacement of the asset at the end of its useful life, these lights are subject to a reduced Transferred Infrastructure (TFI) price. Alternatively, public lighting customers may choose to fund the installation of the assets and retain ongoing responsibility for maintenance and replacement of these assets. Our responsibility for these assets is administrative only, with the assets recorded in our Geographic Information System (GIS) and any faults received forwarded to the public lighting customer for their action, as a result these lights are charged an Energy Only (EO) price.

In some cases, SA Power Networks has agreed to maintain assets (including replacement of minor components (eg PE cells)) owned by the customer, with the customer retaining responsibility for the future replacement of all major public lighting asset components, these lights are charged Customer Lighting Equipment Rate (CLER) prices. With the introduction of LED lighting, a further service offering for Public Light Customer (PLC) was introduced, whereby we undertake routine maintenance of the public lighting assets and have responsibility for future replacement of public lighting infrastructure (poles), while the public lighting customer retains financial ownership of, and is responsible for, replacement cost of the luminaire.

**Table 1 - Public Lighting Maintenance and Replacement Responsibilities**

Service Category	Description	Ownership	Installation / Replacement	Operation and Maintenance
<b>SAPN / SLUOS</b>	SA Power Networks funds luminaire / infrastructure installation or upgrade	SA Power Networks	SA Power Networks	SA Power Networks
<b>TFI</b>	Lighting luminaire / infrastructure is transferred ('gifted' or 'vested') to SA Power Networks	SA Power Networks	SA Power Networks	SA Power Networks
<b>PLC</b>	Customer funds the luminaire installation or upgrade, which SAPN installs SA Power Networks funds the installation and upgrade of infrastructure SA Power Networks maintains assets over their life	Public Lighting Customer (Luminaire) SA Power Networks (Infrastructure)	Public Lighting Customer (Luminaire funding) SA Power Networks (Infrastructure funding, all installations)	SA Power Networks



Service Category	Description	Ownership	Installation / Replacement	Operation and Maintenance
<b>CLER</b>	Customer funds all public lighting assets SA Power Networks maintains assets (minor components only) over their life	Public Lighting Customer	Public Lighting Customer	SA Power Networks (minor components)
<b>EO (Energy Only)</b>	Customer funds and retains ownership of all public lighting equipment and maintenance responsibilities	Public Lighting Customer	Public Lighting Customer	Public Lighting Customer

### 1.6.1. SA Power Networks' responsibility

SA Power Networks is responsible for providing the following:

- Provide SAPN/ SLUOS, PLC, CLER and EO services to public lighting customers as requested.
- Use best endeavours to deliver public lighting services in accordance with the agreed public lighting service levels.
- Where a public lighting customer owns the public lighting assets and infrastructure, it is not required to take any public lighting service from SA Power Networks, however a database reporting public lighting faults for EO services is maintained.

### 1.6.2. Public lighting customers' responsibility

The obligations of public lighting customers will depend upon the service to be provided by SA Power Networks.

- The road authority is responsible for the design, classification and level of compliance of public lighting based on their risk assessment.
- Where lights are to be gifted to SA Power Networks, public lighting customers must ensure the lights installed are in accordance with SA Power Networks design and construction standards.
- SAPN/SLUOS services - the public lighting assets are owned by SA Power Networks and the only responsibility of the public lighting customer is to pay the relevant tariffs.
- PLC services – public lighting customer is responsible for funding the luminaire installation or upgrade, which will be undertaken by SA Power Networks.
- CLER services - the public lighting customer will be responsible for all maintenance of the public lighting assets except for the replacement of failed lamps which is undertaken by SA Power Networks.
- EO services - the maintenance of the public lighting assets is the responsibility of the public lighting customer (including replacement of failed lamps) and SA Power Networks' responsibility is to maintain a database relating to streetlights and record and inform customers of reported street light faults.

## 1.7. Environmental considerations

SA Power Networks is committed to prudent environmental management practices and to managing environmental risks associated with our activities in accordance with sustainability principles, good corporate citizenship, and regulatory and statutory requirements. Under its Environmental Policy Framework SA Power Networks ensures that environmental considerations are incorporated into all business activities as a fundamental part of sound management practice.

### 1.7.1. Recycling and disposal management

SA Power Networks will bear the cost of disposal of all redundant SLUOS luminaires, including SLUOS luminaires containing asbestos, and any of the minor vegetation we have trimmed during lighting maintenance, repairs or replacement.

Redundant luminaires and lamps will be managed in accordance with relevant environmental laws and in accordance with SA Power Networks' obligations in the Tariff Agreement. Subject to issues with asbestos, lamps are separated from redundant luminaires, and the separate components (i.e. lamps and luminaires) are each placed in special purpose bins that are processed by the relevant recycling contractors.

### 1.7.2. Asbestos

Handling of asbestos will be carried out under SA Power Networks' strict guidelines for handling of asbestos.

## 1.8. Customers and stakeholders

There are a number of organisations that have a key role in the provision or management of public lighting.

### **Local Government**

Local Government is a key stakeholder in public lighting and SA Power Networks will work collaboratively to deliver public lighting services. Under the Local Government Act, Councils are responsible for the provision of street lighting for all minor and many major roads within their Council area. Councils have the role of specifying the lighting category to be installed on roads (other than State roads which are managed by the Department of Infrastructure & Transport (DIT)) and public places. In addition, Council may be required to provide feedback and input for new standardised luminaires and columns.

All local Councils in South Australia are public lighting customers of SA Power Networks. The majority of public lighting on Council roads is owned and maintained by SA Power Networks. There are 68 Councils in SA, of which 19 are metropolitan Councils and 49 are rural or regional Councils, and public lighting services are provided to all of these Councils by SA Power Networks.

The **Local Government Association (LGA)** - the LGA is a membership organisation for all Councils in South Australia and is the voice of Local Government in the State. The LGA is created by Councils and all 68 Councils are members of the Association. The LGA provides leadership and advocacy to Councils on key issues affecting Councils and communities, including public lighting.

**Department of Infrastructure & Transport (DIT)** – DIT is the state government department responsible for the management of major arterial roads in South Australia. This management responsibility encompasses the provision of lighting on all DIT designated roads. DIT is generally responsible for the installation and maintenance on most Category V (vehicular) lighting on arterial roads. DIT is also responsible for public lighting on the main road network (arterial roads) in partnership with the local Council (recovers cost from Council where amenity to Council).

### **Regulators**

In addition, there are a number of regulators that regulate the public lighting industry or energy sector.

- **Office of the Technical Regulator (OTR)** – the OTR is responsible for technical and safety issues in the South Australian electricity supply industry, including public lighting services.
- **Essential Services Commission of South Australia (ESCoSA)** – ESCoSA regulates the energy industry in South Australia, including the licensing of electricity operations and establishment of service performance targets. ESCoSA has a service standard framework that will apply to SA Power Networks from 1 July 2025 to 30 June 2030.

- **Australian Energy Regulator (AER)** – the AER is the national economic regulator for electricity distributors, and classifies the services to be regulated and the form of regulation for those services and determines funding levels and charges based for 5-year regulatory periods. The AER has determined to continue to classify public lighting services as an Alternative Control Service (ACS) for the 2025–30 regulatory period, which is consistent with the classification of public lighting in other jurisdictions.. As an ACS, the AER will set price caps for public lighting services reflective of the efficient cost of providing the service.

### ***Retailers***

SA Power Networks informs the retailers of energy usage associated with public lighting and the retailers are responsible for billing public lighting customers for energy usage and SA Power Networks distribution use of system charges. (SA Power Networks bills public lighting customers for Streetlight Use of System and other public lighting services directly.)

### ***Other customers***

Un-metered public lighting is provided to a number of customers including Councils. Floodlighting assets are managed for Housing SA, Department of Education and for private customers such as Community, Lifestyle or Retirement villages, Ports Corporation and various other small customers.

Industrial and residential land subdivisions are ongoing throughout South Australia as the need for additional housing or industry is required. The lighting infrastructure is generally vested back to SA Power Networks if SA Power Networks' standard luminaires and associated equipment has been installed. If the developer has chosen non-SA Power Networks standard luminaires, the lighting infrastructure is vested to the public lighting customer.

### ***Community and residents***

Public lighting is a service provided by SA Power Networks on behalf of local government and DIT. However, the service is ultimately provided for the benefit of road users (including pedestrians and cyclists) and residents and businesses and provides safety, amenity, crime prevention and activation functions.

The provision of public lighting services requires SA Power Networks, DIT and councils to engage with residents and businesses on public lighting matters. SA Power Networks, DIT and councils will seek to clearly define respective roles and responsibilities, in order to ensure a high level of customer service and consistent messaging and communications are provided to residents and businesses.

Engagement with the broader community on service levels for public lighting will occur via the Public Lighting Working Group and the relevant council.

## **2. Engagement and communication with public lighting customers**

### **2.1. Public Lighting Working Group (PLWG)**

In December 2018, a Public Lighting Working Group was established to provide a representative group for public lighting customers to work with the LGA and SA Power Networks on public lighting. As DIT is also a key customer, the Department was also represented in the PLWG.

The group was established to:

- Provide a forum for listening and discussion with metropolitan, regional and rural Councils and DIT.
- Seek input from public lighting customers and stakeholders on the development of SA Power Networks regulatory proposal.
- Build mutual understanding and trust between the LGA, SA Power Networks and public lighting customers.
- Identify new service and product lines to add value to public lighting customers.

- Discuss current issues associated with public lighting services and opportunities for working more collaboratively with public lighting customers.

**Principles to guide our decision-making**

The PLWG committed to developing a set of principles to guide discussions and decision making. An independent facilitator was engaged to develop a set of principles.

The five principles developed were:

1. Commit the time to be collaborative
2. Sector wide versus individual
3. Equitable pricing for standard services
4. Progress over perfection
5. Looking backwards only to plan forwards



A bit more rationale for the principles is provided below:

<b>Commit the time to be collaborative</b>	Investment of time to develop shared understanding before coming to definitive resolution.
<b>Sector over individual</b>	The need to consider the sector’s needs versus individual public lighting customer or vested interests.
<b>Equitable pricing for standard services</b>	Finding an equitable way forward for all, regardless of location and demographics. While some public lighting customers choose to go beyond the standard service offer, this would be a user pays model, but when it is standard, then pricing should be equitable.
<b>Progress over perfection</b>	The need for future focus and the priority of shifting the technology forward as well as keeping up momentum, rather than striving for everything to be 100% perfect (80:20 rule).

<b>Looking backwards only to plan forwards</b>	The PLWG felt this was needed as a reminder as we look forward but recognise the past.
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## **2.2. How we will engage with our stakeholders**

### ***IAP2 Spectrum for Public Participation***

To ensure we effectively engage with our public lighting customers, SA Power Networks has adopted the Public Participation Spectrum approach developed by the International Association for Public Participation. This approach outlines the possible types of engagement that can be undertaken as part of the public participation process.

As the public progress through the spectrum there is an increase in the expectation of participation and types of engagement tools that can be implemented along the spectrum from inform to empower.

Based on this spectrum, the proposed levels of engagement for public lighting are outlined in the table below.

Table 2 - IAP2 public participation spectrum approach and how it may be applied for public lighting services

	INFORM	CONSULT	INVOLVE	COLLABORATE	EMPOWER
<b>Stakeholder/ customer participation goal:</b>	To provide customers with information on our public lighting services	To obtain feedback from customers for public lighting services	To work directly with key customers to ensure issues and expectations are understood and considered in developing public lighting services	To partner with key customers during all stages of the process, including the development of alternatives and solutions for public lighting	To place the final decision making in the hands of key customers
<b>Commitment to stakeholders/ customers:</b>	We will aim to keep you informed	We will aim to keep you informed, listen and acknowledge concerns and provide feedback on how influenced decisions or services	We will aim to work with you to ensure that your concerns and expectations are reflected in our services and provide feedback on how influenced decisions or services	We will aim to seek direct advice in developing solutions and incorporate your input into decisions or services as far as practicable	We will implement what you decide
<b>Example of opportunities or issues:</b>	<ul style="list-style-type: none"> <li>• ESCoSA requirements</li> </ul>	<ul style="list-style-type: none"> <li>• Outage Reporting</li> <li>• Regulatory Proposal</li> </ul>	<ul style="list-style-type: none"> <li>• Information Survey</li> <li>• Postage stamp pricing</li> <li>• Public Lighting Working Group</li> <li>• Design/ construction audit services</li> <li>• Billing and provision of spatial data</li> <li>• Maintenance reporting</li> </ul>	<ul style="list-style-type: none"> <li>• Annual Local Government Public Lighting Forums</li> <li>• Targeted workshops eg. asset management, new technology</li> <li>• Approach to:                             <ul style="list-style-type: none"> <li>- column pricing</li> <li>- decorative lighting</li> <li>- recovery period</li> <li>- luminaires</li> <li>- metro/regional pricing for luminaire installations</li> </ul> </li> <li>• Customer Portal</li> <li>• Emerging technology</li> </ul>	<ul style="list-style-type: none"> <li>• Final decision-making</li> <li>• SA Power Networks does not propose this level of participation for public lighting at this stage</li> </ul>

### 3. Public Lighting Inventory

#### 3.1. Overview

There are approximately 240,000 public lights across the state. This comprises:

- 206,000 on SA Power Networks infrastructure
  - 130,000 attached to our network grid 'Stobie poles' eg. lighting brackets
  - 76,000 on dedicated lighting columns
- 36,000 on public lighting customer infrastructure ie. Councils, State Government.

Each public lighting installation has several asset components:

- **Lamp:** Light globe that produces the illumination, lamps are mounted inside traditional (High Intensity Discharge (HID)) luminaires.
- **PE Cell:** Photo-electric cell which switches the light on in low light conditions.
- **Smart PE Cells:** Alternative PE Cell option to facilitate remote dimming, trimming, On/Off and real-time SLO notifications
- **Luminaire:** Distributes, filters or transforms the light transmitted from a light source, including lamps or LED modules.
- **Bracket:** Supporting structure to hold or extend the luminaire from a pole.
- **Pole / Column:** Elevates the luminaire assembly above the ground, may be distribution poles or dedicated lighting poles/ columns.
- **Cabling underground/ overhead tap:** Provides the power to the public light.

Public lighting follows two basic configurations:

1. The Public Light is mounted to a **Stobie Pole** via a bracket to a crossarm, the luminaire is attached to the bracket and wired through the bracket to the low voltage supply on the Stobie pole.

Typically, the luminaire is controlled via a PE cell or in older installations via switchwire.

2. The Public Light is mounted on a **Public Lighting column**, the luminaire is attached to the end of the column and wired down through the column (via an electrical cable) to a switch and fuse at the base of the column behind an inspection hatch. The wiring then continues down the column under the ground and then is connected to the electricity network via a LV service pit. Wiring between the column and pit is part of the public lighting assets.

Typically, the luminaire is controlled via a PE cell or in older installations via switchwire. Public lighting columns are either galvanised or powder coated and range in height from 4.5m to 10.5m. Public lighting cable is typically 2.5mm squared Copper Twin and 6.0mm<sup>2</sup> squared Copper Earth, although this may vary depending on age. Some wiring is in conduit, but the majority is not.

Two typical configurations are shown in the figures below.

Figure 1 - Typical Stobie pole mounted public lighting configuration

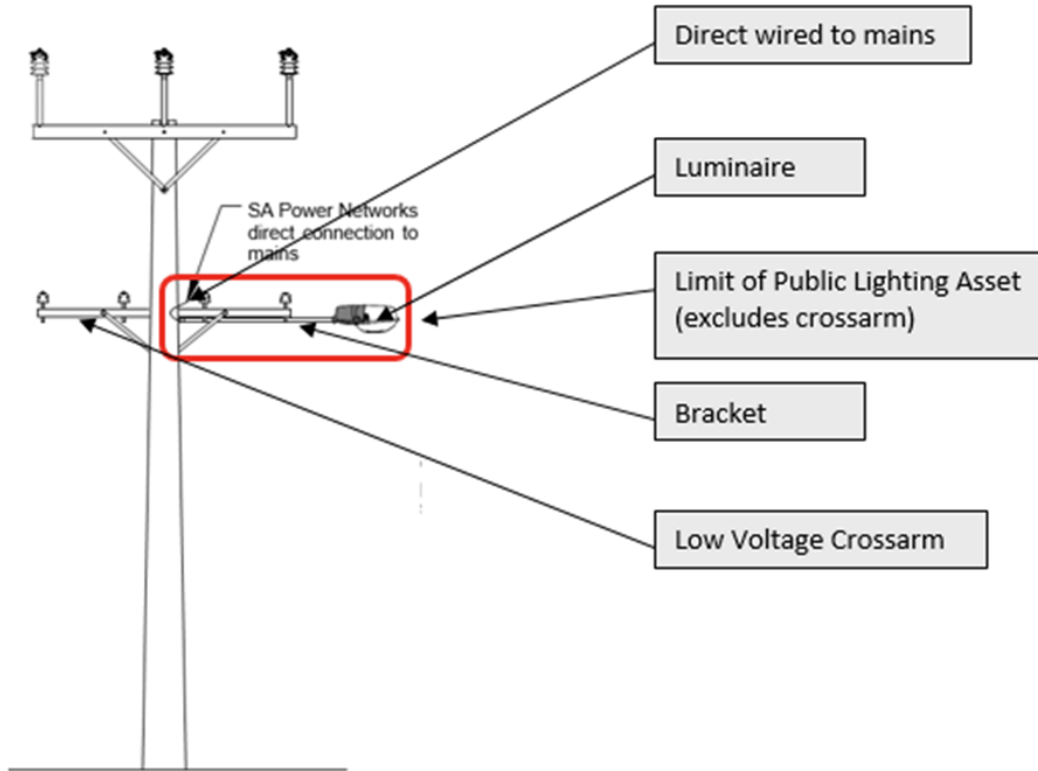
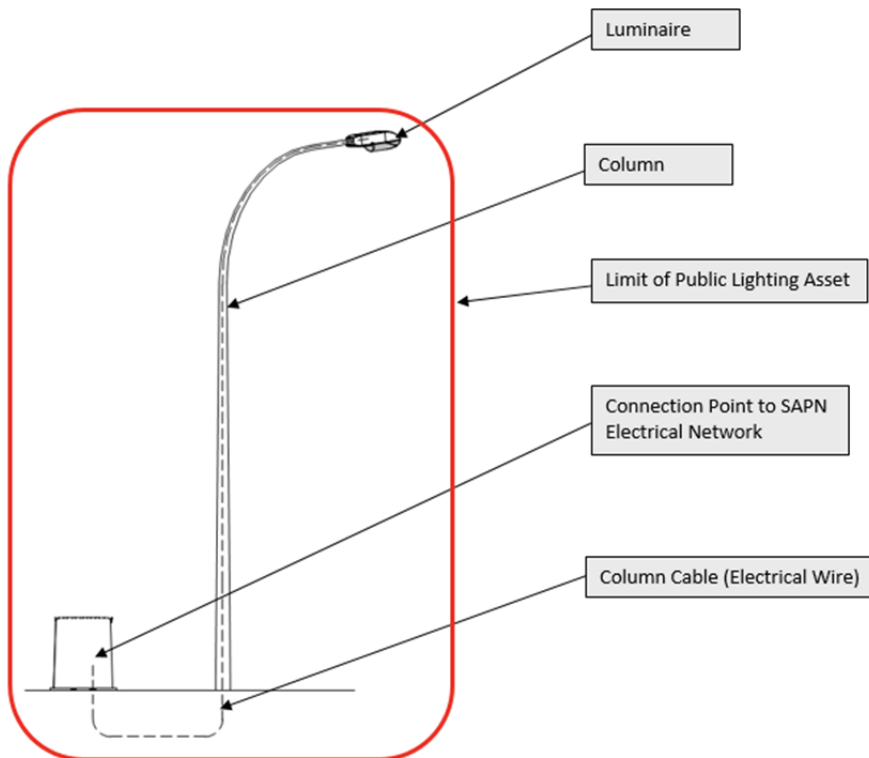


Figure 2 - Typical Column mounted public lighting configuration





Public lighting luminaires are categorised by the level of lighting intended to be provided in accordance with *AS1158:2005 Lighting for roads and public spaces* as follows:

- Vehicular traffic (V category): relate to arterial roads
- Pedestrian area (P category): relate to minor roads

SA Power Networks has a wide range of lamp types (globes) on the public lighting system. This has developed as technology changes have occurred and as trends have altered across the world. As at 1 July 2023, 138,000 (58%) of the luminaires installed have been upgraded to more energy efficient LEDs, providing improved energy and maintenance outcomes for our customers.

### **3.1.1. Public lighting assets**

Public lighting assets are assets which are dedicated to the function of providing lighting and are in essence comprised of the luminaire, a means of supporting the luminaire and wiring.

### **3.1.2. Luminaires**

As at July 2023 there were ~240,000 luminaires under management across the network.

With the LED rollout it is expected most, if not all, old technology luminaires will be replaced in the next 5 years.

### **3.1.3. Columns**

There are approximately 76,000 SA Power Networks owned public lighting columns and these range in mounting height, colour and outreach.

In addition, there are approximately 36,000 customer owned columns that support lights which SA Power Networks provides a service for.

### **3.1.4. Brackets**

There are approximately 119,000 public lighting brackets in service. Of those, 8,000 are Long Pipe brackets which attract a SLUOS (Street Light Use of System) tariff.

### **3.1.5. Cable (wiring)**

There are approximately 2,750km of underground public lighting wiring as well as overhead cable tap.

## **4. Public Lighting Services**

The provision of public lighting services, and associated maintenance and replacement responsibility, is determined in accordance with asset ownership and arrangements in place with public lighting customers.

Public lighting customers can choose which service offering best suits their circumstances, including who funds the initial asset installation, future replacement, and depending on the tariff arrangement who is responsible for the operational maintenance of the assets once installed. SA Power Networks' 2025-30 pricing proposal to the AER has been developed to continue to provide this flexibility in service offerings to our customers.

## 4.1. Basic Services

### 4.1.1. Maintaining lighting output

SA Power Networks is required to maintain lighting output by ensuring the lights are on and at the right illuminance. SA Power Networks will maintain the illuminance of each luminaire to the designed level at the time of installation – ie. standard of day not current standard, unless an alternative agreement is in place with our customers.

Maintaining lighting output is done in a number of ways:

- Illuminance and cleaning of lights
- Repairing Single Light Out (SLO) simple and complex faults in accordance with agreed service standards
- Physical testing
- Establishing and managing a system to allow reporting to owners of failed CLER and EO lighting.

Complex faults are defined as faults:

- i. Where a site-specific traffic management plan and an additional dedicated traffic control crew are required; and/or
- ii. Where a specific authority for road occupancy is required; and/or
- iii. Where identification of an underground fault is required; and/or
- iv. Where access to private property is required.

#### **Target Level of Service:**

- *Repair 95% of simple public lighting faults, for which we are responsible, within 5 business days and complex faults within 30 business days*
- *To maintain luminance output, luminaries will be cleaned as part of every lamp change for HID lights.*
- *To maintain LED luminance output, LED's are scheduled to be cleaned every 10 years. To validate the requirement to clean the LEDs, approximately 9,000 luminaires across the network are luminance checked on an annual basis. Should cleaning be required prior to the 10-year scheduled cleaning cycle to maintain light output, this will be done on a quoted charge basis.*

### 4.1.2. Outage Reporting

Public lighting faults are reported through our online SLO reporting tool or by phoning our call centre. Our aim is to rectify simple faults within 5 business days and complex faults within 30 business days.

Failures are reported via the Online SLO Reporting Tool, SA Power Networks does not inspect or patrol for lamp/ luminaire operability, completely relying on reporting from the public.

#### **Target Level of Service:**

- *An online reporting tool for members of the public and public lighting customers to report faults.*
- *Where a fault is reported, for which we are not responsible, we will notify the public lighting customer of the outage within one business day of receiving the outage report.*

### 4.1.3. Customer Portal – public lighting

A Customer Portal for public lighting has been successfully implemented which was developed in collaboration with public lighting customers. The portal provides a simplified way for all public lighting customers to obtain more information on public lighting e.g. Raise service requests for projects, updating asset data providing the ability to track work online, interact with assets and generate reports. It also provides

customers with the ability to access data on billing and tariffs which they then have the ability to flag where this information is incorrect, this partnership relationship with the asset data will continue to improve the data going forward.

Future enhancements will provide Public Lighting customers the ability to track and monitor SLO/maintenance; highlighting fault type, repair codes and duration of the fault. Digital acceptance/rejection of project quotes as well as accepting digital signatures and associated process enhancements. Process workflow automation for current portal functionality i.e auto data updates resulting in quicker processing times.

**Target Level of Service:**

- *An online portal platform for public lighting customers to raise and track service requests*
- *Live asset data available for customer self-reporting*

**4.1.4. Billing/ tariffs**

Public lighting customers have a number of basic needs in relation to billing and tariffs:

- Timely and accurate billing
- Timely and accurate billing of energy consumption
- Ability to seamlessly transition between relevant tariffs

To meet this requirement SA Power Networks provides a number of services:

- Bill issued to all public lighting customers on the 1st business day of the following month
- A full list of luminaires and locations are supplied with each bill
- Provide accurate details of luminaires and energy consumption (from load tables) to customers retailer
- Flexibility in facilitating transition arrangements to enable shift from HID to LED and SAPN LED to PLC tariffs.

The charges associated with the electricity supplying public lighting is invoiced to the public lighting customers by their nominated Retailer. The Retailer invoice also includes the regulated network supply charges referred to as the Distribution Use of System charges (DUoS).

**Target Level of Service:**

- *Invoices for public lighting services, specifying lamp types and volumes, will be issued by the 1st business day of the month, for the preceding month*
- *If tariff change requested, tariff to be changed once full payment of the residual capital has been made.*

**4.1.5. Asset Management**

SA Power Networks has a range of strategies in place to manage capital and maintenance work on public lighting assets. The following table provides an overview of the asset management strategies, including the provision of GIS information and providing a cost-effective service.

**Table 3 - Asset management strategies**

Item	Description
<b>Data</b>	Spatial data is provided to customers with each bill. These include data on the lamp types, numbers of lamp types and associated tariffs.
<b>Provision of power</b>	<ul style="list-style-type: none"> <li>• For SLUoS, SAPN &amp; PLC LED and TFI LED, SA Power Networks has full responsibility for site inspection.</li> </ul>

Item	Description
	<ul style="list-style-type: none"> <li>• For CLER, SA Power Networks will attend and determine if fault exists between luminaire and the connection point and notify customer of their responsibility to repair.</li> <li>• For EO lighting, a connection point is supplied, and SA Power Networks is responsible for keeping power to the connection point. This responsibility does not extend past the connection point.</li> </ul>
<b>Lighting elevated and structure maintained</b>	<ul style="list-style-type: none"> <li>• For SLUoS, PLC LED, SAPN LED and TFI LED SA Power Networks is responsible to inspect, maintain/ repair/ replace and restore (after accident) public lighting elevation structures. <ul style="list-style-type: none"> <li>- Public lighting columns will be inspected every 5 years in high corrosion zones and every 10 years in low corrosion zones.</li> <li>- Public lighting columns assessed with a condition rating of 'Extreme' will be scheduled for replacement.</li> </ul> </li> <li>• For CLER, SA Power Networks is not responsible for the structure but will attend an emergency, make the site safe and notify the customer.</li> </ul>
<b>Whole of life costs</b>	<ul style="list-style-type: none"> <li>• To minimise whole of life costs extensive testing on lighting assets is undertaken by our Standards Group prior to approval being given to install lights on to the network.</li> <li>• Analysis of performance of the public lighting fleet across reliability, longevity and lighting output reduction through cleanliness and general degradation of the LED allow SA Power Networks to determine optimal refurbishment / cleaning and renewal programs.</li> </ul>
<b>Warranty management</b>	<p>Asset information is stored with warranty information and a system is in place to ensure luminaires returned to manufacturers for warranty claims.</p>
<b>Asset Renewal</b>	<ul style="list-style-type: none"> <li>• The transition of HID to LED currently underway, asset renewal is driven in three ways: <ol style="list-style-type: none"> <li>1. Customer initiated (SAPN or PLC tariff)</li> <li>2. SA Power Networks unplanned (SLUOS HID, SAPN LED, PLC LED &amp; TFI LED), asset fails in service and is replaced with currently a SAPN LED</li> <li>3. SA Power Networks initiated (SLUOS HID), customer consulted, and agreement is reached with SAPN LED installed.</li> </ol> </li> <li>• Luminaires installed at time of renewal will be as per customer specification, where no specific specification exists the luminaire will be replaced like for like. SA Power Networks system allow each customer and each location to specify the luminaire that should be installed during renewal, more typically a general rule set is applied across a customer's fleet.</li> <li>• Managing the LED fleet with the expected much higher reliability and 20-year annuity tariff will be more analytical and consultative than the old HID fleet. SA Power Networks and customers both have the option at the completion of the 20-year annuity to renew the luminaire. For customers this may be for lower energy, different capabilities, aesthetics etc and for SA Power Networks this may be for improved reliability and cost of maintaining the asset. If both parties agree, the luminaires can remain in service until one party wants to renew. Additionally, if the luminaire was on a SAPN tariff it would automatically revert to a PLC tariff at 20 years as the annuity would have been paid off.</li> </ul>

**Target Level of Service:**

- *Public lighting columns will be inspected every 5 years in high corrosion zones and every 10 years in low corrosion zones.*
- *Public lighting columns assessed with a condition rating of 'Extreme' will be scheduled for replacement.*

#### **4.1.6. Reporting**

Public lighting customers have a few reporting requirements, which include understanding if SA Power Networks is delivering service levels and to report carbon / energy usage from public lighting.

SA Power Networks provides energy / carbon reporting to all major public lighting customers on an annual basis. In addition, a full list of luminaires and locations are supplied with each monthly bill.

**Target Level of Service:**

- *Public lighting asset data, including luminaire details and locations, will be provided to public lighting customers monthly.*
- *All public lights mapped in SA Power Networks' GIS system, with GIS data provided to public lighting customers as requested*

#### **4.1.7. Design / Construction / Audit**

SA Power Networks provides design and construction services for new lighting installations. Auditing services of public lighting assets is also provided.

**Target Level of Service:**

- *Provide quote for both simple transactions and more complex designs by an agreed number of days via the Public Lighting Portal.*

## **4.2. Value add services**

Public lighting technology is continuing to evolve, with the evolution of smart controls. We are working with smart city technology providers to develop a cost-effective and ongoing smart lighting/smart city management platform that we can roll out in South Australia. Smart street lighting with remote monitoring can automatically report failures, allowing faster maintenance and reduce operational costs. Smart controls can allow lights to be dimmed when streets are unused or ensure enhanced brightness for events or safety reasons.

## **4.3. Emerging services**

The AER classifies emerging public lighting technology as ACS. All new services eg LEDs or smart controls would be added and approved by the AER as part of our annual pricing approval process. The AER will not approve fee-based services within a regulatory control period, so all new services introduced mid period will need to be introduced as quoted services.

### **4.3.1. Smart lighting/ smart cities technology**

Smart cities technology is used to find innovative solutions in urban areas, provide sustainable solutions to meet urban challenges and improve liveability in cities and towns. One of the key objectives of this plan is smart technology and the introduction of energy efficient technology.

Smart street technology includes the following:

- Lighting with remote monitoring that automatically report failures, allowing faster maintenance and reduced operational costs.
- Smart controls or sensor-based units that allow lights to be dimmed when streets are unused or ensure enhanced brightness for events or safety reasons.
- Remote sensors to provide ongoing data about the use of council assets such as parks and main streets to support decision making on lighting needs and management.
- Installing multi-function streetlights fitted with touch screens and surveillance cameras that provide Wi-Fi, monitor traffic conditions.
- Installing solar panels on streetlights to generate energy.

A number of Councils and DIT in South Australia are considering 'smart city' opportunities and investigating technology to enable greater convenience and efficiencies in on demand smart lighting and energy conservation.

SA Power Networks will continue to work with public lighting customers to help them achieve their smart city goals. SA Power Networks will endeavor to facilitate customer initiated trials of new technologies and systems that are consistent with our safety and critical infrastructure security responsibilities.

Our strategy is to use the pilots and trials as the foundation for a framework of testing and engagement, for both technical and commercial requirements.

The trials will provide valuable practical experience with the trialing of various smart lighting technology options, in terms of management systems and how they can be used to further reduce energy consumption and (eventually) costs, through dimming, trimming, and constant light output, for example. SA Power Networks wants to explore the functionality offered for improving maintenance efficiency through alerts, reports and other asset management and monitoring. SA Power Networks will actively encourage public lighting customers to trial other devices and sensors, to understand how easy they are to integrate, and to compare the cost of alternatives.

It is also our intention to use these pilots and trials to better understand and strengthen the business case for smart lighting, by adding the value of electricity distribution network synergies, and by working with all stakeholders, including product development with suppliers, to get the best out of the technology.

## **4.4. Standards**

SA Power Networks has a variety of equipment available for public lighting. Our Technical Standards and Equipment Group is responsible SA Power Networks undertakes assessment, strategic development and integration of equipment onto the distribution network to provide a safe, cost effective and reliable network.

### **4.4.1. Luminaires**

SA Power Networks uses a variety of luminaires and equipment, dependent upon the location, road category and customer requirements. There is a large range of types and styles of luminaires on the Australian and international market which vary significantly in terms of price and quality.

In order to maximise value, while minimising total cost ownership, and ensure we maintain lighting compliance for customers, various equipment types and styles have been selected and are held on stock. The equipment list includes luminaires, lamps, outreach arms, columns and fixtures.

SA Power Networks also installs, upon request, flood lights (also called security lights) and several types are held on stock.

SA Power Networks will continue to investigate options and tender for supply for alternative lighting.

SA Power Networks has a range of standard luminaires and lamps held on stock. Further information can be found in the Network Information for Customers and Contractors (NICC402) and TS 101: Public Lighting – Design and Installation.

#### **4.4.2. Brackets**

As part of the standard equipment, SA Power Networks has specified several brackets. The longest of these, a long pipe bracket, is 6 metres long and is often used over wide intersections, to extend beyond the tree canopy in heavily vegetated streets and when the stobie pole is set back on a wide verge.

There are various other smaller outreach brackets available which have different height and extension lengths.

#### **4.4.3. Columns**

Luminaires are installed on stobie poles when available. In underground developments and where the power supply is underground, lighting columns are used. There are several standard types and sizes held on stock including 4.5m post top to 10.5m columns used for arterial roads.

Standard SA Power Networks columns are galvanised, black or green powder coated. However, SA Power Networks is not responsible for the ongoing performance of any powder coated finish. When public lighting customers request a different colour finish, they are permitted to do so subject to formally accepting the ongoing maintenance of the finish.

## **5. Pricing and Tariffs**

The public lighting service is funded via tariff arrangements where the cost is calculated for each luminaire type via a building block methodology. The tariffs vary according to asset ownership and responsibilities with customer having the choice for higher or lower tariffs for capital and operational responsibility inputs.

### **5.1. Regulatory process**

The Australian Energy Regulator (AER) has determined to continue to classify public lighting services as an Alternative Control Service (ACS) for the 2025–30 regulatory period, which is consistent with the classification of public lighting in other jurisdictions. As an ACS, the AER will set price caps for public lighting services reflective of the efficient cost of providing the service. This will provide some certainty to customers and every 5 years we will need to forecast costs and proposed prices and the AER will independently review.

### **5.2. Pricing methodology**

A building block approach is used to determine the efficient cost of providing public lighting services. This building block approach enables us to continue to support pricing flexibility and customer choice. Charges vary depending on the service package selected by public lighting customers.

There are five components used in determining public lighting prices – luminaire capital, luminaire operating, infrastructure capital, infrastructure operating, and administration and systems costs. The different components are discussed in more detail below and the components that apply to build up pricing for each service category are outlined in the table.

- **Luminaire capital** - the recovery of capital costs associated with the installation of new luminaires where SA Power Networks funds the installation, this is applicable for lights within the SAPN and SLUOS service categories.
- **Luminaire operating** - reflects the costs associated luminaire maintenance, including reactive SLO work, proactive inspection and cleaning, and bulk replacement activities.
- **Infrastructure capital** - provides for the return of and on the Public Lighting Asset Base (PLAB).
- **Infrastructure operating** - reflects the costs of completing column inspections, associated column repairs, and cable repairs resulting from SLO faults.
- **Admin and systems** - reflect the administrative costs directly attributed to provision of public lighting services, including systems and GIS data maintenance, SLO reporting, customer management, and asset management functions.

Table 3: Price components applicable to each service category

Component	EO	CLER	PLC	TFI	SAPN	SLUOS
<b>Luminaire Capital</b>					✓	✓
<b>Luminaire Operating</b>		✓	✓	✓	✓	✓
<b>Infrastructure Capital</b>			✓	✓	✓	✓
<b>Infrastructure Operating</b>			✓	✓	✓	✓
<b>Administration &amp; Systems</b>	✓	✓	✓	✓	✓	✓

### 5.3. Tariffs

The provision of public lighting services, and associated maintenance and replacement responsibility, is determined in accordance with asset ownership and arrangements in place with public lighting customers – as set out in Section 1.6 of this document.

SA Power Networks has funded the installation and provide a full maintenance service for approximately 85% of installed public lighting assets (poles and lights), with these lights charged SA Power Networks (SAPN) or Street Light Use of System (SLUOS) pricing. Public lighting customers or developers may fund the installation of new lights and gift the installed lights to SA Power Networks following completion, we will then assume full maintenance responsibility for the assets, including responsibility for future replacement of the asset at the end of its useful life, these lights are subject to a reduced Transferred Infrastructure (TFI) price. Alternatively, public lighting customers may choose to fund the installation of the assets and retain ongoing responsibility for maintenance and replacement of these assets. Our responsibility for these assets is administrative only, with the assets recorded in our GIS system and any faults received forwarded to the public lighting customer for their action, as a result these lights are charged an Energy Only (EO) price.

In some cases, SA Power Networks has agreed to maintain assets (including replacement of minor components (eg PE cells)) owned by the customer, with the customer retaining responsibility for the future replacement of all major public lighting asset components, these lights are charged Customer Lighting Equipment Rate (CLER) prices. With the introduction of LED lighting, a further service offering for Public Light Customer (PLC) was introduced, whereby we undertake routine maintenance of the public lighting assets and have responsibility for future replacement of public lighting infrastructure (poles), while the public lighting customer retains financial ownership of and is responsible for replacement cost of the luminaire.

Tariffs will be determined for each of these services.



## 5.4. Tariff Agreements

The commercial arrangements agreed between public lighting customers and SA Power Networks in respect to the ongoing provision and maintenance services are set out in the Tariff Agreement.

The Tariff Agreement includes (where relevant) the Construction Agreement, which covers the supply and installation of new lights.

## 6. Implementation and Review

### 6.1. Strategy and actions 2025-30

This section outlines the strategies and initiatives that SA Power Networks is proposing to undertake to improve our public lighting services and ensure we deliver services that our public lighting customers value.

The following strategies will be developed in consultation with public lighting customers over the next five-year regulatory period.

Action	Description	Timeframe	Responsibility
<b>Customer Portal</b>	Further enhancements to the public customer portal for public lighting	Stage 1 – 2020-25 Stage 2 – 2025-30	SA Power Networks in collaboration with public lighting customers
<b>Smart lighting trials</b>	Trials of smart lighting and new technology	Ongoing	SAPN in collaboration with public lighting customers
<b>LED rollouts</b>	LED rollouts		
<b>Levels of Services</b>	Evolving our levels of Service to ensure delivering what customers want	2025	SA Power Networks in collaboration with public lighting customers
<b>Ongoing engagement with customers</b>	PLWG – continue the PLWG and review ongoing role, purpose and structure	June 2020	LGA/SA Power Networks/ Public lighting customers

### 6.2. Monitoring and review

This framework will be reviewed every five years, prior to the next regulatory control period, to promote opportunities for continual improvement on how we deliver public lighting services.

### 6.3. Dispute resolution

Disputes may arise from decisions made by SA Power Networks in carrying out its responsibility in the provision of public lighting services.

Resolving grievances is important to SA Power Networks and we will endeavour to resolve any dispute with those affected in accordance with our Complaint Management Process.

SA Power Networks aims to respond to or acknowledge all complaints or enquiries within five business days via the most practical and time efficient medium, whether this be via written correspondence, email, telephone, or social media.

If you are not satisfied that SA Power Networks has satisfactorily resolved an issue, the matter can be referred to the Energy and Water Ombudsman of South Australia:

- Energy and Water Ombudsman SA  
Level 12, 50 Pirie Street  
Adelaide SA 5000  
GPO Box 2947  
Adelaide SA 5001

Tel: 1800 665 565

Email: [contact@ewosa.com.au](mailto:contact@ewosa.com.au)

Website: [www.ewosa.com.au](http://www.ewosa.com.au)

The Energy and Water Industry Ombudsman is a totally independent industry body and will act as a mediator between the customer and SA Power Networks. This service is free of charge.

## **6.4. Benchmarking**

SA Power Networks will continue to compare its services and prices to those offered by other providers.

Benchmarking with other utility providers in Australia is important to understand interstate trends and improvements in public lighting to ensure we continue to implement best practice public lighting in South Australia. We will undertake trials and ensure ongoing dialogue with our public lighting customers and industry bodies to ensure the services provided to public lighting customers in South Australia are aligned with industry best practice.

## Attachment A - Target Levels of Service

Customer requirement	SA Power Networks service	KPI / SAPN response
<b>Ability to report public lighting not meeting basic requirements</b>	<p>General Enquiries Help Line</p> <p>Single Light Out Online Reporting Tool</p> <p>EO light owners are notified of the SLO and the online reporting tool resets in 5 days.</p>	<p>Call Centre provided 131261</p> <p>Reporting tool provided and operational  <a href="https://slo.apps.sapowernetworks.com.au/">https://slo.apps.sapowernetworks.com.au/</a></p>
<b>To receive a public lighting bill within 30 days of the billing period that describes the lighting asset and associated tariffs that makes up the bill.</b>	SA Power Networks bill issued by the 1st working day of the month for the preceding month and contains the lamp types, numbers of lamp types and associate tariffs.	12 bills sent per year in month succeeding the billing period.
<b>Ability to quickly and easily change between tariff types (for example changing from SAPN LED to PLC LED tariff)</b>	Future 1: LED tariffs types shown on bill, customer manually requests – via email these PLs be transferred to PLC. SA Power Networks creates invoice and sends to customer, on payment tariffs change.	<p>Invoice sent to customer within 30 days of request</p> <p>Tariff changed when full payment received.</p>
<b>To calculate the energy usage of the public lighting in their area of responsibility and send this data to their nominated energy retailer.</b>	Utilising the Asset Data for the public lighting, SA Power Networks tabulates all the lamp types in the customers area and applies the AEMO load table values per lamp creating an energy usage table for the customer. This is sent to the customers retailer.	<p>12 Energy usage reports sent to retailer on a monthly basis.</p> <p>System under oversight and audited by ESCoSA.</p>
<b>To understand geospatially the location of public lights in their area of responsibility and get this data in a format that can be used with their GIS / Asset Management systems</b>	All Public Lights are mapped in SA Power Networks' GIS system. This data is maintained and provided to customers on request or annually.	GIS file sent to customers on request.
<b>To understand / report carbon / energy usage from public lighting in their area of responsibility</b>	On an annual basis provide energy / carbon reporting to all major customers.	Available as requested
<b>Power is provided to public lighting assets</b>	<p>EO lighting has a connection point supplied, SA Power Networks responsibility is to keep power to the connection point and does not extend past connection point.</p> <p>CLER and PLC LED, SA Power Networks will attend and determine if fault exists between luminaire and the connection point and notify customer of their responsibility to repair.</p> <p>SLUoS, SAPN LED and TFI LED SA Power Networks has full responsibility to repair and restore power to public lighting. (including cable faults)</p>	Forms part of lighting performance below.

Customer requirement	SA Power Networks service	KPI / SAPN response
<b>Light output of each public light is at 70% of original output for HID luminaires and 80% for LED lighting.,</b>	<ul style="list-style-type: none"> <li>• Bulk PE Cell change</li> <li>• Repair simple SLO reports in 5 working days and complex faults in 30 working days.</li> <li>• Change of luminaire if failed for SLUoS, SAPN LED and TFI.</li> <li>• Reporting to owners of failed CLER and PLC LED lighting.</li> </ul>	<ul style="list-style-type: none"> <li>• Reported 12x monthly reporting, 1x annual performance review.</li> <li>• Reported 12x in monthly reporting.</li> <li>• Systems in place to notify.</li> </ul>
<b>Public Lighting service provided cost effectively</b>	<ul style="list-style-type: none"> <li>• Warranty management, asset information stored with warranty information and system in place to ensure luminaires returned to manufacturers for warranty claims.</li> <li>• Minimise whole of life costs by extensive testing on lighting asset prior to approval onto network.</li> <li>• Maximising economies of scale (by limiting lighting options per class) and leveraging purchasing power to minimise capital costs.</li> <li>• Providing common systems to all customers</li> </ul>	<ul style="list-style-type: none"> <li>• Lighting asset in SAP.</li> <li>• Standards Group systems.</li> <li>• Procurement group systems – namely tendering processes.</li> </ul>
<b>Public lighting is elevated and this elevation structure is correctly maintained to minimise risk to the public.</b>	<ul style="list-style-type: none"> <li>• For CLER, SA Power Networks does not have responsibility for the structure other than attending an emergency and making the site safe and notifying the customer.</li> <li>• For SLUOS, SAPN LED, PLC LED and TFI LED SA Power Networks has full responsibility to inspect, maintain / repair / replace and restore (after accident) public lighting elevation structures</li> <li>•</li> </ul>	
<b>Understanding the Public Lighting asset</b>	<ul style="list-style-type: none"> <li>• Future – SA Power Networks to provide access to PL asset information from SAP.</li> </ul>	
<b>Contact for general enquiries relating to Public Lighting</b>	<ul style="list-style-type: none"> <li>• Attend to asset condition enquiries.</li> <li>• Attend to enquiries raised by residents/constituents for Council, MP's etc.</li> <li>• Attend to enquiries relating to legal issues pertaining to lighting (e.g. vehicle collisions etc.)</li> </ul>	
<b>Contact for designs</b>	<ul style="list-style-type: none"> <li>• Designs to AS1158</li> <li>• Lighting audits</li> <li>• Construction</li> <li>• Project management</li> </ul>	
<b>Want limited / no involvement in the O&amp;M management of public lighting in their area of responsibility</b>	<ul style="list-style-type: none"> <li>• Replacement of a failed luminaire (for any reason) with modern equivalent at no cost to customer.</li> </ul>	<ul style="list-style-type: none"> <li>• 12x Monthly reporting of luminaire replacement per year</li> </ul>

## Attachment B – Service driven pricing parameters

Basic Service	Description	Parameters
<b>Maintaining lighting output</b>	Repair 95% of simple public lighting faults, for which we are responsible, within 5 business days and complex faults within 30 business days	<ul style="list-style-type: none"> <li>Historical fault rate by light type</li> </ul>
	Replace LED PE Cells every 10 years, with cleaning	<ul style="list-style-type: none"> <li>LED PE Cell – 10 Years</li> </ul>
	To maintain LED luminance output, LED's are scheduled to be cleaned every 10 years. To validate the requirement to clean the LEDs, approximately 9,000 luminaires across the network are luminance checked on an annual basis. Should cleaning be required prior to the 10-year scheduled cleaning cycle to maintain light output, this will be done on a quoted charge basis	<ul style="list-style-type: none"> <li>LED's cleaned every 10 years</li> <li><i>To validate the requirement to clean the LEDs, approximately 9,000 luminaires across the network are luminance checked on an annual basis</i></li> </ul>
<b>Asset Management - Lighting elevated and structure maintained</b>	Inspect, maintain, repair, replace and restore (after accident) public lighting elevation structures	<ul style="list-style-type: none"> <li>Inspected columns in high corrosion zones every 5 years and low corrosion zones every 10 years.</li> <li>Columns assessed with a condition rating of 'Extreme' will be scheduled for replacement</li> </ul>