

# Appendix 20A

## Public lighting services

**Draft Electricity Distribution Regulatory  
Proposal – 1 January 2021 to 31  
December 2025**

**PUBLIC**

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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**Table of contents****Contents**

<b>1</b>	<b>Executive summary.....</b>	<b>3</b>
<b>2</b>	<b>Background .....</b>	<b>5</b>
<b>3</b>	<b>Our current services and fees.....</b>	<b>6</b>
<b>4</b>	<b>Safer and more efficient lighting.....</b>	<b>8</b>
4.1	Phasing out hazardous mercury lights .....	8
4.2	Phasing out obsolete lighting .....	8
<b>5</b>	<b>Proposed lighting fees and overall cost impact.....</b>	<b>10</b>
<b>6</b>	<b>How to provide feedback.....</b>	<b>14</b>

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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## **1 Executive summary**

This document sets out AusNet Services' draft plans for public lighting services for the 2021-2025 regulatory period. It has been written to help Councils, to whom we provide these services, and interested local community groups engage with our draft plans and to seek their views on the key features of our proposal. Details of how to respond to this document are provided in section 6.

In addition to this consultation paper, AusNet Services will host a public lighting workshop to discuss these plans with customers and stakeholders on 27 February 2019. Details of how to register for the workshop are provided at the end of this paper.

Public lighting fees are ultimately reflected in Council rates and comprise the following:

- Cost of replacing public light lanterns and poles (Capex). Representing 12% of public lighting costs in 2020 and 19% of costs in 2025.
- Ongoing cost of operating and maintaining public lights (Opex). Representing 25% of public lighting costs in 2020 and 31% of costs in 2025.
- Energy cost for public lighting including use of network, retail and wholesale generation costs. Representing 63% of public lighting costs in 2020 and 50% of costs in 2025.

In developing our draft plans, we have undertaken a detailed review of our model for setting our public lighting fees. As part of this review, a number of key assumptions in our model have been updated to more accurately reflect the efficient costs of providing public lighting services. These costs are consistent with our competitively tendered market rates and actual lighting fault rates. By more closely aligning the fees for the provision of public lighting with our actual costs, Councils are better placed to make efficient investment decisions on initiating bulk replacement programs and the efficiency of our public lighting services can be improved.

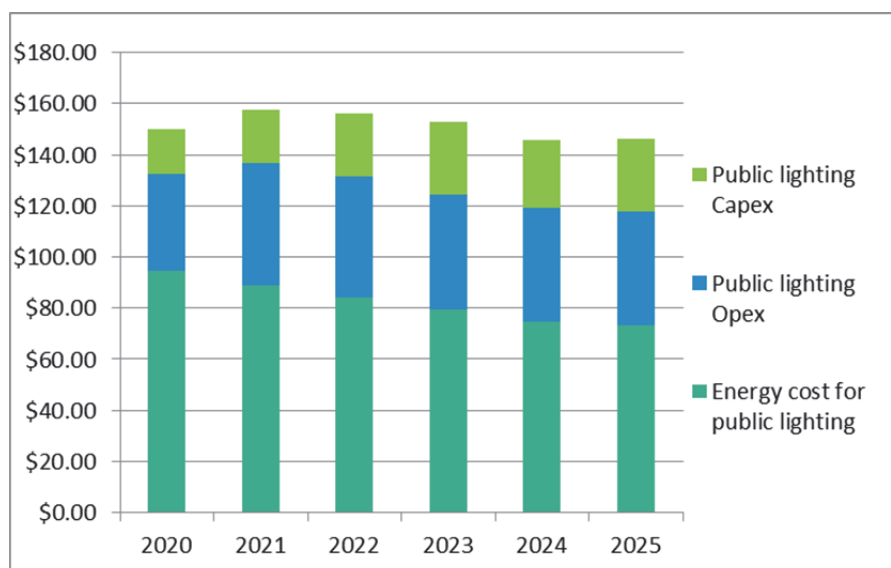
AusNet Services has been working with Councils over the past decade to reduce greenhouse emissions and lighting costs by facilitating the replacement of Mercury Vapour public lights with more energy efficient lights. Councils' investment in energy efficient lights over since 2011 have reduced their overall public lighting cost, in terms of reduced energy consumption and lower public lighting charges. In the coming period, the effects of aligning fees with our actual costs and making a significant investment in replacing obsolete lights with energy efficient LED lights will mean individual lighting fees will need to increase significantly.

However, the overall public lighting cost impact on Councils is expected to be much lower and by the end of the regulatory period reducing to pre-2021 average costs per light. This reflects our detailed review of our model and plans to replace more than 29,000 Mercury Vapour public lights during the 2021-25 period with more energy efficient LED lights. Councils will benefit from the lower maintenance and energy lighting fees that are charged for these replacement lights, with cost savings to continue into future periods.

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

Our analysis shows that the cost per light will reduce in real terms from 2020 to 2025, following an initial increase in 2021, which reflects updated bulk replacement and maintenance cost assumptions. The bar graph below shows the comparison of lighting cost components and impact of the bulk replacement costs and energy savings from 2020 to 2025<sup>1</sup>. Our investment in efficient lighting will reduce more than 10 thousand tonnes of carbon dioxide per year from 2024<sup>2</sup>.

### Average total public lighting costs, expressed as \$ per light, 2020 to 2025 (real 2018 \$s)



We look forward to working with the Councils, our stakeholders and the AER to ensure that the plans we submit in July 2019 reflect the best possible price-service offering for public lighting services. We also want to make sure that Councils are aware of the opportunities that are available to them to manage their public lighting costs.

<sup>1</sup> AusNet Services public lighting charges separated into Capex and Opex price components, and energy cost for public lighting include wholesale energy, distribution network use of system charges, and retail charges.

<sup>2</sup> Assuming a carbon emissions intensity of 1.08 kg CO<sub>2</sub> per kWh for electricity consumed in Victoria, Department of Environment and Energy, National Greenhouse Accounts Factors, July 2017, p20

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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## 2 Background

AusNet Services owns and operates one of the five distribution networks in Victoria. Our electricity distribution network serves urban and rural areas. As shown in the map below, we cover the fast growing outer northern and eastern Melbourne metropolitan area and the eastern part of the State up to the border with New South Wales.



Our electricity distribution network serves around 735,000 customers, which is 25% of all electricity customers in Victoria. We also own and operate 150,000 public street lights for Councils and road authorities. Most of our customers are households (around 90%). Our network also supports many critical institutions such as rail and water utilities, universities and hospitals and diverse industries such as large manufacturing and farming.

We provide a range of distribution services to our customers. The services include: connecting new customers and new solar systems to the network; resolving customer enquiries; responding to storms and emergency events; managing and monitoring the network 24/7; repairing and replacing network equipment; and cutting vegetation and trees away from lines.

This document is focused on our draft plans for public lighting services for the next regulatory period, covering the period from 1 January 2021 to 31 December 2025. Our final public lighting plans must be submitted to the AER by 31 July 2019 for review, and the AER will make its decision by October 2020.

We are seeking input from our customers and stakeholders on our public lighting plans now, so that we can take this feedback into account in finalising our plans. A separate document has been prepared that focuses on our draft plans for the distribution network services we provide to our business and residential customers.

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

### 3 Our current services and fees

AusNet Services provides public lighting services in accordance with the Victorian Public Lighting Code, which is available on the Essential Services Commission web site, [www.esc.vic.gov.au](http://www.esc.vic.gov.au). The services we provide are:

- Operation, maintenance, repair and replacement of both shared and dedicated public lighting assets;
- Installing new public lights; and
- Alteration and relocation of public lighting assets.

Different public lighting fees apply for the Central Region<sup>3</sup> and for the North and East Region<sup>4</sup>. The regional fees reflect the higher costs of providing lighting services in the North and East region, which is characterised by lower light density areas and therefore requires greater distances to be travelled by contractors and service agents. Our current fees for our most commonly used lights are set out in the table below. Also included are the average public lighting fees across other Victorian distribution networks<sup>5</sup>. A full price list for our lighting services is available on our website<sup>6</sup>.

#### Public lighting fees for 2018 (\$ per year per light)

	AusNet Services Central Region	AusNet Services North & East Region	Average 2018 fee across other Victorian distribution networks
Mercury Vapour 80W	40.81	46.44	60.67
HP Sodium 150W	98.52	112.20	101.46
HP Sodium 250W	99.49	110.95	101.73
T5 2X14W	34.81	39.61	40.43
LED 18W	16.59	17.02	27.90
Compact Fluorescent 32W	30.89	35.25	38.32

Our current charges were set by the AER, following a detailed review of the fees charged by the five Victorian distributors during the 2016-20 revenue determination process. Using its public lighting charging model, key inputs were benchmarked across the distributors so that consistent assumptions and costs were adopted. While this achieved consistency, the AER acknowledged in its decision that<sup>7</sup>:

*...public lighting charges will always vary somewhat amongst the five Victorian distributors because of each distributor's particular circumstances (size of asset base, geographic patch to cover, mix of luminaire types, among others). We have previously explained this in prior public lighting determinations.*

3 Central Region comprises the local Government areas of Banyule, Cardinia, Casey, Darebin, Frankston, Greater Dandenong, Hume, Knox, Manningham, Maroondah, Nillumbik, Whittlesea and Yarra Ranges.

4 North East Region comprises the local Government areas of Alpine, Bass Coast, Baw Baw, Benalla, Bogong Trading Company, East Gippsland, Falls Creek Resort, Indigo, La Trobe, Mansfield, Mitchell, Moira, Mount Buller Resort, Murrindindi, South Gippsland, Strathbogie, Towong, Wangaratta, Wellington and Wodonga.

5 Australian Energy Regulator, final decision, various distribution determination 2016 to 2020, Public lighting models, May 2016

6 <https://www.ausnetservices.com.au/Misc-Pages/Links/About-Us/Charges-and-revenues/Network-tariffs>

7 Australian Energy Regulator, final decision, AusNet Services distribution determination 2016 to 2020, Attachment 16 – Alternative control services, May 2016, page 13.

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

Our experience during the current regulatory period is that our approved fees have not been sufficient to cover our annual costs, predominantly as a result of the following two input assumptions in the approved public lighting charges model:

- Our bulk replacement costs were under-estimated and did not include OH&S requirements on public lighting works. Our actual costs were more than double the previously approved forecast; and
- Our actual fault rates of efficient lighting exceeded the model's assumptions.

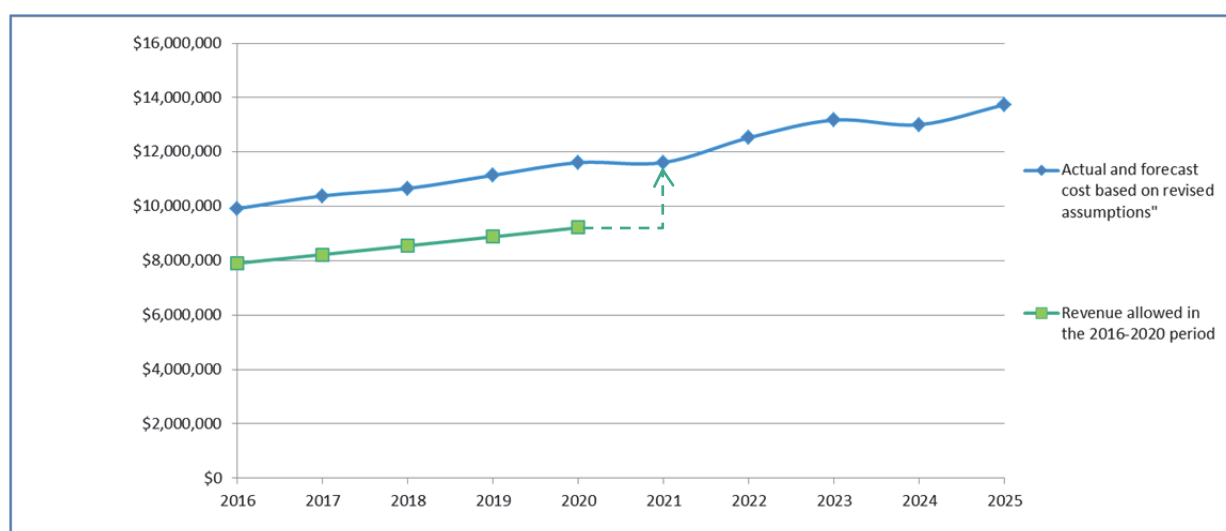
Currently, our public lighting annual revenue is, and forecast to be, on average approximately \$2.2 million or around 20 per cent below our annual costs, as shown in the table below.

### Public lighting services – Annual revenues and costs for 2016 to 2020 (real 2018 \$s)

	2016	2017	2018	2019	2020
Revenue	\$7,906,938	\$8,227,057	\$8,551,769	\$8,879,287	\$9,216,971
Cost	\$9,918,087	\$10,385,819	\$10,659,969	\$11,143,068	\$11,607,751
<b>Loss</b>	<b>\$2,011,149</b>	<b>\$2,158,762</b>	<b>\$2,108,200</b>	<b>\$2,263,781</b>	<b>\$2,390,781</b>

Over the current five year regulatory period we expect our total public lighting revenues to be approximately \$11 million below our total costs. Our revenue shortfall in the 2016-2020 period is illustrated by the gap between our costs (the blue line) and our revenues (the green line) in the figure below. Our revenues will need to increase in 2021 (shown by the green arrow) in order to bridge this gap.

### Historical shortfall in public lighting revenues (real 2018 \$s)



Like any commercial business, we must accept the financial consequences if prices have been set too low. We cannot recover the historical losses of \$11 million incurred during the current regulatory period. Equally, however, no commercial business can continue to provide services at a loss.

We are seeking to amend our public lighting fees for the 2021-25 regulatory period so that we can recover our efficient costs in the future. As a result, our forecast average revenue will need to increase by 8% per annum. As explained in the next section, however, our public lighting fees will also reflect the changing operating environment, which will lead to the provision of safer and more efficient public lighting services. The introduction of more efficient lighting will moderate the impact of our fee increase on Councils, as energy consumption will be lower than is currently the case.

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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## **4 Safer and more efficient lighting**

### **4.1 Phasing out hazardous mercury lights**

Under the Public Lighting Code, we must maintain public lighting assets in accordance with minimum standards. This includes replacing fittings and lights when required, and providing bulk replacement and patrol programs. When an obsolete public lighting asset fails or needs a bulk replacement, a suitable alternative replacement must be made.

Australia signed the “Minamata Convention on Mercury” in October 2013 and the decision on whether Australia will ratify the Convention is expected later this year. The Convention is a multilateral environmental agreement requiring practical actions to protect human health and the environment from anthropogenic emissions and releases of mercury and mercury compounds. Under this convention, import, export and manufacture of Mercury Vapour public lights will be banned from 1 January 2021. With the prohibition, the Public Lighting Code would require the replacement of such lights with another light type. As a consequence, our proposed lighting charges for the forthcoming regulatory period will need to reflect the expected costs of the bulk replacement of Mercury Vapour lanterns.

LED lighting products contain no Mercury, are the most energy efficient technology and have the lowest operating and maintenance costs. At this stage, we are therefore planning to replace all remaining Mercury Vapour lights with equivalent LED lighting products between 2021 and 2024 in accordance with our regulatory obligations.

As LED lighting is more efficient, Councils with large numbers of Mercury Vapour lanterns may benefit from initiating an early replacement program, so that they can lower their public lighting energy maintenance costs sooner. In addition, a Council initiated Mercury Vapour lanterns replacement program would ensure that the selected replacements meet their decorative and heritage requirements.

Through the consultation process on this document we will work with Councils to understand their preferences and reflect their plans in our forecasts for the 2021-21 regulatory period. In particular, the number of Mercury Vapour lanterns that we will need to replace during the 2021-25 regulatory period will depend on the extent to which Councils initiate their own replacement programs and reduce their energy costs earlier. Our public lighting fees will be lower if we replace fewer Mercury Lanterns.

### **4.2 Phasing out obsolete lighting**

As a result of historical investment decisions, we currently have six different types of lighting technologies. This number of different lighting technologies tends to increase the complexity and costs of providing public lighting services, which ultimately is paid for by our customers.

In the future, we want to improve our cost efficiency by rationalising the number of lighting technologies on our network. During the 2021-25 period, therefore, we plan to replace all Metal Halide and Mercury Vapour lights, which would consolidate to four lighting technologies. While the increased replacement activity over the 2021-25 period will lead to higher costs in the immediate future, the expenditure is warranted in terms of future cost savings, particularly in rural and remote areas. As noted in the previous section, the replacement of Mercury Vapour lanterns, which is likely to be a compliance requirement, will also deliver energy cost savings.

Given the benefits of rationalising the lighting technologies, as inefficient luminaires fail we intend to replace them with the equivalent LED technology. This replacement plan will apply to the lighting technologies below, which are expected to become obsolete within the following timeframes:



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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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- Compact Fluorescent lights by 2026;
- T5 lights by 2028; and
- High Pressure Sodium by 2030.

The alternative approach of maintaining these lights by undertaking like-for-like replacement will not be cost effective because quality replacement globes will become increasingly costly to source. Quality issues with T5 and compact fluorescent light globes are already adversely impacting maintenance costs. In addition, the replacement with LED lights provides on-going energy cost savings for customers.

In the case of High Pressure Sodium lanterns, there is a risk of igniting fires in addition to high maintenance costs and high failure rates. The replacement of failed High Pressure Sodium lanterns with equivalent LED lights in advance of the 2030 obsolesce date will minimise the costs to our customers and improve safety.

In summary, our plans for public lighting reflect our objective for a safer, more efficient service by replacing inefficient and obsolete technologies. Our approach is focused on delivering a better service, by working closely with Councils to address our compliance obligations and deliver the lighting services they prefer.

**Question 1:**

**Do you have any comments or questions on our planned replacement approaches to address our compliance obligations in relation to Mercury Vapour lanterns, and to rationalise the number of lighting technologies?**

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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## **5 Proposed lighting fees and overall cost impact**

As explained in section 2, our current public lighting fees were calculated in accordance with the AER's public lighting charges model, using consistent input assumptions across the five Victorian distributors. It was recognised at the time that, in reality, distributors were likely to experience different operating conditions that would drive differences in the costs of providing public lighting services.

The AER's charging model requires numerous forecast inputs to calculate the average cost of providing each type of lighting service. Taking a 'bottom up' approach, the AER seeks to verify that the price for each service reflects the efficient costs of providing that service. In our case, our 2016-20 fees were set at a level that has not enabled us to recover the efficient costs of providing public lighting services, principally as a result of our adoption of cost increases associated with increased OH&S requirements on public lighting works.



In contrast to the charging model used in the 2016-20 revenue determination process, we have determined the efficient cost impact of these OH&S requirements by comparing these forecast inputs with third party contractor rates. Late in the 2011-15 period, we competitively tendered the provision of services for bulk changes, traffic management and repairs to all our public lighting assets. While it is important to actively manage outsourced contracts, particularly to ensure that service quality is maintained, competitive tendering provides a strong assurance that the costs we incur are efficient. Furthermore, our competitively tendered contract rates provide direct information on the efficient cost of providing public lighting services.

To assist the AER and other stakeholders, however, we have revisited its public lighting model to show how our contract rates can be reconciled with updated model inputs and revised assumptions. This approach enables our input assumptions to be compared with other distributors, while also recognising that the resulting price is consistent with our competitively tendered rates. In addition, our reconciliation with the AER's model provides further assurance that our competitively tendered rates are efficient.

To calculate our future public lighting charges, we have considered two scenarios:

- Status quo - AusNet Services replace all Mercury Vapour lanterns during the 2021-25 regulatory period, in accordance with our expected replacement obligations; or
- Council-led replacement – A number of Councils take a proactive approach to replacing Mercury Vapour lanterns, as discussed in the previous section.

A complete list of our fees for public lighting services under both scenarios is provided in the attachment to this paper. As a summary, the tables below show the resulting fees for our energy efficient public lighting services under the status quo.

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

### Fees for energy efficient lights (nominal \$ per year per light) over 2020 to 2025 under the status quo – Central Region

Central Region	2020	2021	2022	2023	2024	2025	Price change per annum over the period
T5 2X14W	37.35	56.41	63.75	64.60	67.92	70.27	13%
T5 2X24W	44.06	60.71	65.39	69.35	72.70	74.59	11%
LED 18W	17.37	33.38	38.69	43.01	46.68	49.00	23%
LED 14W	17.37	34.93	40.27	44.63	48.34	50.70	24%
LED 70W-125W (L1)	25.17	46.60	56.74	64.94	71.83	76.00	25%
LED 155W-250W (L2)	25.94	48.54	59.94	69.15	76.87	81.49	26%
LED 275W-400W (L4)	27.56	50.48	63.15	73.36	81.91	86.99	26%
Compact Fluorescent 32W	33.15	54.47	61.55	62.37	65.58	67.84	15%
Compact Fluorescent 42W	33.15	54.47	61.55	62.37	65.58	67.84	15%

### Fees for energy efficient lights (nominal \$ per year per light) over 2020 to 2025 under the status quo – North & East Region

North & East Region	2020	2021	2022	2023	2024	2025	Price change per annum over the period
T5 2X14W	42.54	70.77	75.51	76.72	79.33	80.70	14%
T5 2X24W	50.10	76.09	80.96	82.12	84.84	87.17	12%
LED 18W	17.85	40.19	45.65	49.33	53.15	55.62	26%
LED 14W	17.85	41.19	46.68	50.38	54.22	56.72	26%
LED 70W-125W (L1)	25.77	61.36	71.84	79.18	86.40	90.92	29%
LED 155W-250W (L2)	26.54	63.30	75.04	83.39	91.44	96.40	29%
LED 275W-400W (L4)	28.12	65.24	78.25	87.61	96.48	101.91	29%
Compact Fluorescent 32W	37.85	68.33	72.91	74.07	76.59	77.92	16%
Compact Fluorescent 42W	37.85	68.33	72.91	74.07	76.59	77.92	16%

The above tables show that the price increase under the status quo would average approximately 16% per annum over the period<sup>8</sup>. We estimate that under an alternative scenario, where Councils lead the replacement program, the price increase may be reduced to approximately 14% per annum from 16% over the period. Note that, under this alternative scenario, the Councils proactively replacing their lights, after paying for replacement, will benefit through lower energy consumption and public lighting charges on an ongoing basis.

While these individual lighting price increases are significant, we expect that our proposed fee increase will have a much lower total cost impact for a typical Council, averaging approximately 9% per annum over the period. This lower increase arises because more expensive inefficient lights, such as Mercury Vapour lanterns, will be replaced with lower cost LED lights. We are planning 30,000 such replacements in the 2021-25 period, which means that Councils will benefit from these

<sup>8</sup> This is a weighted average price increase, which takes account of the different volume of lights for each charge.

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

lights being charged at a lower fee compared to Mercury Vapour Lanterns, as well benefitting from the lower energy costs.

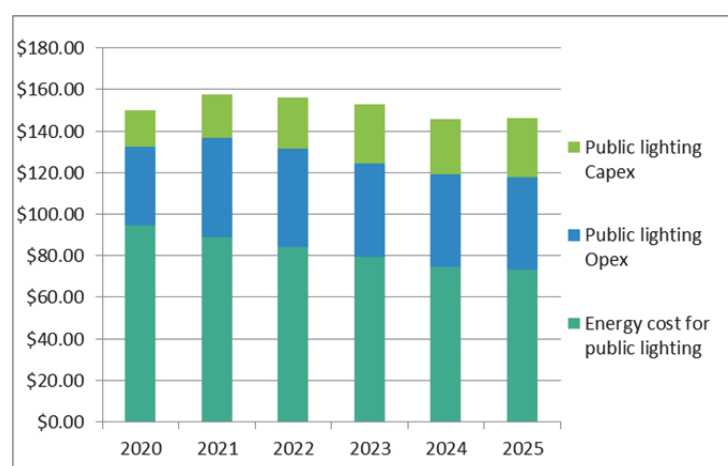
The table below shows the forecast total costs of public lighting services for Councils, which comprises our public lighting fees (as discussed above); distribution use of system charges (DUOS); and wholesale costs, being primarily the retail energy costs<sup>9</sup>. It also shows the average cost per light and the percentage change over the period.

### Total costs of public lighting services 2020 to 2025 (real 2018 \$s)

	2020	2021	2022	2023	2024	2025
Public lighting fees	9,216,971	11,614,387	12,524,224	13,174,387	13,006,469	13,739,713
Energy costs (network, retail and generation)	15,582,557	15,100,838	14,621,056	14,143,846	13,669,590	13,741,909
Total costs	24,799,528	26,715,225	27,145,280	27,318,233	26,676,059	27,481,622
Total costs per light	150.19	157.57	155.97	152.94	145.55	146.07
Percentage change in costs per light		4.9%	-1.0%	-1.9%	-4.8%	0.4%

The table above puts our proposed fee increase in a broader context, which considers the total costs that Councils are expected to incur in relation to public lighting services. In particular, our estimates indicate that the average cost per light is expected to decline between 2020 and 2025, after an initial increase in 2021 due to revised bulk replacement and maintenance assumptions (Opex). While the cost impact will vary across Councils, the analysis indicates that the planned installation of a greater number of efficient LED lights will deliver significant savings to Councils that will offset our proposed increase in lighting fees. The bar graph below shows the comparison of lighting cost components (Opex and Capex) and impact of the replacement costs and energy savings from 2020 to 2025<sup>10</sup>.

### Average total public lighting costs, expressed as \$ per light, 2020 to 2025 (real 2018 \$s)



While we must plan to replace the Mercury Vapour lanterns and set fees that enable us to recover our efficient costs of providing public lighting services, the benefits from moving to more efficient LED lighting will no doubt encourage some Councils to take a proactive approach to the replacement of Mercury Vapour lanterns and other types of less efficient lights.

<sup>9</sup> Net retail cost assumed to be 25 cents/kWh, which we consider is reasonable based on extrapolated ASX VIC baseload future prices, the total loss factor for lights in our network, DUOS charges, typical retailer margins and other costs.

<sup>10</sup> AusNet Services public lighting charges separated into Capex and Opex price components, and energy cost for public lighting include wholesale energy, distribution network use of system charges, and retail charges.

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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Councils may also want to manage the replacement program to address their specific aesthetic and heritage lighting requirements. If some Councils choose a more proactive approach by, for example, accelerating the replacement of Mercury Vapour lanterns in 2019, our future expenditure and our public lighting fees would be lower. The total public lighting costs incurred by those Councils would also be reduced, as they would benefit from the lower energy and maintenance costs associated with LED lighting sooner than would otherwise be the case.

**Question 2:**

**Do you have any comments or questions on our approach to setting our proposed fees for public lighting services, which seek to recover the costs of our competitively tendered services?**

**Question 3:**

**Do you have a view about preferred arrangements for replacing Mercury Vapour lanterns, so that we can reflect these preferences in our replacement plans and public lighting fees for the 2021-25 period?**

**Question 4:**

**Do you have any suggestions for how we should engage with Councils and the AER to ensure that our proposed plans deliver the best outcome for our customers?**

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**

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## 6 How to provide feedback

AusNet Services welcomes feedback from all its customers and stakeholders. To provide feedback:

**Email:** [2021-25EDPR@ausnetservices.com.au](mailto:2021-25EDPR@ausnetservices.com.au)

**Write to:**

Manager Economic Regulation  
Locked Bag 14051  
Melbourne City Mail Centre  
Melbourne VIC 8001

We will be accepting feedback until **31 March 2019**.

In the meantime, we will continue to liaise with Councils to refine our plans and ensure that we submit public lighting proposals that reflect their service preferences.

AusNet Services will host a public lighting workshop on 27 February. To register please contact Stephanie Judd at [Stephanie.Judd@ausnetservices.com.au](mailto:Stephanie.Judd@ausnetservices.com.au).

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

Attachment - Public lighting fees under status quo scenario and alternative scenario (nominal terms)

Status quo – Central Region	2020	2021	2022	2023	2024	2025
Mercury Vapour 80W	46.24	59.91	63.01	66.71	48.28	49.28
HP Sodium 150W	108.49	117.75	122.71	127.96	106.90	109.46
HP Sodium 250W	109.58	120.09	125.15	130.29	108.60	111.20
Mercury Vapour 50W	70.75	91.67	96.41	102.07	73.87	75.40
Mercury Vapour 125W	67.98	88.07	92.63	98.07	70.97	72.45
Mercury Vapour 250W	115.06	126.09	131.40	136.80	114.03	116.76
Mercury Vapour 400W	119.44	130.89	136.41	142.01	118.37	121.21
HP Sodium 100W	116.09	125.99	131.30	136.92	114.38	117.12
HP Sodium 400W	155.60	170.52	177.71	185.01	154.21	157.91
Metal Halide 70W	201.86	261.54	275.05	291.21	210.74	215.12
Metal Halide 100W	259.04	281.15	293.00	305.54	255.24	261.36
Metal Halide 150W	294.29	319.41	332.87	347.11	289.97	296.92
<b>Energy Efficient Lights</b>						
T5 2X14W	37.35	56.41	63.75	64.60	67.92	70.27
T5 2X24W	44.06	60.71	65.39	69.35	72.70	74.59
LED 18W	17.37	33.38	38.69	43.01	46.68	49.00
LED 14W	17.37	34.93	40.27	44.63	48.34	50.70
LED 70W-125W (L1)	25.17	46.60	56.74	64.94	71.83	76.00
LED 155W-250W (L2)	25.94	48.54	59.94	69.15	76.87	81.49
LED 275W-400W (L4)	27.56	50.48	63.15	73.36	81.91	86.99
Compact Fluorescent 32W	33.15	54.47	61.55	62.37	65.58	67.84
Compact Fluorescent 42W	33.15	54.47	61.55	62.37	65.58	67.84

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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**


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Status quo – North & East	2020	2021	2022	2023	2024	2025
Mercury Vapour 80W	52.47	74.00	74.85	79.03	58.78	60.13
HP Sodium 150W	123.35	153.45	159.41	162.11	142.18	145.58
HP Sodium 250W	122.03	151.25	157.16	160.23	137.70	140.99
Mercury Vapour 50W	77.65	109.51	110.78	116.96	86.99	89.00
Mercury Vapour 125W	77.65	109.51	110.78	116.96	86.99	89.00
Mercury Vapour 250W	126.91	157.30	163.45	166.64	143.21	146.63
Mercury Vapour 400W	130.57	161.83	168.17	171.45	147.34	150.86
HP Sodium 100W	131.98	164.19	170.57	173.46	152.13	155.77
HP Sodium 400W	173.28	214.77	223.17	227.53	195.53	200.21
Metal Halide 70W	199.61	281.51	284.76	300.66	223.61	228.77
Metal Halide 100W	261.26	325.02	337.63	343.37	301.14	308.35
Metal Halide 150W	296.81	369.25	383.58	390.09	342.13	350.31
<b>Energy Efficient Lights</b>						
T5 2X14W	42.54	70.77	75.51	76.72	79.33	80.70
T5 2X24W	50.10	76.09	80.96	82.12	84.84	87.17
LED 18W	17.85	40.19	45.65	49.33	53.15	55.62
LED 14W	17.85	41.19	46.68	50.38	54.22	56.72
LED 70W-125W (L1)	25.77	61.36	71.84	79.18	86.40	90.92
LED 155W-250W (L2)	26.54	63.30	75.04	83.39	91.44	96.40
LED 275W-400W (L4)	28.12	65.24	78.25	87.61	96.48	101.91
Compact Fluorescent 32W	37.85	68.33	72.91	74.07	76.59	77.92
Compact Fluorescent 42W	37.85	68.33	72.91	74.07	76.59	77.92



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**Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025**


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Alternative scenario – Central Region	2020	2021	2022	2023	2024	2025
Mercury Vapour 80W	46.24	63.13	65.60	68.29	48.27	49.27
HP Sodium 150W	108.49	121.62	125.84	129.87	106.89	109.45
HP Sodium 250W	109.58	124.03	128.33	132.23	108.59	111.19
Mercury Vapour 50W	70.75	96.59	100.38	104.49	73.86	75.39
Mercury Vapour 125W	67.98	92.80	96.44	100.39	70.96	72.43
Mercury Vapour 250W	115.06	130.23	134.75	138.84	114.02	116.75
Mercury Vapour 400W	119.44	135.20	139.88	144.13	118.37	121.20
HP Sodium 100W	116.09	130.13	134.64	138.96	114.38	117.11
HP Sodium 400W	155.60	176.13	182.23	187.77	154.20	157.90
Metal Halide 70W	201.86	275.57	286.37	298.11	210.71	215.08
Metal Halide 100W	259.04	290.38	300.46	310.08	255.23	261.34
Metal Halide 150W	294.29	329.90	341.34	352.28	289.96	296.90
<b>Energy Efficient Lights</b>						
T5 2X14W	37.35	55.15	61.07	60.87	63.41	65.42
T5 2X24W	44.06	59.41	62.63	65.52	68.06	69.62
LED 18W	17.37	31.54	34.77	37.57	40.10	41.93
LED 14W	17.37	33.09	36.35	39.19	41.76	43.64
LED 70W-125W (L1)	25.17	42.82	48.69	53.77	58.32	61.51
LED 155W-250W (L2)	25.94	44.24	50.79	56.45	61.50	65.01
LED 275W-400W (L4)	27.56	45.66	52.88	59.12	64.68	68.51
Compact Fluorescent 32W	33.15	53.25	58.96	58.77	61.22	63.17
Compact Fluorescent 42W	33.15	53.25	58.96	58.77	61.22	63.17

## Electricity Distribution Regulatory Proposal – 1 Jan 2021 to 31 Dec 2025

Alternative scenario – North & East	2020	2021	2022	2023	2024	2025
Mercury Vapour 80W	52.47	77.53	77.70	80.77	58.77	60.12
HP Sodium 150W	123.35	157.61	162.77	164.16	142.17	145.57
HP Sodium 250W	122.03	155.44	160.55	162.29	137.69	140.98
Mercury Vapour 50W	77.65	114.74	115.00	119.54	86.98	88.98
Mercury Vapour 125W	77.65	114.74	115.00	119.54	86.98	88.98
Mercury Vapour 250W	126.91	161.66	166.97	168.78	143.20	146.62
Mercury Vapour 400W	130.57	166.32	171.79	173.65	147.33	150.85
HP Sodium 100W	131.98	168.65	174.16	175.65	152.13	155.76
HP Sodium 400W	173.28	220.72	227.98	230.46	195.52	200.20
Metal Halide 70W	199.61	294.95	295.61	307.28	223.59	228.74
Metal Halide 100W	261.26	333.83	344.75	347.70	301.13	308.33
Metal Halide 150W	296.81	379.26	391.66	395.02	342.11	350.29
<b>Energy Efficient Lights</b>						
T5 2X14W	42.54	69.51	72.82	72.99	74.81	75.86
T5 2X24W	50.10	74.79	78.20	78.29	80.20	82.19
LED 18W	17.85	38.35	41.73	43.89	46.56	48.56
LED 14W	17.85	39.35	42.76	44.94	47.64	49.66
LED 70W-125W (L1)	25.77	57.58	63.79	68.01	72.90	76.43
LED 155W-250W (L2)	26.54	59.00	65.89	70.69	76.08	79.92
LED 275W-400W (L4)	28.12	60.42	67.98	73.36	79.25	83.43
Compact Fluorescent 32W	37.85	67.11	70.31	70.47	72.23	73.24
Compact Fluorescent 42W	37.85	67.11	70.31	70.47	72.23	73.24