Energy Efficient Public Lighting & 2009 New Minor Public Lighting Charges

Energy Efficient Public Lighting Change Over

New Energy Efficient (EE) public lighting technology is now an available option to assist with reducing the amount of energy used in public lighting. The Australian Energy Regulator (AER) has now approved Operating, Maintenance and Replacement (OMR) charges for the current approved EE Lighting options which may be an alternative to the current residential Mercury Vapour 80 Watt (MV80) lanterns. CitiPower has provided the following information to assist Municipal Councils evaluate their options if considering changing over to approved EE public lighting technologies.

Table 1 provides answers to some typical questions in relation to EE lights.

Table 1

Question:	CitiPower Response:
What new standard Energy Efficient streetlight options are available?	- 42 Watt Compact Fluorescent (**CF42**) - T5 (2x14Watt) Linear Fluorescent (**T5(2x14W)**) - T5 (2x24Watt) Linear Fluorescent (**T5(2x24W)**)
What do these new streetlights look like?	Examples of the new lights can be viewed on page 6 of this document.
What is involved in replacing an existing MV80 to a EE lantern?	This requires the replacement of the complete lantern fitting – which is the housing, globe and starter, with a new EE lantern. The existing MV80 lantern fittings are not suitable to have the new EE globes retrofitted to them.
What are the charges approved by AER - OMR of EE lights, written down value and avoided costs of MV80 lights?	The AER has approved some EE lighting OMR charges along with written down values and avoided costs if replacing existing MV80 lights. The approved and indicative costs are listed in Table 3.
Will the cost profile change next year or get cheaper further out?	The AER has established a process to set annual cost profiles for the changeover to EE lights. This will include the re-assessment of the approved written down value and avoided costs of existing MV80 lights, which may change from year to year.
What are the time frames for implementation of change over of existing lanterns?	CitiPower is proposing to complete the changeover of existing MV80 lights to EE lights (for those lights identified by the responsible Council) during the established cyclical bulk lamp change program.
Are these new lanterns available for non standard (decorative) streetlights?	Not at this stage – Non standard decorative lanterns utilising these new lamp types will require CitiPower approval.
What are the energy savings of EE lighting compared to MV80?	Indicative energy usage comparisons are listed in Table 3.

Table 1 (cont)

Question:	CitiPower Response:
What are the light output comparisons? Are they a direct replacement for a MV80? Which EE lights meet the current lighting scheme code and which ones may need additional lanterns retrofitted into the lighting schemes i.e. underground electricity estates?	All lights have varying levels of output. Table 4 gives a comparison of the different light outputs for the currently approved EE lantern types based on a variety of mounting heights and road reserve widths. Consideration must be given to the impacts of these light outputs by different lights on current arrangements. Not all currently approved EE lanterns are considered as direct replacement for MV80 lights.
Can all MV80 lights be changed to EE lights?	The current available mounting options for EE lights do not allow this technology to be fitted to some decorative lighting structures. Please check with CitiPower before any request for these changeovers.
Are there EE lights available for major road lighting schemes (150, 250, 400 Watt lights)	Not presently - the current EE light options are only available for MV80. Higher output EE lighting options will become available as the technology develops. These lights will be integrated into CitiPower's suite of lights as they are evaluated and approved.
Where can council or the general public look at EE lighting in the field and physically see a visual comparison of the available lights?	CitiPower in conjunction with the City of Yarra has established a demonstration site to allow councils and the public to compare lighting technologies. Refer to the CitiPower Web Site for details: www.citipower.com.au
What about Light Emitting Diode (LED) lighting, when might they be available?	LED public lighting is an emerging technology which is not yet available. CitiPower expects that LED lighting will be an option in the future. Trial LED lights have been included as part of the current CitiPower Demonstration site.
What are the costs to have a brand new EE lantern installed & what is the process?	The 2009 prices for new Minor Public Lighting and Security Lighting Installations are contained in Table 2 of this document. The process for installation of new lights has not changed.

Next Steps

If your council is part of the 2009 CitiPower bulk lamp change program, CitiPower will shortly be contacting you to determine your plan for either the continuation of the standard bulk lamp change for 2009 or your intention to change over (all or part) of the MV80 lanterns to Energy Efficient lights in your municipality.

Any other out of cycle bulk lamp change requests should be directed to CitiPower's responsible officer for further advice. Requests for new light installations should be referred as per your current arrangements for new street lighting.

The CitiPower responsible officer for Energy Efficient Light information is Mr Rowan Smith. All requests for out of cycle changeovers or requests for additional information should be directed to Rowan on rsmith@citipower.com.au

Indicative Costs For New Energy Efficient Public Lighting

The charges for all new minor public lights are contained within Table 2, which now includes the new Energy Efficient light types.

Table 2

NEW MINOR PUBLIC / SECURITY LIGHTING INSTALLATIONS PRICES FOR 2009 (GST INCLUSIVE)	
Cost for each application from Council for all lights and glare shield	$ 176.00

Light Description	Cost for materials and erection per light
Compact Fluorescent 42 watt (CF42) up to 1.5 m bracket	$847.00
Compact Fluorescent 42 watt (CF42) up to 4.5 m outreach bracket	$1,397.00
T5 (2x14watt) up to 1.5 m bracket	$935.00
T5 (2x14watt) up to 4.5 m outreach bracket	$1,485.00
T5 (2x24watt) up to 1.5 m bracket	$935.00
T5 (2x24watt) up to 4.5 m outreach bracket	$1,485.00
80 watt mercury vapour up to 1.5 m bracket	$759.00
80 watt mercury vapour up to 4.5 m bracket	$1,342.00
125 watt mercury vapour up to 1.5 m bracket	$825.00
125 watt mercury vapour up to 4.5 m bracket	$1,397.00
150 watt high pressure sodium vapour (HPS) up to 6 m bracket	$1,562.00
250 watt high pressure sodium vapour (HPS) up to 6 m bracket	$1,518.00
Glare shield installed with 80 or 125 watt public light (additional)	$198.00
Glare shield installed on an existing pubic light (80 or 125 watt)	$363.00
125 watt mercury vapour security light	$1,122.00
250 watt mercury vapour security light	$1,177.00
400 watt mercury vapour security light	$1,199.00
150 watt high pressure sodium	$1,254.00
250 watt high pressure sodium	$1,265.00
400 watt high pressure sodium	$1,309.00

Notes

1. These costs only apply when an electricity supply is already available to an existing pole which is suitable to support the light.

2. Costing for Council requested lighting is based on one application charge of $176, plus the cost of material and erection (includes travel) by the number of lights. The one application fee will only cover lights contained within a 5 km radius, otherwise additional application fees will apply.

3. For work requiring a new electricity supply to be made available, new poles to be installed or any alterations to existing lights, CitiPower will provide a quote following the request from Council.

Requests for new lights should be sent to your CitiPower Australia Office.
Office Location: 35 Rooney Street, Burnley
Postal Address: Locked Bag 14090, Melbourne Victoria 8001

Indicative Costs For Energy Efficient Public Lighting Change Over

Table 3 provides indicative costs relating to the changeover of current MV80 lights to EE lighting as well as typical maintenance and operating costs.

Indicative Change Over Cost per MV80 Lantern = Avoided Cost + Written Down Value + Material Cost + Installation Cost

Indicative Annual Running Cost per Lantern = Annual OMR Charge + Typical Annual Energy Cost

Table 3

2009 CITIPOWER ENERGY EFFICIENT LIGHTING COST PROFILES				
All Prices GST Included	**T5 (2x14w)**	**T5 (2x24w)**	**CF42**	**MV80**
Replacement of each MV80 light to Energy Efficient technology in CitiPower				
Avoided Cost Regulatory Approved	- $18.63	- $18.63	- $18.63	-
Written Down Value Regulatory Approved	$99.31	$99.31	$99.31	-
Material Cost Indicative Offering*	$352.00	$352.00	$253.00	-
Installation Cost (MV80 to EE light) Indicative Offering*	$110.00	$110.00	$110.00	-
Indicative Change Over Cost per MV80 lantern (during bulk lamp change)	**$542.68**	**$542.68**	**$443.68**	-
Ongoing Running Cost				
Annual OMR Charge (per lantern)	$33.08 Regulatory Approved	$36.54 Commercial Offering**	$31.24 Commercial Offering**	$44.83 Regulatory Approved
Typical Annual Energy Cost (per lantern)#	$18.93	$29.16	$28.79	$59.44
Indicative annual running cost per lantern	**$52.01**	**$65.70**	**$60.03**	**$104.27**

* Actual costs will be negotiated based on actual tender of specific project request and scope

Annual energy cost are indicative costs only and dependant on retail rates and hours of operation per day

**Price is a commercial rate and is not approved by the AER

Comparison of Energy Efficient Lights

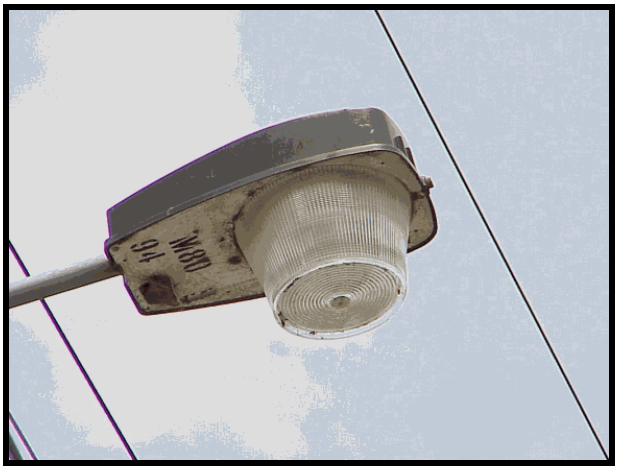
Table 4 provides some technical comparisons for the currently available energy efficient lights with the current MV80 lantern.

Table 4

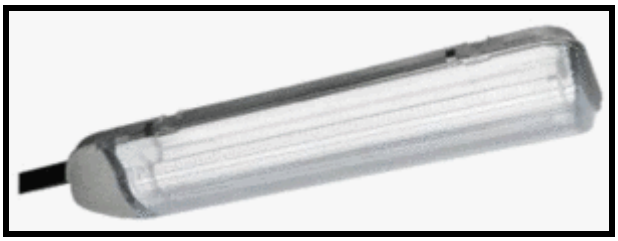
ENERGY EFFICIENT LIGHTING TECHNICAL COMPARISON				
	T5 (2x14w)	**T5 (2x24w)**	**CF42**	**MV80**
ENERGY CONSUMPTION				
Energy Consumption	30.5w	47.0w	46.4w	95.8w
INDICATIVE LANTERN SPACING*				
Category P4 Lantern Indicative Spacing (for a 20m road reserve @ 5.5m lantern height)	34m	63m	53m	46m
Category P4 Lantern Indicative Spacing (for a 20m road reserve @ 6.5m lantern height)	57m	68m	60m	53m
Category P4 Lantern Indicative Spacing (for a 15m road reserve @ 5.5m lantern height)	58m	66m	60m	55m
Category P4 Lantern Indicative Spacing (for a 15m road reserve @ 6.5m lantern height)	63m	71m	65m	61m
*Based upon spacing tables within VSPLAG Final Report "Evaluation of Low Energy Lights for Minor Road Lighting" April 2009. Please note that existing 80W MV lanterns in "P" Category Code areas which are identified for replacement with EE lanterns will require design confirmation to ensure code compliance.				

Lantern Comparison Current and Energy Efficient Lights

Current MV80 Lantern Fitting



T5 (2 x 14W) or T5 (2 x 24W) Linear Fluorescent Energy Efficient Lantern Fitting
Note - Both wattages are the same configuration



CF42 – Compact Fluorescent Lantern Fitting