



AER's preliminary positions on a replacement
framework & approach – VIC EDPR 2016-2020
1st July 2014

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Definitions

AER	Australian Energy Regulator
AEMO	Australian Energy Market Operator
ASNZS	Australian New Zealand Standards
DNSP	Distribution Network Service Provider
FRC	Full Retail Competition
MAV	Municipal Association of Victoria
NEL	National Electricity Law
NER	National Electricity Rules
O&M	Operation and Maintenance
OM&R	Operation and Maintenance with an "R" component for invested capital
Customer	VicRoads, Local Council
PLC	Public Lighting Code
VESI	Victorian Electrical Supply Industry
VPLAB	Victorian Public Lighting Approvals Board
WDV	Written Down Value



Date: 1ST July 2014

Mr Chris Pattas
General Manager, Networks
Australian Energy Regulator
GPO Box 520
Melbourne VIC 3000

SUBJECT: VICTORIAN EDPR 2016-2020 - AER's preliminary positions on a replacement framework & approach.

Dear Mr Pattas,

Citelum Australia welcomes the opportunity to submit a submission in regards to the Framework and Approach Paper for 2016-2020.

Citelum Australia, subsidiary of the Citelum Group, subsidiary of the global energy company Electricite de France have been pursuing contestability since our inception in 2009. Since that time we have come to understand the public lighting framework in detail.

We thank the AER for their continued patience with public lighting and we note that the preliminary paper published by them, certainly has the potential for an evolution from regulated to market competitive forces.

Could we ask the AER review the "Intent of the Public Lighting Code"? We believe that if a regulatory framework followed this intent, many of the issues associated with public lighting would be simplified for customers, DNSP's, the AER and for companies like Citelum who wish to offer competitive public lighting services.

If you require any further information, please do not hesitate to contact me on 0428 079 317 or email: apcarey@citelum.com.au

Best Regards,

A handwritten signature in black ink that reads 'Adam Carey'.

Adam Carey
Managing Director Australia NZ

Executive Summary

This submission is the most comprehensive made about public lighting regulatory frameworks completed by Citelum Australia to date.

We have discovered within the intent of the Public Lighting Code, customers such as Victorian Local Councils and Vicroads can achieve improved efficiencies, reduced costs, simpler transactions and greater transparency in how the public lighting infrastructure is managed and charged by the DNSP's.

We also believe this paper definitively indicates that public lighting is contestable and has been since 2001.

All public lighting services need to be classified as Negotiated.

Public Lighting Code

The key clause within the Public Lighting Code is Clause 1.4. It frames the intent of the code and does not limit the negotiated outcomes a customer can achieve in respect of their individual requirements needed for public lighting.

The protection for the customer is that a condition of the DNSP license is their adherence to the Public Lighting Code.

Electrical Safety

The Legislation pertaining to the Electrical Industry Act promotes competition. There is no legislative exclusivity that would suggest that DNSP's are the sole operators of public lighting. Ownership of assets also does not give any right or inference of exclusivity on the issues of managing electrical safety in regards to public lighting.

There is no legislative requirement that would require a customer to transfer ownership of publicly funded assets to private companies for electrical safety reasons.

3rd Parties wishing to maintain public lighting on DNSP poles can do through the appropriate requirements overseen and regulated by Energy Safe Victoria and appropriate industry guidelines.

Electrical Safety can be managed by the appropriate regulatory authority Energy Safe Victoria.

Product Approvals

There is no legislative requirement that would mandate, that a DNSP must approve a streetlighting luminaire as being electrically safe or suitable for public lighting. DNSP's currently take no risk associated with their approvals. Product approvals should be simply required by the manufacturer from an appropriate authority with an appropriate load profile, provide by AEMO and the DNSP must make an offer to connect.

Simplification of Public Lighting Maintenance Charges

For some councils, who have two DNSP's within their local boundaries can have up to 43 different charges with those charges also being cost-shared which Vicroads. By reviewing the intent of the public lighting code, those charges can be reduced to 4 charges.

Question by the Australian Energy Regulator AER

Is the current classification of greenfield sites and/or emerging technology as a negotiated service correct?

Comments are sought on whether any other classification would be preferable for either service and if so, why?

Introduction

We note within the Framework and Approach that it is the AER's role to administer the Public Lighting Codeⁱ, however the AER has consistently classified public lighting services in other distribution determinations as:

- ⊕ Operation, Maintenance, repair and replacement of public lighting assets
- ⊕ Alteration and Relocation of Public Lighting Assets
- ⊕ Provision of New Public Lighting

Citelum suggests that while the market is contestable, the transition through to a competitive market where no regulatory oversight is provided by the AER is not the appropriate step at this moment, however we believe there is scope to transition now for all of public lighting in Victoria to negotiated services for both existing Distributor owned assets and New Assets.

In fact all public lighting services should be considered Negotiated Services regardless of whether they are brown field or green field installations.

We suggest that the issue of vesting has certainly clouded issues relating to ownership and which assets are part of the distribution network.

Background

For the purposes of our submission, we feel it is necessary to revisit the intent of the Public Lighting Code citing comments made by the ESC in the Draft Decision of April of 2004, comparing those with current Framework and Approach for 2016-2020 and correlating that with the decisions made in 2009, review the current determination and make a suggestion on the simplification of the framework as we approach the next determination. We hope that this information may finally clear up the issue of public lighting, simplify the issues and provide certainty for all stakeholders of public lighting in Victoria.

“The Commission was established under the Essential Services Commission Act 2001 (ESC Act) and commenced operations on 1 January 2002, when it subsumed the role of the Office of the Regulator-General. The Commission is Victoria’s independent economic regulator of prescribed essential utility services supplied by the electricity, gas, water, ports, grain handling and rail freight industries.

The primary objective of the Commission, as defined in the ESC Act, is **‘to protect the long term interests of Victorian consumers with regard to the price, quality and reliability of essential services’**.

The Commission is also guided by the facilitating objectives in the ESC Act and the statutory objectives under the Electricity Industry Act 2000 (EI Act). These objectives require the Commission to ensure **that the benefits of competition** and improved efficiency in the electricity industry are passed through to customers **in the form of effective competition**, efficient prices, appropriate supply and service quality, and service innovation, whilst ensuring that the long term sustainability of the industry is maintained.”

Firstly we need to establish the definition of the Public Lighting within the context of the Distribution Licence. It is important to make this consideration because the introduction of “greenfield” into the regulatory terminology into the paper will further complicate public lighting where in fact it can actually be simplified by going back to the foundation and license condition and codified intent that Public Code provides customers.

Within the definition of the Distribution Network within Victoria,

Under the Distribution License;

Further, ‘public lighting assets’ are defined in the distribution licence as:

‘... all assets of the [distributor] which are dedicated to the provision of public lighting in the **distribution area**, including lamps, luminaries, mounting brackets and poles on which the fixtures are mounted, supply cables and control equipment (for example, photoelectric cells and control circuitry) but not including the [distributor’s] protection equipment (for example, fuses and circuit breakers)’.

Clause 10.3 of a distribution licence requires that an offer to provide public lighting services by a distributor must include a price and other terms and conditions that are fair and reasonable, and consistent with:

- Any relevant guidelines;
- The Price Determination or any other applicable price determination;
- Any statement of charges submitted to and approved by the Commission; and
- The Public Lighting Code.

By deviating and seeking to clarify what may not be wholly contestable or not dilutes the opportunities afforded to the customer in the intent of the Public Lighting Code.

Could we suggest that the AER revisit the comments made by ESC into the intent of the Public Lighting Code?

Public Lighting Code

We note the comments from the ESC that the three principles to the successful operation of the Code are:

The three key principles underpinning the successful operation of the Code are:

- 1. The 'fairness and reasonableness' of charges and terms and conditions;*
- 2. The negotiation process; and*
- 3. The framework for new and replacement lighting assets.*

Fairness and Reasonableness

Considering that in the 2009ⁱⁱ, before customers upgraded to Energy Efficient T5 Streetlights, a level of inaccuracy has been applied to the payment by councils on the WDV. We agree that a WDV should be paid to DNSP's on assets that have been retired before the end of their economic life, however we disagree with the level of inaccuracy applied to the calculation of the WDV.

We contend that since Australian Standards in 1990 required Luminaire Manufacturers to mark the outside of the luminaire with indelible paint quality, noting the lamp type the luminaire accommodated and the year in which the luminaire was produced.

Since 2005, DNSP's have been accruing in their cost build up models an amount for GIS costs by which to record extra information.

The most obvious benefit is the view that the separation of the OM and R charges may facilitate public lighting customers using alternative service providers. However, distributors' databases currently do not record adequate data to support either contestability or the disaggregation of the public lighting excluded service charge. Clauses 5.1.2(e) and 5.1.2(i) of the Code state that distributors must, from a date notified by the Commission, record **information on the date assets were installed** and the **type of poles installed** (i.e. standards, non-standard, frangible), for assets and poles installed after that date. This information would be required as a minimum to enable this approach.

In the Final Determination by the Essential Services Commission Chairman John C Tamblyn set the date as 1st January 2005 by which DNSP's were required to record this information.

Our experience in auditing streetlights in Victoria demonstrates that many assets are over 20 years old and yet because of the assumed WDV on the asset base, customers will be forced to compensate the DNSP for the WDV for assets that are already being recouped through the DUOS for assets installed prior to 2001.

If the DNSP's have recorded the information required of them, there should be a more accurate calculation of the appropriate WDV.

The table below details for a metropolitan Melbourne Council that over half of the lighting assets are well over 20 years old.

AGE OF LIGHTING POINT - AUDIT DATASET		
YEAR RANGE	QUANTITY	PERCENTAGE
Less than 5 years	719	8.52%
5 years up to 10 years	770	9.12%
10 years up to 15 years	818	9.69%
15 years up to 20 years	843	9.99%
20 years up to 25 years	3245	38.44%
More than 25 years old	97	1.15%
"Date" stamp unreadable	248	2.94%
"Date" stamp missing	1102	13.05%
No "date" stamp expected	600	7.11%
GRAND TOTAL	8442	100.00%



Picture taken in 2014 showing a M80 made in 1989 – 25 years old

Table 1: Audit Results for Public Lighting Audit

The Commission also stated that from 2005, the DNSP's also had 4 years by which to amend their GIS systems that would capture this information that would also facilitate the ongoing contestability of the market.

We suggest that the AER review the WDV at the appropriate time in annual pricing submissions and ensure an accurate WDV is paid appropriate to the asset installation in which the DNSP has invested capital to ensure councils do not pay twice for assets.

Negotiation Process

The intent of the Public Lighting Code certainly places a significant level of control in the hands of the customer, however we believe there still pervades a level of misinformation in relation to the code and it is within this section that we demonstrate that while PLC has been used by which to establish minimum levels of asset management, certain Clauses within the code enable a greater level of negotiated outcome.

We suggest that customers have had difficulties under the current AER classification when negotiating an outcome with the DNSP and suggest that public lighting in Victoria could not get any worse than it currently is. The benefit of a negotiated classification by the AER, is that we believe there are adequate process and principles legislated under the NER that would achieve better outcomes than what is currently available under a Direct/Alternative Control scenario.

Much of the needs of customers in relation to seeking better outcomes for public lighting is framed in Clause 1.4 of the PLC and there is almost an unending scope that was the intent of the ESC in the drafting of that clause. It states that any aspect of public lighting can be varied

through Clause 1.4 of the PLC. This should be seen as a strong incentive to classify public lighting as Negotiated services.

'A distributor and public lighting customer may seek a written agreement with the other party to expressly vary their respective rights and obligations under this Code.'

It goes on further to suggest a range of clarifications as to what could be negotiated under this Clause including but not limited to:

- ⊕ The provisions of the Code apply where the public lighting assets are not owned by the distributor;
- ⊕ A public lighting customer **funds the replacement of public lights directly and negotiates a reduction in the charges;**
- ⊕ The payment terms are 7 days rather than the minimum 12 days in the Code;
- ⊕ The public lighting customer **assumes responsibility for all** (or part) of the operation and maintenance of the public lighting assets;
- ⊕ There is a bulk lamp replacement program for major road lamps rather than a routine patrol;
- ⊕ Non-major road lamps are replaced at least every three years, rather than at least every four years; and/or
- ⊕ The public lighting customer has input into the distributor's operation, maintenance and replacement plans.

As we note above, customers can **fund the replacement** and assume responsibility **for all or part of the maintenance** of public lighting assets. This demonstrates that for the full intent of the PLC to come into effect, both the customer and the DNSP must be free to negotiate however because the PLC is linked to the Distribution License and enforcement of the Public Lighting Code is actively encouraged, then there appears in-built protections for customers.

For assets that are replaced by the DNSP, then the Code Applies. However if the customer chooses to replace that asset, the DNSP must also be prepared to divest the old asset as long as the customer is willing to compensate the WDV payable to the DNSP. This would be fair and reasonable.

And while the NER and the NEL do not require the divestment of assets, it should also be noted that the vesting of assets is also not a requirement either in the NER or NEL and therefore the PLC should be the referenced document in relation to the requirements to both the DNSP and the customer.

Previously the ESC has stated that DNSP's require assets be vested to them to form part of the Electricity Act however there is no requirement for this to occur either. We make that suggestion and detail that in our next Chapter of Electrical Safety.

In any case the ESC has stated previously that ownership is also not a matter for the commission and more of an administrative legal matter, therefore could we suggest that any classification within the determination about ownership to include the words vest should be removed from any economic classification.

This will enable consistency between the intent of the Code, in that customers can engage all or part of the OM for public lighting.

We would agree, however, if a formal vesting process has been undertaken by council to transfer those assets by a full council resolution decision, much the same way other public assets are divested, then DNSP's can assume legal ownership of the asset. Until this is known, the question of ownership is still unresolved and therefore if the councils wishes to engage alternative OM operators, it should be free to do so even when those assets are mounted on distribution poles or have been previously maintained by the DNSP. The asset information that the DNSP's have been charging in their cost build up should detail this ownership per asset and therefore the reconciliation should be relatively simple to determine which assets are classified as OM Assets and which assets are OMR Assets.

The restructuring of the pricing recognising ownership and contribution of capital will clarify these issues.

Framework and Approach for New and Replacement Public Lighting Assets

The framework and approach that the ESC clarified regarding New and Replacement Assets certainly clarifies the intent and flexibility of the PLC.

'Public lighting customers **are able to choose to own new public lighting assets** and therefore competitively tender the **construction and ongoing operation and maintenance of the new public lighting assets**.

However, as defined in clause 3 of the Code, a public lighting customer and distributor may agree that ownership of assets, after their construction and commissioning, will be transferred to the distributor. **If an agreement to transfer the assets** is made, then the assets become subject to the applicable standards and obligations of the Code."

It further goes onto to say the following in regards to existing street lights on distribution poles however we can cover those issues off in the Chapter of Electrical Safety.

While the public lighting customer has the right to construct own and operate new public lighting, this right does not extend to:

- Installing new public lighting assets on distribution poles **without first** obtaining the distributor's consent; or
- Connecting public lighting assets to the distributor's network **without their consent**

We agree with the statement above, but we detail in our section of electrical safety that these issues can be covered off separately via the electrical safety regulator ESV and AER need not be concerned about the intricacies of OHS and Electrical Safety as most States in Australia have separate State based safety issues.

The issues of connection applications are covered off under Chapter 5 of the National Electricity Rules and whether that connection is an automatic connection or a negotiated connection can be dealt with here.

Essential Services Commission Clarifications

Ten years ago, the ESC in Appendix Hⁱⁱⁱ also made some significant clarifications to the issues raised by many stakeholders at the time. We would argue that those issues still remain by many stakeholders now and the AER should revisit this to ensure consistency in its clarification between the policy intent and the classification.

Several public lighting customers expressed concern that the Code should, but does not:

- ⊕ Cover non-standard lights, leaving customers exposed to private negotiations with distributors;
- ⊕ Address the replacement process for standard lights and that the Code should be extended to incorporate greater flexibility to enable distributors to meet their customer requirements, such as individual customer service performance contracts; and
- ⊕ Cover public lighting assets owned by customers, and therefore customers may often choose not to own assets, which in turn limits contestability.

The Commission made the following clarifications and below is a copy of that information.

The Commission considers that the following clarification may address these issues:

- ⊕ The Code does apply to non-standard public lights where the distributor owns these lights.
- ⊕ The Code **does not prevent** customers owning public lighting assets (standard and nonstandard), and then negotiating with a distributor (**or another third party**) to **operate and maintain these assets for a negotiated charge**. Additionally, the customer could choose to vest the assets in the distributor who could then own and operate the assets in a similar manner to the distributor owned asset, which are the subject of this review.
- ⊕ The Code does address replacement of assets. Specifically, clause 2.1(c) of the Code requires distributors to *'develop and implement plans for the operation, maintenance, refurbishment, replacement, repair and disposal of its public lighting assets'*.
- ⊕ Further, the Commission notes that the intent of **clause 1.4 of the Code** is to provide distributors and public lighting customers **flexibility**:

'A distributor and public lighting customer may seek a written agreement with the other party to expressly vary their respective rights and obligations under this Code.'

The Code does **not place any limitations on what these variations may** entail, it merely outlines the minimum services a distributor is required.

For example, a public lighting customer and distributor may agree to vary the rights and obligations under the Code such that:

- ⊕ The provisions of the Code apply where the public lighting assets are not owned by the distributor;
- ⊕ **A public lighting customer funds the replacement of public lights** directly and negotiates a reduction in the charges;
- ⊕ The payment terms are 7 days rather than the minimum 12 days in the Code;

- ⊕ The public lighting **customer assumes responsibility for all (or part)** of the operation and maintenance of the public lighting assets;
- ⊕ There is a bulk lamp replacement program for major road lamps rather than a routine patrol;
- ⊕ Non-major road lamps are replaced at least every three years, rather than at least every four years; and/or
- ⊕ The public lighting customer has input into the distributor's operation, maintenance and replacement plans.

As it can be seen above the intent of the PLC, that there is a broad range of items that can be negotiated and this exhaustive list demonstrates that flexibility must be introduced into the classification and consideration must be towards classifying all public lighting as negotiated services.

To start delineating between the technicalities of what may be contestable by suggesting greenfield and emerging technology and standard public lighting classified as Direct/Alternative, dilutes the broad negotiated intent of the PLC and will further confuse the market.

The efficient technologies of today will be the inefficient ones of tomorrow and so therefore a framework that caters for that flexibility in technological change should be facilitated and encouraged in this next determination.

Vesting

With Appendix I.7^{iv} of the ESC Final Review an argument was put forward by the DNSP's that Vesting was required as part of the standard condition of contract.

We detail within the next chapter, that we can find no legislative requirement that would compel a public lighting customer to vest an asset.

We would also suggest that unless the customers have delegated authority to divest those assets are to be vested to the DNSP, then ownership of those assets should not be assumed. This point was made very clear to Vic Roads stakeholders in 2003^v:

"It should be noted that the electrical industry is now deregulated in respect of street lighting, for new and replacement street lighting schemes installed on roads under the care and management of VicRoads. Thus, **no agreement which transfers ownership**, or which could be interpreted as transferring ownership, away from VicRoads shall be made."

It was clear in the determination that vesting was not a requirement and if DNSP's could be satisfied that safety was met, then customers could retain ownership of the asset.

It should be made clear that ownership is not in contention here and DNSP's should not therefore assume ownership unless the customer has consciously agreed to.

The issues of the technical and safety should also not be used as a reason to vest.

Electrical Safety

Within this part of our submission we demonstrate that Electrical Safety should not be a concern of the AER in assessing whether it is technically feasible to move towards FRC. And the transition from Direct/Alternative should be considered to Negotiated in the first instance.

Electrical Industry Act 2000

We note that the objectives of the Electricity Industry Act are to:

ELECTRICITY INDUSTRY ACT 2000 - SECT 10

Objectives of the Commission

The objectives of the Commission under this Act are—

- (a) to the extent that it is efficient and practicable to do so, to promote a consistent regulatory approach between the electricity industry and the gas industry; and
- (b) to **promote the development** of full retail **competition**.

Electrical Safety Act 1998

Notice here, that there is no requirement for the DNSP to own an asset rather the Act details that it is either **owner** or **operator** of the complex electrical installations and the meaning of the complex electrical installations is the owner or operator of an electrical line installed on land that it does not own.

We would agree with the contention that DNSP's must own the asset if the Act supported that position but it is clear that this is not the case within the Act. This Act therefore supports that another party (operator) other than the owner (DNSP) can be designed, constructed, operated and maintained other than the DNSP.

ELECTRICAL SAFETY ACT SECTION 75 1998

General duties of **owners or operators** of complex electrical installations and railways

- (1) An owner or operator of a complex electrical installation must take reasonable care to ensure that all parts of the complex electrical installation that it owns or operates—
 - (a) are designed, constructed, operated, maintained and decommissioned in accordance with the regulations; and
 - (b) are safe and operated safely.

This owner or operator context of the Act is further supported in other sections such as the section for tree clearing. The wording **unless** provides that distinction.

ELECTRICAL SAFETY ACT SECTION 84

A distribution company is responsible for the keeping of the whole or any part of a tree clear of an electric line within its distribution area **unless** under this Subdivision another person is responsible for—

- (a) the maintenance of the line; or
- (b) the keeping of the whole or any part of a tree clear of the line.

Below we bring into focus, the hierarchy of the Electrical Safety Act in relation to the Public Lighting Code and therefore the intent of the Public Lighting Code should also be considered in relation to any matters of electrical safety and if those safety matters are then interpreted as to creating a perception that would limit the contestability provisions or the broad, negotiated intent of Clause 1.4 of the code, then the PLC should take preference. Section 157 of the NEL also supports that the reasoning that Technical or Safety reasons can be used by which to prevent access.

ELECTRICAL SAFETY ACT SECTION 85

Energy Safe Victoria or the relevant distribution company or the relevant transmission company may, **subject to any code applying** in relation to the exercise of powers under this section issued by the Essential Services Commission under the Essential Services Commission Act 2001 , exercise the following powers in relation to electric lines—

The exercise of powers does not extend to preventing a third party accessing their infrastructure provided agreement and relevant standards are adhered to by the parties. The connection agreement can then also be subject to Chapter 5 of the NER and the facilities access protocol

We note that within the Act, there is nothing that would suggest that the DNSP has legislative authority^{vi} by which to give equipment approvals in addition to the statutory approvals and therefore the delay experienced by some new LED suppliers in the market should not be occurring.

We agree that the DNSP has to assess the suitability of a piece of equipment but this should not extend to the power of providing an approval service to the industry. Every electrical contractor and person operating in the electrical industry has a legislative requirement to ensure equipment is installed safely however this requirement does not extend to the activity of providing approvals. Separate approval bodies and laboratories provide this service in accordance with applicable standards.

Further we note that within Section 58 of the Act, any approval of any prescribed equipment is provided by Energy Safe Victoria and does not appear to extend to any other party.

Electrical Installation Regulations 2009 – NO GO ZONE

Often a reason used within the industry as to why some other organisation cannot work on the public lighting is that the infrastructure is within the NO GO ZONE however the Electrical Installation Regulations Section 318 detail again the term **“Owner or Operator”** and therefore ownership of the asset is not seen as the obligatory requirement to work within the NO-GO ZONE:

ELECTRICITY SAFETY (INSTALLATIONS) REGULATIONS 2009 - REG 318

Minimum distances between persons and aerial lines

(1) A person must not come closer to an aerial line that forms part of a relevant installation specified in Column 1 of Table 318 than the minimum distance specified in Column 2 of Table 318 opposite that aerial line.

Penalty: 20 penalty units.

(2) This regulation **does not apply** to—

- (a) a licensed electrician engaged by the **owner** or **operator** of the aerial line to carry out electrical installation work on that line; or
 - (b) a person engaged in tree clearing work who holds a current certificate specifying satisfactory completion of a training course in tree clearing, approved by Energy Safe Victoria; or
 - (c) a **telecommunications worker** who holds a current certificate specifying satisfactory completion of a training course in power line awareness, approved by Energy Safe Victoria; or
 - (d) a person employed or engaged by a major electricity company who is carrying out electrical work on an aerial line owned or operated by the major electricity company; or
 - (e) a person engaged by the **owner or operator** of the aerial line who is carrying out electrical installation work on the line, under the effective supervision of a licensed electrician, if the person—
 - (i) has completed a contract of training as an electric line worker that involves electrical work on high voltage aerial lines; and
 - (ii) has the **written permission** of the **owner or operator** of the line.
- (3) A person referred to in sub-regulation (2) must comply with the Blue Book.

As we note above, it is the written permission of the owner or operator. To withhold permission would have to be beyond ordinary circumstances. The written permission required is consistent with the requirements of the Blue Book. We would also argue that there is nothing fundamentally different between a tele-communications worker providing an essential service approved by Energy Safe Victoria and a public lighting specialist also providing an essential service of light to the community.

Blue Book

Within the Blue Book^{vii} we can establish that asset owners (DNSP's) shall have procedures to facilitate a safe system of access.

12.1 General

An asset owner shall have procedures to facilitate a safe system of access by persons, not under the control of the asset owner, to work near or within safe approach distance or, when appropriate, in the vicinity of electrical apparatus.

For the purposes of this clause, persons not under the control of the asset owner are persons or organisations that **have no contractual obligation to the asset owner** and are not performing work for the asset owner for the particular task.

This Chapter within the Blue Book detailed in the Electrical Installation Regulations also has supporting chapters such as Clause 9.2.4^{viii} where it raises the possibility that that some infrastructure may have organisations with multiple ownership. This supports the notion that customers such as councils can have ownership of public lighting on DNSP's poles and the issues are then established through the council's public lighting operator with the DNSP.

9.2.4 Multiple ownership

Where the operational control of the scope of electrical apparatus to be covered is owned by more than **one organisation**, a protocol shall be established between these organisations for processing the application and outage requirements.

Green Book

The GREEN Book is the VESI Guide written for DNSP's and consideration for Overhead Lines with multiple asset ownership also highlights the acknowledgement someone can own an asset on a DNSP's pole^{ix}.

Electrical Safety Management Systems AS5577

It should be noted within Victoria, that parties can voluntarily submit an Electrical Safety Management System to ESV. This enables companies to demonstrate an efficient manner of complying with electrical safety without using the prescribed methods as detailed in the Electrical Safety Regulations.

AS3000 Wiring Rules

Often an argument put forward when a council chooses to retain ownership of the public lighting luminaire, the installation has to be re-wired to Australian Standards. It should be noted however that AS3000 is comprised of two parts. If a party chose to comply to Part 2, then the argument that the installation has to be rewired stands, however if Part 1 is chosen and electrical safety can be demonstrated through design, then the installation may comply through the design. AS3000^x is structured in this way to allow for flexibility for installations that are unusual in nature such as complex electrical installations such as energy distribution networks.

There are also exemptions available and application for these exemptions can be found on ESV'S website^{xi}.

Service and Installation Rules SIR's

We note from the AER's last determination that reference was made to Clause 7.8.5.1. During this time the Service and Installation Rules has been revised to Clause 7.8^{xii}, however this rule still remains that it supports that Public Lighting can be mounted upon the distributor's pole. What should be highlighted here is the allocation of risk associated with the equipment:

"In all cases, where equipment other than network assets are located upon a Distributor's pole, the customer/person or body responsible for the equipment shall be responsible for the installation, **maintenance** and **liability** associated with their equipment"

This part of the rule needs to be highlighted to ensure consistency in pricing when councils possibly install their public lighting on a DNSP pole and the issue is raised that the DNSP can now charge rent to council for granting such an access. The possibility of charging rent on a streetlight, that utilises electrical energy would be inconsistent with the rules for shared assets and the allocation of risk in accordance with Chapter 6^{xiii} of the National Electricity Rules, where the price for access must not be unreasonably onerous, taking into account the allocation of risk, the price between the DNSP and the other party.

National Electricity Rules also stipulate that this charge is a maximum charge^{xiv} and must be in accordance with Chapter 6.

Facilities Access Protocol

The facilities access protocol between two organisations should not be unreasonably onerous especially on the third party wishing to maintain the public light fitting on the DNSP's. The same criteria DNSP's use to meet the requirements of the Blue Book and the Green Book should be the minimum requirements established between the organisations.

This would also ensure the parties maintain good faith when negotiating the access between the two parties and ensure minimal costs to each party.

Part 1 – Commercial Aspects

- ⊕ Contract Parties Detail
- ⊕ Contact details of Key Personnel for both sides
- ⊕ Equipment Covered
- ⊕ Operating Duration
- ⊕ Dispute Resolution Process
- ⊕ Certificate of Insurance (to demonstrate financial viability to transfer risk)

Part 2 – Technical Aspects

- ⊕ Safe-work Method Statement
- ⊕ Lighting Designs
- ⊕ Electrical Design
- ⊕ Notification of Incidents

There is not a an exhaustive list of requirements detailed within the Green Book^{xv} for Electrical Workers to operate public lighting and whether the maintenance is undertaken by the DNSP or a third party, the issues of electrical safety can be managed with Energy Safe Victoria.

We would argue that even contained within the Green Book, that a Facilities Access Arrangement proposed appears to exceed the safety requirements of the industry as is noted, Public Lighting is an excluded activity requiring an Electrical Access Protocol^{xvi}:

An EAP shall be issued for work on or near exposed LV conductors **except** for the following types of work:

- Work on protection and control systems.
- Work on station service supply auxiliary circuits.
- LV servicing and metering.
- Public lighting (other than overhead switch wire circuit works).
- When undertaking live work techniques.

Type 7 Metering Installation

Some consideration is needed to support Type 7 Metering installations being classified as Negotiated in the context of the Public Lighting Code and the contestability provisions.

The reason for this is that if the customer decides to include a higher level of performance for the outage rates and fault levels for public lighting as a result of a competitive tender, that would seek to improve the functional requirements of a Type 7 metering installation, then National Electricity Rules needs to be considered.

7.13 Evolving Technologies and Processes and Development of the Market

(a) Evolving technologies or processes that:

(1) meet or improve the performance and functional requirements of this Chapter; or
(2) facilitate the development of the market, may be used if agreed between the relevant Market Participant(s), the Local Network Service Provider and AEMO, and the agreement of the Local Network Service Provider and AEMO must **not be unreasonably withheld**.

(b) No agreement contemplated by rule 7.13(a) can be entered into if it materially and adversely affects the interests of persons other than the Market Participant(s) and the Local Network Service Provider who are parties to the agreement.

Contestability and competition of the market that improves the process of public lighting and helps facilitate the development of the market supports that Type 7 metering devices be considered negotiated services.

Section 157 National Electricity Law

Section 157 of the NEL provides clear guidance on whether technical or safety reasons can ever be used by which to prevent or hinder access. Although not specifically needed in the submission, all stakeholders associated with public lighting need to be aware of the in-built protections and intent that the NEL appears to endorse in the development of the energy market in Australia.

Electricity by its very nature is complex however technical or safety reasons used by which to prevent the development of the market need to be read in context of this part of the NEL.

Product Approvals

This section deals with the issue of product approvals in relation to public lighting. Affecting particularly new entrants, Victoria has evolved into one of the least transparent, expensive public lighting approvals regime in Australia. Anecdotally lighting suppliers have spent well over \$250,000 to consultants endorsed by the DNSP's to assess products. Coupled with Victoria; Australia's only state with a specific public lighting contestability policy, product approvals as first step requirement by DNSP's has not created any more choice for the customer than what had occurred at the start of the last determination. We agree with the AER that approvals for public lighting have taken far too long.

Other councils and government authorities outside of Victoria approach the issue of approvals with far more simplicity. For example most of the LED requests to AEMO have occurred outside of the State of Victoria during the last determination. Most of the innovative lamp types and products are proposed outside of Victoria first.

There appears still misinformation in relation to gain approvals and our suggestion that for the DNSP's to be involved in further product approvals beyond the statutory requirements adds an administrative cost that they neither have allowed for, or in the process, are diverting them away from their core activities associated with public lighting.

First we can establish that public lighting falls under the category of "plant" and is in the National Electricity Rules under the following definition:

plant

(a) In relation to a connection point, includes all equipment involved in generating, utilising or transmitting electrical energy.

Secondly we can establish that under National Electrical Rules that plant standards can be a combination of Australia, International Standards or part there-of if the reliability panel determines as such.

plant standard

An Australian or international standard or a part thereof that:

- (a) the Reliability Panel determines to be an acceptable alternative to a particular minimum access standard or automatic access standard for a particular class of plant, or
- (b) a schedule in Chapter 5 establishes as an acceptable alternative to a particular minimum access standard or automatic access standard for a particular class of plant

It is evident that lighting manufacturers and customers outside of Victoria understand on how first to gain an approval for an unmetered load as many of the updates to the Type 7 unmetered load tables have originated outside of Victoria. Manufacturers approach AEMO with the relative technical information, AEMO conduct a review and the load profile is published. Presumably these luminaires are for projects involving new and innovative technologies.

Could we suggest that the AER make comment that as long as the manufacturer has met all the statutory requirements for electrical safety, that the DNSP cannot refuse connection?

Victorian Public Lighting Approvals Board

During the last determination, the Victorian Government, the Municipal Association of Victoria signed an MOU with the DNSP's to agree on a process by which to speed up the approval of public lighting luminaires. It is our understanding that over 50 technologies have been assessed by parties associated with the approvals board and only a small number have been found to meet the requirements for DNSP's.

We would question the need for the DNSP's to be involved in approvals. The notion that DNSP's must somehow be involved in approval of public lighting is akin to arguing that DNSP's must somehow be involved in the approval process of the family toaster. There is no electrical barrier between the power outlets of the household appliances and an electrical substation. It is unreasonable to assume that public lighting design and manufacturer to the appropriate standards would any less affect the safe operation of a network whether the street light is mounted on DNSP owned pole or customer owned pole and therefore approvals should not be a core function of the DNSP.

For councils who choose to divest itself of their assets and entrust all OM and future OM+R to a DNSP, would be subject the individual DNSP's procurement specifications that it would deem fit.

Conversely a council who choose to retain ownership rights of public lighting should not be inhibited by a DNSP for doing so. Other states allow customers to retain ownership and do not inhibit the choice of public lighting luminaire chosen by the customer.

Example of Product Approval by DNSP

Our reason for clarifying whether a DNSP needs to be involved in public lighting approvals, is framed within the actual wording from each of the DNSP'S^{xvii} in relation to one of the energy efficient streetlight approvals it has granted in Victoria during the last determination. We ask the question based on the caveats that the approval has within it, what benefit is there on the approval, subsequent delays, time costs experienced by the manufacturer and the customers by the DNSP for such an approval?

It appears 4 of the DNSP's have absolved themselves of all risk associated with the product under consideration. Customers must also be made aware of what risk they are actually carrying in relation to the connection of energy efficient products connected to the network on the basis of such a notification from the DNSP.

United Energy **does not accept any liability or responsibility** whatsoever to any person arising in connection with the installation or use of these products or the use or reliance on this notification.

Citipower/Powercor **does not accept any liability or responsibility** whatsoever to any person arising in the connection with the installation or use of the product or the use or reliance on this notification. Also by Citipower/Powercor giving this notification it does not, expressly or impliedly, warranty or guarantee that:

- ⊕ The individual installing the product is suitable and/or qualified to install the product on the Citipower/Powercor distribution network;
- ⊕ The manufacturer or distributor of the product has been approved to install the product on the Citipower/Powercor's distribution network; or

- ⊕ The installation procedure used to install the permitted product is suitable for the Citipower/Powercor Distribution Network

Jemena **does not accept** any **liability** or **responsibility** whatsoever to any person arising in connection with the installation or use of these products or the use or reliance on this notification.

Australian Standards

ASNZS1158.6 is a product specification. It has no legislative authority and recent challenges were made as to the legitimacy of the standard in context of Australia's technical barrier to trade treaties.

Suppliers of electrical equipment are regulated under three aspects:

- ⊕ Electrical Safety
- ⊕ Energy Efficiency
- ⊕ Electro-Magnetic Capability

Energy Safe Victoria^{xviii} clearly delineate the responsibility on product responsibility,

"The foundation of Australian electrical equipment safety legislation is an essential safety regime whereby electrical equipment suppliers are responsible to ensure that all electrical equipment supplied or offered for supply in Australia meets minimum safety specifications."

This statement is also supported by Section 54 of the Electrical Safety Act and therefore responsibility for the luminaire to be safe rests upon the manufacturer and person offering for sale.

It should also be noted that currently DNSP's are represented on ESV's Equipment Advisory Committee^{xix} as required under the act and the question should be raised, if the approval of street lighting luminaires is deemed to a core DNSP activity, then the appropriate mechanism by which this is undertaken is through their membership on ESV's advisory committee. In the absence of this, the DNSP, 3rd party operators should simply accept the certifications and items from the street lighting luminaire distributor to demonstrate compliance.

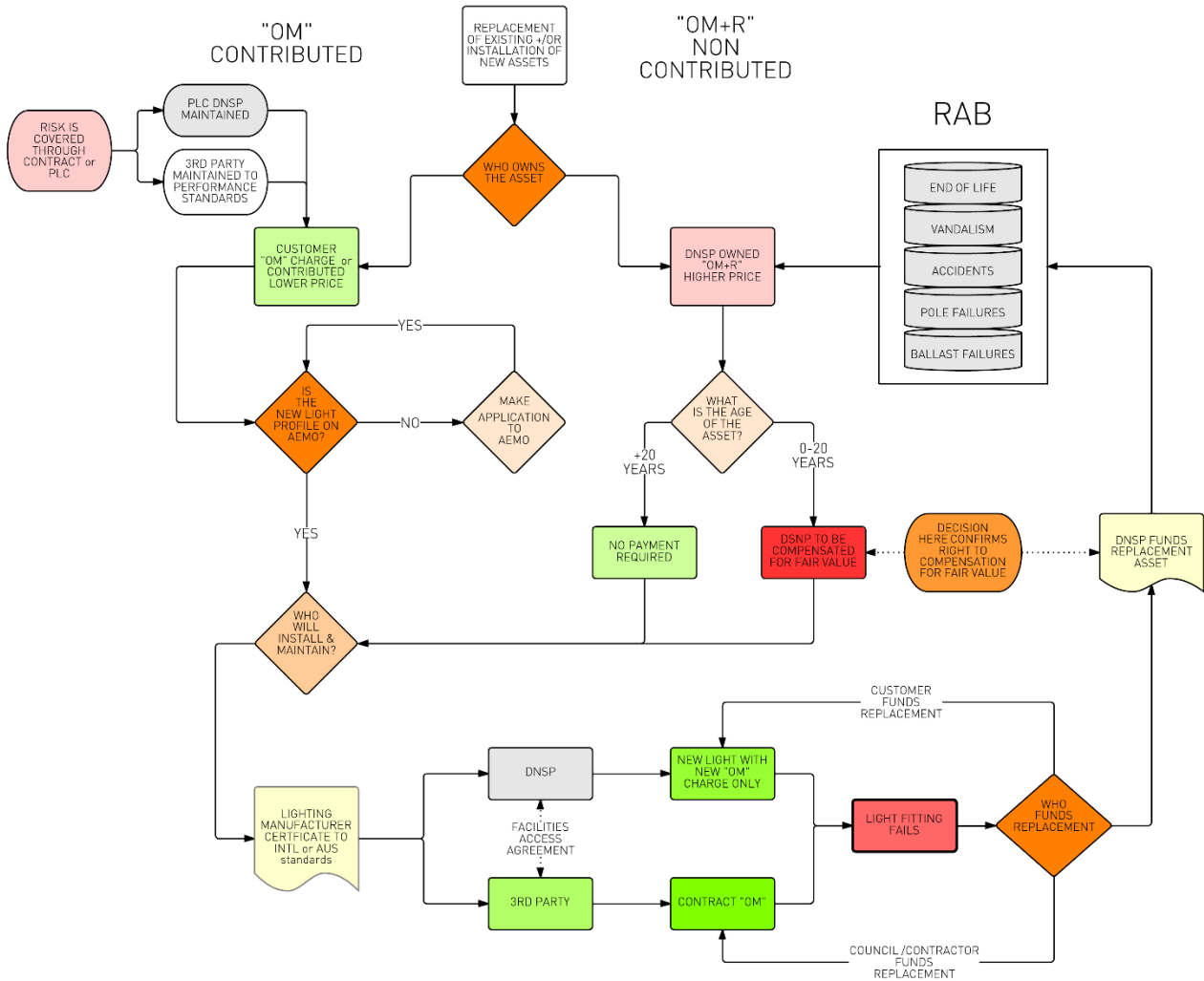
AEMO Unmetered Load Table

It should be clarified that if the installation is to be un-metered, then the first step that needs to be made by customers in the choice of a new technology is to have the AEMO unmetered load table updated. It is evident that this process is understood as a first step by other customers outside of the Victorian jurisdiction. We detail this process on the Proposed Framework of Public Lighting in Victoria.

Proposed Framework of Public Lighting Victoria

The following framework details the recognition between OM and OM+R and includes the intent of the public lighting code where customers have the right to fund the replacement of lighting assets, subcontract the maintenance to a third party or the DNSP on the basis of an ongoing reduced OM charged without the R component.

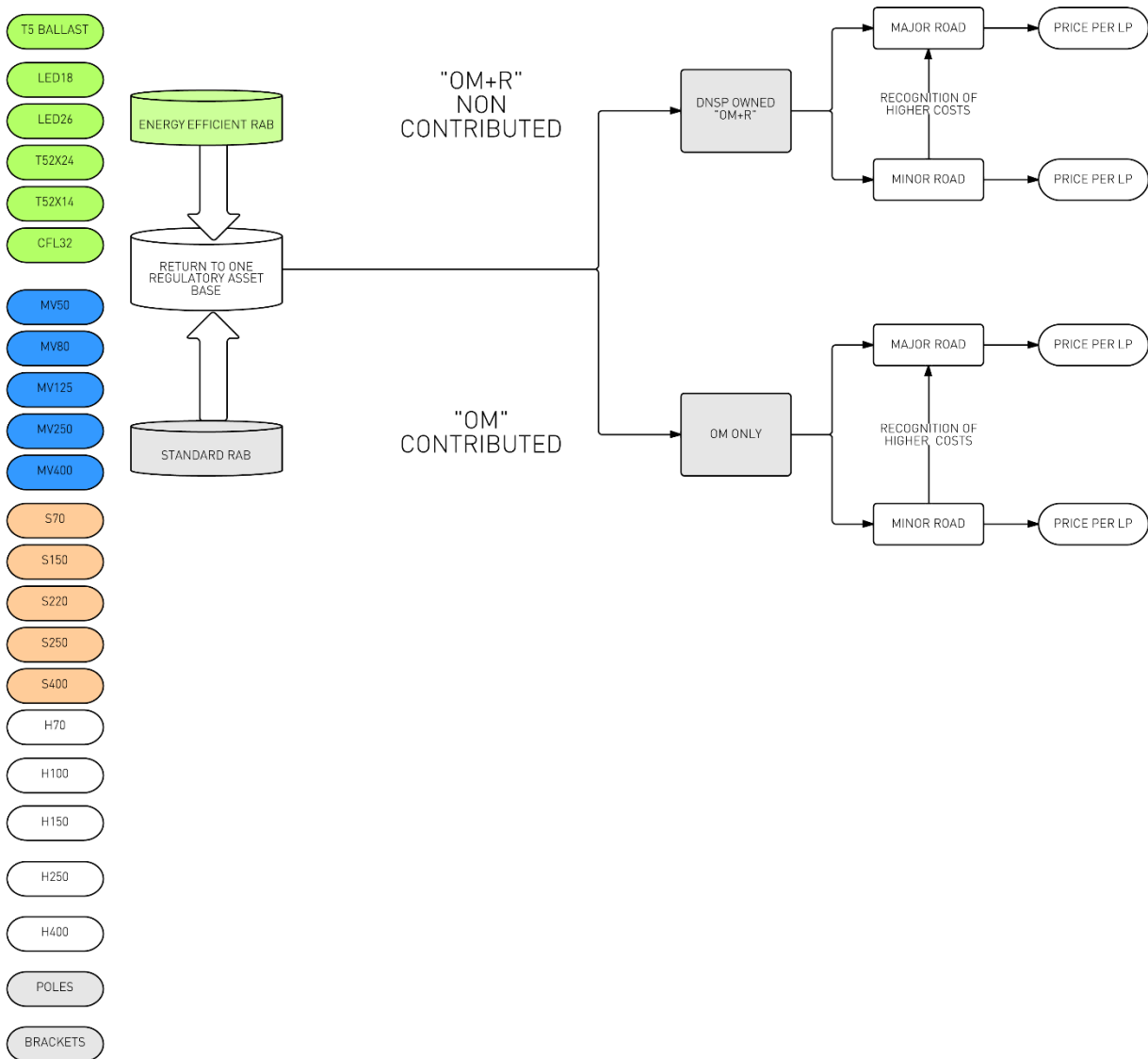
Fig 1 – Proposed Framework of Public Lighting Victoria



Proposed Simplification of OM Charges

The proposed simplification of public lighting maintenance charges has with it, the appropriate recognition of costs attributed between minor road maintenance activities and the associated major road activities.

Fig. 2 – Simplification of Public Lighting OM and OM+R Charges



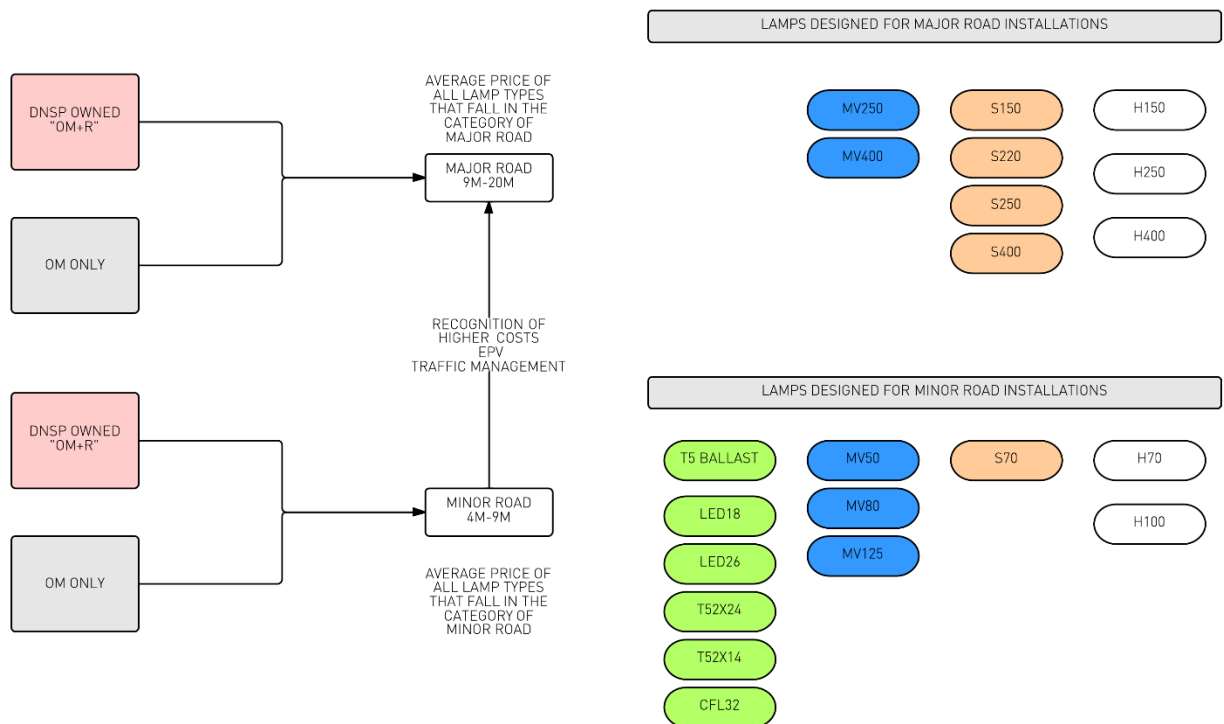
Propose allocation of Lamp types into Major Minor Road

Undertaking a lighting design to achieve an illuminance (lux result) can be approximately simplified to the following inputs:

- ⊕ Light output of the Luminaire or Lamp
- ⊕ Mounting Height

Therefore we can then allocate for the majority of the lamps the following assumptions relating to mounting height. In addition to this, the data recorded from 1st January 2005 on the DNSP's GIS Management Systems should confirm the assumptions made here. Citelum have conducted audits totally in excess of 50,000 lighting points and the data confirms the direct correlation between the wattage of the lamp and the mounting height.

Fig.3 Allocation of Lamp Types According Road Category



Conclusion

We strongly suggest consideration for a tiered pricing structure that recognised appropriately the contributions of capital invested by either the public lighting customer and classify all public lighting services as Negotiated rather than keeping some services Direct/Alternative Control and blurring the distinction between public lighting services by placing focus on emerging technology and greenfield sites.

This blurring will only further confuse and frustrate stakeholders and new entrants to the market; new public lighting operators, consultants, lighting designers, LED manufacturers.

We also believe the simplification of the pricing structure will reduce the transactional costs for public lighting for DNSP's

It can be noted throughout our submission that the PLC had broad ramifications that have yet to be given the appropriate regulatory classification. Negotiated should be strongly considered for all public lighting services.

The AER could also harmonise with QLD and NSW by using the terminology of Contributed and Non-Contributed to deliver consistency in NEM.

Contributed Assets

Assets that were new assets installed by the customers and currently maintained by the DNSP or a Third Party – O&M only

Major and Minor Road Classifications

To recognise the cost difference in EPV between Minor Road (up to 8.0m) and Major Road (8.0m+) and associated traffic management costs

Non-Contributed Assets

Assets that were O&M and replaced because of vandalism, faulty ballasts, vehicle accidents are replaced and CAPEX is placed into the RAB and now classified with an "R"

Major and Minor Road Classifications

To recognise the cost difference in EPV between Minor Road (up to 8.0m) and Major Road (8.0m+) and associated traffic management costs

The historical context and intent of the Public Lighting Code required DNSP's to adjust their GIS Management Systems in 2005 by which to record extra information that would facilitate this appropriate pricing structure as suggested above.

The costs for that GIS were also built into the cost build up model for OMR from 2005 and therefore customers should be able to obtain a simplified pricing structure where their investment in new assets has been appropriately recognised.

Customers need to inform themselves and be empowered by the appropriate regulatory authorities and mechanisms to be able to negotiate effectively. Technical and Safety barriers must not be used by anyone by which to prevent access.

DNSP's should not assume ownership of public lighting assets unless ratified by a full council resolution and pricing should in the interim be adjusted

Type 7 Reclassification

As has been demonstrated in this submission, to avoid doubt, Type 7 metering installations if owned by the customer should be classified as negotiated and open for competition. This would ensure consistency between the contestability provisions of maintenance and the metering installation.

Last word

As was stated back in April 2004 by the ESC, customers were misinformed about Public Lighting.

We would contend that 10 years later, customers are still misinformed about public lighting.

This submission should help serve as a reference to customers and stakeholders wishing to understand the intent of the public lighting code that in its vision provided customers with:

- ⊕ Choice of Ownership
- ⊕ Choice of Technology
- ⊕ Choice of Maintenance
- ⊕ Choice of Funding the replacement capital, retaining ownership and negotiating a reduced maintenance charge that did not include "R" component.

References

- ii AER Energy Efficient Public Lighting Charges – Final Decision 2009
- iii Essential Services Commission Review of Public Lighting Excluded Services Charges April 2004
Appendix H
- iv Essential Services Commission Final Review Excluded Services Charges August 2004
- v Vicroads Guidelines for Streetlighting Operating and Maintenance TCG 005-1-2003
- vi Section 153 Electrical Safety Act
- vii Blue Book Chapter 12 Published 2012
- viii Blue Book Clause 9.2.4 Published 2012
- ix Green Book Clause 2.1.6
- x AS3000 Clause 1.9.4
- xi <http://www.esv.vic.gov.au/Portals/0/Electricity%20Professionals/Exemption%20form%20-%20September%202013.pdf>
- xii Service and Installation Rules 7.8 2014
- xiii Chapter 6.7.1 d Clause 10
- xiv NER Chapter 5.5(g) Access Arrangements relating to Distribution Networks

- xvi Green Book Clause 4.3.2
- xvii CONFIDENTIAL Product approval letter given to Citelum
- xviii Energy Safe Victoria -
<http://www.esv.vic.gov.au/Portals/0/Electricity%20Professionals/Files/GeneralGuidelines2005.pdf>
- xix Electrical Safety Act 1998 Section 50