SUBMISSION TO THE AUSTRALIAN ENERGY REGULATOR (AER)

LOCAL GOVERNMENT RESPONSE TO THE VICTORIAN ELECTRICITY DISTRIBUTION PRICE REVIEW (EDPR) 2026-31

Prepared by the Victorian Greenhouse Alliances

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Prepared by the Victorian Greenhouse Alliances on behalf of their member councils.

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EXECUTIVE SUMMARY

On behalf of, and with input from their council members, the Victorian Greenhouse Alliances are pleased to make this submission to the Australian Energy Regulator (AER) to the 2026-2031 Victorian Electricity Distribution Price Review (EDPR). This submission provides supporting evidence and rationale for a number of key recommendations in the following areas:

Public lighting

- Changes to the Victorian Public Lighting Code (the Code) – The Code is clearly out of date due to technology changes, which impacts the operation and management of street lighting. Updating the Code is important, as it remains a key method by which the Distribution Network Service Providers (DNSPs) and the AER test the assumptions within the DNSPs' cost models.
- DNSP investment in LED replacements – DNSPs are proposing to replace 150,000 streetlights with LEDs over the period. We recommend expanding this to include replacing all streetlights to LED over the period whilst supporting local governments to direct design, smart lighting and amenity decisions. Local governments also support DNSPs funding the installation of smart lighting on major roads and in select locations in residential areas.
- Recognising customer funded assets within pricing models to bring Victoria into line with all other Australian states by replicating the model proposed by Jemena.
- Detailed analysis of the DNSP's cost models indicates many other areas where best practice should be implemented. These recommended changes have the potential to save customers more than $10M over the period.

The energy transition

- There is a need for standardised benchmarks and metrics in assessing Consumer Energy Resources (CER) expenditure that provide insights on service levels and customer benefits.
- Networks have a restricted approach to investing in innovation. Despite a combined innovation expenditure of $65M across five businesses, this represents only 0.6% of total network investment. This amount is deemed insufficient to address the challenges of the transition, particularly when compared to other industries.
- The integrity of claims should be investigated, including disinformation campaigns via industry associations attempting to preserve profits at the expense of consumers and the shift towards cleaner energy.

Regional supply and standalone power systems

- AusNet's $9M investment in Stand Alone Power Systems (SAPS) for 30 vulnerable communities is commended for its comprehensive approach, including solar, battery, and communication systems to ensure essential services during outages.

- Powercor's $18M SAPS proposal lacks transparency on non-network programs for rural areas, prompting councils to request disclosure of community cost/benefit assessments and details for future implementation to improve rural resilience initiatives.

Vegetation management

- Better collaboration between distribution businesses and councils is needed to find solutions that allow mature trees near power lines in low bushfire risk areas to be managed effectively, balancing safety, amenity, and environmental considerations.
- Clearer allocation of responsibilities is needed for tree clearance near power lines under the Electricity Safety Act 1998 to address the conflicts between network businesses' pruning practices and council tree management objectives.
- Networks should implement more frequent pruning cycles to preserve mature trees, conduct regular audits of cutting crews, and explore aerial bundle cable solutions for areas with valuable trees.

Climate resilience

- DNSPs are investing in enhancing network resilience to address the impact of extreme weather events and climate change, focusing on flood protection, emergency response, and network hardening. However, there are concerns that the current approach to assessing costs and benefits for climate adaptation measures may limit a network's adaptive capacity. Infrastructure Victoria's economic assessment highlights the need for a broader evaluation that considers other drivers for accelerated investment, such as electrification and EV uptake.
- The AER should mandate DNSPs to develop a consistent methodology for assessing costs and benefits of adaptation and resilience measures to ensure comprehensive evaluation of network investments.

Voltage management

- Expand the successful voltage reduction trial that took place across Victoria in 2020 to reduce electricity consumption ~2.4% state-wide with transparent annual reporting on community benefits.
- Undertake a cost benefit analysis of the deployment of the Australian Standard AS IEC 60038:2022 for all networks. This reform provides the opportunity to unlock the full potential of the technology, with estimated community cost savings of $33M per year.

1. INTRODUCTION

On behalf of, and with input from, their council members, the Victorian Greenhouse Alliances (VGAs) are pleased to make this submission to the Australian Energy Regulator (AER) to the 2026-2031 Victorian Electricity Distribution Price Review (EDPR).

The VGAs are formal partnerships of local governments and statutory agencies driving climate change action across Victoria's municipalities. The VGAs deliver regional mitigation and adaptation programs that provide economies of scale and enable projects typically beyond the reach of individual councils and agencies. Our project work is complemented by targeted advocacy, capacity building and regional partnerships. Read more here.

Critically, the existing governance structures and capabilities within the Alliance networks facilitate a coordinated dialogue between local government and both state and federal governments on key issues relevant to the energy sector. This was demonstrated in the previous three pricing reset periods, where the Alliances coordinated a submission dealing with a range of issues including costs relating to the operation, maintenance and replacement (OMR) of public lighting. The outcomes of the past two submissions and determination processes were successful in generating over $33M in avoided costs for the local government sector over the previous 10 years.

2. PUBLIC LIGHTING

Key sector wide issues

This section discusses some key issues that are influencing the efficient operations of the overall street lighting industry. These items are:

- Changes to the Victorian Public Lighting Code
- DNSP investment in LED replacements
- Treatment of CPI
- Detailed public lighting cost model inputs
- Specific items for each Victorian DNSP

2.1 Changes to the Victorian Public Lighting Code

In the 2021-26 EDPR, Victorian councils advocated for the AER to request that a review of the Victorian Public Lighting Code (the Code) be implemented by the Victorian Essential Services Commission in time to influence (where relevant) the current EDPR. It is disappointing that there has been no change to the Code over the last regulatory period and the issues outlined below remain unresolved.

The Code was released by the Victorian Essential Services Commission in April 2005 and aims to:

> *"… regulate the provision of public lighting or the arrangements for such provision by specifying minimum standards and certain obligations of* ***distributors*** *and* ***public lighting customers*** *(bolding from original document). The objective of such regulation is to provide a safe visual environment for pedestrian and vehicular movement during times of inadequate natural light."*

Minor updates relating to "ESC's Review of the Guaranteed Service Level payment" were released in December 2015.

Since 2005, significant technology changes have occurred in the street lighting and electricity network sectors which have large impacts on the operation and management of street lighting. As such, the Code is now out of date, with both customers and DNSPs regularly ignoring irrelevant clauses. Despite this, the Code remains a key method by which the DNSPs and the AER test the assumptions within the cost models proposed by DNSPs.

Changes in technology have resulted in the Code not reflecting appropriate minimum standards. Table 1 provides several examples to demonstrate areas where the Code requires updating to

provide effective minimum standards for public lighting. They are not designed to be comprehensive but simply to confirm the need for change.

Table 1: Examples of current Code clauses that require change

Clause within Code	Requirement for updating
N/A (i.e. not relevant to a specific Clause currently)	Clarify the governance, maintenance and service relationship between DNSPs and customers where smart technology is installed on street lighting assets.
N/A	Formal processes for engagement and negotiation between DNSPs and customers with regard to public lighting issues are now commonplace. This should be reflected within the Code.
N/A	Increase recycling requirements for public lighting. Old lamps contained 80-90% glass, whilst new LEDs are less than 15%. Ensure the requirements of the Code cover appropriate recycling of LED products.
2.1c) develop and implement plans for the operation, maintenance, refurbishment, replacement, repair and disposal of its public lighting assets: - in a way which minimises costs to public lighting customers	Additional focus on energy efficiency and consideration of life cycle costs is required.
2.3.1a) operate a 24hr call centre to receive public and public lighting customer reports of public lighting faults	The advent of smart technology changes provides alternative interface platforms to the mandatory 24h call centre requirement for registering the reporting of lighting faults by customers.
2.3.1c) replace non-major road lamps at least every 4 years or otherwise as required by public lighting standards 2.3.1d) clean, inspect for damage and repair luminaires during any re-lamping; 2.3.1d) replace photo-electric cells at least every 8 years or otherwise as required by public lighting standards	Public lighting technology has changed with the introduction of longer life technology. These new technologies provide opportunities to vary the maintenance regimen due to the availability of longer life components and more robust luminaires, however these changes are not reflected in the current code requirements for minimum service levels.
2.3.1e) routinely patrol major roads at night to inspect, replace or repair luminaires at least 3 times per year	The advent of smart technology provides the ability to remotely understand maintenance and performance requirements for public lighting.

Recommendation:

- The AER should request that a review of the Victorian Public Lighting Code be implemented by the Victorian Essential Services Commission in time to influence (where relevant) the next Victorian Electricity Distribution Price Review.

2.2 DNSP investment in LED replacements

Victorian DNSPs are planning to invest $78M in energy efficient lighting changes during the 2026-2031 period. This would ensure most streetlights are energy efficient by the end of the period.

Table 2: Victorian DNSP energy efficient lighting investment 2026-2031

	UNITED	JEMENA	CITIPOWER	P'COR	AUSNET	TOTAL
Investment	$20M	$12M	$7M	$20M	$18M	$78M
Lights replaced	38,814	33,900	14,922	39,516	23,359	150,511
Non-LEDs remaining	12,435	37	4,685	10,551	19,039	46,747

Victorian councils have clear targets to reduce energy and emissions over this period and this work is a key element of delivering on these promises to the community and we welcome this investment. However, we request that DNSPs expand on this investment in the following ways:

- Replace all lights with energy efficient LED lighting - a further 46,747 lights over the period.
- Within the replacement program, integrate local government perspectives into project and design decisions such that the program can be delivered to enhance community safety and lower environmental impact. We recommend that these projects be delivered in consultation with local governments as per the replacement of over 300,000 lights over the past 15 years. This can be co-ordinated via the streetlighting support provided by the Municipal Association of Victoria (MAV).
- In concert with the LED roll-out program, DNSPs to fund the installation of smart lighting for all major road lights and for additional lighting assets nominated by individual local governments.
- Remove the requirement for road patrols after smart lighting has been installed. Road patrols are required under the Public Lighting Code to ensure road safety on major roads. By installing smart lighting, the level of lighting safety will be significantly improved and the need for visual inspection will no longer be required. In addition to the direct road safety benefits, this would save customers approximately $3.2M over a full 5-year period.

Recommendations:

- All DNSPs replace all streetlights with LEDs by the end of the period.

- DNSPs to support local government input via the MAV streetlighting support program. Customers are to be consulted on the roll-out program, in particular to direct design, smart lighting and amenity decisions.
- Install smart lighting in all major road lights to support operating cost reductions of around $3.2M per period ongoing. Ensure these reductions are accounted for in the relevant years of the 2026-31 EDPR model.

2.3 Recognising customer funded assets

In most jurisdictions, when customers fund lighting upgrades, DNSPs provide a lower cost tariff that recognises this investment. This is the case for all DNSPs servicing NSW, Queensland, Tasmania, SA and WA. In Victoria this has not historically been the case, however Jemena has proposed to use this approach by establishing a new Regulatory Asset Base (RAB) for customer funded upgrades. This RAB is very low and the corresponding maintenance prices are much lower for the relevant councils.

Customers across Victoria have voluntarily funded significant volumes of LED lighting. Some examples include:

- City of Greater Geelong (more than 20,000 lights in Powercor)
- City of Melbourne (more than 15,000 lights in Citipower)
- City of Brimbank (more than 8,000 lights in Powercor)
- Shire of East Gippsland (more than 3,000 lights in AusNet)
- Mornington Peninsula Shire (more than 15,000 lights in United Energy)

In contrast, many other councils have not funded the upgrade of many or any lights to LEDs. Splitting the asset bases is a simple way of ensuring direct cross-subsidisation does not occur, which could disproportionately impact some councils.

Recommendation:

- All DNSPs to replicate the approach of Jemena to ensure councils who have fully funded capital replacements are not subsidising DNSP funded roll outs.

2.4 CPI

The DNSPs apply different estimated CPI figures for the 2026-31 period. CitiPower, Powercor and United Energy apply 2.75%, while Jemena and Ausnet Services are using 2.5%.

Recommendation:

- The AER should review and adjust CPI to ensure consistent application across all DNSPs.

2.5 Detailed public lighting cost model inputs

Detailed analysis of the public lighting cost models submitted by each DNSP indicates there are many areas where best practice should be implemented across DNSPs. For some inputs the recommended changes are modest, in others there are clear errors or significant over statements, which – once rectified – should result in large savings for customers. Overall, the recommendations within this section are to bring each of the inputs in line with best practice. These changes have the potential to save customers more than $10M over the period.

The relevant inputs include:

- Inputs – all lamps
- Pole inspection rates
- PE Cell replacement cycle
- Ausnet Services specific items
- Jemena specific items
- CitiPower, Powercor and United Energy specific items

Each of these are discussed below, as well as a summary of the recommended alternative approach.

2.5.1 Inputs - all lamps

Some inputs for all lamps are unusually varied. Each of the inputs summarised in Tables 3 and 4 are discussed further below.

Table 2: Comparison of inputs for all lamps (2026/27 data utilised)

	JEMENA	AUSNET	CITIPOWER	POWERCOR	UNITED
Labour rate (per hour)	158.40	105.15	$149.53	$149.53	$149.53
Labour rate for night patrols (per hour)	$196.96	$131.43	$178.30	$178.30	$178.30
Elevated platform vehicle (per hr) - urban MV,urban T5	$36.71	$49.79	$55.45	$62.25	$61.45
Elevated platform vehicle (per hr) - rural MV, rural T5, S-HP	$36.71	$89.97	$78.60	$78.60	$55.20
Patrol vehicle (per hour)	$6.54	$39.54	$34.99	$42.64	$15.20

Table 3: Comparison of inputs for all lamps, % variance from lowest

	JEMENA	AUSNET	CITIPOWER	POWERCOR	UNITED
Labour rate (per hour)	151%	100%	142%	142%	142%
Labour rate for night patrols (per hour)	150%	100%	136%	136%	136%
Elevated platform vehicle (per hour) - urban MV,urban T5	100%	136%	151%	170%	167%
Elevated platform vehicle (per hr) - rural MV, rural T5, S-HP	100%	245%	214%	214%	150%
Patrol vehicle (per hour)	100%	605%	535%	652%	232%

2.5.1.1 Labour rates

The labour rates vary significantly across DNSPs. We propose the AER review these rates and ensure they are fair, efficient and reasonable.

2.5.1.2 Elevated platform vehicle

The range of costs for these items (including the range across urban and across rural areas) is large. Without specific justification, it appears that some rates are uncompetitive. Given that each of the DNSPs meet both Energy Safe Victoria (ESV) and Victorian Electricity Supply Industry (VESI) guidelines, it is unreasonable for some prices to be as much as double those of other DNSPs. We propose the AER review these rates and ensure they are fair, efficient and reasonable.

2.5.1.3 Patrol vehicle (per hour)

The patrol vehicle rates (per hour) vary widely. Several are more than six times the lowest cost, suggesting that they are uncompetitive. It is unreasonable for this range to be so wide.

Recommendation:

- The AER review all rates for labour and vehicles and ensure pricing is competitive and reasonable.

2.5.2 Pole inspection rate

Jemena have proposed a pole inspection rate of 30, which is less than half that of the other DNSPs which are typically around 75. Without further information from Jemena we assume this figure is in error. In any case, this should be benchmarked and the rate of inspections of other DNSPs utilised.

Recommendation:

- Jemena's pole inspection rate should be reset to 75 poles per day.

2.5.3 PE Cell replacement cycle

Historically, PE Cells have been replaced in residential areas every second lamp replacement to reduce extra trips to site for this routine maintenance activity. With the advent of smart cells (that replace the PE Cell and have a life of around 10 years) and LEDs (which only need replacement every 20 years) it makes sense that the maintenance cycle for PE Cells in residential areas is 10 years.

Most Victorian DNSPs have already changed the PE Cell replacement input to 10 years. Ausnet Services and Jemena need to update their model to the same.

Recommendation:

- Ausnet Services and Jemena should update their PE Cell replacement period from 8 years to 10 years.

2.5.4 AusNet Services specific items

We recommend changes to the following specific items of relevance in the Ausnet Services proposal:

- AusNet are forecasting significant increases in LED 18W lights over the period. This light type is no longer widely installed, having been replaced by the 14W alternative. We recommend adjusting so that the 14W increases instead of the 18W.

- AusNet proposes to convert a small number of legacy 80W MV lights to replacement LED lamps (corncobs). We are withholding support for this change based on a request for further information, specifically:

    - Confirming whether it is the intent to make this change for the remaining CFL lamps also (noting there is a significant number remaining after 2030 in the AusNet forecasts).
    - We recommend changing this tariff to a new tariff "LED Corncob" so that customers understand what is installed (noting the significant cost difference between these two options and the price variability from around $72 to $132) and then transitioning numbers across the forecast period.
    - The lamp replacement period has not been altered from the 80W MV, at 4 years. We are aware that manufacturer recommendations are for lamps to be replaced

every 5 years, which would integrate with the proposed smart cell replacement period (10 years) and luminaire useful life (20 years).

Recommendation:

- AusNet to increase 14W light numbers over the period instead of 18W.
- AusNet to confirm intentions for LED Corncobs, create a new dedicated tariff and change the replacement period to 5 years to align with a ten year PE Cell replacement cycle.

2.5.5 Jemena specific items

Adjustment to smart cell volumes in Jemena

Local governments support the establishment of smart lighting for Victorian streetlights. The business case for smart lights is clear for major road lights (where 100% of major road lights are recommended to install smart lighting) and not residential streets. There are some opportunities driven by road safety and the control of lighting pollution to establish smart lighting in residential areas, however a reasonable estimate of the number of installations is 10% of these lights.

Jemena have estimated that 75,505 of around 84,000 streetlights will include smart lighting. We recommend this is adjusted to 33,454 which includes all major road lights (27,296 in 2030) and 10% of residential streetlights.

Funding of accelerated LED rollout program

Jemena propose that local governments fund the “accelerated LED rollout program”. Local governments disagree that they should fund this. Instead, Jemena should provide funding to complete the LED accelerated rollout. An option should be provided to customers who wish to fund the rollout and subsequently receive the lower ongoing tariff model.

Local governments support Jemena’s approach to working on the process and protocols (regarding specifications, installers and project management) to be followed and look forward to the process.

Recommendation:

- Jemena to reduce the estimated number of smart devices from 75,505 to 33,454 which includes all major road lights (27,296 in 2030) and 10% of residential streetlights.
- Jemena to include funding for accelerated LED rollout program and provide the option for customers to fund.

2.5.6 CitiPower, Powercor and United Energy specific items

We recommend changes to the following specific items of relevance in the CitiPower, Powercor and United Energy proposals:

- The DNSPs propose to have 3000K luminaires as standard for residential areas. We support this, particularly as a measure to protect nocturnal animals; however there are specific locations where choosing 4000K luminaires results in improved safety outcomes (e.g. at traffic signals and pedestrian crossings). Whilst supporting 3000K as the standard residential streetlight option, we request that the DNSPs enable councils to choose 4000K for specific locations.
- The DNSPs propose to give councils management and control of public lighting in non-trafficable parks, gardens and laneways to help ensure safety and access. We request further detail and input into the transition process for these assets before confirming support for this transition.
- The DNSPs propose to convert a small number of legacy lights to replacement LED lamps (corncobs). We are withholding support for this change based on a request for further information, specifically:
    - We recommend changing this tariff to a new tariff "LED Corncob" so that customers understand what is installed and the related cost variations. This change should then be represented in transition numbers across the forecast period.
    - Confirming the lamp replacement period. We are aware that manufacturer recommendations are for lamps to be replaced every 5 years, which would integrate with the proposed smart cell replacement period (10 years) and luminaire useful life (20 years).

Recommendation:

- Whilst supporting 3000K as the standard residential streetlight option, we request that the DNSPs enable councils to choose 4000K for specific locations.
- DNSPs to provide further detail and the potential for council input into the transition process for off street lighting assets across to council management.
- Confirm intentions for LED Corncobs and create new dedicated tariff. Update the replacement period to 5 years to align with a ten-year PE Cell replacement cycle.

3. THE ENERGY TRANSITION

Driving network innovation will be critical for supporting consumers through the energy transition. Electrification is central to Victoria's energy transition because it enables a shift to renewable energy sources, reduces reliance on fossil fuels like gas, and promotes a cleaner, more affordable, and sustainable energy future. To ensure consumer confidence, it is important to have balanced regulatory settings that support new energy technologies and services alongside consumer education based on clear unbiased information.

3.1 Consumer Energy Resources (CER)

The integration of CER presents an opportunity to support a more cost-effective and efficient energy system, enhance reliability, and lower energy costs for consumers. CER can bring various benefits, such as managing minimum and peak demand, providing essential system services, and reducing the need for expensive network upgrades, large-scale generation, and storage investments.

Evaluating CER integration expenditure is complex and technically challenging for consumers to consider. Despite this challenge, we acknowledge the good work undertaken by Victorian DNSPs in these pricing proposals towards proactive integration of CER across the networks.

TABLE 5: Summary of CER integration expenditure

Real ($M Real 2020)	UNITED	JEMENA	CITIPOWER	POWERCOR	AUSNET
CER enablement	$65.7M	$85M	$39.5M	$97.1M	$35M
Customers (2025)	715,000	380,000	360,000	930,000	809,000
Expenditure on CER per customer	$92	$224	$110	$104	$43
Change in expenditure on CER per customer	+33%	+64%	+14%	+28%	-63%

The diversity and sophistication of the assessment approaches of DNSPs reinforces the need for a common set of benchmarks and metrics to be developed for this critical and emerging area.

The data presented in Table 5 demonstrates that there is significant variation across the proposed expenditure profiles of the DNSPs, when comparing the portion of CER expenditure and the costs per customer. However, these indicators are blunt and don't provide any insights on service levels or customer benefits. It is likely that the data provided in Table 5 is an underestimate of the total expenditure on CER which may be captured under other forms of augmentation costs.

A consistent value or methodology should be developed in consultation with consumers to ensure it is meaningful and allows for energy users to understand the trade-offs involved with different investment options. This approach should clearly demonstrate the allocation of benefits and when these fall to the community or back to the networks. For example, there has been significant investment in neighbourhood batteries over the past two years and the community benefits of these projects are still unclear. The Value of Customer Reliability (VCR) is an example of how this complexity can be distilled to a meaningful metric related to service levels that customers can clearly comprehend.

Recommendation:

- Establish clear and consistent methodologies for assessing CER expenditure that clearly demonstrate the allocation of costs and benefits, using metrics and benchmarks that are meaningful to consumers.

3.2 Innovation

The energy transition necessitates innovation and new business models in distribution networks to accommodate renewable energy sources and evolving consumer needs, including digital technologies and consumer integration. Table 6 demonstrates that the combined innovation expenditure for all five businesses equates to $65M. This represents just 0.6% of the total network investment proposed across the period. This amount is clearly insignificant when compared with other industrialised businesses where expenditure on research and development is often higher by several orders of magnitude.[1]

TABLE 6: Summary of innovation expenditure

Item	UNITED	JEMENA	CITIPOWER	POWERCOR	AUSNET
Innovation expenditure ($M)	$15M	$8M	$7.5M	$20M	$15M
% of total network capex	1.1%	0.35%	0.6%	0.5%	0.4%
Cost per customer ($)	$21	$21	$21	$22	$19

Over the last regulatory period, councils have welcomed the more proactive steps taken by AusNet Services in the establishment of their Innovation Advisory Committee (IAC). The IAC has provided a governance model that has enabled the business to engage with a cohort of informed stakeholders on a range of emerging initiatives, including the opportunity for participants to propose new projects for delivery.

The best example of this is the Electric-fair-cation project which seeks to better understand the impact of electrification of households, both from a network perspective and a vulnerable

[1] 2024 EU Industrial R&D Investment Scoreboard (link)

customer perspective. The project will quantify the network and non-network costs and benefits of electrification to inform the development of new business models, subsidies and targeted interventions that will be required to ensure vulnerable households are not left behind. It will also provide real world data on the ability of electrification combined with thermal upgrades to residential buildings as a method of reducing peak demand in network constrained areas.[2] If successful, this project could pave the way for the mainstreaming of DNSP-led household upgrade programs as a standard non-network solution. This transformational opportunity highlights the need for this approach to be replicated in other networks. The establishment of an ongoing process for networks to share reports and learnings from such trials will enable replication opportunities to be fast-tracked and accelerate action across Victoria.

Recommendations:

- Require all networks to establish innovation advisory committees using AusNet's IAC governance model plus ongoing cross-network information sharing mechanisms.
- Approve all DNSP's proposed additional expenditure on innovation (above and beyond traditional innovation allowances) where evidence of a clear pathway to business-as-usual funding and delivery is provided.
- The AER develops a new innovation allowance scheme over the next regulatory period that permits distributors to invest in innovation up to an agreed portion of capex (%) that is commensurate with other industrialised businesses.

3.3 Consumer education and integrity of claims

There is a concerning trend whereby individual DNSPs adopt public positions on their support for the energy transition (and use this as justification for additional expenditure), whilst at the same time clouding public debate on the costs and benefits of the transition via industry associations such as Energy Networks Australia (ENA). A clear example of this is ENA's recent submission to the Regulatory Impact Statement (RIS) for Building Electrification.[3] The core criticism is that the ENA is a lobby group for privatised gas networks with a vested interest in maintaining the gas industry. Their modelling has been widely criticised and is seen as a disinformation campaign attempting to preserve their profits at the expense of consumers and the shift towards cleaner energy.[4]

The ACCC monitors and enforces various codes aiming to ensure fair and transparent practices and protect consumers in the energy market. When the integrity of claims is called into question they should be actively investigated. Despite these concerns, it is pleasing to see some

[2] Peak demand reduction potential is modelled in ClimateWorks Renovation Pathways.
[3] Victoria's Power Shift: the hidden costs of forced electrification in Victoria (link)
[4] Environment Victoria statement (here)

distributors disclosing their performance and progress against The Energy Charter Principles, centered around customers, community and integrity.

Recommendation:

- The AER proactively engages with the ACCC to investigate the ENA's claims relating to the 'hidden costs' of electrification.

4. REGIONAL SUPPLY & STANDALONE POWER SYSTEMS (SAPS)

Throughout Victoria, extreme weather events and climate change pose a significant risk, impacting the reliability and resilience of the distribution network. The most severe of these events frequently result in multiple prolonged outages for customers.

Councils are in support of the proposed approach taken by AusNet who provided a clear and compelling business case for investing $9M across thirty communities that face significant challenges due to factors such as remoteness, geographical obstacles, socioeconomic conditions, and a history of vulnerability to major events.

Their analysis demonstrates the implementation of solar, battery, generator systems, and telecommunication equipment at these 30 locations will bring several critical benefits to the communities. The proposed SAPS will ensure that essential services, such as first aid facilities, emergency shelters, and communication networks, remain operational during outage events. The provision of telecommunication equipment will enhance communication capabilities, enabling residents to receive updates and emergency alerts, as well as coordinate response efforts during crises.

Powercor is proposing to invest $18M in SAPS, however we could not find clear evidence within their proposal of a systematic review and assessment of non-network programs to improve reliability and resilience in rural and remote locations. Given the business has published a SAPS Customer and Stakeholder Engagement Strategy[5], the omission of this information is a concern for stakeholders, particularly for councils within these communities. Instead, it mentions that SAPS will be deployed to individual customers at the end of long lines who are most exposed to outages.

Recommendations:

- Support AusNet's proposal to roll-out SAPS in all 30 locations.
- Request Powercor to disclose which remote and rural communities have been assessed under their SAPS strategy and provide clear cost/benefit information on their approach to implementation in the next period.

[5] https://www.powercor.com.au/network-planning-and-projects/network-innovation/stand-alone-power-systems/

5. VEGETATION MANAGEMENT

There remains a pressing need for the distribution businesses to work collaboratively with councils to investigate solutions that enable mature trees to remain and be managed in close proximity to power lines in low bushfire risk areas. Urban street trees are critical infrastructure that deliver a range of community benefits, including a reduction in the urban heat-island effect, reduced stormwater runoff, reduced air pollution and carbon drawdown, critical habitat for local wildlife and enhanced biodiversity, improved community health outcomes, reduced energy costs and increased property values.

Under the Electricity Safety Act 1998, the two main parties responsible for keeping trees clear of power lines ("responsible persons") are DNSPs and councils. For several years, Victorian councils have advocated to the State Government for a line clearance regimen that better balances safety, amenity and environmental considerations, particularly in low bushfire risk areas. Currently, network businesses are required to submit Vegetation Management Plans annually to Energy Safe Victoria (ESV), and we recognise that most issues in this section of our submission relate to the ESV processes. However, it is important that the AER is aware of the issues relating to vegetation management around powerlines and how it is assessed in DNSPs' OPEX proposals. Councils have expressed how vegetation management being undertaken by network businesses, largely subcontractors, can conflict with other council tree management objectives, such as increasing canopy cover to reduce urban heat island impacts. Powercor's pricing proposal includes a plan to reduce vegetation management expenditure by reducing pruning cycles. However, this three-year pruning cycle has led to significantly more aggressive pruning than more regular pruning cycles. Councils generally consider more frequent pruning regimens to be more appropriate to ensure that the broader value of the trees are not compromised. Some have suggested that delineation could occur between areas of different voltages (eg.6kv to 22kv and above) and bushfire risks, and more frequent annual pruning for significant trees.

Recommendations:

- DNSPs should be required to implement more frequent pruning cycles, in order to reduce unnecessary destruction of mature trees, with annual cycles for urban / township areas and two-year pruning regime cycles for most other scenarios.
- Recognition that greater collaboration should be sought between councils and network DNSPs on vegetation and habitat management. This is particularly relevant where councils have ambitious urban forest plans and canopy cover targets.
- More frequent audits of contracted cutting crews to improve pruning to Australian standards and to raise any issues as they arise.
- Work with councils to aerial bundle cable on spans with identified high value trees.

6. CLIMATE RESILIENCE

Extreme weather events and climate change are a significant risk that can impact both reliability and resilience of the distribution network. The most severe of these events cause multiple prolonged outages for Victorians, and these events are expected to become more severe and frequent over time. We support the investment proposed by all DNSPs in enhancing network resilience in the 2026-31 period as summarised in Table 7.

TABLE 7: Summary of climate resilience expenditure

Items	UNITED	JEMENA	CITIPOWER	POWERCOR	AUSNET
Network Resilience Expenditure ($M)	$150M	$224M	Not explicitly stated – Embedded in reliability investments	$243M	$226.4M
% of Total Network Capex	10.7% (of $1,399M)	10% (of $2,229M)	Likely minimal direct investment	6.7% (of $3,645M)	6.5% (of $3,500M)
Key Focus Areas	Flood protection, emergency response hubs, storm hardening	Extreme weather resilience, flood & fire risk mitigation, network hardening	Urban climate risk adaptation, emergency response planning	Bushfire resilience, storm hardening, SWER to three-phase upgrades	Undergrounding, covered conductors, hardened poles, SAPs, community hubs

However, there are some concerns that the approach taken to assessing costs and benefits is relatively narrow and may constrain the ability of the networks to adapt in a timely manner. This issue is described in Infrastructure Victoria's economic assessment of adapting electricity distribution networks to climate change.[6] The report models a number of climate adaptation options and assumes that the current overhead network infrastructure has a mix of ages and will be replaced periodically over its expected lifespan of 50 years. However, if network reinvestment is needed sooner than anticipated, the cost of investment will increase and the case for implementing resilience measures becomes stronger. The report also identifies other reasons for accelerated investment (such as electrification and EV uptake) which are currently excluded from the models being applied by the DNSPs in their evaluation of resilience options. Assessing these in isolation effectively excludes co-benefits from being captured.

Recommendation:

- The AER requires all DNSPs to develop a consistent methodology for assessing the costs and benefits for adaptation and resilience measures and apply this when evaluating other network investments.

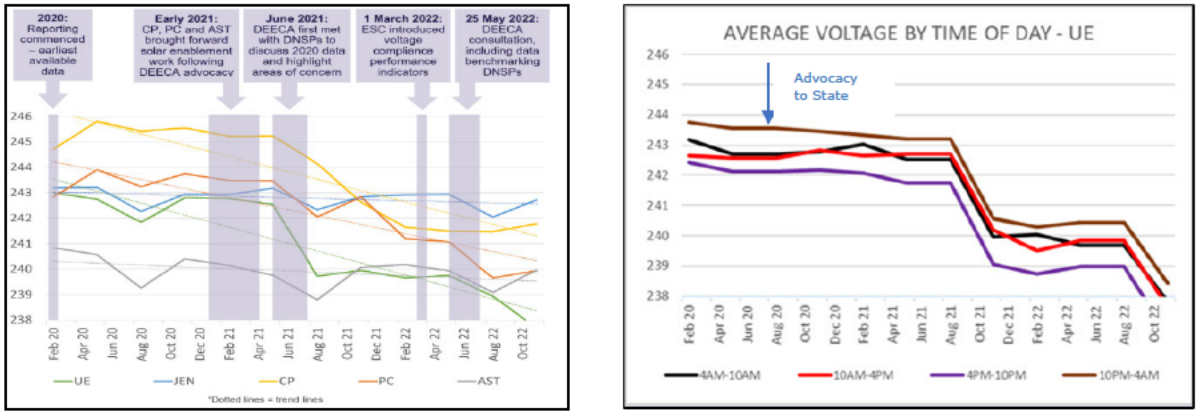
[6] https://assets.infrastructurevictoria.com.au/assets/Economic-assessment-of-adapting-electricity-distribution-networks-to-climate-change.pdf

7. VOLTAGE MANAGEMENT

In 2017, ARENA provided $5.76M funding for a $6.61M United Energy project to reduce voltage across the electricity network.[7] The project utilised the comprehensive information being provided by customer smart meters to adjust voltage levels being discharged from zone substations across the UE network (47 substations). This work was focused on demand management for a small number of days in summer.

In April 2020, advocacy was undertaken by Ironbark Sustainability to the Australian Energy Regulator and the Victorian Government with the coordinated support of the Victorian Greenhouse Alliances. The advocacy was to expand this trial across the state and for continuous voltage level adjustment with the intent of significantly reducing electricity consumption. The estimated impact of this was to reduce 1.3% to 3.3% of electricity across the state leading to reductions in the instances of solar export curtailment.

Figure 1: Average voltage by Victorian DNSP from 2020 to 2022 with key Victorian Government actions[8] and UE voltage levels (LHS) with the VGA advocacy timing (RHS)



Following work by the Victorian state government, three DNSPs (United Energy, Powercor and Citipower) implemented and expanded the use of the DVMS from 2021 to 2023. As can be seen in Figure 1 (RHS), United Energy, who was best prepared for the change, quickly implemented a step change in voltage. Direct annual savings for the Victorian community through reduced electricity consumption in 2022 were $7.1M. By Autumn 2023 this had increased to $12.6M and 26,000 tCO2-e.

As well as the real change to October 2023, during the 2025 to 2029 period the two remaining DNSPs have also received funding to expand this program across Victoria. The adoption of the Australian Standard (AS IEC 60038:2022), which lowers the minimum voltage, has the potential to reduce voltage further as DNSPs can manage compliance at the lower end more readily. The

[7] https://arena.gov.au/projects/united-energy-distribution-demand-response/

[8] Department of Energy, Environment and Climate Action (DEECA) Voltage Management in Distribution Networks Directions Paper 2023; ESC refers to Essential Services Commission

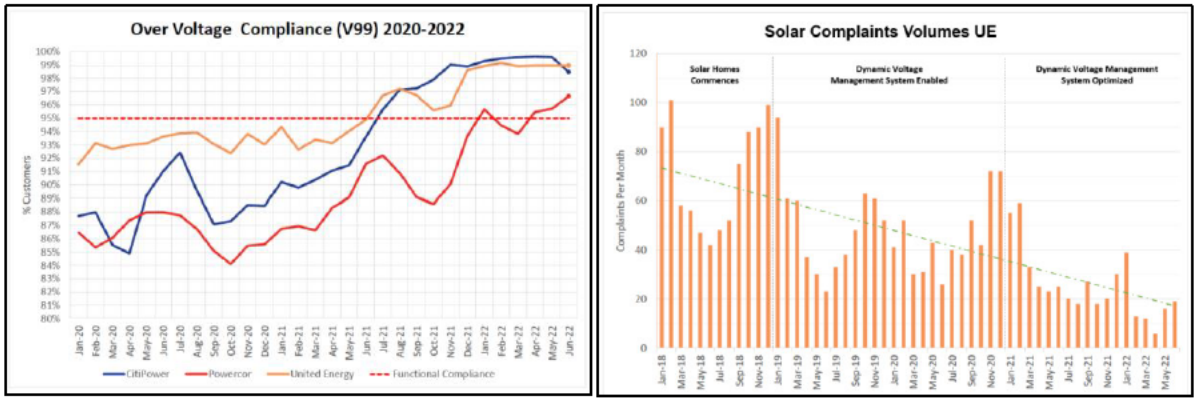
impacts of these three changes have been modelled using the assumptions that the Victorian government used in its consultation process in 2022.

Table 8: Annual impact of DVMS in Victoria current and proposed

Annual benefits to Victoria	Oct. 2023 (United Energy, Powercor and Citipower)	Expansion across Vic (estimated)	Inclusion of Standards change (estimated)
% voltage reduction	1.6%	2.4%	4.1%
Electricity savings (kWh)	53,953,850	81,554,578	140,200,166
Emissions savings (tCO2-e)	26,376,204	70,137	120,572
Community cost savings	$12,567,164	$19,433,572	$33,776,816

Additional benefits of the program to date have included significant improvement in over-voltage compliance and a reduction in solar complaints. Over-voltage can lead to network constraints and the need for solar curtailment, so these two graphs are in part showing two sides of the one coin: when over voltage is managed better there is less solar curtailment, and hence fewer complaints occur.

Figure 2: CitiPower, Powercor & UE. Voltage management in distribution networks (Aug 2022)



There is a limit to reducing voltage and this should be considered in any further expansion of this work. Having said that, this is clearly a success story and there are further opportunities to expand this work for community benefit. The work highlights the significant emissions and cost savings that can be achieved through well-targeted advocacy and the work of DNSPs.

Recommendations:

- Require at least annual reporting of average voltages across each DNSP, as previously reported up to 2023, to ensure DNSPs are making best use of this technology and provide clarity to the community on the impacts of DNSP expenditure for their benefit.

- Complete a community cost-benefit analysis to consider the adoption of the Australian Standard AS IEC 60038:2022 for Victorian networks. Specifically, this includes the replacement of the current voltage bands to 230V +/- 10% to enable DNSPs to make full use of the DVMS without compromising minimum compliances. Once implemented, DNSPs should be responsible for managing voltage at lower than current levels and balancing impacts on customer reliability.
- The AER engages with other state governments to complete a cost-benefit analysis of the deployment and use of DVMSs for use at all times to lower average voltages. This should be combined with the two recommendations, as above for Victoria.

GLOSSARY

Term	Definition
AER	Australian Energy Regulator. Responsible for regulating pricing for electricity in the National Electricity Market (exc. WA and NT), including street lighting
DMIS	Demand Management Incentive Scheme
Capex	Capital expenditure
Opex	Operating expenditure
Repex	Replacement expenditure
Augex	Augmentation expenditure
AEMO	Australian Energy Market Operator
CFL	Compact Fluorescent lamp
DNSP	Distribution Network Service Provider, also known as Energy Distribution Business (EDB) also known as distributors.
EPV	Elevated Platform Vehicle
ESC	Essential Services Commission
ESV	Energy Safe Victoria
Lamp	The light bulb in a luminaire
LED	Light emitting diode/luminaire
Luminaire	The lamp, fitting and control gear of the light
MAV	Municipal Association of Victoria
MV	Mercury Vapour lamp/luminaire
SHP/HPS	High Pressure Sodium lamp/luminaire
Street Lighting	Street lighting found in residential streets and main roads
T5	Efficient lineal fluorescent lamp/luminaire
VESI	Victorian Electricity Supply Industry
VGA	Victorian Greenhouse Alliances
WDV	Written Down Value