

Report to Energy Consumers Australia

A review of Victorian Distribution Networks

Regulatory Proposals 2021-2026

Spencer&Co

Business advisory services

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Introduction

Changes to the framework

The Regulatory Framework has changed in recent years to provide for formal customer representation in regulatory processes via the Customer Challenge Panel and greater support for local customer advocates via the nationally funded body, Energy Consumers Australia (ECA).

The removal of rights to appeal the merit of regulatory decisions has led business to look to customers and their advocates to provide assurance to the Australian Energy Regulator (AER) that regulatory proposals are in customers' interests.

Businesses are now engaging with customers directly and taking on feedback with the goal that with sufficient support and endorsement from customers and advocates, proposals are capable of acceptance. Proposals are still subject to AER's assessment.

Our objective

The objective of this report is to highlight issues on behalf of ECA and customers to help the AER determine if the Victorian distributors regulatory proposals are in the long-term interests of customers and should be accepted.

Promoting the long-term interests of consumers means that current and future consumers pay no more than they need to for the quality of service they require.

In simple terms it means:

Not one dollar more is spent than necessary; Not one day earlier than needed.

The Regulatory proposals must show how the networks will deliver distribution and metering services that promote the long-term interests of customers with respect to price, reliability, quality and security of supply.

Further, the proposals must comply with the requirements of the Rules including being able to demonstrate engagement with customers.

Scope of works

Spencer&Co has been engaged by ECA to review the regulatory proposals put forward by the five distribution networks in Victoria - Jemena, AusNet Services, Citipower, Powercor and United Energy.

Spencer&Co were engaged by ECA to review the Draft Plans put forward by the Victorian networks in February 2019 and as part of that process, Spencer&Co was involved in several 'Deep Dive' workshops and stakeholder information forums.

We are grateful for the opportunity to contribute to this process and to contribute to the long term interests of electricity customers in Victoria.

Key questions

In compiling this report we have looked for answers to these key questions from the Rules:

- Do the proposals reflect prudent and efficient investments?
- Are they designed with the long term interests of customers in mind?
- Do they promote long term interests in terms of price, quality, safety, reliability and security of energy supply?

In addition, the ECA has asked us to consider:

- Have the businesses shown an understanding of the strategic context in which they operate?
- Have they reflected these trends in their proposals?
- Have they shown evidence they are focusing on their customers?
- Have they attempted to balance competing priorities and shown what they have traded off?

Key findings

Customer engagement

- **Good customer engagement will lead to customer centricity.** We suspect the approaches that have involved building ongoing relationships with customers will be most effective and longer lasting.
- **We should not lose sight of the starting point** - the price customers in each franchise pay for the quality of service they receive.
- The customer forum has been invaluable in bringing the voice of the customer to the table.

Expenditure

- **Expenditure has gone up** despite concerns about affordability.
- **Prices would be rising significantly** in a steady WACC environment.
- **Scrutiny of investment programs is still important** even as revenues are declining, because customers should not pay more than they need to at this time.
- **RAB is growing** despite concerns about affordability.

Capex

- **Replacement expenditure is higher than last period** and subject to discretion re: timing. This makes it easier for programs to be deferred to deliver CESS benefits. Programs require technical review.

- **DER forecasts are too high** and must be revised down to reflect slow down in growth. Cost estimates underlying investment programs need to be scrutinised. Equity outcomes of the programs (remaining constraints) should be considered.
- **IT costs are going up** for Citipower, Powercor and United Energy. It is not clear how the benefits of IT expenditure have been captured in lower forecast costs. IT costs for Jemena and AusNet are lower than previous period but are coming off a high base.
- **Bushfire costs are high** and subject to review by Energy Safe Victoria (ESV). We encourage networks to work with ESV to reduce costs as much as possible in the revised proposal.

Opex

- **Reclassification of costs** is changing the starting point and making it hard to compare starting points. We are surprised at the timing of these changes and concerned about the affordability impacts on opex.
- **Step changes are significant** and need scrutiny. EPA, HBRA and REFCL costs have been withdrawn or reduced. Other step changes should be reconsidered.
- **Similar mechanisms should be used** across DNSPs to recover similar costs such as ESV levies, EDO fuse replacement, and insurance premium rises which are all subject to different approaches in the proposals.

- **Cost escalation does not reflect current economic circumstances.** The use of more than one forecaster at this time of uncertainty would be prudent.

Other issues impacting revenue

- **AusNet's accelerated depreciation** is at odds with concerns about affordability. AusNet's approach requires review.
- **Incentives schemes** need to be justified and must be designed to deliver services that are better than the baseline of services that customers expect. Where services meet the baseline, there should be no reward.
- We welcome the AER's approach to a flexible design of the draft Customer Service Incentive Scheme but are concerned that targets be set to reflect the expected step change in performance that is expected as a result of IT investment.
- Parameters should be consistently defined and measured wherever possible. Schemes should target poorest performance first rather than marginal improvements to moderately good performance.

Pricing proposal

- **Pricing proposals lack ambition.** Proposed tariff reform does not take advantage of declining revenue environment.
- **The balance** between simplicity and cost reflectivity could be improved.

Strategic context

Climate change and the move to renewables

Australian business and Governments are committed to actions to reduce Australia's green house gas emissions. A key input to the Victorian Government's strategy is its Solar Homes Scheme that subsidises 650,000 residential customers to install PV up to 2026.

In addition, Victoria is experiencing increasing levels of investment in large scale, Grid-connected renewable investments made possible through ARENA funding, but increasingly without funding as the economics of investment in renewables improves.

Smart Grid / Future Grid

The increasing penetration of solar throughout the low voltage network is causing capacity constraints as low voltage networks, designed for one-way flow of electricity, are being used for two-way flows. The investment in network capacity to facilitate solar export is a key component in the Victorian networks' proposals and contributes \$230m worth of new investment.

The availability of smart meter data for all customers on the network provides a unique data source for Victorian networks to use in their analysis of forecast constraints.

The future of electrified transport including electric vehicles is not a major theme in the Victorian proposals

as the take-up of EVs is slow at present and difficult to forecast with certainty.

Bush fire risk mitigation

The Victorian Government continues to drive reductions in the risk of bush fire starts following the catastrophic outcomes of the 2009 Black Saturday bush fires and subsequent Bush Fire Royal Commission. A substantial program of investment in Rapid Electrical Fault Current Limiters (REFCLs) at locations across Victoria's distribution network will add more than \$1 billion of capital investment to the network to mitigate future risk of bush fire damage by the end of the 2021-26 period. In addition, changes to pole replacement practices have been recommended for some networks bringing forward ~\$230m of pole replacement.

The cost of improving energy safety is also being felt in higher levies to fund Energy Safe Victoria - the Governments' energy safety regulator.

Focus on customers and improved customer service

The regulatory regime has changed in recent years to explicitly require networks to show how their proposals represent the views of customers.

The Victorian distributors have made considerable efforts to engage with customers and reflect their preferences in their proposals. More than ever before,

network businesses are considering the benefits to customers of their investments and operations and taking tangible steps to improve their customers' experience.

Affordability of energy

Customer engagement by Victorian networks shows that energy affordability remains customers' highest priority. Reliability is also valued but the majority of customers were happy with existing levels of reliability and did not want to pay for reliability improvements.

The Government's decisions on bush fire risk mitigation and action on climate change has added to the cost of service delivery and works against energy affordability in the short term.

Population growth and development in Melbourne

Melbourne is one of the fastest growing cities in Australia. Despite forecast energy growth being relatively flat, urban in-fill, changing land use for residential development and Government investment in infrastructure is contributing to pockets of high growth necessitating augmentation of the network and high levels of customers connections. However, recent economic circumstances brought on by the global COVID-19 pandemic will impact economic growth, particularly in the short-medium term and is likely to have wide ranging impacts on networks' revised proposals.

The impact of COVID-19

The COVID-19 pandemic has disrupted social behaviours, business operations and Australia's economic outlook dramatically. It is unclear how long the pandemic will last, or how long the economic impacts will endure. Happily, as of May 2020, Australia appears to be one of a handful of countries that is managing the health impact well. It remains to be seen whether Australia's economic experience can be managed as well.

The assumptions upon which the Victorian distributors proposals are based have fundamentally changed since they were submitted just four months ago. The regulatory period will begin on 1 July 2021, some 15 months away. However, the unfolding economic crisis will have negative impacts on economic growth forecasts, which in turn, will drive changes to investment timing. Each business is aware that it will need to review its forecasts to reflect the economic impact of COVID-19 in its Revised Proposals.

We expect the following inputs to be reviewed and investment plans updated to reflect the new economic circumstances:

- Forecasts for **economic growth** will soften as economists predict a recession at best (two quarters of negative economic growth), or an economic depression at worst (a sustained down turn in negative economic activity).
- **Small connections** are likely to slow as financial uncertainty prompts customers to defer or delay decisions to invest in new property, housing or business activities.
- **Large connections**, particularly those driven by Government spending will be less impacted by COVID-19

as Governments will be incentivised to drive economic activity through investment in infrastructure.

- The rate of **uptake of solar** may slow as many customers face financial uncertainty and reduce spending on non-essential items.
- **Consumption** of energy and **demand for network capacity** will vary by sector, and will drive changes in investment:
 - **Residential** consumption is increasing in the short term as Australians are forced to stay at home. The majority of workers and children working and learning from home is driving increased residential energy consumption, but is less likely to drive changes to demand.
 - **Commercial** consumption and peak demand has been negatively impacted as retailers and the hospitality sector close. In contrast to the residential growth, the recovery to underlying trends is likely to be slower as the economic crisis takes its toll on businesses, not all of which will re-emerge when the health crisis abates.
 - The **industrial** sector will also be negatively impacted as demand for goods slows. Like the commercial sector, a slower recovery to underlying levels is expected.
- **Capital works delivery** is likely to be delayed by a slow down in project approvals and delivery of works as a result of disruption to normal operations and work practice restrictions. We expect this delay to be short lived and may result in a delay in project timing.
- **Wage growth** assumptions - expected pressure on wages is unlikely to occur at levels predicted before this crisis. We

would expect all distributors to revise their forecasts to reflect softening labour market conditions.

- **Output growth** assumptions - an economic recession will stall output growth rates. We expect this to manifest itself in delays to investments underpinned by economic growth forecasts (i.e. connections, augmentation programs). It is unclear whether COVID-19 will cause scarcity of construction resources locally. Governments will be taking actions to ensure that international supply lines are open despite travel bans and border entry restrictions on people.
- **Bond rates** have fallen as investors flee to safer investment options and drive bond yields to historic lows. The trailing average approach to debt will ensure that the return on debt awarded to businesses tracks the underlying economic conditions.
- **Wholesale market changes** including the compliance date for the application of new rules will likely be delayed and change the timing of some expenditure.
- **Decarbonisation** of the economy may take a back seat in the short term as companies try to survive financially. The underlying necessity of decarbonising business operations is a long term trend that may be slowed, but not abandoned.
- **Power Quality** investments will need to be reviewed as projects are often tied to growth forecasts.

We understand the complexity in forecasting 7-10 years in advance in such unprecedented and uncertain times. Nevertheless, we look to businesses to keep customers at the forefront of their considerations when updating forecasts.

'New Reg' process

AusNet Services is the first business to undertake the 'New Reg' process to negotiate and review its regulatory proposal.

Has it been a success?

The Customer Forum has helped AusNet obtain a level of customer insight in its proposal that would not have been achievable otherwise. The process has shown how 'lay people' can effectively scrutinise elements of the regulatory proposal, and that the absence of specific regulatory knowledge is a temporary issue, not one that should preclude their involvement. That said, there has been significant investment on behalf of AusNet and Forum Members to understand and explain the regulatory regime and environment. It would be a lost opportunity if this new-found knowledge was not used again.

Was the scope too limited?

Only 7% of capex was included within the scope. Given the detail to which The Customer Forum delved, it is disappointing that more of the program was not subject to its scrutiny. The Forum was very successful in challenging the timing of major augmentation projects. It would have been good to see the same analysis and pressure put on AusNet's replacement program to see if a similar result of deferred timing on the basis of affordability and minimal increase in risk would have eventuated for repex.

Was the process worth the costs and time involved?

The costs of The Customer Forum and the cost in both time and resources expended by ECA and AER are not publicly available.

AusNet has reported the process took up a significant amount of time on top of preparing its regulatory proposal. However, when asked, AusNet confirmed it considered the process to have been worth it, particularly in terms of customer insights and driving customer focus internally. The process may prove more worthwhile from a network perspective if the AER chooses to apply a lower level of scrutiny to AusNet's proposal than to those of other networks.

How should the AER approach the assessment of capex and opex following involvement of the forum?

AusNet does not perform as well as its peers in the AER's benchmarking analysis, with opex efficiency declining significantly from 2010-2016. AusNet has undertaken a transformation program in recent years. However, the evidence suggests that AusNet's opex starting point is high relative to peers and should be reviewed downward. We note AusNet has agreed to 1% efficiency trend to apply as a means of sharing future efficiencies immediately with customers.

As mentioned earlier, The Customer Forum was effective in challenging AusNet's augmentation forecast and the timing of some major replacement projects. The AER

should review AusNet's other capital forecasts to ensure customers are not paying more than they should, particularly in the current economic environment.

What improvements in the process could be made for future applications?

There was benefit in Forum members being recruited from outside the industry. These members brought fresh thinking and drove a relentless focus on customer benefits as there was no assumed knowledge of how customers benefit from investment decisions.

The Customer Forum's research and expertise lifted AusNet's engagement activity in both volume and quality which proved invaluable. As engagement becomes more of a BAU skill for networks, this expertise may not be as critical in future processes. However, the ability to challenge findings will always be important.

It was useful for stakeholders to be involved in the process and see members of the Forum in action. It not only provided stakeholders with confidence, but it also provided an opportunity to add issues to their consideration. More opportunities to engage with the Customer Forum would be beneficial.

The scope for the Forum should be widened to make use of their insight and expertise. The Forum's review of replacement capex was limited. Given the complexity members were able to get across, limiting scope to major augmentation projects was a lost opportunity.

Common proposal themes

Customer engagement

All Victorian distributors have spent significant resources and time engaging with their customers. All businesses have been able to articulate customers priorities and have demonstrated how these priorities have been reflected in their proposals

There is variation in the approach taken to engagement but all approaches have been effective in increasing each network's understanding of their customers. There is evidence that the culture of all businesses is changing to become more customer focused, albeit with different rates of change.

Efficiency

The Victoria businesses have all celebrated their relative efficient operational performance relative to other networks in other jurisdictions. However, Citipower, Powercor and United Energy, argue their opex efficiency means they are less able to absorb costs and consequently, require greater increases in opex to cover new costs.

Regulatory cost increases

All five businesses are seeking step increases in opex to cater for new or extended regulatory obligations. Higher licence fees have a similar impact across all five businesses but the mechanism sought to recoup the costs varies between businesses.

New EPA regulations have been interpreted differently by networks resulting in large variations in cost increases being sought.

Insurance

All networks are seeking ways to cater for forecast insurance cost increases. The increases vary markedly between the three businesses, as does the mechanism each business proposes to use to accommodate these costs.

Asset Replacement

All businesses have proposed increases to replacement capital compared to last period and a change in focus to substation components (i.e. switchgear) and smaller equipment such as service lines and the low voltage network.

Bush fire

Bush fire compliance continues to drive costs in Victoria, particularly for AusNet and Powercor. REFCL compliance will cost up to \$400m this period (and total more than \$1billion overall).

Future Grid / DER

All networks have incorporated investment plans to deliver the Future Grid that includes investment in devices to monitor energy flows on the low voltage network, that in turn will help better target augmentation capital and enable greater solar export at least cost.

Four of five companies have modelled AMI data points to identify future constraints as the basis for their cost projections. Jemena has used a higher level model that delivers a forecast of required capital.

Customer Service Incentive Scheme (CSIS)

All businesses have considered the CSIS but there is no consistency in its treatment. The Customer Forum has reviewed and supports AusNet's proposal. Citipower, Powercor and United Energy intend to submit a CSIS in their Revised Proposals. The scheme is currently being designed.

Jemena has withdrawn its proposal for a CSIS in support of its customers who gave a clear message that they expect good customer service to be included in the base price for distribution services and do not support providing additional incentives to businesses to deliver services that they consider to be a standard level of service.

Cost escalation

All five businesses have applied cost escalation to forecasts. However there is debate as to the most accurate forecast to use now that the AER has moved away from its previous policy of averaging cost escalation forecasts by two respected forecasters. Economic circumstances have changed significantly since proposals were submitted and cause pressures on wages to soften.

Electric vehicles (EV)

The uncertainty in vehicle uptake has led networks to propose an EV Event as a pass through.

Recommendations for revised proposals

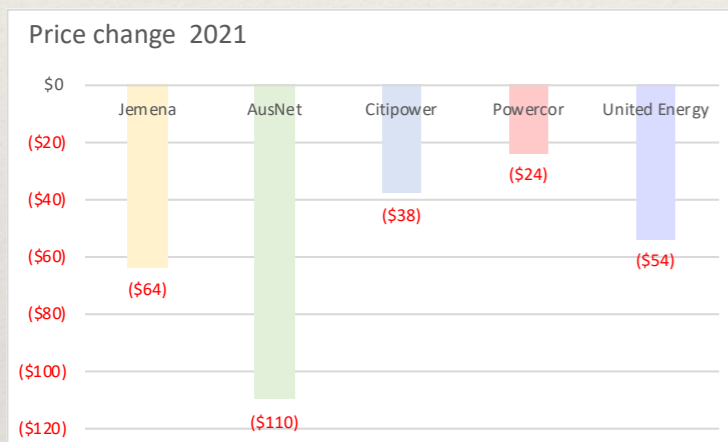
Issue	What we liked	Issue	What we would like to see
Network prices down	Falls in network prices are welcomed by customers whose main priority is the affordability of energy supply. Affordability is even more important in an environment of economic slow down and rising unemployment.	Expenditure is high	We are concerned that expenditure is much higher than last regulatory period despite concerns about affordability. This is particularly concerning in context of large capex-underspends. We recommend networks review investment programs to ensure price falls are not reliant on changes in WACC and tax only.
Customer experience is a focus	Several businesses have reviewed their customer touch points and have committed to process and service improvements with key outcomes and milestones applied. We recommend all networks commit to a series of improvements and report against them.	COVID-19 impact	We expect to see a thorough review of forecasts to take account of the impact of COVID-19. The impact is most likely to be seen in connections, DER, and cost escalation.
Ongoing engagement	The networks have committed to ongoing engagement as a normal business activity into the future. Engagement in longer-lasting relationships appears most beneficial in driving cultural change.	DER	We would like to see more information about how cost estimates for network's DER programs have been estimated. We are concerned to ensure that estimates are based on an appropriate mix of possible solutions that can be justified. We are also interested in a phased approach to manage costs.
Customer friendly information	We appreciate the effort networks have made to deliver information that is accessible and relatively easy to read.	Connections	We would like to see an update of connections expenditure that takes account of the economic slow down and explicitly tests forecasts against more than one forecast methodology.
Proposals linked to feedback	Engagement with customers was extensive. Networks went to great effort to link proposals to feedback. Networks need to be careful not to 'lead the witness' to ensure they get the right answer.	REFCL	Given the +\$1billion cost of the REFCL program for Victorian customers, we would like to see networks continue to work with ESV to revise costs down as much as possible, particularly in this economic environment.
Enabling solar export	All businesses engaged with customers on the issue of solar. There is evidence that customers want more than they can afford, or are prepared to pay.	Pole replacement	We are concerned that the decision to increase pole replacement has not taken into account the reduced bush fire risks REFCL has created. We seek assurance that the risk assessment has taken this improvement into account.
Investment programs in context	We liked presentation of expenditure in context of previous period expenditure with an explanation of what is driving any change. Jemena and AusNet both provided good detail. In some cases, obvious comparisons were missing.	Step changes	We would like to see a rationalisation of the step changes being requested by networks and more rigorous assessment of what costs are part of normal operations, particularly in the context of significant EBSS rewards for some businesses.
Opex cost efficiency	Networks have all been working to improve cost efficiency. We would like to see a common approach taken to cost recovery for similar costs (ie ESV levy, insurance, minor repairs)	Incentives	We seek assurance that the proposed CSIS will produce service improvements to customers that are well above what customers would expect from the investments in IT that have been proposed. Customers should not pay twice.

Revenue & Price

Prices for residential customers will fall

Residential customers in Victoria will receive reductions in the price of distribution service in 2021 from between \$110 to \$24.

Price reductions are gratefully received by customers. There is evidence that price reductions being offered are not large enough in the circumstances



Are revenues falling as much as they should be?

The AER's chart (right) shows the drivers of revenue in 2021-26 compared to the current period 2016-21.

The Weighted Average Cost Of Capital (WACC) which is used to determine the return on investment is calculated using market factors including 10-year bond rates which are at very low rates.

Together with the AER's recent decision on tax that has reduced the revenue businesses receive as tax compensation, the lower WACC and the tax decision mask the fact that most of the other building blocks are actually increasing - opex is higher (except AusNet and United Energy), capex programs are larger (except AusNet), incentive payments are high, and depreciation is also higher (except Jemena).

In the absence of the lower WACC, revenues and prices would be rising. We therefore question whether networks would be making the same investment decisions if WACC was steady? Are networks investing for the benefit of customers? Are customers paying more than they need to at this time?

Drivers of revenue change (SCS and metering services)

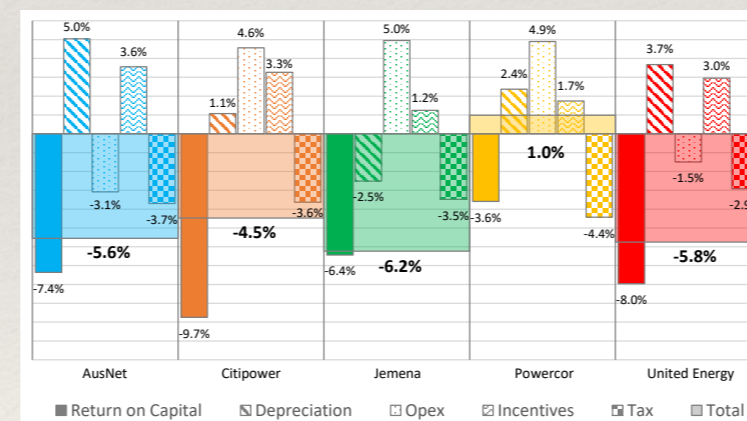


Chart reproduced from AER Issues paper, April 2020 p27

We encourage the AER to apply the same level of scrutiny to the regulatory building blocks in this period as they would in a higher WACC environment.

That said, we are aware that a declining revenue environment provides opportunities to make some important decisions that would be more difficult if revenues were rising - decisions to invest in new technology, and to implement tariff reform. This opportunity should not be overlooked.

What are the long term implications for affordability?

The AER must balance the needs of today's consumers with those of tomorrow's customers. In all cases, except AusNet, the Regulatory Asset Base (RAB) is growing in real terms, which means that future customers will have a larger cost burden than today's customers.

ECA is keen that networks plan their investments with a strategic long-term focus to ensure that programs are forward thinking and do not display the boom-bust cycle of investment.

It is important that networks consider the long term sustainability of their investments and aim for a stable RAB to ensure that customers face an affordable future. To that end, only AusNet shows a reduction in RAB, albeit from a very high base following 10 years of investment in bush fire resilience.

Key numbers

Issue	Jemena	AusNet services	Citipower	Powercor	United Energy
Average price change - residential (p.a.)	-\$64	-\$110	-\$38	-\$24	-\$54
- small business (p.a.)	-\$148	-\$62	-\$119	-\$68	-\$238
Total revenue	\$1285m	\$3182m	\$1,611m	\$3,690m	\$2,247m
RAB change (2021-26) per customer	4.2%	-6.3%	5.0%	7.4%	7.4%
Opex	\$576.6m	\$1222m	\$569m	\$1537m	\$798m
Step change - positive	+ \$42.4m	+ \$14m	+ \$43.7m	+ \$98m	+ \$85.6m
Capex	\$781m	\$1478m	\$852m	\$2140m	\$1219m
Repex	Up 5%	Up 14%	Up 166%	Up 53%	Up 47%
IT	-18%	-12%	Up 65%	Up 18%	Up 48%
Connections (net)		\$210.2m	\$134.8m		\$129.3m
REFCL (capex)	\$52m	\$197.3m	n/a	\$173m	n/a
DER capex	\$34.8m	\$42.85m	\$44.6m	\$74.3m	\$61.8m
Incentive payments	\$49m	\$141.7m	\$54.1m	\$76.3m	\$117.9m
Metering price change	-37%	-31%	-21%	-13%	-14%
Capital underspend (2016-21)	\$95m (13%)	\$102m (5.5%)	\$228m (28%)	\$200.6m (11%)	\$166m (17%)
Revenue / customer	\$3645	\$4655	\$4701	\$4415	\$3280

Capex - augmentation

The Victorian networks have sophisticated investment programs that are underpinned by high quality engineering and sophisticated investment models refined over many years. We have reviewed the forecast methodologies of each network which are largely similar and appear consistent with best practice.

Augmentation expenditure (Augex) is driven by network constraints caused by higher demand from new and existing customers. Augex is typically lumpy and needs to be considered on a case by case basis.

Peak demand is forecast to be relatively flat by all networks over the 2021-26 period. Localised pockets of higher growth due to land rezoning and urban infill are driving specific projects.

Augex also considers network constraints driven by solar export. This issue of managing Distributed Energy Resources (DER) is discussed separately.

AusNet

We note that the Customer Forum reviewed AusNet's augex program which is relatively small compared to its other programs. Further we note that the Customer Forum challenged AusNet to defer several zone substation augmentations on the basis that customers were concerned about affordability and the reliability impact of deferring these projects was relatively minor.

We consider... that the process of challenging the timing of major augmentation works should be applied across all networks.

In an environment where focus on affordability is top of mind, projects should be deferred where the reliability impacts are relatively minor, not simply triggered when the investment criteria is met. This is particularly the case as:

- demand forecasts are often made 7-8 years in advance and actual demand can deviate from the forecast over that time particularly if economic conditions change,
- deferring capex out of the regulatory period can mitigate the likelihood that businesses are rewarded for capex deferral regardless of whether it is the result of a change in demand, or whether the project simply runs late.

It is in customers' interests that timing of major projects be challenged and weighted in favour of deferral where reliability impacts of doing so are minimal. This will help to reduce the financial impost on customers.

Jemena

Jemena has forecast a 58% increase in augmentation expenditure compared to the current period. A large proportion of this expenditure relates to REFCL and DER, both of which we have commented on separately in this report.

Jemena's remaining capital projects have been the subject of customer engagement, detailed analysis and testing for non-network solutions.

Jemena's compliance with ISO 55001 asset management standards provides us with comfort in its augmentation program.

That said, we would ask the AER to challenge the timing of major projects to ensure that the impact of a slowing economic environment is taken into account.

Citipower

Citipower's augmentation program is designed to address forecast increases in demand driven by rezoning of land near Melbourne's CBD, as well as upgrading of ageing zone substations that show deteriorating asset condition.

We support Citipower's strategy to upgrade supply in the Fisherman's Bend, Brunswick and CBD areas and support the progressive removal of historical 6.6kV distribution assets with higher capacity and more efficient equipment that provides improved flexibility in future. This is consistent with strategies in other networks both in Victoria and NSW.

We are not convinced by the need to install communication devices at contestable metered sites as part of the Digital Network Program. We consider that efforts should be made to gain access to the existing contestable meter data before investing in a \$5.5m program to install separate equipment to duplicate the information.

Capex - augmentation (2)

Powercor

Powercor's augmentation program is dominated by the REFCL program and its solar enablement program. These are both discussed elsewhere.

Powercor hopes to spend \$9.1m to upgrade supply in Western Victoria. This project, consists of four feeder upgrades from single phase to three phase supply. It reflects the outcome of customer engagement and strong community support.

We note concerns about whether all customers should pay for the upgrade. However, we consider that there are many instances where customers who are not beneficiaries of projects are asked to pay for them. The key issues from our perspective are:

- The current VCR methodology is not sufficiently granular to reflect the value specific rural communities place on reliability, and
- Should the AER allow economic benefits of this project to be incorporated into the cost-benefit analysis due to the problems with VCR above?

We would encourage the AER to work collaboratively with Powercor to find a way to support projects such as this which are being driven by customers.

This project demonstrates that the industry is changing to reflect the voice of the customer and willing to collaborate to find solutions. We consider the draft criteria put forward to be a reasonable starting point for circumstances where economic benefits are included.

We have reviewed the major projects and a selection of feeder projects and we are satisfied with the analysis and modelling that underpins the projects. We note our previous comments about investment timing and ask the AER to review timing of projects and defer projects where there is minor reliability impact of doing so. Powercor note that certain feeder projects could be delayed with DM. They have confirmed that there is no DM assumed in the proposal and that this document, together with the Annual Distribution Planning Report is a call for DM.

Powercor argues that a proactive replacement program to remove all EDO fuses from the network this period has higher benefits than a partial program - it also has a higher cost. In circumstances where customer's primary concern is affordability, a smaller program should be activated. We also question why a proactive program such as this would not be considered repex. Given the number of step changes Powercor is seeking and the pressure on prices we would recommend the program be considered as part of a general replacement program.

United Energy

Like Powercor and Citipower, United Energy has a robust investment framework. We are pleased to see United Energy's commitment to DM continue through its Summer Saver scheme and the fact that the scheme continues to defer investment.

We are satisfied with the underlying driver of the major projects. However, we will again leave it to the AER to determine whether projects can be deferred further if reliability impacts are minimal.

We note that United Energy, like Citipower and Powercor have argued that the LV network augmentation programs do not overlap with the solar enablement program. The explanations appear reasonable but given the size of the solar enablement program, we support the AER's investigation to confirm there is no overlap.

Capex - Connections

Customer connection volumes are difficult to predict, particularly in uncertain economic times. The current economic slow down is likely to slow growth rates compared to previous periods. However, Government investment to counter the impacts of slower economic growth will no doubt continue if not increase. However, large projects are generally one-off projects that are lumpy and do not contribute to the underlying trend.

All networks have shown pockets of high growth where new connections are forecast to be highest - areas on the urban fringe, inner city urban in-fill and areas where land has been rezoned from industrial to medium- and high-density housing. Much of this is driven by population growth which we expect to slow in the short term. Powercor also notes the increase in connection of embedded generation. It is unclear what the economic impacts will be on this sector.

United Energy

United Energy is expecting to connect 55,000 new connections at a cost of \$129.3m capex (net cap cons). United Energy describes its forecasting methodology and compares the forecasts to others derived using alternative methods. We appreciate the robustness of the approach, but note that the changing economic circumstances mean the forecast must be reviewed.

United Energy intends to launch a new portal to streamline connection requests as Citipower and Powercor have done during this period.

We are concerned that ... the expected cost savings from the portal were not shown in lower cost estimates in future. We expect customers to benefit from this strategy as soon as it is implemented.

We note that United Energy has tried to benchmark its unit cost rates using RIN data and refers to shortcomings in the RIN data. We rely on AER to assess whether the unit rates are reasonable but note that United Energy is seen as efficient in the AER's benchmarking analysis.

Powercor & Citipower

Citipower and Powercor have adopted United Energy's approach to forecasting that was accepted by the AER in 2016 and has applied this method to its forecast since the Draft Plans in 2019. The new methodology has resulted in a significant reduction in forecast connections capex for Powercor and a smaller reduction for Citipower.

We are pleased to see the efforts Powercor and Citipower are making to streamline connections processes and note that the online portal has lowered costs. We are also pleased with Powercor and Citipower's commitment to connections timeframes following feedback from customers.

Powercor was expecting to connect 114,000 new customers at a cost of \$336m and Citipower 17,700 costing \$135m (both net of cap cons).

We expect ...to see this forecast fall due to the economic slowdown triggered by COVID-19.

Jemena

Jemena has forecast a 6% growth in net expenditure on customer connections compared to 2016-21 period (13% growth in total customer connections). Jemena has based its connection forecast on ACIL Allen's growth forecasts as well as specific construction activity forecasts provided by ACIF for commercial activity.

We note that commercial/industrial customers connections contribute 50% of Jemena's forecast expenditure.

We consider... Jemena's forecast to be too high given the current economic slow down, and the pause in movement of people to Victoria.

AusNet

AusNet forecasts 30,000 new connections at a cost of \$135m (net cap cons). AusNet has used historical averages over periods of 3-5 years to establish its forecast.

We are concerned... that history will not reflect the slow down in economic conditions. We are also surprised by the lack of independent forecasts used.

We recommend AusNet review its forecast given new economic circumstances and also consider independent forecasts for growth in construction activity and customer number growth as a check on any future forecasts.

Capex - DER

Victorian Government solar homes program

The Victorian Government solar homes initiative is turbo charging solar uptake by residential customers in Victoria.

Growth rates for solar uptake vary by network due to socio-economic factors such as income, dwelling type, and home ownership as well as the size of the subsidy offered by the Government which varies by postcode.

Approximately 30% of Victorian customers are forecast to have PV installed by 2026.

Customer research

Research by Victorian businesses shows a majority of customers support renewables and investment in a smarter grid.

Program design

The DER programs have been designed to optimise investment by improving the visibility of load flows on the low voltage network through enhanced connectivity models, improved visibility behind the meter (i.e. which customers have solar), and modelling future constraints based on forecasts of PV uptake. Together, this information allows networks to target investment to relieve network constraints where the benefits outweigh the costs.

Should all customers pay?

The networks will charge all customers for the costs of enabling DER. Powercor, Citipower and United Energy asked their customers whether all customers should pay for investments to facilitate solar exports. A majority of customers responded that only customers with solar should pay for network augmentation to facilitate solar export.

However, Citipower, Powercor & United Energy decided, as did AusNet and Jemena, that all customers should pay for DER on the basis that the benefits such as lower wholesale energy costs would flow to all Victorian customers.

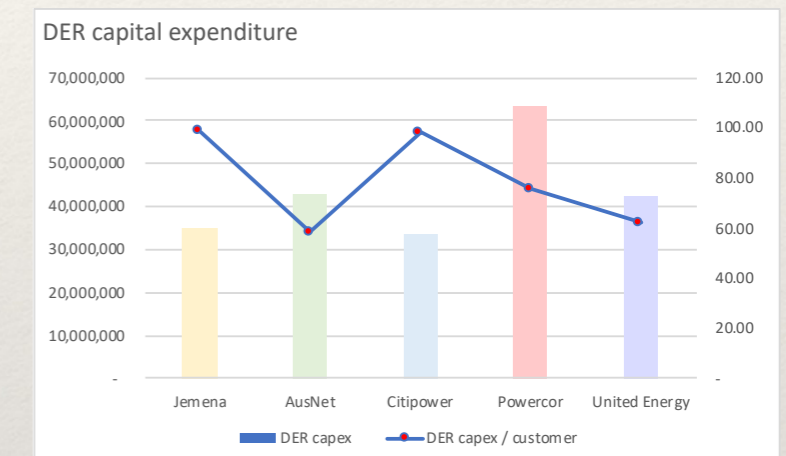
We have sympathy with the 'user pays' approach advocated by customers. We also support decisions that put downward pressure on prices for vulnerable customers who are less likely to be home owners and have PV.*

However, we note that the approach taken by the businesses is consistent with the Victorian Government's policy intent where the costs of the Solar Homes rebate scheme is borne by all Victorian tax payers, and the benefit of the program is the reduction in reliance on fossil fuels in Victoria which also accrue to all customers. With this in mind, we are comfortable with the DER program costs being borne by all Victorian customers.

*We note that some vulnerable customers such as pensioners may be home owners.

Program costs are high

The cost of the DER programs across Victoria is more than \$230m which works out as approximately \$60-\$100 per customer over the 2021-26 period. This is a significant new cost.



The size of the program is larger for larger networks, but we note that the cost per customer is highest in networks with a smaller customer base. We are concerned about the costs for Citipower in particular given its CBD locale.

It is also important to compare the types of program included in the DER costs. If Citipower, Powercor and United Energy's Digital Network Program is included in costs (the program is required to operationalise the solar enablement program) it adds a further \$41m which increases costs per customer of these networks to \$130 (Citipower), \$89 (Powercor), and \$90 (United Energy). AusNet becomes an outlier in terms of lower costs.

Capex - DER

Program assumptions are not all clear

The businesses have taken different approaches to modelling the impact of PV on the network and calculating the cost of the DER programs.

Citipower, Powercor and United Energy have modelled forecast constraints on the network using AMI data. The businesses have designed the program to enable 5kVA to be exported onto the grid 95% of the time. Without the program, the modelling suggests that customers would forgo significant benefits of lower cost wholesale energy.

AusNet has modelled its outcomes in terms of voltage improvements rather than removal of constraints. Although the two concepts are related, voltage improvement has a wider reach across the customer base. It appears that the extent of constraints being lifted in AusNet's network area is lower than in Citipower, Powercor and United Energy's network areas.

Jemena has not yet modelled its LV network and its modelling of constraints is higher level in comparison to other networks. It should be noted that Jemena's lower level of solar installation provides time for Jemena to develop its network models before constraints start to bind. That said, we are concerned that better, more granular information will show that initial estimates have been overly conservative and are higher than required.

It is generally unclear how the costs of relieving constraints has been calculated. Citipower, Powercor and United Energy commissioned Jacobs to identify the costs of likely remedies. We know that there is a range of possible remedies for voltage issues from phase balancing to upgrading feeder capacity, but it is unclear what mix of these remedies has been used to build program costs.

Citipower, Powercor and United Energy note that investment in Digital Network Program will help them operationalise the solar enablement program.

We are concerned... that conservative assumptions have been used to develop costs and that when LV models are operational, better information will reveal

that lower levels of investment are required.

We recommend... AER take a conservative approach to awarding capex allowances in this period given the models on which the programs are based are yet to be finalised. In addition, AER should review the cost of remedies included in program costs to ensure they represent a realistic mix and an efficient cost.

Finally, we note the costs of the DER programs are linked to constraints which are linked to forecasts of PV uptake. A COVID-19 driven economic recession could slow the uptake of PV and push out constraint timing. If this is the case, we would expect program costs to fall in the 2021-26 regulatory period.

BUSINESS	Customers with solar		DER investment outcomes	Capex	Opex
	2020	2026			
Jemena	13%	28%	All solar customers can export 5kVA	\$34.8m	\$3.8m
AusNet	19%	31%	99% customers enjoy improved voltage, 70% of previously constrained export is enabled	\$42.85m	\$0.0m
Citipower	4%	24%	All customers can connect solar, 5kVA solar export enabled 95% of the time. Constraints are removed where economic benefit is higher than cost	\$33.6m (\$44.6m)	\$1.3m
Powercor	18%	34%		\$63.3m (\$74.3m)	\$6.2m
United Energy	11%	23%		\$42.4m (\$61.8)	\$4.2m
Total costs			*Note: costs in brackets include the Digital Network Program	\$217m (\$258m)	\$15.5m

Capex - REFCL

REFCLs will cost customers more than \$1billion

The Rapid Earth Fault Current Limiter (REFCL) program was an outcome of the Victoria Government's response to the 2009 Black Saturday bush fires. Ten years later, REFCL remains a significant driver of capex for Powercor, AusNet and to a lesser extent, Jemena.

Much of the REFCL program has been delivered but Tranche 3 will be delivered in 2021-26 period. Powercor and AusNet have borne the brunt of the REFCL requirements with 22 REFCLs required in each network. Jemena has one REFCL to install this period in a joint project with AusNet.

Compliance with the REFCL requirements is costly in terms of capex but also requires ongoing testing.

Does REFCL work?

Several REFCLs were operational during the 2019-20 summer and there is evidence from both AusNet and Powercor that REFCL did its job and protected customers from more than 100 potential fire starts. The program has been an expensive government initiative for Victorian customers.

Research conducted by the Victorian businesses, particularly AusNet and Powercor showed that customers were very concerned about bush fire safety and prepared to pay more to lower bush fire risks. However, it is not clear that the billion dollar of the REFCL program was communicated to customers during that engagement.

Costs in 2021-26

Powercor is seeking \$186m for Tranche 3 and for testing this period, AusNet \$153m, and Jemena \$53m. Together the REFCL program is forecast to cost \$400m in this period which is more than \$200 / customers within these networks. This is a significant new cost for customers to bear.

Jemena and AusNet are working together to design a compliant REFCL installation within Jemena's network. The costs of the options being considered vary widely and discussions are underway between AusNet, Jemena and ESV to identify ways to reduce the expense of the Tranche 3 REFCL solution. We applaud efforts by these businesses to reduce costs to customers.

Powercor says it is seeking to reduce costs to customers by combining REFCL works with other augmentation works where possible.

It is not clear whether the businesses have updated their bushfire risk assessments for other assets (i.e. pole replacement) on the basis that the REFCLs are in place and are working to reduce the risk of fire starts.

We recommend AER review the capex estimates to ensure they align with exemption discussions that are currently underway to ensure they reflect any lower cost options if they are approved by ESV.

Reliability

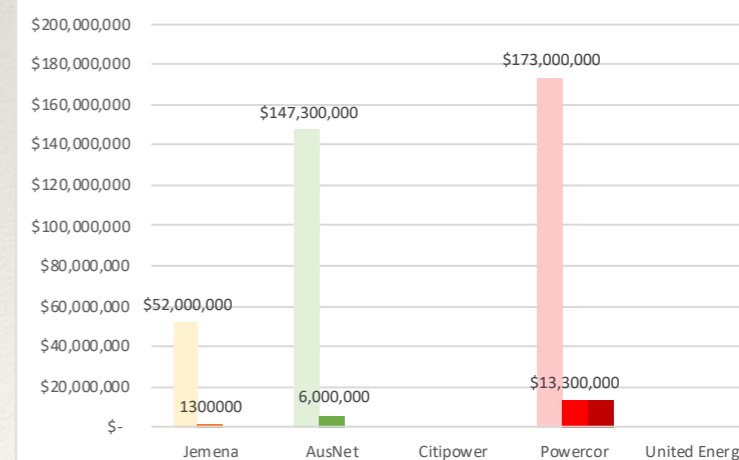
REFCL is impacting negatively on reliability in some areas of the network. Powercor is seeking \$13m to fund ACRs to restore reliability to normal levels.

Have these poorer reliability outcomes been reflected in STPIS outcomes? We would expect STPIS targets to be set to take account of the expected reliability improvement to ensure that customers do not pay twice - once for capex to fix the problem, and again when performance improves under the STPIS.

The costs of the REFCL program are over \$1billion (\$690m approved by AER previously, and up to \$400m in this period).

We expect... active consideration of whether other bush fire related costs and risk assessments can be offset given the evidence REFCLs are working to mitigate risk.

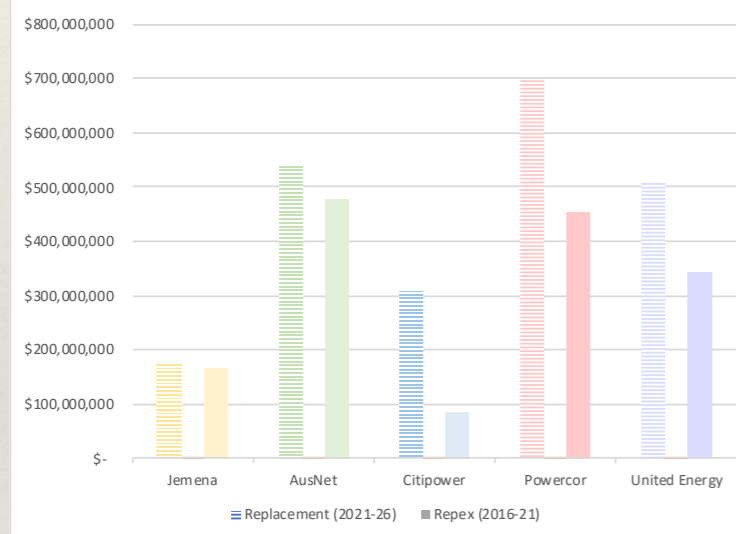
REFCL (2021-26)



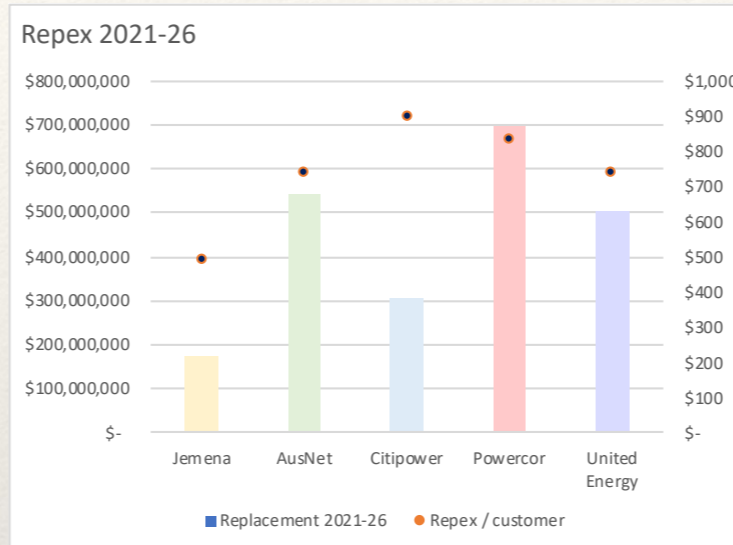
Capex - Replacement

The following chart shows the 2021-26 capital replacement expenditure forecast compared to the expected replacement expenditure in 2016-21. It shows in all cases that networks have forecast an increase in replacement in the 2021-26 period compared to last, although for Jemena, the increase is marginal.

Repex in 2021-26 compared to last period



Most businesses have applied the AER's repex model to their programs as a starting point comparison. However, not all replacement is modelled and therefore reviews of specific programs are required.



Powercor

The most significant driver for the increase in expenditure for Powercor is a change in replacement criteria for poles in response to ESV findings in relation to pole replacement criteria. 34% of Powercor's repex program is being spent on pole replacement. Pole replacement is discussed separately.

Citipower

Environmental compliance and changes to its pole replacement program are the most significant drivers of Citipower's replacement program increase.

United Energy

Environmental compliance requirements is the biggest driver of increased repex for United Energy. Environmental compliance is discussed separately.

AusNet

AusNet has proposed a \$476m program for repex which is 14% higher than last period. We note that AusNet has included programs previously categorised as 'safety programs' in its repex as well as some programs previously related to metering.

The Customer Forum has negotiated \$78m worth of major repex projects leaving almost \$400m of repex to be reviewed by the AER.

Pole replacement makes up 33% of the total program and the level of spend is commensurate with pole replacement this period.

Jemena

Jemena's \$211m replacement program represents a 10% increase on the previous period. The main drivers for the increase in expenditure are larger programs to replace zone switchgear and control systems.

The explanations provided for both programs are cogent and we take comfort in the fact that the programs have been designed under the ISO55001 asset management framework.

Repex - Applying the model

Citipower

Citipower has applied the Repex model. The total program forecast by Citipower is significantly higher than the Repex model would suggest, particularly in categories of switchgear, transformers, SCADA and protections systems as well as pole replacement, and environmental compliance (the latter two are discussed elsewhere in this report).

Citipower has a large program of major replacement works in the CBD. A risk monetisation methodology is used to determine the timing of asset replacement which we have reviewed. The replacement programs for switchgear and transformers reflect the lumpy nature of large asset replacement. We are satisfied that the major replacement projects put forward by Citipower are justified.

Citipower, Powercor and United Energy's service line replacement program forecast is higher than in previous periods due to a proactive replacement of Neutral Screen Services and Twisted PVC services over a 10 year period which contributes a ~30% uplift to the underlying program. We support this program on the basis that United Energy has specifically discussed this issue with customers and shown the likely bill impact. Customers supported these programs despite the higher cost.

Powercor

Powercor has applied the Repex model. At a total level, Powercor's repex program is significantly higher than the Repex model would suggest.

However, the largest variances are in relation to pole replacement and environmental compliance (both issues considered below). When these two programs are removed, the overall repex program is consistent with the Repex modelling provided by Powercor.

United Energy

United Energy's repex program shows forecast expenditure to be higher in every category other than overhead conductors and underground cable replacement.

The Repex model uses historic expenditure and costs to forecast expected replacement requirements. As a result, it may not reflect future conditions particularly for equipment such as switchgear and transformers which are replaced based on individual asset condition rather than as a class of assets.

We support the replacement programs for these larger asset types including United Energy's readiness program to enable greater use of mobile transformers to manage risk and consequence of transformer failure.

AusNet

AusNet's analysis shows that the majority of its replacement programs are lower than the Repex model outcomes with two exceptions - pole and switchgear replacement. We understand the limitations of the Repex model in relation to switchgear and large transformer replacement.

We are pleased to see AusNet's explanation of why its forecasts are in many cases significantly lower than the Repex model outcomes. Based on these explanations we are comfortable that AusNet's forecast does not represent under-investment in the network, and that the categories in which there are higher forecasts can be adequately explained.

We note the largest programs of conductor and service line replacement are in fact lower than previous periods. However, we are unable to analyse the programs further as the supporting documents have confidentiality claims applied. We leave it to the AER to determine whether an increase of 14% in repex is too high in the 2021-26 period, particularly in light of underspent repex in the previous period.

Jemena

Jemena has applied the Repex model. Overall, the modelled outcomes are higher in total than Jemena's forecast.

In category terms, the largest variations are in switchgear (Jemena's forecast is higher) and transformer replacement (Repex forecast is higher). Jemena explains this reflects the lumpiness of investment in these large components, and shows the change in focus in this period.

Repex - Pole replacement

Citipower, Powercor, United Energy: Pole replacement

The largest component within the repex forecast is pole replacement.

Citipower, Powercor and United Energy have all adopted new asset management practices developed by Powercor in response to ESV findings of changes to Powercor's asset management assumptions of wood strength over time. ESV also made recommendations for Powercor in relation to implementation of its asset management strategy and strategic analysis of data.

As a result, all three companies have incorporated a step up in maintenance costs and pole replacement: Powercor is proposing ~250% increase in pole replacement, Citipower 400% increase and United Energy 15% increase.

Fire start risk reduction - pole replacement and REFCL

We recognise the difficulty that Powercor faces in addressing community concerns about bushfire risks. The ESV's involvement has indicated ways it believes Powercor can change its criteria to increase the number of poles replaced, thereby further reducing risks of fire starts.

We note that Citipower, Powercor and United Energy have included statements in their proposals that their existing pole management practices have led to very low levels of pole failure.

We have not seen whether the businesses have considered the billion dollar REFCL program and the significant reduction in risk of fire starts that it is believed to account for in each network's risk assessments for poles.

We would welcome further clarity on whether the two programs should be linked and considered as working together to reduce risk, with a view to ultimately reducing the cost to customers.

We are concerned that Powercor's customers are being asked to fund \$480 per customer for pole replacement and REFCL this period. This is a significant impost on customers in addition to normal network operational costs over the period, and one we think that Powercor should be working to reduce.

We do not understand why the increase at United Energy is so modest in comparison to its sister organisations. We note that United Energy has applied its risk based pole replacement program to High Bush Fire Areas (HBFA). It is not clear what risks have increased for Citipower that would prompt such a significant increase in pole replacement as there are no HBFAs in Citipower's network. A better explanation of this part of the methodology would be helpful.

We support ... an increase in pole replacement if there is evidence that the asset management system has been lacking and that residual strength of poles over time had not been considered in the replacement criteria. However, given the level of expenditure and the low levels of pole failure to date, we ask that the AER review the modelling to assure itself that the parameters have been correctly applied.

We are concerned... by the suggestion that ESV has found gaps in Powercor's asset management system that suggest a lack of strategic oversight and strategic analysis of data.

We support a review of Powercor's Reliability Centred Maintenance (RCM) methodology for other asset classes to ensure similar gaps are not present that may also lead to customers being asked to fund a step up in replacement of other asset classes in future.

It is in customers' interests that replacement expenditure does not follow a boom-bust cycle. A sustainable level of replacement helps keep prices stable and RAB growth relatively flat.

AusNet

AusNet's pole replacement forecast is stable at \$202.1m which represents a 1% reduction on comparable spend in the current period. We note that AusNet has flagged an ESV review of its pole replacement methodology which could lead to changes to the program.

We are unclear as to whether the historic program includes poles replaced under the special Powerline Replacement Program. Any comparisons between periods should take account of the impacts of this program and compare like with like.

We trust the ESV will take account of failure rates and affordability concerns when performing this review.

Jemena

Jemena has forecast a steady pole replacement program and unchanged replacement criteria. We would be surprised if changes are required to Jemena's replacement program given its pole failures in recent years have been very, very low - 2 failures in 2017 and 1 failure in 2018.

Repex - Environment

EPA requirements

Changes to the EPA in Victoria were planned to apply from 1 July 2020. The policy is designed to move from a reactive framework of managing pollution to a proactive framework of managing risk.

The amended Act applies a General Environmental Duty to all individuals and companies in Victoria:

"A person who is engaging in an activity that may give rise to risks of harm to human health or the environment from pollution or waste must minimise those risks, so far as reasonably practicable."

The EPA has indicated it will work with industry to develop a Compliance Code to identify the best ways to identify, assess and manage risks. This will help utilities understand the actions that would be considered 'reasonably practicable' in the circumstances.

Citipower, Powercor, & United Energy

Citipower and Powercor have undertaken a desk-top assessment of the likely impact of the EPA changes. Oil containment, land contamination and noise pollution were identified as being the most significant drivers of new expenditure.

We consider that... expenditure on oil containment is reasonable and note that bunding and water treatment facilities are included in all new facilities.

Citipower, Powercor & United Energy are proposing to achieve compliance with the EPA Amendments over time by targeting worst affected sites in the 2021-26 period. We support this approach.

The businesses have included estimates of remediation costs in their proposals. We have raised concerns that the estimates represent an overly conservative approach to compliance in both volume of affected sites and the cost of remediation.

We consider ... the estimates for noise abatement in the proposals to be high and reflect a very conservative approach to compliance. Powercor confirmed that there have been no noise-related complaints to date that have led to noise abatement expenditure. We reject the estimates put forward by Citipower \$58.9m, Powercor \$30.5m and United Energy \$66.71m, particularly as there is little or no evidence that equipment noise is a problem for customers in these franchise areas.

A test case in Melbourne's CBD (Citipower's franchise) will help clarify the impact of the EPA Amendments on substation equipment operating within urban areas and the level of expenditure required to achieve compliance with noise pollution standards, if any.

Updated forecasts

On 18 May 2020, Citipower, Powercor and United Energy updated their forecasts to remove the capex and opex associated with the new amendments in response to advice the application of the amendments would be delayed.

Jemena

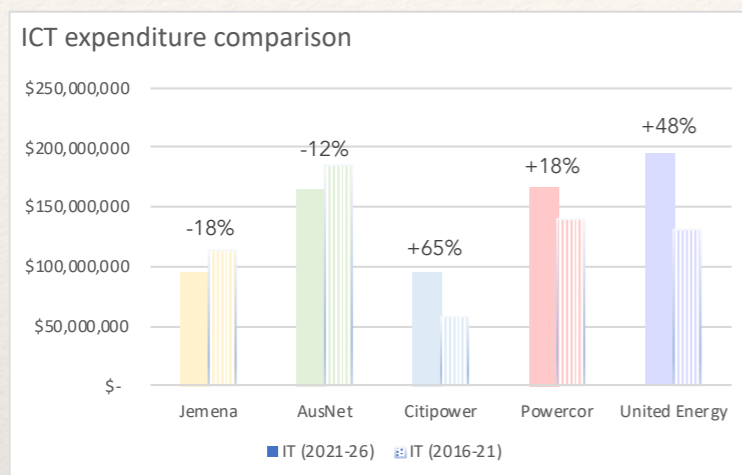
Jemena is subject to the EPA Amendments but has not sought a step up in capital expenditure. Jemena has sought \$4.5m in opex to review its environmental risks, upgrade its environmental management plans and reporting mechanisms so as to proactively demonstrate compliance with the new obligations. Jemena has provided a detailed breakdown of costs and the approach appears reasonable. However, we would like Jemena to engage with the EPA to confirm compliance requirements, and review its cost estimates in light of the deferral in the date of the regulation's application. More time may allow costs to be smoothed over time and more costs be borne as part of normal business costs - a similar approach to AusNet.

AusNet

AusNet Services considers that compliance with the EPA amendments will cost \$1m. AusNet was encouraged by the Customer Forum to absorb these costs as part of absorbing a suite of non-material cost increases. AusNet is relying on its existing asset management systems and a modest upgrade to its compliance framework to demonstrate compliance.

We recommend the AER test the veracity of Jemena's compliance expenditure, and whether the differences between forecast costs of compliance relate to different levels of conservatism in compliance. We recommend compliance costs be addressed via the pass through mechanism if required.

IT - Citipower, Powercor



ICT investment is a growing area of investment for distribution businesses. Most IT investments are justified with clear statement of needs, risk and analysis of options. However, benefits are not always clear, particularly where the benefit is improved customer service. If customers are being asked to pay for the investment, it is reasonable that the customer benefit is clear, tangible and measurable. Where benefits are hard to quantify it is reasonable that the business takes part of the risk of the investment. This may include self-funding the investment until benefits are revealed.

We note the AER's guidance on assessment of IT projects which states that any IT investment designed to reduce opex should be accompanied by a negative step change in opex. It should not simply contribute to the 0.5% productivity requirement.

We have not seen any negative step changes in opex or reliability outcomes based on IT investments.

Citipower

Citipower will spend \$96.1m on ICT in the 2021-26 period which represents more than 10% of Citipower's total capex program at a cost of \$280/customer. It is 65% higher than its IT program in 2016-21 period.

We have reviewed much of the material presented and note the underlying strategy to invest in a smarter network was supported by customers. However, we are concerned that customers, whilst benefiting from these investments, may not be able to afford the costs in this regulatory period. The timing of these investments should be reviewed carefully and 'must have' capability balanced with 'nice to have' capabilities on the basis of affordability.

Much of the explanation of the IT investment program is consistent across Citipower, Powercor and United Energy as they have joint ownership and leverage common systems. The synergies achieved by three networks operating in the same jurisdiction is significant and should result in comparatively lower IT costs to their customers.

We have a couple of other concerns:

- Citipower intends to continue to migrate systems to Cloud-based systems. However, there is no mention of how moving to cloud offsets existing IT costs. We look forward to a more detailed explanation of why costs are increasing and how Citipower has offset the costs via tradeoffs.

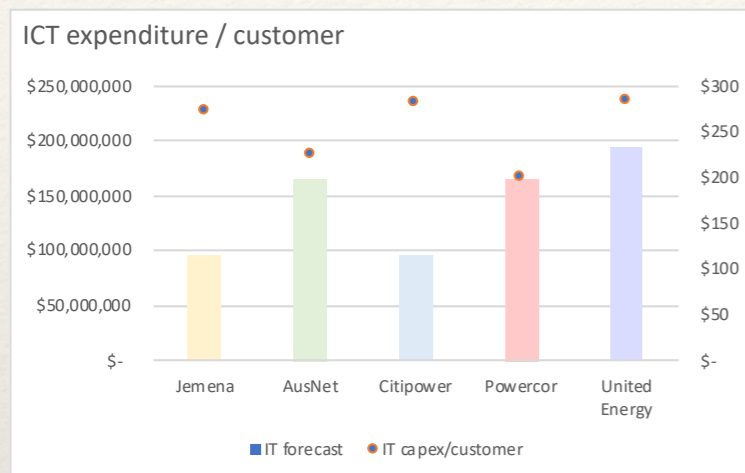
- The intelligent engineering program is designed to improve GIS data, which will improve customer and worker safety when working on and around the network. It will also reduce costs of designing works by allowing more automation. We would like to see how Citipower has incorporated these lower cost outcomes in its forecast. It is not clear that these savings have been taken into account.
- The customer enablement program allows dynamic control of solar export and is argued to support a more equitable impact on customers wanting to export. We are not yet convinced that this program is a 'must have' in this regulatory period, particularly given the uncertainty around economic slow down and take-up of PV.
- We are not convinced that the change in the allocation of costs between Citipower and Powercor for IT systems costs is appropriate. Allocating costs on the basis of end beneficiaries (customers) or users (employees) seems reasonable. We suspect the allocation of costs on a 50:50 basis is driven by the effect of reducing pressure on Powercor's opex and benchmark efficiency which has been under pressure in recent years.

Powercor

Powercor has a \$166m ICT program that is the cheapest program/customer of all the Victorian networks. It is 18% higher than its IT program in 2016-21 period.

The same concerns raised for Citipower are relevant to Powercor because the projects are the same.

IT - United Energy, Jemena, AusNet



United Energy

United Energy's ICT expenditure represents 16% of its total capex expenditure and is the largest program amongst the Victorian networks. United Energy spent \$131m in the 2016-21 period. Its forecast for 2021-26 represents a 48% increase on its previous ICT program.

It is unclear from the proposals why the costs are much higher at United Energy for the same outcome. We note that the program is driven by a large number of refreshes to critical systems. We also understand that there is some 'catch-up' for United Energy to achieve the level of IT capability available at Citipower and Powercor.

United Energy has a significant underspend in the 2016-21 period for which it will receive CESS rewards. It is difficult for customers to reconcile large CESS benefits with large amounts of capital being sought again.

Furthermore, we expect to see how the productivity savings from future investment have been taken into account as lower forecast costs. We are concerned that customers will pay to improve efficiency through investment in new capabilities, and pay again via efficiency rewards when networks outperform their allowances.

AusNet

AusNet Services has forecast a \$165m program of IT investment that includes significant upgrades to core network systems, streamlined data sharing and improved communication within the company. It is 12% less than its IT spend last period.

We note that the Customer Forum has reviewed parts of the program and as a result AusNet has agreed to absorb some costs (part of IT Cloud migration).

We also note AusNet's intent to capture the efficiency savings from multiple IT projects by applying a 1% productivity allowance to its opex (ie. double the AER's rate of 0.5%).

The Workforce Collaboration program (\$8.6m) as well as the Information Management program (\$13.8m) appear to be projects that other networks have self-funded in the past to improve efficiency. We consider the decision to include these projects in the IT program (i.e. not self-fund them) is a less risky approach for AusNet given the size of the opex program and the transformation program that continues at AusNet. However, we agree

with the AER that it is unreasonable for customers to fund internal company improvements and also pay for rewards. We leave it to AER to determine whether AusNet's productivity rate of 1% is sufficient to ameliorate the risks of double dipping.

AusNet's \$10.4m Outage Management investment is described as having benefits for planned outages. We suspect that it will also have benefits for unplanned outages and therefore would like to see how these benefits have been incorporated into STPIS targets.

Jemena

Jemena proposes a \$91m program for the 2021-26 period which is 18% lower than the last period. Jemena has provided reasonable explanations for why it has chosen a baseline of IT expenditure to assess future recurrent spending. It shows recurrent spending is flat. The major non-recurrent components of the program are Future Grid (\$15.7m), 5-minute settlement (\$10.5), SAP migration (\$5.6m) which are common to other networks. We rely on the AER to assess whether the costing of these projects is reasonable.

IT costs / customer is high for Jemena, but it is a relatively small network and is disadvantaged by simple / customer comparisons. We note that spending is down on previous periods which provides us with some comfort about the estimate.

Non-system

Non-system program consist of corporate programs related to corporate office leases, vehicles, property including depot upgrades, and other costs that are not related to the network.

United Energy is the only business to forecast a higher non-system capex in 2021-26 than in the previous period. All the other businesses have forecast smaller programs.

Businesses have provided high level explanations for programs and high level costs. We therefore must rely on AER's detailed review of program costs.

AusNet

AusNet's program of \$42.1m is largely consistent with spending in the current period when compared like with like.

We are concerned that the increase in vehicle leases occurs in the last year of the period, and if delayed would fall outside the period leading to substantial CESS benefits. We look to the AER to confirm that timing of lease expenditure is necessary and appropriate and unlikely to be gamed.

We support the innovation allowance (capex) of \$6.4m and acknowledge the Customer Forum's work to ensure that programs are clearly articulated and are directly related to customer benefits.

Jemena

Jemena's non-system program (\$18.2) reflects investment decisions made in the current period to delay the replacement of some vehicles as well as the large investments in property made during the 2011-15 period.

Consequently, spending on vehicles is high early in the period. We appreciate the detail Jemena has provided about standard lives for vehicles and consider its investment proposals to be reasonable. We note property investment is negligible this period.

Citipower

Citipower proposes a \$20.7m program which is marginally higher than its non-system expenditure in the current period. The majority of expenditure (\$15.4m) relates to property security. We note that Citipower and its sister organisation Powercor have proposed a staged program and will target the highest risk sites during this period. We appreciate this balancing of network need and affordability .

We sought clarification of why building upgrades were required for existing (not new) buildings. We were told that compliance requirements are triggered for a whole site when changes to part of a site reach a certain threshold. We understand the AER has also sought justification of this issue for Citipower, Powercor and United Energy. We rely on their investigation as to whether this expenditure is justified.

Powercor

Powercor's non-system program of \$227.5m is 7% lower than last period. The majority of expenditure is on depot refurbishment, property security upgrade and fleet.

Powercor propose to replace or refurbish five depots during the 2021-26 period. The business cases provide the logic behind the investment but little detail on costing. We assume the AER will dig further into the costings to justify \$114m.

We could find no information other than what was included in the proposal to justify \$95m for fleet. We seek further information before we can comment.

United Energy

United Energy's program of \$85.6m is significantly higher than the non-system expenditure program in the 2021-26 period. The upgrade of three depots at Burwood, Keyborough and Mornington contribute \$68.9m. As is the case with Citipower and Powercor above, we are satisfied with the logic set out in the business cases provided, but are unable to comment on the cost of the program as there are no detailed costs included. We rely on the AER to determine the reasonableness of the costs.

The remaining cost of \$16.7m relates to fleet and tools and equipment. We can find no supporting detail to justify these programs.

Opex - the base

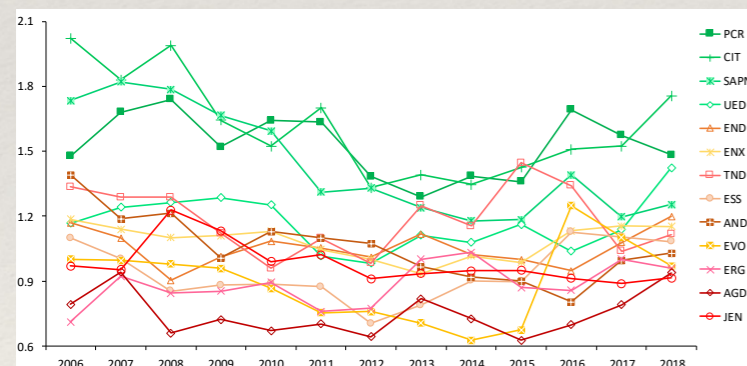
The AER uses the base-step-trend method to determine opex for distributors. An assessment of each of the three elements is required to determine the efficiency of the forecast costs.

Assessing the base

The AER's MPFP analysis for opex shows Citipower, Powercor and United Energy remain three of the top four performers. AusNet is ranked 9th and Jemena is ranked 13th out of 13.

All of the Victorian businesses are multi-utility businesses that share corporate costs across multiple businesses. This should result in relative efficiency of these businesses compared to others. It is therefore surprising to see Jemena and AusNet perform relatively poorly in the analysis.

DNSP opex multilateral partial factor productivity indexes, 2006–18



Source: Economic Insights, AER analysis.

p 16 AER Benchmarking report, Nov 2019

In recognition of declining opex efficiency relative to peers, AusNet and Jemena have undertaken transformation programs to reduce their base year opex. Are the cost reductions sufficient to represent an efficient starting point?

AusNet's transformation program has improved its relative opex efficiency since 2015 and has reduced opex by approximately \$60m per annum to 2019. This is an impressive correction which can be seen in the steep incline in the chart (left) from 2016 onwards.

Given AusNet's relative performance to peers, we consider there is further efficiency to be achieved. We note AusNet's intention to absorb \$21m of new costs as negotiated with the Customer Forum. As such, our concerns about the relative efficiency of the starting point is somewhat ameliorated.

We recommend AusNet use 2019 as the base year as it reflects the most recent full year of audited opex data and will have the full benefits of the transformation program contained therein. This is consistent with the base year used by Citipower, Powercor and United Energy.

We do not object to AusNet's base opex as a starting point for its opex forecast for the 2021-26 period but suspect that further efficiency will be achieved in the period. The AER will need to decide whether the productivity escalator is sufficient transfer of these savings to customers.

Jemena has used a base year of CY2018, consistent with the AER's recent decision for Jemena's gas business, as this year contains no additional costs associated with Jemena's transformation program and is at the lowest level within the 2016-2019 period. We support this approach.

We are concerned that Jemena's starting point is relatively less efficient than its peers based on the AER's analysis. However, we note that Jemena's transformation program is forecast to deliver a \$9m reduction in opex per annum. We note that Jemena's base year opex is well below the AER's allowance for the current period and that Jemena forecasts its opex per customer to be constant over the 2021-26 period.

We do not object to Jemena's base year opex as a starting point for forecasting opex for the 2021-26 period.

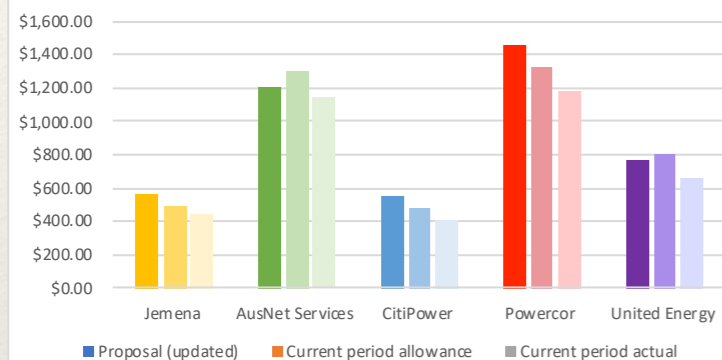
Citipower, Powercor and United Energy are shown to be the most efficient of the Victorian businesses according to the AER's methodology. In this light, it is hard to argue that their starting opex is anything other than efficient.

We acknowledge the improving performance for both Citipower and United Energy. United Energy's performance has improved considerably in recent years in response to decreased costs following the change in ownership and sharing of corporate costs with Citipower and Powercor. However, we note that Powercor appears to be on a downward trajectory in efficiency terms. This is of some concern as Powercor is the largest of the three businesses with more customers affected. We will look carefully at future costs to ensure that Powercor's efficiency remains at a high level.

We consider Citipower, Powercor and United Energy's base year opex to represent efficient starting points for their opex forecasts for the 2021-26 period.

Opex

Comparison of opex in (2021-26) and (2016-21)



Forecast opex is rising substantially

All networks propose an increase in opex for the 2021-26 period compared to what they have spent during the last period.

While some increase is to be expected, the size of the increases is surprising, particularly in the context of customer concerns about energy affordability.

Jemena, Citipower and Powercor have proposed opex increases above 20% compared to actual spend in the current period.

AusNet and United Energy have proposed allowances that are above their current spend, but below the allowance granted by the AER in 2016 (both have claimed significant EBSS benefits this period).

Step changes and re-categorisation of costs from capex to opex, and from metering (alternative control service) to opex (standard control service) are driving the significant step up in opex.

We consider the changes to opex require review for all networks (including AusNet).

Re-categorisation of costs in 2021-26 period

	Jemena	AusNet	Citipower	Powercor	United Energy
Change in capitalisation (capex to opex)	\$60m				
Change in lease capitalisation (opex to capex)		-\$34.5m			
GSL		\$33m			
ESV Levy		\$11.5m			
Recategorisation of costs			\$26.8m	\$33.5m	\$32m

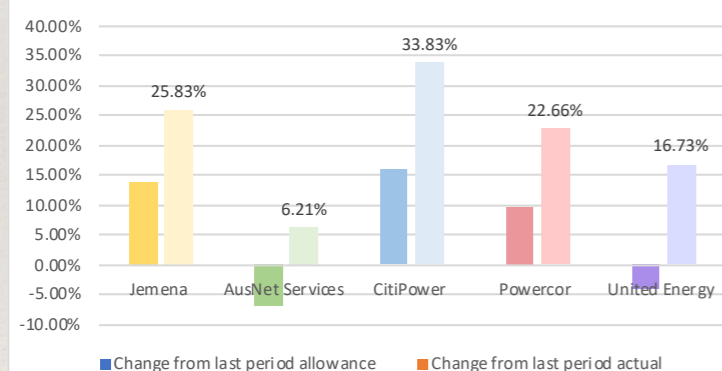
Re-categorisation of costs

All networks propose to recategorise some costs prior to the start of this regulatory period. In some cases this results from changes to accounting standards (vehicle leases, AusNet) or regulatory decisions (wasted truck visits). Other changes have been at the behest of the networks who believe a re-categorisation of costs is more in keeping with the activity (minor repairs, Citipower, Powercor, United Energy), or more in keeping with the long-term interests of customers (capitalised overheads, Jemena). The increase in costs to opex is generally offset with a decrease to capex (or vice versa).

We are concerned about the impact of these changes on affordability, particularly for those networks already facing opex cost pressures of +20%.

We are also concerned that several of these changes were not the subject of consultation with customers. However, to the extent that the costs have historically been accepted by AER, the question is one of how to balance the impact on today's customers versus tomorrow's customers rather than an increase in costs overall.

Change in opex from 2016-21 period



Opex - step changes (1)

The step change methodology is designed to cater for new costs imposed on businesses that are not reflected in the base year.

The AER states that a step change in cost must be related to a change in regulatory obligation and that obligation must be binding. Further, when assessing the step change, it will look to whether a business has chosen the most efficient option, has taken steps to minimise the cost of compliance, and if compliance can be met by existing allowances.

Step changes sought by Victorian businesses

There are \$233 million worth of step changes being sought by the five businesses in the 2021-26 period. The bulk of these costs are being claimed by Citipower, Powercor and United Energy - businesses assessed by the AER as the most efficient businesses in the NEM.

The step changes contribute an increase in costs of between 1.4% for AusNet, and 9.2% for United Energy. For customers, the cost impact ranges from \$23 (over 5 years) for AusNet's customers, to \$120 (over 5 years) for Jemena's customers.

There are no negative step changes being identified to offset the positive step changes (increases) in costs.

Step changes	Jemena	AusNet	Citipower	Powercor	United Energy
5-minute settlement costs		\$3,600,000	\$1,900,000	\$4,900,000	\$3,900,000
Cyber security	\$2,900,000	\$4,700,000	\$14,400,000	\$14,500,000	\$45,900,000
SAP upgrade					
Insurance	\$28,800,000			\$5,000,000	\$2,200,000
REFCL*	\$1,300,000	\$6,000,000		\$8,400,000	
Environmental Protection Act*	\$4,200,000		\$0	\$0	\$0
ESV levy			\$1,500,000	\$4,000,000	\$2,500,000
New High Bushfire Areas*				\$0	
Yarra Trams pole relocation			\$14,400,000		
Transitional hedging costs	\$900,000				
Change to financial year	\$500,000		\$1,800,000	\$1,800,000	\$1,800,000
DM projects					\$8,600,000
EDO fuse replacement				\$11,200,000	
IT cloud migration		\$2,600,000	\$2,300,000	\$5,900,000	\$4,700,000
Solar enablement / Future Grid	\$3,800,000		\$1,300,000	\$6,200,000	\$4,200,000
Total step changes	\$42,400,000	\$16,900,000	\$37,600,000	\$61,900,000	\$73,800,000
Total opex	\$576,600,000	\$1,222,000,000	\$569,000,000	\$1,537,000,000	\$798,000,000
Step change as % of opex	7.4%	1.4%	6.6%	4.0%	9.2%
Cost per customer over 5 years	\$120	\$23	\$110	\$74	\$108

* Citipower, Powercor and United Energy updated their forecasts for Environmental Protection Act compliance, and Powercor's estimates for REFCL testing and New High Bushfire Areas on 18 May 2020.

Opex - step changes (2)

The interaction between step changes and efficiency benefits

We are concerned that the step changes being sought may act to reset operating costs and establish a higher level of cost from which further EBSS benefits can be extracted.

In the 2016 reset, all businesses requested step changes in costs, and all were able to outperform the AER's allowance (except Citipower) which has led to \$178.4m being claimed as EBSS rewards in the 2021-26 period.

According to the AER's methodology, the base year is revealed as an efficient cost because businesses have an incentive to reduce costs as far as possible to achieve efficiency benefits under the EBSS.

However, the step change mechanism does not operate symmetrically in practice. It is extremely rare for a business to put forward a negative step change. In practice, the methodology operates to increase the base opex from which businesses are incentivised to reduce costs. To the extent that a business over-forecasts the step change compliance costs, EBSS benefits are easily derived. Negative step changes are not identified upfront but tend to be revealed as efficiencies during the period.

It is important that the AER assesses the veracity of each step change to ensure that networks do not use step changes to generate more 'low hanging fruit', and that customers pay no more than required, no earlier than is necessary.

Forecasting compliance costs

Several networks explained that many of the step changes were extensions of existing regulations and were already being complied with which allowed actual compliance costs to be a guide for future costs. We accept this to be a reasonable starting point.

However, we ask the AER to test forecast costs for efficiencies of scale and scope. Fixed costs of compliance are unlikely to change, but the variable portion of compliance costs may decline as scope and scale increase.

The date on which several new obligations will apply is likely to change due to COVID-19 including 5-minute settlement and the EPA amendments. It is important that networks adjust their forecasts accordingly.

Comparability of costs

All businesses in Victoria have been subject to a change to the regulatory period from calendar year basis to a financial year basis. Despite the common requirement, the costs claimed by the businesses vary considerably.

AusNet has decided to absorb the costs at the request of The Customer Forum to absorb non-material costs. Jemena is seeking \$500k to cover costs of additional audit of accounts, and Citipower, Powercor and United Energy who share corporate back office functions seek \$1.8m each - a total of \$5.4m to comply. We suggest the

AER interrogate these costs as they appear much higher than identified by AusNet or Jemena.

Compliance costs vary with legal interpretation and risk appetite

Regulations imposed on businesses can be very specific, but increasingly, regulators are moving away from specifying inputs and prefer to specify outcomes leaving businesses to decide how best to achieve compliance. Regulators are also changing the onus of responsibility. Businesses are responsible for ensuring events do not happen, rather than being required to rectify things when they do. This means that compliance costs are a function of legal interpretation and risk appetite.

Example: Changes to EPA

Compliance with regulations is linked to legal interpretation and risk appetite. The EPA amendments were scheduled to apply from 1 July 2020 and impose a 'General Environmental Duty' on all individuals and businesses in Victoria, who must take steps that are 'reasonably practicable' to manage environmental risks. (We understand that the start date will be delayed).

We suggest the AER review the interpretations of compliance being taken by each business to ensure that customers are funding a similar level of compliance and risk management across Victoria.

Opex - step changes (3)

Customers may end up paying rewards for poor decisions

Example: Cyber security

All five companies are subject to compliance with new Federal Government cyber security standards for energy utilities. However, the costs range from \$2.9m for Jemena to \$45.9m for United Energy.

United Energy is forecast to receive \$72.4m in EBSS benefits for opex efficiency improvements during the last period. However, customers could argue that reducing costs has not been prudent and that the under-spent expenditure in recent years should have been used to improve the cyber security of the business in line with obligations that are known to be forthcoming. By resetting the base line opex for United Energy, customers are being asked to pay rewards for levels of opex that are below the sustainable level, and being asked to pay to correct these decisions in the upcoming period.

Other companies who have a more robust cyber security system in place are disadvantaged as they did not receive EBSS benefits for reducing their expenditure to unsustainable levels nor make what turn out to be poor IT choices in hindsight.

The AER must take care to ensure the step change mechanism does not undermine prudent expenditure in the pursuit of efficiency rewards.

Commercial negotiations

A business's own commercial contracts may trigger legal obligations. However, it is not clear that a commercial

contract would trigger a regulatory obligation and therefore meet the criteria for a step change.

In the case of Yarra Trams, we seek confirmation that commercial terms fall within the step change definition. Secondly, we seek assurance that the costs are valid and the contractual arrangements are in the interests of customers. Finally, the AER should satisfy itself that contractual arrangements have not been designed to avoid application of the shared asset guideline.

Different mechanisms to recover the same costs

Example - Bush Fire Insurance

All businesses are seeking to cater for forecast insurance cost increases. The step up in costs varies markedly across the five businesses, as does the mechanism each business proposes to use - opex step change (large / small), or pass through.

Jemena has sought a very large step change to cover expected increases in insurance premiums (worth 4.8% of total opex). In contrast, AusNet has agreed with the Customer Forum to absorb the recent increase in insurance costs, but has requested several new insurance related pass through events to capture events where it cannot obtain adequate coverage for the costs included in the proposal.

Powercor and United Energy have requested step changes for insurance that appear modest in comparison to Jemena which may be explained by a better starting point.

Example - ESV levy

All businesses are required to pay a levy to fund Energy Safe Victoria. The levy is based on customer numbers and thus varies by business.

Citipower, Powercor and United Energy have sought a step change in opex to cover the expected increase in the levy based on their forecast of customers over the period.

In contrast, AusNet has suggested a revenue adjustment be made within the control mechanism to recover the required amount of revenue each year based on actual customer numbers (i.e. this mechanism simply passes through the cost and does not require a forecast).

Jemena has included a specific forecast for the ESV levy (outside the base-step-trend methodology) based on ESV advice for levy payments to FY21. Jemena has held this forecast constant in real terms throughout the period. Currently the ESV levy is added to Jemena's total opex, but Jemena is also open to it being incorporated in the control mechanism as is currently the case.

Step changes must consider tradeoffs

Business should only make a decision to move IT systems to the cloud where the benefits of doing so are outweighed by the costs. Jemena has determined it will receive sufficient savings in avoided costs of software updates and other investment that it can fund the change within existing allowances. We seek evidence that all businesses have explicitly considered how cloud migration costs can be offset.

Opex - Trend

All businesses forecast wage pressure within the sector, but materials costs were forecast to be flat. Following the COVID-19 crisis, wage pressures are likely to soften in the early part of the period.

The AER in its decision for SAPN used Deloitte Access Economics (rather than an average of Deloitte and BIS) purporting that Deloitte more accurately forecast wholesale price increases nationally. In contrast, AusNet and Citipower, Powercor and United Energy all argue that BIS Oxford Economics is more accurate when looking at Victoria only. BIS argues that wage pressure in Victoria is likely to be higher than the National and All State Industries Average.

The analysis provided shows that there is no clear winner in terms of forecast accuracy. While we believe that Victoria's labour market is broader than the state of Victoria, and that a national wage forecast may be appropriate, we consider it prudent, particularly in the current economic circumstances, to use two forecasters rather rely on one.

Superannuation guarantee increase scheduled for 1 July 2021 to 9.5% and annually up to 12% by 2025/26 is not included in the official forecasts of labour costs. Citipower, Powercor and United Energy have added the super guarantee into their estimates of labour cost escalation.

We seek evidence... that the increase in the super guarantee will lead to an increase in total wages rather

than a redistribution of salaries between super and taxable salary. To the extent that employees rather than employers bear the burden of the change to super, the adjustments to escalators are likely to be too high.

Weights of labour / materials input costs

Citipower, Powercor and United Energy argue the AER should use audited accounts to establish the weights of labour and materials rather than the AER's benchmarking model outputs. We note that businesses that have a higher labour input will receive higher revenues from relatively stronger labour cost growth.

We are concerned... that practices of cost allocation are not consistent across networks and that both the audited accounts and the benchmarking model reflect these differences (i.e. do not account for the differences). We consider that more work is required in this area.

Output growth

We are concerned... that COVID-19 will cause a slow-down in economic growth and connections, particularly in the early half of the period, and that the output growth measures underlying forecasts such as customer numbers, circuit length and matched demand are likely to be too high.

Productivity

All companies have applied the AER's productivity index to opex. We note that AusNet has agreed to absorb \$21m of costs which it argues is equivalent to a further 0.5% productivity measure applied (total of 1%). In contrast, Citipower, Powercor and United Energy argue their position on the opex efficiency frontier together with having the productivity measure applied means they are unable to absorb any new costs. Collectively they have identified \$173m worth of step changes (\$866.5m over 5 years) in extra opex that customers will pay.

Real cost escalation	Labour	Materials	Output	Productivity	Labour / materials	Labour rate forecasts
Jemena	1.05%	0.0%	1.28%	0.5%	59.7% : 40.3%	Average of DEA and BIS
Citipower	1.99%	0.0%	1.5%	0.5%	70% : 30%	BIS Oxford
Powercor	1.99%	0.0%	1.9%	0.5%	77% : 23%	BIS Oxford
United Energy	1.99%	0.0%	1.9%	0.5%	77% : 23%	BIS Oxford
AusNet	0.58%	0.0%	1.39%	0.5%	59.7% : 40.3%	Average of DEA and BIS

Depreciation

Depreciation is the allowance provided so that capital investors recover their investment over the economic life of the asset. It is an important building block within the revenue formula.

All networks other than Jemena have sought an acceleration of depreciation for one or more asset class.

The following charts from the AER's Issues Paper shows that AusNet and United Energy have the largest variation in depreciation between periods.

AusNet

AusNet has sought to accelerate depreciation of some SCADA and Network control units which increases forecast revenues by \$160m. This is a surprising decision at a time when affordability is a priority for customers.

An increase in depreciation means that the residual asset base value is lower. We note that AusNet is the only network whose RAB is declining over the period. However, the decision to accelerate depreciation adds to this decline and effectively means customers today are being asked to pay more than future customers.

In discussions, AusNet mentioned that its decision to increase depreciation was to assist cash flow which was under pressure due to the very low WACC. We find this a surprising admission and one that requires review by AER. We find it difficult to reconcile this decision with AusNet's purported customer focus.

Drivers of revenue change (SCS and metering services)

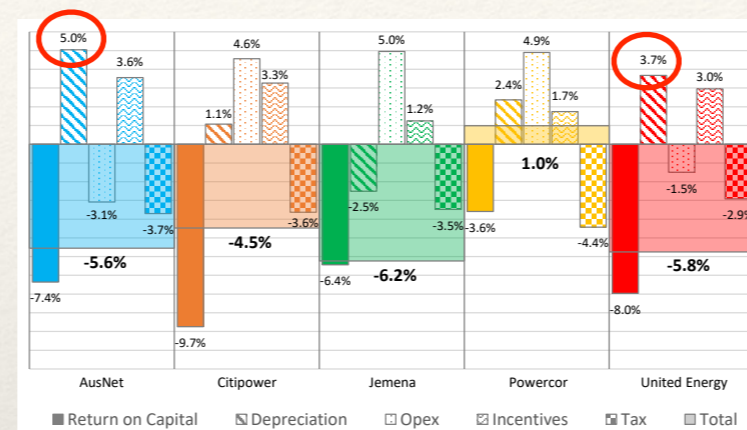


Chart reproduced from AER Issues paper, April 2020 p27

We also note that AusNet seeks to depreciate SCADA/ Network control assets over 10 years (5.6 years remaining). At Powercor and Citipower, the equivalent asset class has a remaining life of 13 years. We would like to understand what is driving this variance.

United Energy

United Energy has the largest proportion of revenue coming from depreciation compared to peers. We would like to understand what drives this outcome. Customers should not be required to pay a dollar more in revenue than is necessary to operate the network and the business.

Depreciation as a proportion of opening RAB

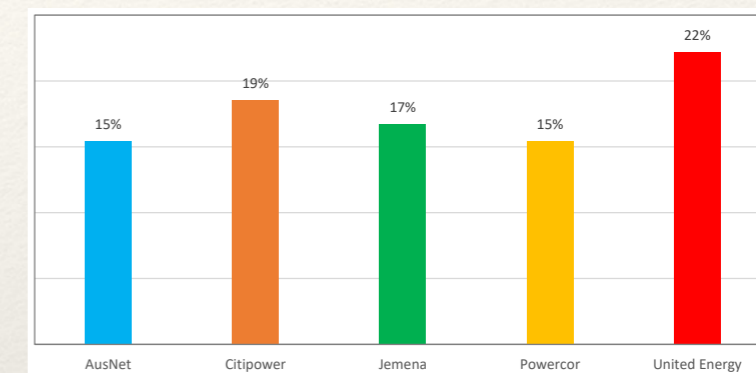


Chart reproduced from AER Issues paper, April 2020 p33

Solar enablement

Citipower, Powercor and United Energy all refer to increase in depreciation as a result of replacement of distribution transformers that cannot be tapped to provide for localised solar export. Has this hidden cost been taken into account in the costing of options?

Changes in assets lives

Significant changes to asset lives should be viewed with caution. Changing lives from 40-50 year assets to 10 year assets has a significant impact on revenue (see AusNet). Further, we would like to see how networks proposing such changes have considered smoothing the revenue impact over two periods.

We look forward to the AER's detailed scrutiny of depreciation.

Incentives

There are several incentive mechanisms that the Victorian distributors have taken advantage of during the 2016-21 period.

EBSS

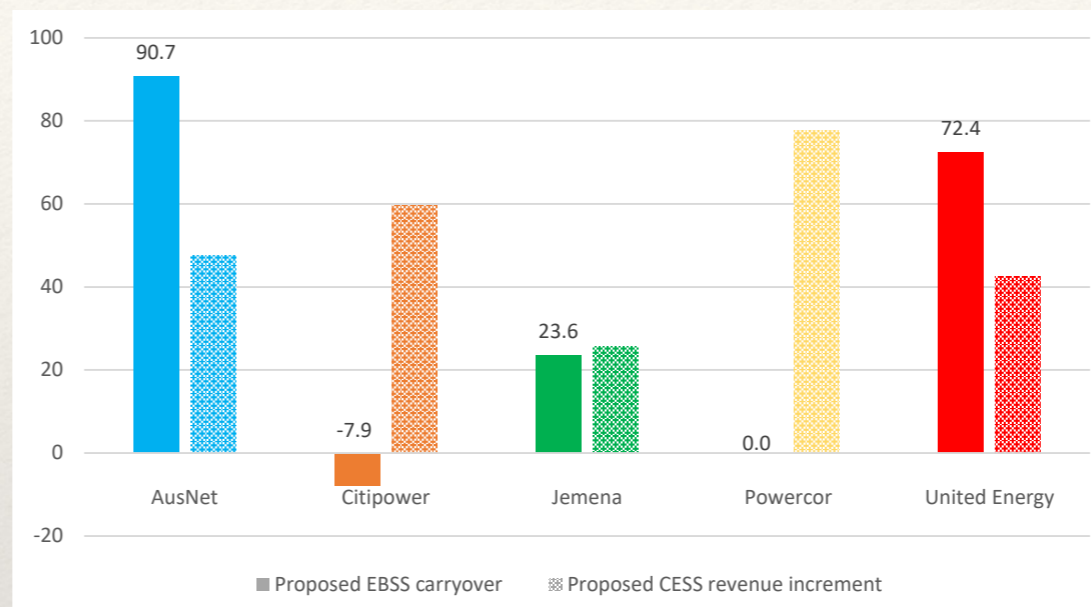
The Efficiency Benefit Sharing Scheme (EBSS) rewards businesses for ongoing reductions in opex, and penalises businesses that increase opex from year to year. The scheme is designed to pass 70% of efficiency benefits to customers and 30% to the businesses.

For the 2016-21 period, \$178.4m will be paid to businesses as efficiency rewards which infers that customers will receive \$416m worth of benefits over the long term.

The amount of extra revenue being paid to businesses shows the significant efforts being made to spend less than the allowance, or may also indicate that the AER's allowance was too generous in 2016.

Those networks that are performing relatively poorly in the AER's benchmarking analysis are set to receive the largest EBSS rewards in recognition of their efforts to reduce spending. Networks closest to the frontier are receiving almost no EBSS reward. The outlier is United Energy which is claiming \$72.4m in EBSS rewards. The savings made in its costs are due predominantly to its change in ownership and the fact that it can leverage corporate costs shared with Citipower and Powercor. This no doubt compensates for the absence of EBSS rewards applicable to those networks.

Proposed EBSS and CESS carryovers, AER Issues Paper, p37



CESS

The CESS rewards businesses that reduce capital expenditure below their capex allowance and penalises businesses for any overspend. All five networks are expecting significant rewards under the CESS scheme for spending below the AER's allowance in 2016-21 - a total of \$246m in CESS benefits has been claimed as rewards.

It is unclear whether these rewards are the result of systemic over-forecasting by businesses in 2016, under-delivery of required capex by businesses, a change in underlying drivers (i.e. change to growth compared to forecast), or clever deferral of capex by businesses whilst managing risks.

We are concerned when businesses under-deliver their replacement program, claim CESS rewards and then seek higher replacement capex in the following period. Businesses must be able to show how they managed risks in the interim. Otherwise customers will have borne the risks during the period and businesses received the benefit.

Ultimately, customers should know whether the CESS is rewarding efficient behaviour, happenstance, poor forecasting or an inability to drive project approvals through the internal bureaucracy. We consider the AER should look carefully at the CESS design to ensure it only rewards efficient behaviour. We suspect it does not.

Incentives (2)

All Victorian businesses seek application of the following incentive schemes:

STPIS

All businesses will apply the STPIS in the 2021-26 period. Reliability targets have been updated to reflect recent performance. We note the very good reliability outcomes experienced by Victorian customers in general which we assume can, at least in part, be attributed to the roll out of smart meters.

The networks have incorporated momentary outages in their parameters as required by the AER's methodology. The GSL component of the STPIS scheme does not apply in Victoria as a separate jurisdictional scheme is in place.

DMIS & DMIA

The Demand Management Incentive Scheme (DMIS) and Demand Management Investment Allowance (DMIA) are standard schemes within the regulatory framework designed to encourage networks to pursue DM and counteract the natural bias that networks have to pursue network solutions over DM solutions.

United Energy and AusNet lead the Victorian Networks in trials and successful application of innovative DM. The DM schemes need more support than ever at a time when capital is so cheap and growth capex so low. We hope that despite these economic circumstances, United Energy's positive experience with DM encourages others to pursue DM more vigorously in future.

GSL scheme

We are somewhat troubled by the networks' practice of estimating the cost of GSL payments as a cost line item. The STPIS works to ensure that reliability is not compromised in the pursuit of efficient investment and operations. The GSL scheme provides justification for the lack of reliability for some customers (who anecdotally rely on GSL payments).

We consider that customers should only be required to fund reliability payments for other customers if the costs of improving reliability to standard levels is prohibitive. Networks should self-fund payments where the failure to deliver services is within their control such as missed appointments, delays in connections, street lights not repaired within standard number of days.

F-factor scheme

The F-factor scheme applies in Victoria and incentivises networks to reduce the risk of fire starts from network assets. The F-factor scheme, together with other bush fire risk reduction initiatives such as REFCL has been very effective in reducing fire starts with all networks reporting declining rates of fire starts over the past 5 years. We have no objection to this scheme continuing for the 2021-26 period, but will be interested to understand whether the scheme is required once all REFCLs have been installed.

Innovation

AusNet services is the only business who has sought a specific allowance for Innovation. However, all networks have noted the importance of innovation and committed to pursuing innovation, predominantly through smart grid investments.

AusNet's proposed innovation program has been reviewed by the Customer Forum. As a result of this review, AusNet removed projects that did not have a clear link to customers. The Customer Forum supports AusNet's Innovation allowance of \$7.5m (\$1.2m relates to trials and is considered opex).

AusNet has shown a history of Innovation investment which we applaud. We note that AusNet intends to apply governance arrangements to the program similar to that put in place by Ausgrid which was approved by the AER. We would like to see AusNet share the results of its innovation program with other distributors to ensure that customers across Victoria and in other jurisdictions can benefit from its research.

In light of the AER's previous support for similar programs, and the support given by the Customer Forum for AusNet's program, we do not oppose AusNet's Innovation allowance.

Customer Service Incentive Scheme (CSIS)

All five Victorian distributors have considered the Customer Service Incentive Scheme (CSIS) but there is little consistency between the approaches taken. The different approaches shed light on the internal cultures of each network business:

AusNet has proposed a CSIS which has been supported by the Customer Forum as a mechanism to drive internal behaviour and improve outcomes for customers. AusNet was strongly of the view that an incentive mechanism with real dollars attached would make the customer service improvements impossible for AusNet's Executive to ignore.

Citipower, Powercor and United Energy state their intention to submit a CSIS in their Revised Proposals following further customer engagement. The proposed scheme is currently being designed.

These three companies have strong philosophical support for incentive regulation and have a history of outperforming incentive targets wherever they are set. However, it is disappointing that a Customer scheme was not designed earlier if the intention is to use it. The delay could be interpreted several ways.

In contrast, **Jemena** has withdrawn its proposal for a CSIS in support of its customers who gave a clear message that they expect good customer service as 'standard' and do not support providing additional incentives/revenues to networks to deliver what they consider should already be in the price.

We have two concerns... with the CSIS scheme as proposed:

1. **The standard service should be good service.**
We have a similar view to Jemena's customers. There is a standard level of **good** service that should be included in the base price for distribution network services.

Businesses should not be provided with additional rewards for delivering services that meet this standard.

2. **Targets should reflect the future state.**

All distributors are planning significant investment in technology that will improve customer service in the 2021-26 period including:

- allowing better access to customer data,
- single portals for information,
- tracking of connection requests,
- automatic approval for solar connection,
- Dynamic control of solar exports, etc.

We consider it is inappropriate to base targets on historical performance at a time when a step change in service improvement is expected.

AER's Draft CSIS

The AER has done a good job in examining the issues associated with design of a new scheme.

We support ... a flexible scheme whereby networks can propose parameters that are most meaningful to their customers.

We support ... the proposal that customers must endorse the design of the CSIS proposed by a network. We hope that in consultation with customers, networks use professionals to help design the scheme to will measure what is purported to be measured.

We support ... the AER's plan not to proscribe how networks obtain customer support but leave open the prospect for innovation in designing engagement activities and the scheme.

We are concerned ... that targets reflect the change in baseline performance that has been used to justify inclusion of IT investment and programs to improve process in the regulatory proposal. Targets should be stretch targets so that rewards are not paid for the standard levels of performance - to do so would cause customers to pay twice for service improvements. A dead band where no reward or penalty is paid could be a useful way to address an expected step change in performance resulting from forecast technology investment.

Further issues for consideration

We offer some further issues for consideration:

- ❖ **Sufficiency and consistency of data.** Where a single network is proposing a scheme it is less important that definitions of parameters are consistent. However, it would be useful for the AER to start with a view to achieving consistency for similar parameters from the outset in order to increase the number of service parameters that could potentially used in future benchmarks. Our concerns about baseline data used to set targets is also relevant here.
- ❖ **Target poorest performance.** Issues of process improvement are easier to fix for all customers than issues such as complaints which are specific to an individual customer and inherently subjective. Targets should be set to improve poorest performance rather than set to encourage marginal improvements for the bulk of customers.
- ❖ **A paper trial** could be used to iron out data issues or to set a new baseline following a step change in performance.

Pass through

The pass through mechanism is an important mechanism to cater for uncertainty, particularly where costs of an event are large and uncertain, and inclusion of an expected value for the event in the forecasts would have a significant impact on revenue and may not occur.

The Rules set out the requirements for a pass through event and proscribe a set of standard pass-through events. Networks are able to propose additional events if they meet the criteria.

All networks put forward the accepted list of pass through events which includes the following:

- Insurer credit event - consistent with recent decisions
- Insurance coverage event - variation in approach
- Natural disaster event - consistent with recent decisions
- A terrorism event - updated to include cyber terrorism
- Retailer insolvency event - consistent with Rules definition

The businesses propose some minor amendments to the wording of several of these events. We have no objection to the proposed amendments.

New pass through events have been proposed by businesses as follows:

Major cyber event	CP, PC, UE
Act of aggression	CP, PC, UE
Electric vehicle event	CP, PC, UE, AusNet
Insurance premium event	JEN, AusNet
Insurance cap event	JEN,

Insurance cap event / Insurance coverage event

Insurance is the biggest issue for networks in managing the uncertainty of future costs in the 2021-26 period.

We are sympathetic to the difficulties that networks face in obtaining insurance of appropriate coverage and note the possibility that a portfolio of policies may be required. We accept that gaps in policy coverage have the potential, theoretically, to occur. However, we would hope that if the AER accepted this change, it would be able to ensure that businesses would be incentivised to ensure there are no insurance gaps (to the extent possible), and that any gaps are the result of the lack of available cover rather than a lack of care a business has taken to identify insurance gaps.

Insurance premium event

Jemena has also put forward an insurance premium event in addition to a substantial step change for expected insurance cost increases.

Given the fact that much of the detail with regard to insurance coverage and cost is subject to confidentiality, we only make high level comments.

We have already noted our surprise at the materiality of the insurance step change proposed by Jemena and strongly recommend the AER review it with a view to reducing the costs to customers whilst allowing Jemena to achieve a prudent level of cover. Making use of a pass-through event may help relieve costs to customers during the regulatory period and balance the risk to Jemena in the absence of an event.

AusNet also proposes a pass-through event for the inability to obtain insurance coverage at all, or at a reasonable price.

Establishing 'reasonable coverage' and a 'reasonable price' is difficult given confidentiality claims and the complexity of the issue. We therefore rely on the AER's investigation of the issue, particularly why Citipower, Powercor and United Energy do not seek a similar event. We also welcome the AER's review of why the insurance step change for Powercor and United Energy is also much smaller than Jemena.

Pass through (2)

Electric vehicles

All networks except Jemena have proposed an electric vehicle pass through event. We are reticent to support this event for the following reasons.

We can see that AEMO's forecast of the impact that fast-neutral-slow take-up rates has on the share of operational demand and that a fast take-up rate could increase network demand substantially in the future periods.

That said, we note that the forecast shows a fast take-up rate will be responsible for 2% of operational demand at best at the end of the period.* Government policies have the potential to drive the take-up rate higher and the network impact sooner, but we think this is unlikely in the current economic circumstances.

The Victorian networks have put forward substantial investment programs to digitise their networks. We would hope that this investment would be used to help mitigate the impact of EV uptake on the network.

We would like to see work undertaken to design electric vehicles tariffs that encourage charging at times that will mitigate the impact on demand growth. A pass through mechanism for electric vehicle uptake could act as a disincentive to progress tariff strategy in this area.

We acknowledge the relatively high utilisation rates that the Victorian networks have and the relatively small

augmentation programs being put forward due to flat forecast demand. However, we think that there is sufficient capital being requested by the networks in this period to allow networks to reprioritise expenditure as required.

Cyber event

We note that the AER in its draft determination for SAPN refused a 'major cyber event' as a nominated pass through event. We support the AER's view that businesses are primarily responsible to maintain security of critical systems and as such are best placed to address this risk.

We note that Victorian businesses have all put forward significant investment to enhance their cyber security and meet the regulatory standards required for critical infrastructure. We also agree with the AER that it is the responsibilities of businesses to ensure that are appropriately insured for such events.

However, we note the following issues:

- Citipower states it is unable to obtain insurance for non-physical losses as a result of cyber crime and that coverage.
- A major cyber event may be similarly outside the control of a DNSP as a terrorism event, and a natural disaster.

- Citipower has included criteria for the event that would require the AER to assess whether or not insurance was available and obtained, and whether actions were taken to mitigate the event from occurring, and actions to mitigate the impact of the event.

We think Citipower, Powercor and United Energy have proposed sufficient safe guards that allow the AER to exclude events where the network has not acted prudently. As a result we do not oppose the nominated pass through for a cyber event.

Act of aggression

We note the extent to which Citipower, Powercor and United Energy have gone to establish a definition for a pass through touted previously by Essential Energy as an 'act of war'. While we consider a war or 'act of aggression' to be a conceivable possibility, we do not consider that such an event would occur without the actions of Government to make special provisions for its impacts, both physical and financial. COVID-19 has had a significant economic impact and we have seen Governments act quickly to mitigate the implications for the economy. We would expect an act of aggression that met the definitions put forward would more than meet a threshold at which Governments would act.

We do not consider that its inclusion as a nominated pass through event is required.

*AEMO modelling cited in Powercor's Tariff Structure Statement, p13.

Metering

We are pleased to note that the cost of metering for customers in all networks is falling significantly in the 2021-26 period. Lower revenues are required by networks as little capex is forecast other than minor replacement for faulty meters and new meters for new connections. WACC has fallen significantly since 2015 and has reduced returns compared to last period.

Benefits to customers

We are pleased to see that networks are making efforts to explain the benefits of smart meters to customers. AusNet, who has been challenged by the Customer Forum to explain the benefits, has dedicated considerable space in its proposal to this issue. Despite the disappointing history on cost reflective prices for residential customers in Victoria, the explanations provided by AusNet and other businesses provides comfort that AMI has delivered benefits to customers via lower business costs.

We are pleased by the decision taken by AusNet and agreed by all Victorian networks to remove the disconnection / reconnection charges faced by customers moving premises. We look forward to see what other customer charges can be removed entirely. We are also pleased by the improvements in communication to customers during this process.

All businesses have taken the opportunity to reallocate part of the cost of metering systems to the distribution network business on the basis that advanced meters (AMI) provides useful data for network analysis including power quality information that helps identify faulty equipment as well as faster outage location detection for faster response and recovery of supply.

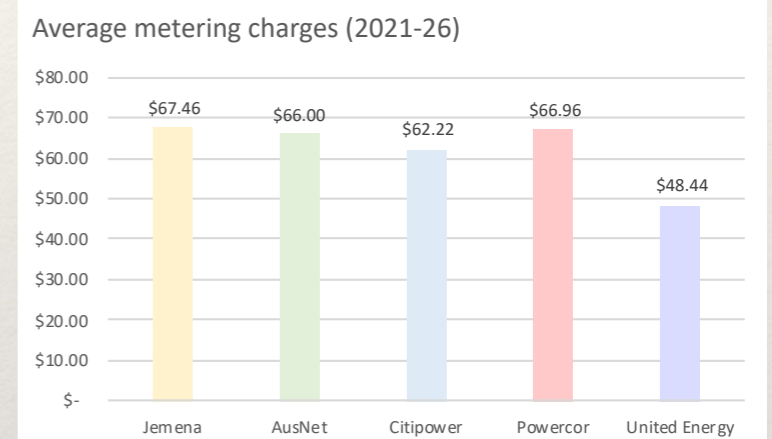
The longer term

We are slightly concerned about the absence of planning for metering replacement in future. When questioned, all networks responded saying that wide spread replacement of meters would not be required for another 10 years (circa 2030). We are satisfied that a 10 year timeframe provides sufficient time to develop a replacement strategy that ensures replacement of the meter fleet is smoothed over several regulatory periods and does not lead to a significant step change in costs.

AusNet

AusNet explicitly refers to the costs of upgrading its meter fleet from 3G to 4G in its metering revenue proposal. The other networks who face the same issue only refer to the 3G upgrade in their costs for distribution business. Given that all networks have allocated meter costs to the DNSP, it is important

that all networks attribute the telecommunication upgrade in a manner consistent with their cost allocation methodologies. This will ensure that metering costs between networks remain more comparable.



United Energy

United Energy is unusual in its metering cost outcomes. It is unclear why United is able to provide the same service for considerably less cost than its peers. We note the allocation of metering data cost between the DNSP and the metering business is the same as Citipower and Powercor (88%:12%). We would welcome more information on this matter to understand whether other companies can also provide services for this lower price.

Tariffs

Network pricing for retailers

The 2021 Tariff Proposals represent a lost opportunity to move more quickly on tariff reform.

In its draft determination for South Australia Power Networks (SAPN), the AER states:

“The purpose of network tariff reform is to improve the cost reflectivity of the price signals that distributors charge retailers for the cost of providing electricity network capacity for their end customers.”*

The AER accepts the fact that retailers do not necessarily pass on pricing signals and may repackage tariffs on the basis of customer preferences.

With the knowledge that retailers will repackage price signals if necessary, it is surprising that distributors have not moved faster to reform tariffs.

We acknowledge the efforts networks went to in order to collaborate and engage with customers. We note the top 5 objectives of simplicity, economic efficiency, adaptability, affordability and equity that have been adopted.

We note that networks found in consultation that customers, although accepting that network pricing was directed at retailers, did expect an inevitable impact on them, and were particularly concerned about the impact of tariff reform on vulnerable customers.

A rare opportunity for reform has been missed

A declining revenue scenario is a rare opportunity to undertake broad based tariff reform with very few ‘losers’.

Regrettably, the Victorian tariff proposals lack ambition. Tariff reform has been relegated to ‘the slow track’ on the basis of protecting vulnerable customers. The reform such as it is, focuses on new connections, customers upgrading connections or installing solar, batteries or a charger for an electric vehicle. Existing residential customers are ignored unless they ‘opt in’ to more cost reflective tariffs.

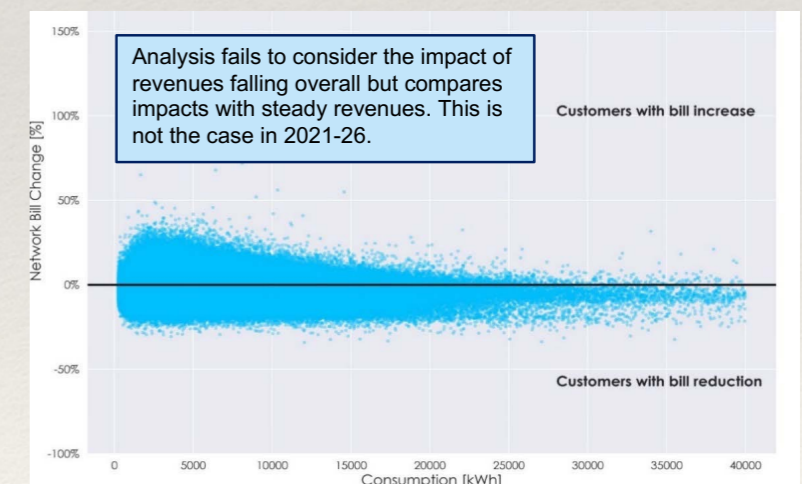
Powercor states that a conservative approach will allow it to ‘ready’ customers for TOU. It is unclear why customers, who have already had AMI meters for 10 years need further time.

This is a missed opportunity. ACIL Allen confirmed that the majority of vulnerable customers would be better off under a TOU tariff in a steady revenue

environment. We would like to see the analysis conducted in the declining revenue environment we currently face.

Another reason given not to make use of this opportunity is that any change in demand in response to price signals would have an inconsequential impact on costs during this period. It is unclear whether the businesses have considered the potential tariff impact on the planned DER program. Further, it is unclear whether demand will continue to be low in future periods. The tariff strategy shows a lack of strategic vision for the longer term and lacks a clear transition path.

Figure 22 Victorian bill impacts of a move of all single-rate customers to our new ToU tariff (%), Powercor TSS, p42.



* AER Draft Determination for SAPN, Overview p39.

Tariffs (2)

Is every day a peak day?

The application of peak time to weekends and public holidays throughout the year for residential tariffs represents the inevitable compromise when five businesses that have peaks at different times of the year/week/day negotiate for a single outcome.

We understand the desire for simplicity but we reject the idea that customers are confused by different tariffs applying to weekends or public holidays. Customers face different fares for public transport on weekends, different priced movies at different times of day, and different store opening hours on weekends and public holidays. Consistency across every day of the week is more *unusual* than different pricing for weekends.

We are also concerned that peaks generally occur in the summer months Dec-March and are largely driven by air-conditioning load in residential areas. We therefore wonder why the proposed TOU tariff has peak periods that occur during two thirds of the year when only 22% of peaks occur. A flat tariff with a seasonal peak would only need to apply to week days in summer (ie 23% of days in the year) to capture 70-80% of peaks. In contrast, the current peak period applies every day.

We would encourage networks to revisit this decision to ensure customers across Victoria are not paying more than they need to, particularly on weekends (which account for 29% of the year) and in shoulder and winter periods (which account for two thirds of the year).

Transition plan to more cost reflective tariffs

Demand tariffs are widely seen as most cost reflective, but also as difficult to explain to customers. A flat tariff with a seasonal peak is more like a demand tariff than a ToU tariff that applies throughout the year. It is important that networks consider the end-point for tariff reform so ensure that the transition path they plot is supportive of the end goal. This is particularly important when considering how to best educate customers about the cost of demand on the network.

Is AMI delivering benefits to customers?

Victoria was the first jurisdiction to mandate the roll-out of AMI. More than a decade later, most of the benefits have flowed to Victorian businesses rather than to the customers that paid for the meters. The majority of customers including business customers still face simple pricing structures and limited access to data (albeit this is set to change this period with businesses investing in customer access to data portals).

We note that businesses are using AMI data to better target expenditure and that customers are beneficiaries of this in the long term. However, we encourage Victorian networks to push for more cost reflective pricing options for customers and thereby deliver one of the main benefits of AMI to customers.

Electric vehicles

AEMO's forecasts suggests that EVs consumption share of operational demand in Victoria will be about 13% by 2040 under a neutral scenario and 15% under a faster uptake scenario.

All businesses have used a pass-through event to cater for uncertainty of uptake and uncertainty of network impact. We consider this is to be a reasonable approach for this period given the uncertainty around take-up, particularly in the current economic circumstances where an economic downturn could see spending on electric vehicles deferred as customers consolidate their financial positions and defer discretionary spending.

We encourage networks to design specific tariffs for electric vehicle owners and support the idea that electric vehicle chargers be connected to a separate circuit as per traditional controlled load. Given the potential for future uptake, and the potential that 'convenience charging' in the 'after work' time slot it would seem sensible for networks to have some control over vehicle charging to ensure that charging loads can be staggered rather than all turned on at the same time using a digital timer.