Cost pass through application – June 2021 storms

(PUBLIC VERSION)

22 November 2021

Contents

1 Executive summary

This application seeks Australian Energy Regulator (AER) approval to pass through to customers the additional costs we incurred to respond to and remedy the damage caused to our distribution network following the 9 and 10 June 2021 storms (June Storms).[1, 2]

These storms devastated areas in Melbourne's outer east and the Dandenongs[3] and impacted our ability to provide direct control services. It is the relevant event upon which this pass through application is based.

Figure 1: Storm damage

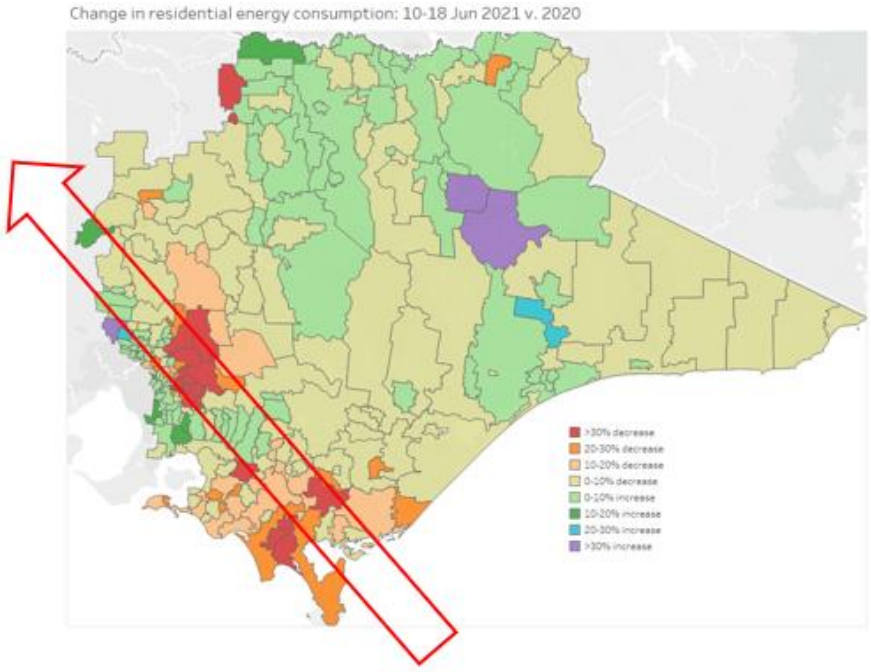
In total, fourteen 66 kV feeders (power lines) were taken out of service, fifty-eight 22 kV feeders reported faults and 10 zone substations went black, resulting in 230,000 customers being off supply. The severity of the storms, particularly the duration, speed and direction of the wind, directly damaged our assets and/or caused damage through trees/other debris falling across our power lines.

[1] Pursuant to clause 6.6.1(a) of the National Electricity Rules (NER).

[2] These costs include the additional costs we expect to incur due to a Ministerial Order (regulatory change) which has required that we pay GSLs to our storm affected customers.

[3] These storms, which occurred over two consecutive days, were a consequence of the same underlying weather systems and have been treated as the same event.

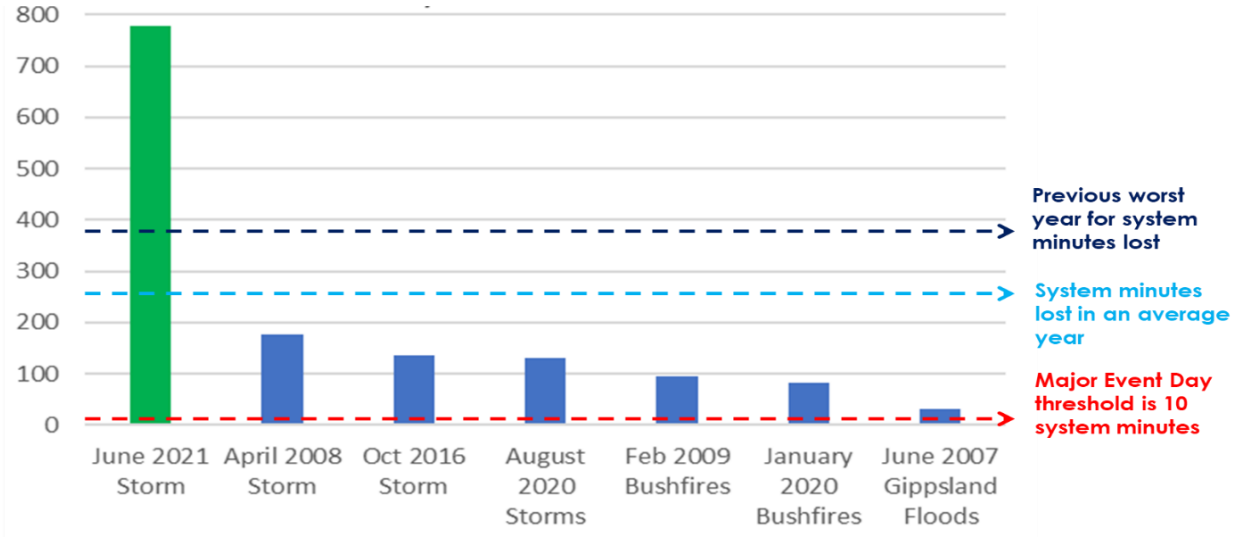
Figure 2: Path of the storm and our distribution network region



Source: AusNet

The storm was unprecedented in its impact on our customers and our network. This is demonstrated by the chart below which shows that the number of system minutes[4] lost materially exceeded the number of system minutes lost from previous large events.

Figure 3: System minutes lost



Source: AusNet

Ongoing presence of high winds and extensive obstruction of the road network resulted in delays to gaining safe entry to affected areas. However, our crews entered the affected areas as soon as it was safe to do so, with the aim of restoring energy supply as quickly and as safely as possible. Making assets safe, responding to customers impacted by loss of electricity supply, and restoring services as safely and as quickly as possible, required an exceptional response

[4] Total minutes off supply dividend by total customers.

effort from us and our service delivery partners (as well as from Victorian and New South Wales (NSW) peers who we called in via mutual aid).[5]

Support made available

Following the storms, support was made available to customers affected, including financial support via the Australian Government Disaster Recovery Payment and the Victorian Government Prolonged Power Outage Payment.[6]

Recognising the severity of the damage and the hardship being experienced by our customers, we also offered support by:

- Providing care packs (food and hygiene products), access to mobile charging stations, battery banks, torches and batteries for council and local volunteer groups.
- Working with the Red Cross to take delivery of, and distribute, emergency food packages.
- Working directly with local councils to set up 16 community hubs to provide information (in the absence of operational telecommunication networks), and access to customer relief, internet and power.
- Expediting claims and payments of $200 to customers for food spoilage and processing claims and payments.
- Waiving reconnection fees (usually $500 to $1500 per customer, with most of those in the Dandenong Ranges at the higher end of this range.
- Administering the Victorian Government Prolonged Power Outage Payment for around 7000 eligible customers, facilitating over $11 million in payments.
- Assisting with communicating the availability of small generators for customers most in need.

Additional costs incurred

Our response to the June Storms resulted in us incurring $51.3 million ($2021) in additional costs that were not allowed for in our 2016-20 distribution determination (including its six-month extension), or the 2021-26 distribution determination.[7] The additional expenditure is material and has impacted the cost of us providing direct control services. We are, therefore, seeking recovery of these additional costs via the cost pass through provisions of the National Electricity Rules (NER).[8]

We consider that our $36.2 million ($2021, smoothed) positive pass through amount should be approved as:

- The June Storms meets the relevant requirements to qualify as a natural disaster pass through event, which was approved by the AER as a nominated pass through event in our 2016-20 distribution determination as varied by a six month extension.

[5] Mutual aid is an agreed process to obtain, where possible, short-term assistance in the form of personnel, equipment, materials, and other related services from other DNSPs outside the area that a DNSP operates. In this case, mutual aid was called in from Endeavour Energy, Ultegra, Ausgrid and Zinfra/Jemena. Mutual aid programs are a requirement of the Distribution Code of Practice and these resources are managed and coordinated through our Integrated Response and Contingency System (SPIRACS) – see section 4.

[6] For information on the various support packages that were made available, see: https://www.disasterassist.gov.au/Pages/disasters/current-disasters/Victoria/vic-floods-storms-09-06-2021.aspx (accessed 23/06/2021), https://www.premier.vic.gov.au/supporting-victorians-after-storms-and-flood (accessed 23/06/2021) and https://www.ausnetservices.com.au/en/About/News-Room/News-Room-2021/Storm-Update (accessed 23/06/2021).

[7] This is the gross estimate. We have also identified some offsetting costs.

[8] See clause 6.6.1.

- The costs incurred as a result of the June Storms satisfy the 1% materiality threshold in the NER for the pass through event to be a positive change event.[9]
- Our application addresses each of the requirements outlined in clause 6.6.1(c).[10]
- Our application was submitted on or prior to 15 December 2021, being the last day of the extension granted by the AER on 1 October 2021 in accordance with clause 6.61(k).

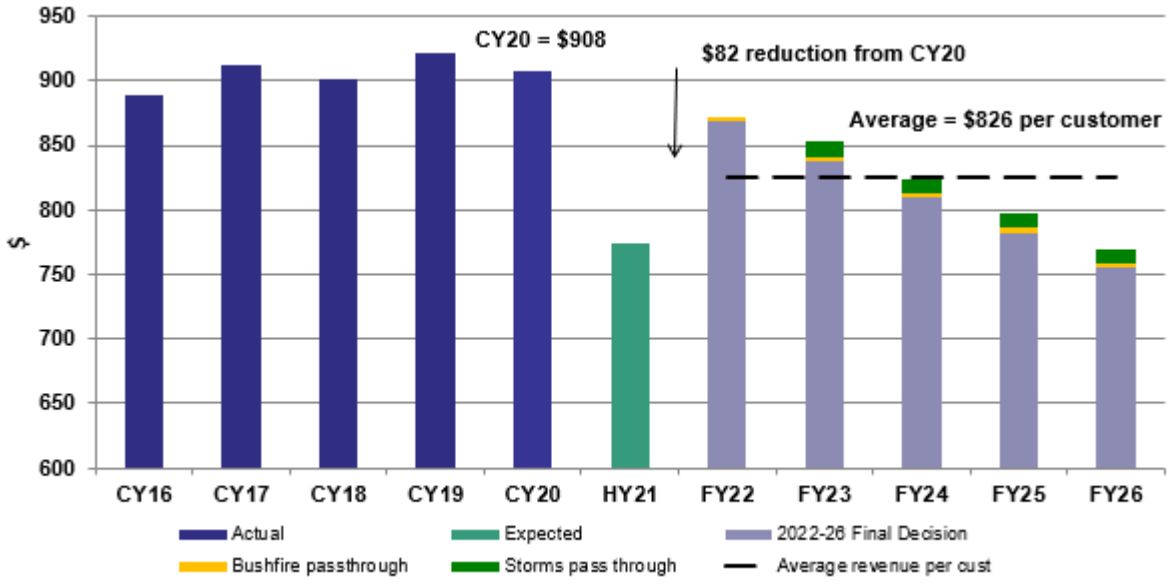
We have also proposed an expenditure decrement of $0.17 million ($2021) in future years to account for future work that was brought forward to the storm recovery period, and which no longer requires the funding approved in our 2021-2026 distribution determination.

Recovery period

We are proposing that this positive pass through amount be recovered in equal amounts (in nominal terms) over a 4-year period starting 1 July 2022 and ending on 30 June 2026. Given we are expecting prices to fall, this recovery profile will help smooth the resultant price increase over the current regulatory period.

As shown in the figure below, the pass through amount will contribute around $11.10 to the average customer's bill each year of the 4 year period starting from 1 July 2022. This is equivalent to $6.35 per year for the average residential customer and $58.57 per year for the average non-residential customer.

Figure 4: Revenue per customer (real $2021)



Source: AusNet

Note: We have experienced continued strong customer growth despite the impact of COVID-19. Relative to the EDPR we have, therefore, used higher customer number data to prepare this chart.

[9] This holds irrespective of how we measure it (be it calendar year 2021 or financial year 2020-21 – see section 5.3 for more information.

[10] This application also addresses the matters listed in clause 6.6.1(j) that the AER must take into account in determining the approved pass through amounts. This will enable the AER to approve the costs we have proposed as part of this positive pass through amount.

2 Cost pass through framework

The pass through provisions in Chapter 6 of the NER allow Distribution Network Service Providers (DNSPs) to seek approval from the AER to recover (by passing through to customers) a material increase in the costs of providing direct control services where the increase is the result of an event specified in clause 6.6.1.(a1).

2.1 Our written statement

To seek approval from the AER to pass through those costs, the NER require a DNSP to submit a written statement to the AER within 90 business days of the relevant positive change event occurring[11], or such longer period as agreed to by the AER in accordance with clause 6.6.1(k). The written statement must address the matters outlined in clause 6.6.1(c), namely:

- The details of the positive change event.
- The date on which the positive change event occurred.
- The eligible pass through amount in respect of the positive change event.
- The positive pass through amount we are proposing in relation to the positive change event.
- The amount of the positive pass through amount that we propose should be passed through to distribution network users in the regulatory year in which, and each regulatory year after that in which, the positive change event occurred.
- Evidence:[12]
    - of the actual and likely increase in costs referred to in clause 6.6.1(c)(3) of the Rules; and
    - that such costs occur solely as a consequence of the positive change event.
- Such other information as may be required under any relevant regulatory information instrument.

2.2 Framework for AER assessment

If the AER determines that a positive change event has occurred, it must determine:

- the approved pass through amount; and
- the amount of the approved pass through amount that should be passed through to distribution network users in the regulatory year in which, and each regulatory year after that in which, the positive change event occurred.

In making this decision, the AER must consider the factors listed in clause 6.6.1(j) of the NER.

In addition, the National Electricity Law (NEL) requires the AER, in exercising its economic regulatory functions and powers, to do so in a manner that will or is likely to contribute to the achievement of the National Electricity Objective (NEO).

The NEL also specifies the revenue and pricing principles.[13] Of relevance to this application is the principle that a regulated network service provider should be provided with a reasonable opportunity to recover at least the efficient costs the operator incurs in providing direct control

[11] Clause 6.6.1(c).

[12] We have not recited clause 6.6.1(c)(6)(iii) as it relates to a retailer insolvency event and is not applicable.

[13] Section 7A.

services and complying with a regulatory obligation or requirement or making a regulatory payment.[14]

3 Outline of our written statement

This application[15], comprising this document and its attachments, is our written statement to the AER[16] to recover a positive pass through amount of $36.2 million ($2021, smoothed). It complies with the requirements of clause 6.6.1(c) of the NER as it provides:

- the relevant details to enable the AER to determine that a positive change event has occurred;
- the details of the eligible pass through amount;
- the positive pass through amount; and
- evidence of the increase in costs.

This application also addresses the matters listed in clause 6.6.1(j) of the NER which the AER must take into account in deciding the approved pass through amounts.[17]

This application was submitted to the AER on or before 15 December 2021, being the last day of the extension granted by the AER on 1 October 2021 in accordance with clause 6.61(k). Therefore, the requirement to submit the written statement by the requisite date is satisfied.

Our application addresses the remaining matters in the following sections:

- **Section 4: Positive change event** – demonstrates why the June Storms satisfy the definition of a positive change event.
- **Section 5: Cost incurred** – outlines the additional costs we incurred in providing direct control services as the result of the June Storms. These costs capture the activities we undertook to address the impact of the storms and restore our network, as well as the costs associated with additional GSL payments associated with a new Victorian Government Ministerial Order. Further evidence to support the costs that were incurred because of the June Storms is provided in Attachments 1, 7 and 12.
- **Section 6**: **Pass through amount** – specifies the eligible pass through amount and positive pass through amount in relation to the June Storms.
- **Section 7: Guaranteed Service Level (GSL) scheme** – outlines how we have reflected a Ministerial Order that impacts GSL payments and the costs we will incur as part of the natural disaster event to which this cost pass through application applies.
- **Section 8: Service Target Performance Incentive Scheme (STPIS)** – outlines how the June Storms, a 'catastrophic event', should be excluded from the calculation of the STPIS, an incentive scheme that aims to rewards/penalise us for managing network reliability for factors within our control.

[14] National Electricity Law, section 7A(2).

[15] At times referred to in this document as 'statement' or 'application'. These terms should be read interchangeably and inclusive of all appendices and supporting attachments accompanying this application.

[16] See clause 6.6.1(c) of the NER.

[17] We note clause 6.6.1(c)(7) requires us to provide such other information as may be required under any relevant regulatory information instrument. No such instrument has been issued by the AER at the time of submitting this statement. However, clause 6.6.1(e1) provides scope for the AER to request additional information to help it make its determination. We will welcome any such engagement if it will assist the AER in its deliberations.

As part of our application we have also provided:

- A compliance checklist that identifies the sections of our written statement that address the NER requirements for a pass through application (Attachment 2).
- A non-confidential version of this written statement to facilitate public consultation and a confidentiality template (Attachments 3 and 4) in accordance with the AER's confidentiality guidelines.

4 Positive change event

4.1 The June Storms as a pass through event

To be eligible for a pass through application we must establish that a positive change event has occurred. A positive change event is:

> … *a* pass through event … *which entails the* Distribution Network Service Provider *incurring* materially *higher costs in providing* direct control services *than it would have incurred but for the event, but does not include a* contingent project *or an associated* trigger event.[18]

The positive change event that is the subject of this application is the severe storms that began on 9 June and ended on 10 June 2021, which severely impacted our network and our customers.

- On 9 June 2021, bad weather intensified and a severe weather event with strong winds and heavy rains severe storms hit customers connected to our network, particularly those in South Gippsland, Melbourne's outer east and the Dandenong Ranges.
- On 10 June 2021, severe weather, including strong winds and heavy rains, persisted and continued to affect our network.[19]

We have used 10 June 2021 (the last day of the storms) as the date on which a positive change event occurred.

The remainder of this section, in conjunction with the materiality assessment in section 5.3, demonstrates how the June Storms event meets the requirements of a positive change event, namely that:

1) it is a pass through event;
2) materially higher costs were incurred in providing direct control services; and
3) the event is not a contingent project or an associated trigger event.

A 'pass through event' means, for a distribution determination, an event specified in clause 6.6.1(a1).[20] The clause specifies that each of the following are a pass through event:

1) a regulatory change event;
2) a service standard event;
3) a tax change event;
4) a retailer insolvency event[21;] and

[18] NER, Chapter 10 (definition of *'positive change event'*).

[19] The Victorian Government also declared a state of emergency in response to the impacts of flooding in Gippsland on the Yallourn power station, which caused significant cracks in the banks of the Morwell River Diversion and the wall of the mine.

[20] NER, cl 6.6.1(a1) and Chapter 10 (definition of *'pass through event'*).

5) any other event specified in a distribution determination as a pass-through event for the determination.

This application is in respect of a nominated pass through event under clause 6.6.1 (a1)(5).

The relevant distribution determination during which the June Storms occurred is our 2016-20 determination[22] as varied by the AER's October 2020 decision.[23] The AER's variation to the Final Decision confirmed that a 'natural disaster event' will apply to as a nominated pass through event for the 2016–20 regulatory period as varied by a six month extension. A 'natural disaster event' is defined as:

> *…any natural disaster including but not limited to fire, flood or earthquake that occurs during the 2016-20 regulatory control period that increases the costs to AusNet Services in providing direct control services, provided the fire, flood or other …*[24]

The definition includes a note to the effect that in assessing a pass through application for a natural disaster event, the AER will have regard to, amongst other things, whether we have insurance against the event and the level of insurance that an efficient and prudent NSP would obtain in respect of the event. These matters are addressed in this application.

Importantly, the positive pass through amount we proposed in relation to this 'natural disaster' event includes the costs we incurred as a direct result of a Ministerial Order that requires us to make GSL payments to customers affected by the June Storms. This is discussed further in section 7 of this application.

This application demonstrates that these costs are properly part of the eligible pass through amount associated with the June Storms, and that we are permitted to pass through these costs to distribution network users. Specifically:

- Section 4.2 demonstrates that the June Storms event constitutes a positive change event as it was a 'natural disaster', in the normal meaning of the phrase, and not a consequence of our acts or omissions.
- The event is not a contingent project or trigger event, for the reasons discussed in section 4.3; and
- The June Storms event resulted in us incurring materially higher costs in providing direct control services for the reasons discussed in section 5.3 (and section 7).

4.2 Details of the event

The June storms caused widespread damage throughout parts of Victoria and heavily impacted our network.

At times, wind gusts exceeded 100 km/h. The extreme weather resulted in flooding, fallen trees and poles, and significant damage to overhead power lines. For example, in additional to the fourteen 66 kV feeders that were affected, fifty-eight 22 kV feeders reported faults, representing a significantly larger impact relative to other major events (see Figure 5 below). This, in turn,

[21] This event definition is not applicable in Victoria as Victoria is not a NECF jurisdiction.

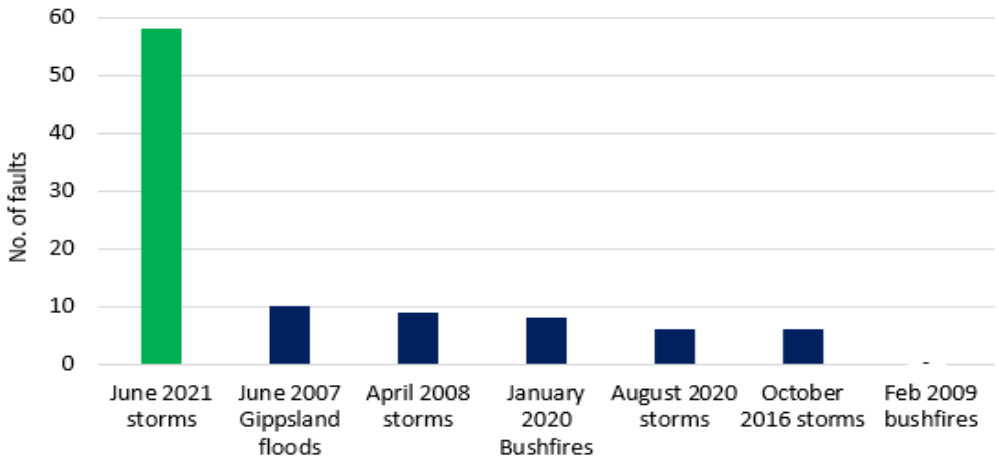
[22] Available at: https://www.aer.gov.au/networks-pipelines/determinations-access-arrangements/ausnet-services-sp-ausnet-determination-2016-20/final-decision (accessed 24/06/2021).

[23] Available at: https://www.aer.gov.au/system/files/AER%20-%20Six-month%20extension%20-%20AusNet%20Services%20variation%20decision%20-%20October%202020_0.pdf (accessed 20/09/2021).

[24] AER, AusNet Services distribution determination final decision 2016–20, Attachment 15 – Pass through events, p. 15-7.

caused widespread power outages throughout our network. At its peak, 230,000 customers or around 30% of our total customer base, were without power.[25]

Figure 5: 22 kV feeder faults during major event days

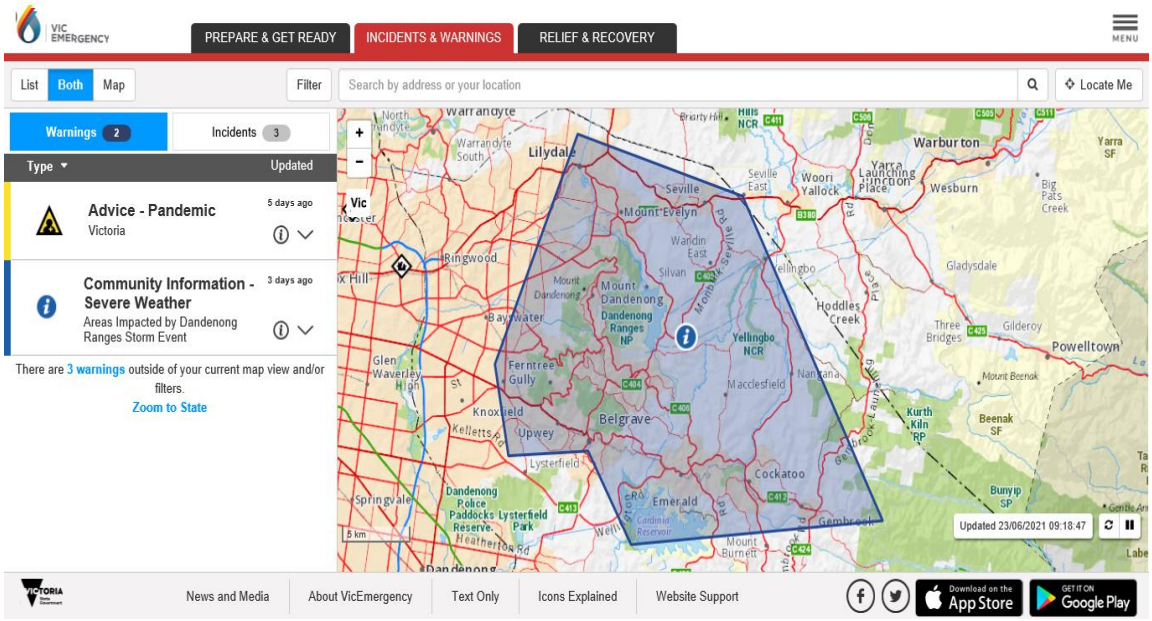


Source: AusNet

As a result of the storms, the Victoria State Emergency Service (VICSES) noted that it had the busiest week in the history of the service, with over 9,000 requests for assistance across the state as VICSES responded to wild weather and riverine flooding, all of which caused significant damage.[26]

The extent of the damage was extensive, and a screenshot from the Vic emergency website shows the impact of this extreme weather event.

Figure 6: Severe weather warning



Source: https://www.emergency.vic.gov.au/respond/# (accessed 23/06/2021)

[25] Using SAIFI (customer interruptions) data would suggest 357,414 customers were affected by the June storms. This is more than the peak number outlined above. We have not used this number as it is not a unique count of customers affected. We have done this as its use would result in a customer who experienced multiple interruptions during the storms being captured multiple times.

[26] Victoria State of Emergency Services, Busiest week on record as VICSES supports the Victorian community, available at: https://www.ses.vic.gov.au/w/busiest-week-on-record-as-vicses-supports-the-victorian-community?redirect=%2Fnews-and-media%3Fzx%3Dw4skf2bts4oc (accessed 24/06/2021).

The Bureau of Meteorology (BOM) also issued weather warnings (see below) and subsequently noted the severe weather conditions that many of our customers were facing in the Victorian and Melbourne June 2021 monthly statements and the Monthly Weather Review Australia June 2021.[27]

Figure 7: Bureau of Meteorology weather warning (9 June 2021)

Source: Bureau of Meteorology

A range of other sources, including the Insurance Council of Australia, have also highlighted the severe impact of the June Storms.[28]

The pictures below illustrate the extent of the damage that we had to address prior before crews could enter affected areas to assess damage and restore electricity supply to our customers as safely and as quickly as possible.

Figures 8 and 9: Strom damage

[27] See: http://www.bom.gov.au/climate/current/month/vic/archive/202106.melbourne.shtml (accessed 20/09/2021), http://www.bom.gov.au/climate/current/month/vic/archive/202106.summary.shtml (accessed 20/09/2021) and http://www.bom.gov.au/climate/mwr/aus/mwr-aus-202106.pdf (accessed 20/09/2021).

[28] See, for example, https://insurancecouncil.com.au/wp-content/uploads/2021/06/210613-Insurance-catastrophe-declared-for-Victorian-floods.pdf, https://www.latrobe.vic.gov.au/news-and-media/Flood_and_Storm_Recovery, https://www.yarraranges.vic.gov.au/Council/Storm-Emergency-Information/BRV-Storm-and-Flood-Clean-Up-Program, and https://www.realestate.com.au/news/treechange-vendors-saddled-with-huge-cleanup-bill-as-storm-losses-top-182m/.

Crisis management

Central to the effectiveness of our response to the June Storms was our ability to activate appropriate emergency response protocols. Used across emergency services organisations, the Strategic Plan for Integrated Response and Contingency System (SPIRACS) is a highly developed response system, that escalates incidents to different layers of management according to severity. The purpose of this system is to:

- Ensure the outcomes of an emergency are managed and planned.
- Control events which may interrupt a safe supply.
- Prepare for those events which are not preventable.
- Respond to those events which impact the business.
- Recover from events.

Our staff – and our delivery partner staff, who participate in emergency response activities upon escalation from business as usual (BAU) operations – are trained in the escalation procedures and participate in trial scenarios so that roles and decision-making processes are well understood. This facilitates the effectiveness of response to the incident.

In response to the severe weather warning issued on 8 June, we held preparatory emergency management briefings. As the storms took hold, we were able to quickly determine that we were dealing with a natural disaster with a Level 4 escalation. This meant that an Emergency Management Team (EMT) & Crisis Management Team (CMT) were immediately established. We also established several strike teams, including ones to set up relief hubs. Our preparation and successful implementation of our (SPIRACS) response helped us to navigate the aftermath of the storms and ensure our customers were supported and were back on supply as soon as it was safe to do so.

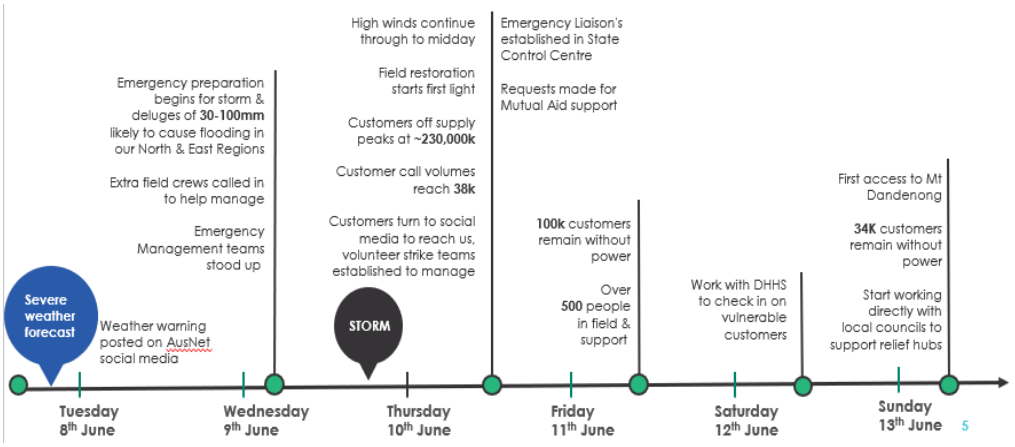
Figure 10: Community relief

Further information on the SPIRACS escalation process is at Attachment 5.

Incident response

As the severity of the storms became increasingly apparent, it was essential for us to remain alert to the network elements at risk, and to be at the ready to conduct inspections of assets and to restore service continuity as soon as it was safe to do so. From the beginning of the storm event we implemented steps to keep customers affected or at risk informed on our activities.

Figure 11: Timeline of early steps



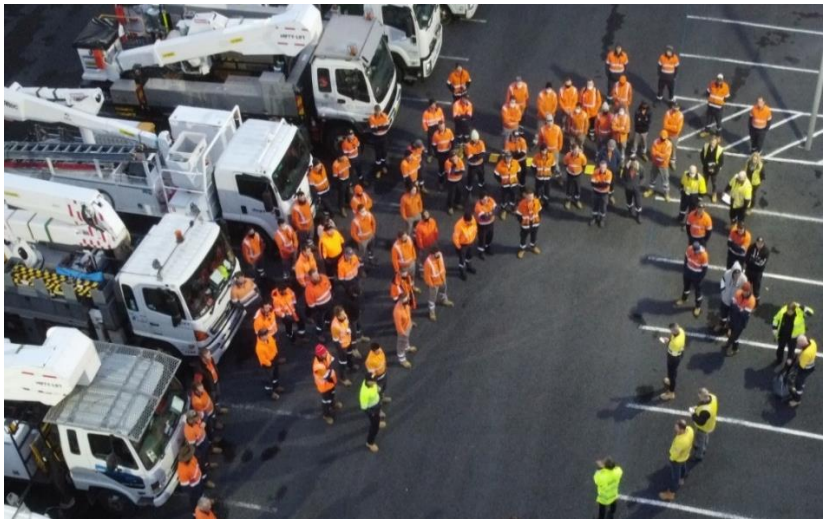
Source: AusNet

Further information on some of the steps that we took from very early in the process are outlined below:

- Leading up to the storm we held preparatory emergency management meetings about the upcoming storm. We were in a state of readiness for heightened network activity. Extra field crews were arranged, and some tactical crew placement was deployed.
- Widespread damage was evident across our network on the morning of Thursday 10 June. Significant bad weather caused further damage to the network throughout the day. However, the full extent of the restoration task was not immediately known as many areas were inaccessible. Restoration started at first light on Thursday 10 June. Carrying out aerial assessment was an initial priority for remote and inaccessible areas so that we could understanding the extent of the network damage. Aerial support was also considered to be a more expedient way to conduct patrols and to identify the maximum number of restoration options.[29]
- Given the size of the restoration challenge, we invoked the 'mutual aid' arrangements with other distribution network businesses in Victoria and NSW to access additional support restoration and repair crews. Downer resourced between 250 and 400 local Victorian field crew daily while additional resources were provided by other peers in the industry: approximately 100 crew members from NSW (Endeavour Energy, Ultegra, Ausgrid) and 25-30 from local Zinfra/Jemena.

[29] Where practical, aerial support can also be used to assist with conductor restringing.

Figure: 12: Field crew briefing



- To support the local field operations, a strike team, and a host of activity trackers and reports were implemented to monitor our progress in addressing faults and restoring supply.
- Due to extraordinarily high inbound call volumes, customers turned to our social media sites for information. We set up another strike team to meet customer expectations. A dedicated storm response page was also created on our website. We also briefed newsrooms every day[30] and had regular discussions with the Victorian Government.
- Working directly with local councils, we set up 16 community hubs to provide information to affected communities in the absence of telecommunications networks. The hubs also provided access to information, customer assistance, internet and power.
- Mobile generation units were deployed to some of the most significantly affected community sites/centres and critical locations. The units provided power to shops, relief centres, and schools, and provided some residential load where the network configuration permitted.

Figure: 13: Mobile generation unit

[30] From 5am for hourly news bulletins, interviews for breakfast radio shows and local radio stations. From midday for the major and local TV networks and interviews. In the afternoons providing interviews for major radio drive programs and evening radio programs.

Restoration was completed in all areas other than Mt Dandenong by 20 June. This allowed us to redeploy additional resources to expedite the restoration and reconstruction efforts in Mt Dandenong.

4.3 Exclusion of contingent projects and trigger events

A pass through event must not be a contingent project or an associated trigger event.

A contingent project is a contingent project proposed by the DNSP that is approved by the AER in accordance with clause 6.6A.1(b). A trigger event is a specific condition or event described in clause 6.6A.1(c), the occurrence of which, during the relevant regulatory period, may result in the amendment of a distribution determination under clause 6.6A.2.

The AER's Final Decision for our 2016-20 regulatory period approved a contingent project program to provide for the installation of Rapid Earth Fault Current Limiters (REFCLs) and standards for asset construction and replacement in specified areas of the network (Declared Areas). The primary purpose of these projects is to improve the safety of the distribution system. We did not propose, and the AER did not approve a contingent project of for capital expenditure of the kind required by the response to the June Storms.

Therefore, the June Storms is not precluded from being a positive pass through event.

5 Costs incurred

Another of the thresholds that must be satisfied for the AER to approve a positive pass through application is that the cost to the DNSP of providing direct control services must increase "materially" as a result of the pass through event.

An increase in costs is material if the change in costs (as opposed to the revenue impact) that a DNSP has incurred, and is likely to incur, in any year of a regulatory period, as a result of the event, exceeds 1% of the annual revenue requirement for the DNSP for that regulatory year.[31]

5.1 Material change in the costs of providing direct control services

Restoring powerlines in the storm-affected areas and ensuring safe operation has resulted in a significant increase in costs to provide direct control services to customers in the regions affected by the June Storms. The following sections demonstrate that the increase in costs attributable to carrying out relevant activities meets the materiality threshold.

It is noted that a proportion of the increased costs were incurred directly by us, whereas others were passed on to us by third party contractors engaged to perform the work on our behalf. For the costs that were incurred by third party contractors, we have carefully assessed all claims put forward and have also had those claims reviewed by independent experts. This process was robust and several efficiencies were identified as a result.

As part of this process we have also identified the expected cost reductions in the 2022-26 regulatory period. These cost reductions reflect the fact that some work that would have been required in future years and is part of the on-going cost of maintaining the network, was brought forward and carried out as a necessary part of the storm restoration activities.

Initial inspection

The first activity in the recovery effort was to patrol the affected distribution lines to ascertain the extent of the asset damage. This is a critical first step field response, as it also enables an

[31] Definition of "materially", chapter 10 of the National Electricity Rules.

assessment of the relative difficulty in restoring customers' electricity supply. This work was conducted on the ground and in the air as soon as safe access was granted, recognising that for many affected customers, restoration of electricity supply was a high priority. The costs we incurred during this initial inspection phase include timesheet costs for asset inspectors, living away from home expenses, helicopter hire for aerial inspections and fuel costs for vehicles.

Importantly, learning from our recent experience with the bushfire cost pass through, we established cost codes for each of our business units to capture the (incremental) cost we incurred as part of the storm recovery effort. Costs involved include timesheet costs for asset inspectors, living away from home expenses, helicopter hire for aerial inspections and fuel costs for vehicles. Timesheet costs included normal time work, work undertaken by volunteers to support the storm recovery effort and overtime and week-end work. There were also costs for office-based activities such as project management and administration in coordinating the event response.

Vegetation management

Our network covers areas that are heavily treed and the vegetation damaged by the storms impacted the network by falling across our lines. There were also many trees outside of the normal clearing space that were still standing but had been damaged by the high winds and other falling debris. These trees posed significant risk to the network from the likelihood of falling into the powerlines, which in turn created a risk to our field crews and any nearby customers. Removing these hazards was a high priority because it was a necessary pre-condition to being able to restore services safely and remove any future risks to safe supply. Other debris that had fallen across or otherwise impacted our power lines was also removed prior to restoring service. Vegetation management costs where therefore incurred in addressing the damage caused by the storms to ensure we could continue to provide direct control services to our customers.

Restoration of supply

Once safe access was obtained, we required temporary solutions to re-establish supply to some customers. This included deploying mobile generators and working directly with local councils to set up community hubs in some areas. This enabled us to provide information to our customers in the absence of functioning telecommunication networks, and to provide customers access to assistance, internet and power. Where it was not possible for us to restore supply via the grid quickly, restoration activities nonetheless remained a top priority. Material costs captured in this category include the field work costs incurred by both Downer and Zinfra.

Further inspection and vegetation management

Throughout the remainder of 2021, we will need to confirm that all storm-affected sections of the network have been rebuilt correctly. We will also need to continue our regular vegetation inspection to identify any additional storm-affected trees.

Additional GSL payments

We have also included forecast costs associated with the payment of GSLs associated with the June Storms. As discussed in detail in section 7, as a direct result of the June Storms a (Victorian Government) Ministerial Order was issued on 18 November 2021 that will require us to compensate eligible customers who reside in our distribution zone and who were impacted by the June Storms.[32] We have estimated that the incremental cost associated with this change is $22.2 million.[33]

[32] See: http://www.gazette.vic.gov.au/gazette/Gazettes2021/GG2021S636.pdf (accessed 18/11/2021).

[33] This is a net figure which captures the contribution made by the Victorian Government. We are still considering the tax implications of that contribution.

Expected cost reductions in the 2022-26 regulatory period

As well as creating new costs, some work that would have been required in future years and is part of the on-going cost of maintaining the network, was brought forward and carried out as a necessary part of the storm restoration activities. In particular, some assets replaced as a result of damage caused by the were due for end of life replacement in the near term, and so the work undertaken in the aftermath of the storms will reduce future asset replacement activity.

The reduction in future work will reduce our costs during the 2022-26 regulatory period. The forecast cost reductions in this regulatory period are shown in Table 2 below.

5.2 Assessment of materiality

Consistent with the approach adopted by the AER in its decision on our 2020 bushfire pass through application, we assessed the materiality of the cost increase by comparing the total increase in expenditure we incurred as a result of the event against the materiality threshold set out below. This approach is consistent with both the NER and the operation of the regulatory framework.

5.3 Materially higher costs

The additional operating expenditure (opex) and capital expenditure (capex) arising from the storms is material if it exceeds an amount equal to 1% of the annual revenue requirement established in the PTRM from the AER's revenue determination. We have incurred a material change in costs due to the June Storms.

Table 1 shows the additional opex and capex costs in 2021 we incurred and the savings we expect to incur in the second half of 2021, arising from the June Storms. Table 2 shows the cost savings we expect to achieve in the next regulatory period, and Table 3 presents the net increase in direct costs.

Table 1: June Storms incurred costs

$ million ($2021)	Jan-June 2021	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Emergency (replacement) capital works^	21.6	0.3	-	-	-	-	21.9
Emergency corrective works (opex)	4.2	0.1	-	-	-	-	4.2
Vegetation management (opex)	3.0	-	-	-	-	-	3.0
Audit fees (opex)	-	0.1	-	-	-	-	0.1
GSL payments (opex)	22.2	-	-	-	-	-	22.2

Source: AusNet

^ Costs exclude overheads

Table 2: Forecast cost reductions in 2022-26 regulatory period

Categories of work ($2021)	2021-22	2022-23	2023-24	2024-25	2025-26
Capital expenditure (replacement)	- 0.13	-	-	-	-
Vegetation management (opex)	- 0.04	-	-	-	-

Source: AusNet

Table 3: June Storms incurred costs (net)

$ million ($2021)	Jan-June 2021	2021-22	2022-23	2023-24	2024-25	2025-26	Total
Emergency (replacement) capital works^	21.58	0.19	-	-	-	-	21.77
Emergency corrective works (opex)	4.17	0.08	-	-	-	-	4.25
Vegetation management (opex)	3.01	- 0.04	-	-	-	-	2.96
Audit fees (opex)	-	0.10	-	-	-	-	0.10
GSL payments (opex)	22.23	-	-	-	-	-	22.23
Total	**50.99**	**0.32**	**-**	**-**	**-**	**-**	**51.31**

Source: AusNet

^ Costs exclude overheads

The net increase in costs we have or are likely to incur due to the June Storms satisfies the materiality threshold, regardless if is calculated by reference to the annual revenue requirement determined on a calendar or financial year basis (see tables below).

Table 4: Demonstrating material change in costs (Calendar year 2021 basis)

$ million (nominal)	2021
Annual revenue requirement (ARR) (unsmoothed)	$665.8
Total costs	$51.3
Materiality of cost pass through	8%

Source: AusNet

Table 5: Demonstrating material change in costs (Financial year 2020-21 basis)

$ million (nominal)	2021
Annual revenue requirement (ARR) (unsmoothed)	$677.4
Total costs	$51.3
Materiality of cost pass through	8%

Source: AusNet

6 Eligible and proposed cost through amounts

6.1 Eligible pas through amount

Clause 6.6.1(c)(3) of the NER requires us to specify the eligible pass through amount.

The eligible pass through amount is the increase in costs incurred in the provision of direct control services as a result of the pass through event.[34] It covers all expenditure including the capex and opex incurred and likely to be incurred until either the end of the regulatory period in which the positive change event occurred or, if cost recovery is to continue into the next period, the end of that regulatory period.

In determining the eligible pass through amount, only incremental costs attributable to the June Storms were included; No costs that would have been incurred under a business-as-usual (BAU) scenario form part of this application.

The costs set out in section 6.2 (below) comprise the eligible pass through amount.

Attachment 1 provides a build up of the costs incurred to determine the eligible pass through amount. Costs already incurred are identified (these entries have been reviewed, based on agreed upon procedures by KPMG) and a forecast of the costs yet to be incurred is provided.

[34] Definition of 'eligible pass through amount', chapter 10 of the National Electricity Rules.

6.2 Evidence of the costs for the eligible pass through amount

Clause 6.6.1(c)(6)(i) of the NER requires us to provide evidence of the actual and likely increase in costs included in the eligible pass through amount.

Table 6 and Table 7 below provide a breakdown of the opex and capex included in the eligible pass through amount. The costs include both actual costs and forecast costs for on-going inspection and vegetation management during 2021. The expenditure is categorised by activity.

Table 6: Storm incurred opex (net), breakdown

$ million ($2021)	Jan-June 2021	2021-22	2022-23	2023-24	2024-25	2025-26
Emergency corrective works (opex)	4.17	0.08	-	-	-	-
Vegetation management (opex)	3.01	- 0.04	-	-	-	-
Audit fees (opex)	-	0.10	-	-	-	-
GSL payments (opex)	22.23	-	-	-	-	-
Total opex	**29.41**	**0.13**	-	-	-	-

Source: AusNet

Table 7: Storm incurred capex (net), breakdown

$ million ($2021)	Jan-June 2021	2021-22	2022-23	2023-24	2024-25	2025-26
Emergency (replacement) capital works^	21.58	0.19	-	-	-	-
Total capex	**21.58**	**0.19**	-	-	-	-

Source: AusNet

^ Costs exclude overheads

The actual costs already incurred in the tables above were extracted from our enterprise resource planning and accounting system (SAP). We engaged KPMG to review our cost recording to provide confidence that the actual costs contained in the eligible pass through amount are incurred were solely due to the June Storms (see confidential Attachment 7).

For on-going or future work, we prepared forecasts using the same principles that apply to the development of our regulatory proposals.

A breakdown of the eligible pass through amount is set out in the table below.

Table 8: Eligible pass through amount ($2021 unsmoothed)

$ million ($2021)	2021-22	2022-23	2023-24	2024-25	2025-26
Return on capital	1.0	1.0	0.9	0.9	0.8
Return of capital	0.0	0.0	0.0	0.0	0.1
Operating expenditure	29.5	0.0	0.0	0.0	0.0
Tax	0.0	0.0	0.0	0.0	0.0
Building block revenue	**30.6**	**1.0**	**1.0**	**0.9**	**0.9**

Source: AusNet

Note: In $2021 smoothed terms, the equivalent total is $36.2 million.

6.3 Costs included in eligible pass through amount are solely as a consequence of the positive change event

Clause 6.6.1(c)(6)(ii) of the NER requires us to provide evidence that the actual and likely increase in costs included in the eligible pass through amount occurred solely as a consequence of the positive change event. Similarly, clause 6.6.1(j)(5) requires the AER, in determining the approved pass through amount and the amount to be passed through to users in each regulatory year, to take into account the need to ensure the DNSP only recovers any actual or likely increment in costs that is solely as a consequence of the positive change event.

In calculating the eligible pass through amount, we included only the incremental costs for those activities that were incurred solely as a result of the positive change event. To be clear, we excluded the following costs from our claim:

- Fixed fees paid to our contractors that we would have paid if the June Storms did not occur.
- Office-based staff time, as these costs would have been incurred by the business in any event.

We captured expenditures that were in response to the June Storms in a manner consistent with our accounting framework, creating a specific project code in SAP[35] to clearly record and track the costs incurred due to the Storms.

Our accounting structure allowed us to record costs as BAU or Storm-specific, and into capex and opex categories. Individual work orders e.g., for an identified pole replacement activity, were tracked using SAP to enable cost capturing at a detailed level throughout the storm response period.

To ensure confidence in the accuracy of the transactions recorded in our financial system, and as discussed in section 6.2, KMPG has reviewed our financial records based on agreed upon procedures (see confidential Attachment 7).

[35] Systems Applications and Products in Data Processing.

Clause 6.6.1(c)(c1) of the NER requires that the positive pass through amount proposed not include any expenditure for a restricted asset, unless in conjunction with a request for asset exemption. Although it is not clear whether the replacement of a restricted asset would require an exemption to be included in the positive pass through amount, we have no evidence to suggest that asset that was subject to network restoration works arising from the June Storms event would be classified as a restricted asset.

6.4 Efficiency of eligible pass through amount

Clause 6.6.1(j)(3) of the NER requires the AER, in determining the approved pass through amount and the amount to be passed through to users in each regulatory year, to take into account the efficiency of our decisions and actions in relation to the risk of the positive change event. This includes whether our actions minimised the magnitude of the eligible pass through amount.

Our preparedness for major incidents affecting the network and our actions to restore services after the impact of the June Storms together ensured an efficient response.

Being a disaster recovery response, the needs of communities severely impacted by the Storms and customer safety are necessarily high response priorities. We are well prepared to respond effectively and efficiently to incidents of all kinds that may impact our network. In our response to the June Storms we utilised existing process and methods and contractual arrangements for regular network management activities and rapid response to natural disaster incidents such as storms and bushfires.

We have established, well documented and proven strategies and plans to be able to respond to incidents of varying causes and scales that may impact the network and our customers. These strategies include the setting up of Emergency Management and Critical Management teams to centralise decision making and ensure efficient timely collection and dissemination of information in real time. Our incident response processes also allow us to establish hubs of additional support capability to facilitate efficient response according to the circumstances.

To meet the challenging circumstances associated with the aftermath of the June Storms, we worked closely with local councils to establish community relief hubs. We also deployed mobile generation units to some of the significantly affected community sites/centres and critical locations. This provided power to shops, relief centres and schools, and provided some residential load where the network configuration permitted.

A strike team was established to ensure timely restoration and the effective use of activity trackers and reports to monitor our progress. Another strike team was also established to meet customer needs concerning access to information, particularly regarding estimated supply restoration times.

Our effort was well managed and was coordinated internally, with emergency agencies and with local councils.

The field response utilised our internal resources, our contracted field works contractors and, given the severity of the storms, peers from Victoria and NSW. Importantly, our service delivery arrangements make provision for incident response, so the terms and conditions (including fees) for these arrangements is set via a commercial negotiation process and not during periods of crisis. This ensures efficient unit costs and clarity in the scope and cost of the services that can be mobilised at short notice, be it for asset inspection, line reconstruction or vegetation management. We consider that our approach proved to be very effective at facilitating a rapid, efficient response to the June Storms.

Insurance considerations

In accepting a 'natural disaster event' as a nominated pass through event in our distribution determination for the extended 2016-20 regulatory period, the AER's Final Decision noted:

> *In assessing a natural disaster event pass through application, the AER will have regard to, amongst other things:*
>
> *(i) whether AusNet Services has insurance against the event*
>
> *(ii) the level of insurance that an efficient and prudent NSP would obtain in respect of the event.*[36]

We do not hold insurance cover for damage caused to the 'poles and wires' of the network by a natural disaster. The cost of holding this insurance is assessed when we routinely review our insurance needs and renegotiates insurance arrangements.

Through these reviews and by keeping abreast of trends in insurability, we can confirm that insurance cover for poles and wires is not an efficient approach to managing the risk of damage to or loss of these assets. There are several contributing reasons:

- The insurance cap available is extremely low in comparison to the value of the assets, and the value that may be impacted by one natural disaster event. The value (merit) is incomparable to the value of insuring assets located within our properties;
- The premium for including this risk is a significant proportion of the payout cap, as is the deductible; and
- If a claim was made under such cover, it is expected that the premium would increase significantly. This reflects the insurer's assessment of the likelihood of this risk being realised.

Insurance cover for the poles and wires is not readily available at economic rates. This was confirmed by our insurance broker who confirmed that none of its utility clients within Australia hold this form of cover. The broker explained that underwriters attempting to write this form of cover experience difficulty reinsuring the risk as reinsurers do not have appetite for this type of risk. It is understood that, absent reinsurance, the underwriters' concern stems from loss scenarios due to catastrophic weather events (fire, storm and cyclone), which may result in large insurance pay-outs. Thus, the few underwriters who have previously quoted this form of cover provide small aggregate limits with prohibitively expensive premiums.

Other DNSPs face similar whole of network insurance considerations, even though the nature of the local environment for some networks will differ. We have previously checked the approaches of some of our peer network operators on a confidential basis and can confirm that our practice of not insuring for this risk is consistent with those operators contacted.

Finally, to put the expensive cost of this cover in perspective, our current property insurance is based on a return period in excess of 1 in 100 years, whilst the poles and wire cover is based on a return period of 1 in 5. Thus, poles and wires cover is 20 times more expensive than traditional property cover.

6.5 Positive pass through amount

Clause 6.6.1(c)(4) of the NER requires us to specify the positive pass through amount that we propose in relation to the positive change event. The positive pass through amount is defined as an amount not exceeding the eligible pass through amount.

[36] AER, AusNet Services distribution determination final decision 2016–20, Attachment 15 – Pass through events, p. 15-7.

We propose a positive pass through amount of $36.2 million ($2021, smoothed).

We have calculated the proposed positive pass amount as the change in our required revenues for the 2022-26 regulatory period due to the positive change event. That is, our proposed positive pass through amount incorporates the opex and return on capital and return of capital for the 2022-26 regulatory period arising from the incremental expenditure from the June 2021 storms, as well as the impact of the incremental costs on the cost of corporate income tax building block.

The PTRMs used to calculate the pass through amount with this application is provided as Attachments 8 and 11.

6.6 Pass through amount in each regulatory year

Clause 6.6.1(c)(5) of the NER requires that we specify the amount that we propose to pass through to customers in the year, and each regulatory year after that, in which the positive change event occurred.

We propose to recover the proposed positive pass through amount of approximately $9.0 million (smoothed, June 2021 dollars) in each regulatory year for the period from 1 July 2022 to 30 June 2026.

Recovering the positive pass through amount throughout the remainder of the current regulatory period will help smooth the price increase and will insulate our customers from a large one-off price increase in 2022.

7 Guaranteed Service Level (GSL) scheme

The GSL scheme is designed to compensate customers for interruptions to their service. We have included GSL payments as part of our cost pass through application due to a new Victorian Government Ministerial Order (an issue we discuss in section 7.3 below).

The June Storms caused the largest measured interruption to the distribution network since we were privatised (1995). It was almost five times bigger than the August 2020 Storms as measured by system minutes (see Figure 3 (earlier)) and affected almost double the number of customers (~230,000).

7.1 Application for a GSL exclusion event

On 14 July 2021, as permitted under the regulatory framework, we wrote to the AER to exclude the supply interruptions caused by the June Storms.[37] This application was transferred to the Essential Services Commission (ESC[38]) with the agreement of the AER.

The Electricity Distribution Code (the EDC)[39] requires the ESC to excuse a DNSP from making a supply restoration payment or a low reliability payment (both of which are types of GSL payments) if:

[37] This is consistent with the transfer of economic regulatory functions and powers from the ESC to the AER pursuant to section 23 of the National (Electricity) Victoria Act 2005.

[38] As part of the transfer of economic regulatory functions from the ESC to the AER, the AER considers and determines applications for exemptions from the obligation to make GSL payments under the EDC: see section 23 of the National Electricity (Victoria) Act 2005.

[39] Version 12 of the EDC was the version that applied at the time of the June Storms. Version 13 commenced on 1 July 2021.

- the ESC is satisfied that the obligation to make the payment arises from an event which relates to supply interruptions that exceed the DNSP's daily unplanned interruption frequency threshold (as defined in clause 6.3.5(d) of the EDC[40]); and
- the DNSP has applied in writing to the ESC within 30 business days of the event occurring, consistent with the requirements of clause 6.3.5 of the EDC.

7.2 A new Ministerial Order that stops the June Storms being a GSL exclusion event

On 3 August 2021, the Victorian Minister for Energy, Environment and Climate Change wrote to us advising of her intention to make a Ministerial Order (the proposed Order)[41] to include an additional condition in our electricity distribution licence. Our understanding of the proposed Order is that it will ensure customers who reside in our distribution zone and who were impacted by the June Storms will receive GSL compensation.

On 18 November 2021, the Victorian Government confirmed its position that GSL compensation will be required for eligible customers who reside in our distribution zone and who were impacted by the June Storms.[42] The Victorian Government also indicated it will contribute $3.1 million to these payments. We have, therefore, estimated that the net cost of providing these additional payments is $22.2 million (see Attachment 12).

7.3 Treatment of GSL payments within this application

We have treated the Ministerial Order as part of the natural disaster event as it better aligns with the purpose and requirements of the cost pass through framework.[43] There are several reasons that support this approach.

The impetus for the proposed Ministerial Order was the consequence of the application of the regulatory framework in direct response to the June Storms. Absent this natural disaster event, it is unlikely that the Minister would have had cause to make such an order. Therefore, it is the case that any obligation to GSL payments that we become subject to imposes a cost that is a result of the natural disaster events.

There are also practical reasons as to why the GSL payments should be considered as part of this cost pass through application. There is greater administrative simplicity for the AER and us if the totality of the eligible pass through amount is considered at once. For example, the analysis need only be undertaken once. By being able to consider all costs that make up the proposed pass through amount, the AER can better understand the impact of the approved pass through amount on customers and the length of time that we should be permitted to recover those amounts. Further, only one set of decision papers (draft and final determinations) is required.

Considering the GSL payments as part of the natural disaster event also simplifies our communications with our customers about costs. If a GSL cost pass through is sought separately and subsequent to the natural disaster event, we may have two cost adjustments in a short space of time for a strongly related issue. Communicating the reasons for each adjustment may therefore be confusing for some customers and may generate questions regarding why a simpler and more cost-effective approach could not have been applied.

In any event, the definition of 'regulatory change event' supports the approach we have applied in this application. The definition expressly states that a change in a regulatory obligation or

[40] The June Storms caused our daily unplanned interruption frequency metrics to increase significantly: 0.32 and 0.21 for 9 and 10 June respectively. Consistent with the EDC provisions referenced above, we requested the AER exclude these dates for the GSL payment scheme because our daily unplanned interruption frequency exceeded the threshold (0.19) set in the EDC.

[41] This was made under section 33AB of the Electricity Industry Act 2000 (EIA).

[42] See footnote 31.

[43] The alternative would be to treat it as a separate regulatory change pass through event.

requirement can only be a regulatory change event if it falls within no other category of pass through[44]. For the reasons outlined above, we consider the making of the proposed Ministerial Order can be treated as part of the June Storms natural disaster event, and therefore fails to satisfy the requirements for a regulatory change event.

If the AER disagrees with our position, we request that it treat this written statement as in response to a regulatory change event, insofar as the statement deals with matters arising from the making of a Ministerial Order in the terms outlined in this section 7.

7.4 Additional information on the GSL payments

As outlined above, the costs associated with the Ministerial Order should be treated as part of the June Storms natural disaster event. Outlined below is some summary information that explains why these GSL payments should be treated as a part of the natural disaster pass through event and why the costs and should be approved by the AER.

Table 9: Summary assessment of GSL costs against the cost pass through criteria

Criteria	Description
It is a positive change event	The GSL payments were calculated on the basis of outages that occurred on 9 and 10 June 2021, as a direct result of the storm that commenced on 9 June 2021. Since Section 4 of this written statement establishes that the Storm satisfies clause 6.6.1(a1)(5) as a natural disaster event, the event that triggered the GSL payments (the June Storms) is therefore a positive change event.
Costs are related to providing direct control services	Clause 22.1(b)(1) of our distribution licence requires that we comply with the Electricity Distribution Code (EDC) which includes the GSL scheme. The costs related to the GSL scheme therefore formed part of our forecasts that were submitted to the AER (and ultimately approved) as part of the recent distribution reset process. It, therefore, follows that Victorian Government changes to the GSL scheme that result in more GSL payments being made to customers will increase the costs associated with providing direct control services.
The event resulted in materially higher costs	The net GSL cost ($22.2 million) exceeds the threshold (see Section 5). Our proposed GSL amount is a forecast. We note this satisfies clause 6.6.1(j)(2)) because the AER must consider both actual incurred costs and costs likely to be incurred.
The event is not a contingent project or an associated trigger event	As explained in Section 4.3, there is no approved contingent project that is relevant to our response to the June Storms. Accordingly, there is no implication for eligibility of the June 2021 storms as a positive pass through event.

[44] Definition of 'regulatory change event', chapter 10 of the National Electricity Rules.

8 Service Target Performance Incentive Scheme

The Service Target Performance Incentive Scheme (STPIS) is an incentive scheme that rewards businesses for continual reliability improvements. The STPIS targets represent the maximum amount of outages that we are allowed to incur over a 1-year period, before we are penalised for performance.

There are two important concepts to understand and distinguish when considering the STPIS:

- Our performance is measured relative to our STPIS targets, where Major Event Day (MED) exclusions are removed from our performance metrics. These exclusions remove days where our performance was impacted by factors outside of our control (such as storms and other catastrophic events) or because they are not representative of a normal day. This mechanism ensures the incentive we face to improve our performance is based on factors that we can control.
- A MED exclusion is a day in which the daily System Average Interruption Duration Index (SAIDI) exceeds a threshold value. The STPIS Guideline adopts the 'beta method' from the Institute of Electrical and Electronics Engineers' (IEEE) standard 1366-2012[45] to calculate MED thresholds because as far as we are aware, this is the most authoritative standard on reliability metrics (see Box 1 below). We are not aware of any Australian equivalent. The 'beta method' outlines that all SAIDIs are to be used to determine the threshold value, i.e., the SAIDIs of very large events, such as catastrophic events, remain included to determine the threshold value.

This means all events are included in the determination of the MED threshold value, and the MED threshold value is used to identify MED exclusions. This can lead to a problem that the IEEE standard provides a discussion on. The IEEE standard said that the inclusion of catastrophic events (which would include the June Storms), in the calculation of reliability indices could cause a shift of the average of the data set and increase the standard deviation, and therefore cause a relatively minor upward shift in the resulting reliability metric trends. This means that the inclusion of rare and large events (catastrophic events) could artificially increase our average SAIDI and standard deviation and lead to a MED threshold that is artificially high:

> *When using daily SAIDI and the 2.5β method, there is an assumption that the distribution of the natural log values will most likely resemble a Gaussian distribution, namely a bell-shaped curve. As companies have used this method, a certain number of them have experienced large-scale events (such as hurricanes or ice storms) that result in unusually sizable daily SAIDI values. The events that give rise to these particular days, considered "catastrophic events," have a low probability of occurring. However, the extremely large daily SAIDI values may tend to skew the distribution of performance toward the right, causing a shift of the average of the data set and an increase in its standard deviation. Large daily SAIDI values caused by catastrophic events will exist in the data set for five years and could cause a relatively minor upward shift in the resulting reliability metric trends* [46]

The impact of an artificially high MED threshold is that it could result in the under-identification of MED exclusions. This means more outages are counted towards our performance indices, leading to artificially under-performing indices. This is an unreasonable outcome as it would penalise us for catastrophic events that are clearly rare and considered outliers, even when compared to other large events.

[45] AER 2018, Electricity distribution network service providers, Service target performance incentive scheme, version 2.0, November, clause 3.3(b).

[46] IEEE 1366-2012, p. 19.

Box 1: Institute of Electrical and Electronics Engineers

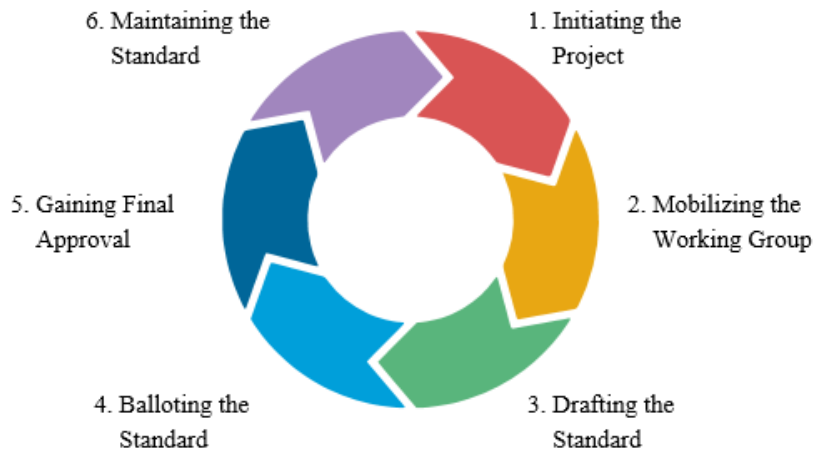
The Institute of Electrical and Electronics Engineers (IEEE) is the world's largest technical professional organisation for the advancement of technology, and has:

- Over 400,000 members in more than 160 countries, more than 60% of whom are from outside the United States;
- More than 107,000 Student members;
- 342 Sections in ten geographic Regions worldwide;
- 2,562 Chapters that unite local members with similar technical interests;
- 3,485 Student Branches at colleges and universities in over 100 countries;
- 2,877 Student Branch Chapters of IEEE technical Societies; and
- 580 affinity groups; IEEE affinity groups are non-technical sub-units of one or more Sections or a Council. The affinity group patent entities are the IEEE-USA Consultants Network, Young Professionals (YP), Women in Engineering (WIE), Life Members (LM), and IEEE Entrepreneurship.

Additionally, the IEEE:

- Has 39 technical Societies and seven Technical Councils representing the wide range of IEEE technical interests;
- Has more than 5 million documents in the IEEE Xplore® digital library, with more than 15 million downloads each month;
- Has an active portfolio of nearly 1,200 standards and more than 900 projects under development;
- Publishes approximately 200 transactions, journals and magazines; and
- Sponsors more than 1,600 conferences and events in 96 countries while contributing over 3.6 million total conference papers to IEEE Xplore since 1936, with as many as 200,000 new papers added annually.

IEEE standards are developed using a time-tested, effective and trusted process that is easily explained in the following six-stage lifecycle diagram.



Source: https://standards.ieee.org/develop/index.html (accessed 26 October 2021).

In the AER's Final Decision for STPIS, the AER provides a discussion on catastrophic events and said that catastrophic events should be included in the calculation of MED thresholds because:

> *If we cannot identify a consistent measurement approach for the definition of a catastrophic event using multiple beta thresholds, as defined by the IEEE standard, we cannot simply adopt an arbitrary number. Hence, we will retain the current approach of using a 2.5 beta standard to define major events days without prior exclusion of catastrophic events. We require a uniform method that can be applied to all distributors consistently.*[47]

We do not agree with the AER's position on this matter and consider that catastrophic events should be excluded in the calculation of MED thresholds because the IEEE standard has already concluded that it is not possible to universally identify catastrophic events and recommended that the identification of catastrophic events should be determined on a case-by-case basis:

> *… identification and processing of catastrophic events for reliability purposes should be determined on an individual company basis by regulators and utilities since no objective method has been devised that can be applied universally to achieve acceptable results.*[48]

We consider the AER should adopt the IEEE standard's conclusion and identify catastrophic events on a case-by-case basis and should not rely on the premise that a consistent measurement approach is needed because the IEEE has already concluded that it is not possible to do so.

To support our application for the June Storms to be deemed a catastrophic event and therefore excluded from the calculation of the MED threshold value, we have provided additional information below.

8.1 June Storms is a catastrophic event

The June Storms should be deemed a catastrophic event because it was a clear outlier. It caused the largest measured interruption to the distribution network since we were privatised (1995). It was almost five times bigger than the August 2020 Storms as measured by system minutes, and it impacted close to almost double the number of customers (~230,000).

While the IEEE standard does not specify a method for definitively identifying catastrophic days, the AEMC's final report on distribution reliability measures recommended that the 4.15 beta method described by the IEEE presentation[49] could be used to identify catastrophic events.[50] The AEMC said that the 4.15 beta method has proven to work in many instances.[51] The application of this test to the June Storms results in the June Storms being identified as catastrophic events because the 9 and 10 June 2021 were 5.5 and 4.9 betas respectively. That is, both days exceed the 4.15 standard deviation test in the AEMC report. Importantly, 5.5 beta and 4.9 beta are the two highest betas on record. Of the 8,581 days on record, we have only experienced 6 days where the daily SAIDI is 4.15 or more standard deviations from the mean (see the figure below).

[47] AER 2018, Amendment to the Service Target Performance Incentive Scheme (STPIS), Establishing a new Distribution Reliability Measures Guideline (DRMG), Explanatory statement, Final decision, November, p. 22.

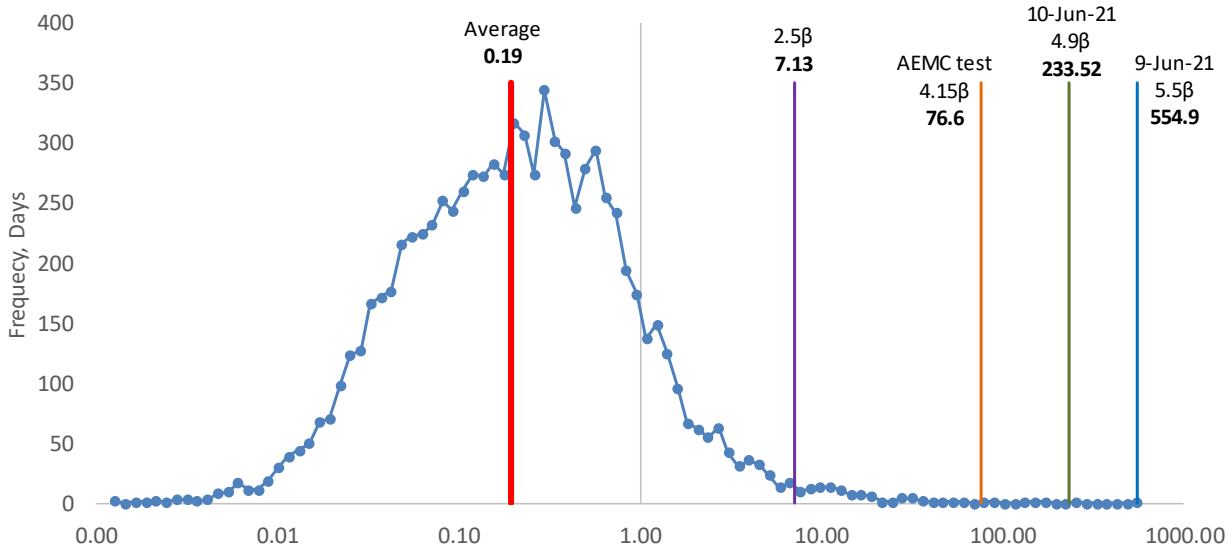
[48] IEEE 1366-2012, p. 20.

[49] IEEE presentation, Uses of the IEEE 1366 and catastrophic days, John McDaniel, Vice Chair - Distribution Reliability WG, April 2012.

[50] AEMC 2014, Review of Distribution Reliability Measures, Final report, 5 September, p. 28.

[51] AEMC 2014, Review of Distribution Reliability Measures, Final report, 5 September, p. 28.

Figure 14: Daily USAIDI (1 Jan 1998 to 30 June 2021)



Source: AusNet

8.2 Including the June Storms results in a MED threshold that is too high

The IEEE standard states that the inclusion of catastrophic events, such as the June Storms, in the calculation of reliability indices could cause a shift of the average of the data set and increase the standard deviation, and therefore cause a relatively minor upward shift in the resulting reliability metric trends.[52] This means the inclusion of catastrophic events could artificially increase our average SAIDI and standard deviation and therefore lead to a MED threshold that is artificially high. These characteristics are demonstrated by the following metrics, whereby the inclusion of the June Storms in our reliability indices results in:

- a shift in the average daily SAIDI from 0.721 to 1.158;
- an increase in the SAIDI standard deviation from 4.960 to 15.120; and
- a relatively minor upward shift in the resulting MED threshold value from 10.2588 to 10.9729.[53]

8.3 Why excluding the June Storms is appropriate

While the IEEE standard recognises that the exclusion of catastrophic events could result in too many MEDs being identified in the future, this is not a material concern for us. Specifically, if the June Storms are excluded the 2021-22 MED threshold, this will shift the MED threshold marginally down, from 10.9729 to 10.2588. Importantly, this change results in only two days out of the last 23 years falling within this range.

Looking forward, based on our experience, we estimate we will experience one storm within this range over the next 10 years. That is, by excluding the June 2021 storms from the calculation of MED thresholds, we are not expecting a significant increase of future MEDs. This means our proposed approach will continue to ensure the STPIS provides a strong incentive for us to improve our performance over time.

[52] IEEE 1366-2012, p. 19.

[53] The metrics in the three dot points reflect the 2016-17 to 2020-21 data (five years).

9 Attachments list

Attachment 1 – Build up of costs (Confidential)

Attachment 2 – Compliance checklist

Attachment 3 – Confidentiality template

Attachment 4 – Proportion of confidential material

Attachment 5 – AusNet's incident management governance (Confidential)

Attachment 6 – Avoided 2022-26 capital expenditure

Attachment 7 – KPMG review of AusNet's costs (Confidential)

Attachment 8 – CP1 – 2021 HY Post-Tax Revenue Model – Public

Attachment 9 – CP2 – AusNet Final Decision RFM 2016-21 – Public

Attachment 10 – CP3 – AusNet Final Decision Depreciation 2021-26 – Confidential

Attachment 11 – CP4 – AusNet Final Decision PTRM 2021-26 – Public

Attachment 12 – GSL payments