

Inquiry into the electricity outages affecting Far West NSW in October 2024 – Response to supplementary questions

1. Your submission refers to damage on the 66 kV line supplying the towns outside of Broken Hill, distinct to the damage to the 200 kV X2 line. At the hearing, we also heard about a fault on the line from Pinnacles Place.

a) Further to the evidence provided at the public hearing on 6 March 2025, can you please provide an overview of the outages suffered on the Essential Energy distribution network in October 2024 which were not directly caused by the outage of X2 line

- ▶ There were a number of relatively minor interruptions originating from Essential Energy's network in the Broken Hill region during the period from the 17th to 30th of October. The initial storm event contributed to the 66kV line interruption detailed below in response to 1(c), while there were 14 other interruptions which affected fewer than 200 customers combined. Most of these smaller interruptions were fuse operations due to lightning strikes.
- ▶ Essential Energy experienced minor interruptions in supply while working to safely connect the microgrid established at Pinnacles Place substation, which impacted communities including Menindee, Wilcannia, White Cliffs and Tibooburra. The Pinnacles Place microgrid was established to provide support to communities outside of Broken Hill township that were impacted by the failure of the shared transmission network overall and intermittent supply loss at the transmission level, and to relieve load from Transgrid's backup generator. Once established, customers supplied from Essential Energy's temporary microgrid were unaffected by further interruptions from the transmission network.

b) Who did Essential Energy notify regarding the damage to these 66 kV lines? When did you make these notifications?

- ▶ Essential Energy first sent an SMS to customers impacted by this outage at 11:26am on 17 October, noting that a restoration for this line was not yet available.

	<ul style="list-style-type: none"> ▶ Essential Energy informed the office of the Minister for Energy of an extended outage for communities in Wilcannia, Menindee and Tibooburra at 6:16pm on 17 October, without direct reference to damage on the 66kV line. ▶ On the afternoon of 17 October Essential Energy distributed a media release to local media outlets noting extensive damage to the electricity transmission network. ▶ Information regarding repairs to the line and expected timeframe was communicated to the Energy Utilities & Services Functional Area Coordinator (EUSFAC) at a meeting commencing at 8:30am on Friday 18 October. ▶ Information about repairs to this line was also conveyed directly to the office of the Minister for Energy at 12:16pm on Friday 18 October by email. ▶ Essential Energy also made notifications to IPART of the outages consistent with the obligations of its licence and IPART's incident reporting manual.
c) Can you detail what exactly was damaged to the Essential Energy lines caused by the storm on 17 October 2024? Where did this damage occur? How many residents are downstream from these points?	<ul style="list-style-type: none"> ▶ Following the storm on 17 October 2024, Essential Energy identified damage to an insulator on the 66kV line between Mt Gipps substation and Sunset Strip. Based on data from Essential Energy's protection systems, this fault occurred after the X2 transmission line had failed and supply was already lost. This line is fed from Mt Gipps Zone Substation which, in turn, is fed to Mt Gipps 66kV line from Pinnacles Place substation. ▶ The damage occurred on a 66kV pole approximately 20km off the nearest sealed roadway, and was identified late in the afternoon 17 October, during a proactive line patrol. The location of this 66kV line fault was approximately 58km in a direct line from Broken Hill, as shown below in Figure 1.

- ▶ This damage prevented restoration of supply to 1,446 customers in areas beyond Mt Gipps substation including Menindee, Wilcannia, and White Cliffs.



Figure 1 - Location of 66kV fault

On the same day there were three other interruptions:

	<ul style="list-style-type: none"> ▶ A pole failure affecting four customers at Copi Hollow ▶ A lightning strike causing fuse operation affecting 12 customers at Broken Hill, and ▶ A failed customer service connection was replaced, affecting one customer in Broken Hill.
<p>d) Can you describe what was the fault at Pinnacles Place and clarify why 'access was a problem' to repairing that fault?</p> <ul style="list-style-type: none"> i. When did you discover the fault? ii. When was it repaired and power restored to the rural and remote customers downstream? 	<ul style="list-style-type: none"> ▶ No fault occurred at Pinnacles Place in the initial storm event. As described above in the answer to 1 (a) and (c), there was an outage related to damage on a line which connects to Pinnacles Place, and some short outages while connecting the microgrid. ▶ The temporary microgrid at Pinnacles Place experienced two brief interruptions as the arrangement was configured. The other interruptions were required to safely connect and disconnect the microgrid to and from the network. ▶ The reference at the hearings was to the line running from Pinnacles Place, as detailed above. ▶ Access was a problem in repairing the 66kV fault due to the remoteness of the location of the damaged insulator (as shown in Figure 1), along with ground conditions that were extremely wet and boggy, making access difficult for ground vehicles to inspect and conduct repairs. ▶ The damage was repaired on 18 October 2024, and all customers were progressively restored by 6:06pm that day.
<p>e) We heard that Pinnacles Place was later established as the site of a microgrid</p> <ul style="list-style-type: none"> i. When did this occur? ii. Is this microgrid at Pinnacles Place permanent? 	<ul style="list-style-type: none"> ▶ The microgrid was brought into service at Pinnacles Place on 24 October, with the first customers supplied at 6:20pm. ▶ The infrastructure installed to enable the Pinnacles Place microgrid will remain until Transgrid has confirmed it has adequate generation operational and available for contingency of supply for an outage of either the X2 line or the current single gas turbine generator.

2. We heard that, at the time of Transgrid received the generator sets from Essential Energy, they were in poor condition.

a) Further to the evidence provided at the public hearing on 6 March 2025, can you please provide an overview of the condition of the diesel generators at the time that Essential Energy sold the generators?

► Until they were sold to Transgrid in mid-2022, Essential Energy owned the two diesel-powered gas turbine generators in Broken Hill (**Generators**). In the decade prior to the sale the Generators were operational only during routine testing or during outages. This meant that each Generator had low operating hours over its life. Combining low operating hours with Essential Energy's quality and condition-based maintenance practices, the Generators were in a reasonable operating condition considering their age at the time of their sale to Transgrid. This was reflected in technical due diligence material provided to Transgrid before the sale.

Further relevant points:

- **Run test sheets** - Essential Energy had provided Transgrid with run test sheets over the prior 5 years demonstrating how the Generators had performed during inspection and test runs, including minor defect(s) that needed to be resolved. It was Essential Energy's practice to resolve minor defect(s), once identified.
- **Borescope inspection** - In December 2020, Essential Energy engaged ATMS Group to undertake a standard borescope inspection on each Generator to assess conditions considered to be abnormal and to provide information on the present state of the Generators to all prospective purchasers in advance of the sale.
- Despite some minor items identified as being in poor condition, the overall conclusion of these inspection reports was:
 - *"In view of all the observations, the overall condition of the turbine/generator buildings are in reasonable condition."*¹

¹ Essential Energy Broken Hill Power Station Borescope Inspection ATMS-00-48-2020-GT1 BI, p11; Essential Energy Broken Hill Power Station Borescope Inspection ATMS-00-48-2020-GT2 BI, p 11

	<ul style="list-style-type: none"> ○ <i>“The Borescopic inspection of GT1 gave no reason for immediate concern.... GT1 is fit for purpose as a peaking duty Gas Turbine with low load factor and low starts requirements.”²</i> ○ <i>“The Borescopic inspection of GT2 gave no reason for immediate concern.... GT2 is fit for purpose as a peaking duty Gas Turbine with low load factor and low starts requirements.”³</i> ● These reports were provided in a virtual data room for all prospective purchasers of the Generators to consider, including Transgrid. ● Maintenance activities – also provided in the virtual data room were copies of historical major and minor maintenance activities so that prospective purchasers could consider the works undertaken as well as technical assessments demonstrating satisfactory completion of those works (where applicable). ● Transgrid undertook its own comprehensive technical due diligence in January 2022 that included independent technical specialists assessing the condition of the Generators. Essential Energy was not provided with a copy of those reports. Transgrid also conducted onsite checks of the Generators in June 2022.
<p>b) Was this information included in the due diligence process undertaken by Essential Energy, referred to at the hearings?</p>	<p>► All the information held by Essential Energy referred to under sub-question (a) above was released to prospective purchasers as part of the sale process through a virtual data room. The data room contained information relating to historical maintenance works and capital works on the Generators, performance history, operating hours, as well as test runs. Essential Energy also provided a forecast of expected maintenance activities that Essential Energy considered would be necessary to meet recommended original equipment manufacturer (OEM) maintenance requirements within the information memorandum that was issued to participants in the sale process. Transgrid conducted its</p>

² Essential Energy Broken Hill Power Station Borescope Inspection ATMS-00-48-2020-GT1 BI, p11

³ Essential Energy Broken Hill Power Station Borescope Inspection ATMS-00-48-2020-GT2 BI, p11

own due diligence on the Generators, including submitting requests for information which Essential Energy answered.

c) Did Essential Energy determine an “end-of-life” date for the generators prior to selling to Transgrid?

- ▶ No. Transgrid undertook its own assessment of the options for providing reliable supply to Broken Hill as part of its Regulatory Investment Test – Transmission (RIT-T), and noted in its Project Assessment Conclusions Report (PACR) that it had engaged Aurecon to “*more thoroughly assess the current condition of the turbines, including through physical inspection, and the required refurbishment work (and cost) in order to ensure they can function satisfactorily to meet the identified need*”.⁴ The PACR further notes that “*overall, the updated Aurecon review has given [Transgrid] confidence that the existing turbines are able to meet the reliability requirements at Broken Hill*”.⁵
- ▶ The PACR also notes Transgrid had “*assumed that the cost of this future investment is the same, in real terms, as the cost of establishing new turbines at Broken Hill now (i.e., as outlined below for Option 3) and occurs in 2044. This reflects an independent review of the asset condition and expected life of the existing turbines commissioned by Transgrid as part of the PACR.*”⁶
- ▶ Essential Energy did provide Transgrid with forecasts on when investments would need to be made in order to extend the life of the Generators and to ensure suitability as backup generation. Given the low operating hours of each Generator, with appropriate ongoing maintenance and investment the Generators were considered to be capable of providing backup supply for an extended period.

⁴ https://www.transgrid.com.au/media/y23izxmo/transgrid-pacr_broken-hill-supply.pdf p27

⁵ https://www.transgrid.com.au/media/y23izxmo/transgrid-pacr_broken-hill-supply.pdf p27

⁶ https://www.transgrid.com.au/media/y23izxmo/transgrid-pacr_broken-hill-supply.pdf p31

d) Prior to Transgrid's acquisition of the generators, how was Essential Energy maintaining those assets? Was that maintenance stopped when Essential Energy decided to divest them?

- ▶ Essential Energy undertook regular routine maintenance on the Generators. This included:
 - Routine inspections, maintenance and starting of the turbines, alternating starting of the turbine units every 3-6 months.
 - Routine inspection and maintenance of the fuel storage facilities.
 - Routine testing and maintenance of the transformers, and of other electrical assets, in accordance with existing Essential Energy practices adopted on its distribution network for similar assets.
- ▶ Essential Energy continued its routine maintenance practices throughout the sale processes, as well as undertaking additional inspections in order to provide prospective purchasers with information relating the condition of the Generators. This was confirmed by an independent engineering report commissioned by Essential Energy, dated October 2020, and made available to Transgrid. This report concluded that the plant was generally operated and maintained in accordance with OEM and Essential Energy guidelines, and that the station was being well maintained by the Essential Energy team.
- ▶ The Generators were required to support Transgrid's reliability obligations to Broken Hill and the surrounding community, in the event that its single transmission line (X2) was impacted and not operational. After significant efforts to agree cost recovery from Transgrid to support the operating costs of the Generators, Essential Energy wrote to Transgrid on 19 March 2021 to advise that it would place the Generators into "care and maintenance". In practice this did not impact the routine maintenance activities that were undertaken on the Generators. The usual practices were sustained until the sale was completed, even though at the time Transgrid had not contributed to the costs of operating the Generators.

Broken Hill Gas Turbines Maintenance Regime and History

- Since Essential Energy took ownership of the Generators when they were transferred to Australian Inland Energy (the predecessor organisation to Essential Energy) in 2003, maintenance works were carried out by Essential Energy personnel, Transgrid personnel, General Electric personnel and external contractors.
- Essential Energy engaged Woods Group for condition assessment works in 2006 where the Generators were “benchmarked” for maintenance scheduling due to the lack of available maintenance records.
- Through its period of ownership, Essential Energy complied with relevant engineering standards to achieve sound asset management outcomes for the Generators. The operating purpose of the Generators allowed Essential Energy to follow a condition-based asset management strategy, applying the relevant maintenance and capital expenditure to the Generators as and when it was required.
- Electrical asset inspections of the Generators and testing of features such as circuit breakers and transformers were undertaken by Essential Energy on the same regime as other comparable assets used in the distribution network.

Capital Investment Undertaken

In addition to routine maintenance on the Generators, since 2012 Essential Energy had made several capital upgrades to the Generators totalling over \$7.3 million. While the Generators enabled Transgrid to meet its reliability and performance obligations from July 2017, Transgrid did not contribute to the costs of these upgrades.

This included capital expenditure to upgrade the following items:

- Generator 2 rotor refurbishment.

- Fuel farm inspection and re-certification including new fuel metering equipment, and upgrades to protective coatings and access ways.
- Upgraded control system from Mark II SpeedTronic to Mark VIe.
- Upgraded the CO₂ fire extinguishing system for the Generators.

3. The Committee has heard evidence from communities in Wilcannia, White Cliffs, Tibooburra and Menindee that it is not unusual to have a power outage every few months, and for that outage to last for a few days.

a) Can you please provide an overview of the works and upgrades being undertaken by Essential Energy to improve the resilience of the network and reduce outages?

Essential Energy has several planned projects to improve the resilience of the network.

The most significant of these is the Pinnacles Place Substation augmentation project, which is designed to improve the reliability of the Broken Hill network as follows:

- ▶ The Broken Hill network is currently supplied by 6x22kV overhead feeders from the Transgrid 220/22kV Substation at Broken Hill. The extended network beyond is supplied via 2x22/66kV step-up transformers at Essential Energy's Pinnacles Place substation and associated 66kV networks beyond which supply Mt Gipps, Sunset Strip and Menindee zone substations and associated distribution networks beyond. This network is exposed to faults from the 2x22kV overhead feeders, which supply Pinnacles Place and parts of the Broken Hill 22kV network.
- ▶ The project will initially replace the existing 22kV supplies from the Transgrid 220/22kV substation with two high capacity, underground 22kV feeders to Pinnacles Place, where they will supply a 22kV switchboard which will connect to the existing 22kV feeders supplying the Broken Hill 22kV network and the 2x22/66kV step up transformers.
- ▶ This work will provide Essential Energy with full visibility and remote operational capability on the 22kV supplies to the Broken Hill 22kV distribution network and the 66kV network supplying the surrounding area. It will also reduce the risk of 22kV faults at Broken Hill, impacting the 66kV network beyond Broken Hill.
- ▶ Initially, the 66kV will also be supplied from these 22kV underground cables, but a proposed later stage will see them replaced with 66kV connections from the Transgrid 220kV substation, when available, which will further improve the reliability of the Broken Hill network.

- ▶ When stage 1 of this project is complete, along with a separate plan to replace the existing frequency injection (FI) load control system with smart meters at the customers' premises, a review of the 22kV network supplying Broken Hill will occur to better balance the loads across the 22kV feeders. This will seek to minimise the impact of outages to connected customers. Existing design constraints with the current FI load control arrangement, prevent this rearrangement of load occurring before the new load control system is in place.

Another significant project to improve the resilience of this part of Essential Energy's network is the installation of a 22kV connected Microgrid at Tibooburra Village, designed to maintain supply to the village in the event of a loss of supply. The network supplying Tibooburra is located at the end of a very long 33kV line, via Mt Gipps Zone Substation, near Broken Hill, which exposes it to adverse weather and access constraints during storms.

Further trials of Microgrids have been proposed for Sunset Strip/Menindee and Wilcannia, subject to funding grants from the Australian Renewable Energy Agency (ARENA) through the Regional Microgrids Program. The supplies to these locations are remote, difficult to access, long and lightly loaded. This makes it challenging to justify reliability improvements with traditional network solutions (such as new poles and wires stretching over these long distances), leading to an approach of installing more localised generation and energy storage.

Additionally, Essential Energy has received regulatory approval to invest in the roll out 400 Standalone Power Systems (SAPS) over the 2024-29 regulatory period.

- ▶ Essential Energy has so far identified 12 sites in the Far West NSW region which would be suitable for a SAPS. We are currently in the process of approaching these customers and undertaking further design planning. Four of these customers have so far agreed to Essential Energy installing and operating a SAPS, while one customer has agreed to be paid to leave the network and install their own SAPS.
- ▶ As the program is voluntary, not all customers have agreed to Essential Energy installing a SAPS. Essential Energy is working with identified customers on a one-on-one basis to

	<p>understand and address concerns, as well as meeting with local stakeholders to explain the program.</p> <ul style="list-style-type: none">▶ Essential Energy representatives will meet with some of these customers and stakeholders in Far West NSW in May 2025 to discuss the potential delivery of SAPS. Other customers who believe their site might meet the criteria for delivery of a SAPS can contact Essential Energy to initiate an investigation into the suitability of their site.
b) How often is Essential Energy's network in the Far West region of NSW outside of the Broken Hill township subject to maintenance tasks, particularly asset inspections and capital improvements?	<ul style="list-style-type: none">▶ The Essential Energy overhead distribution network assets are inspected every 4.5 years. Maintenance tasks can be required following the asset inspection, or at other times when a defect is identified or reported.

4. Many witnesses spoke of their doubts regarding the strength of the current poles and wires between Broken Hill and Tibooburra. What is the life expectancy of the poles and how regularly are they inspected?

► This feeder is visually inspected every two years with a full inspection every 4.5 years. The last inspection was in March 2024 where remedial tasks were undertaken to ensure serviceability was maintained. Essential Energy is continuing to monitor the condition of the line and is assessing long term solutions to improve reliability of supply as detailed for other questions.

5. Can you please provide an overview of “micro-grid” solution proposed by Essential Energy, and advise whether this micro-grid would rely on a diesel generator to work alongside solar and other renewables?	<ul style="list-style-type: none">▶ Essential Energy is currently part-way through the installation of a 22kV connected microgrid at Tibooburra Village. The microgrid is designed to maintain supply to the village in the event of a loss of supply. At present, this is being achieved through the use of an autostart diesel generator, which activates if a fault is detected on the very long 33kV line which supplies the township from Broken Hill.▶ The diesel generator is intended as a temporary solution to the threat of storm damage and reliability issues, with a solar and battery microgrid currently in design and development and expected to be delivered in 2027.
a) What is the status of the micro-grid project at Tibooburra?	See question 5.
b) Has a timeframe for the completion of this project been determined?	See question 5.

6. In regards to the proposed work to establish isolated 'microgrids' in various towns outside Broken Hill:

a) Other than Tibooburra, where are the other proposed locations in the Far West region?

- ▶ Essential Energy continues to explore options for additional microgrids and is seeking funding through the Australian Renewable Energy Agency (ARENA)'s Regional Microgrids Program to accelerate their delivery and in consultation with Far West communities. This includes plans to develop microgrids in Far West NSW at:
 - › Menindee/Sunset Strip: Essential Energy proposes to install solar generation and a battery energy storage system (BESS) to enhance the resilience of these communities to outages caused primarily by lightning strikes and high winds on the 96 km connection to the nearest depot. The microgrid would substantially reduce the frequency and length of outages experienced in this very remote location, supporting the provision of essential services.
 - › Wilcannia: This project is in early development and would involve the delivery of a microgrid featuring solar generation and BESS to enhance resilience for local communities and decrease emissions by reducing reliance on diesel generation.
 - › Ivanhoe: Essential Energy has installed a diesel autostart generator at Ivanhoe in a similar configuration to that at Tibooburra.
- ▶ Essential Energy is also pursuing other microgrid projects in various locations outside the Far West.

b) What is the expected timeframe for this work?

- ▶ These projects are contingent on receiving funding from ARENA, however should funding be forthcoming we expect these projects could commence planning and development in July 2025, with completion expected in 2028.

c) At the hearing, we heard that this work was already in progress before the storm in October 2024. Can you clarify when did work on these microgrids for the Far West begin?

► Essential Energy commenced work on the Tibooburra microgrid in February 2024.

7. The Committee has heard evidence from community members that power bills were significantly higher in the last quarter of calendar year 2024 than prior quarters, despite the outage. Does Essential Energy have any comments on this?

- ▶ Essential Energy cannot comment on individual energy bills, as billing is the responsibility of retailers. Retailers may be able to provide more information on data related to consumers bills.
- ▶ As detailed in response to Question 8, Essential Energy waived the daily Network Access Charge for impacted consumers for the 15 days of the outages, and requested retailers pass this on to their customers impacted by the outage.

<p>8. Essential Energy advised that it provided a discount of its network charges during the outages period.</p>	
<p>a) Can you please provide details of the average discount for an affected household/business end user?</p>	<ul style="list-style-type: none">▶ Essential Energy has waived daily Network Access Charge for a period of 15 days commencing from 17 October 2025. The Network Access Charge for:<ul style="list-style-type: none">› Residential customers = \$1.28 per day› Small business customers = \$2.06 per day› Large business customer = \$19.18 per day
<p>b) Did Essential Energy require that electricity retailers pass this discount onto affected customers?</p>	<ul style="list-style-type: none">▶ Essential Energy advised retailers that it was waiving the daily Network Access Charge and requested retailers pass this on as a reduction in charges to impacted customers.▶ In practice, retailers were credited these charges on their Network Use of Systems (NUOS) charges file from Essential Energy for each customer affected by the outages.▶ Essential Energy is unable to require or compel retailers to pass this credit on.

9. Did the power outages in October and November 2024 constitute a breach of the Guaranteed Service Level 1 or Guaranteed Service Level 2?

- ▶ No, the Guaranteed Service Level obligations in Essential Energy's Distributor's Licence⁷ do not apply to *excluded interruptions* as defined in the licence conditions. *Excluded interruptions* included such interruptions in supply due to a failure of the shared transmission network or occurs on a *major event day*, and are provided for in Essential Energy's Distributor's Licence.⁸
- ▶ Essential Energy considers the interruptions related to the Broken Hill Incident to be excluded interruptions as provided for in Essential Energy's Distributor's Licence, and has represented the same to IPART as part of its investigation. Essential Energy can provide this correspondence with IPART to the Committee if useful, subject to IPART's agreement.

⁷ Ministerially Imposed Licence Conditions for the Operator of a Distribution System on Licence Holder, Essential Energy, dated 22 September 2023, Condition 5, Schedule B

⁸ Ibid., Condition 7.1(b), Schedule B

<p>10. Can you please provide an overview of the actions taken to assist customers with registered Life Support equipment, including assistance provided in restoring power, prioritising power supply during rolling outages and providing back-up generators?</p>	<ul style="list-style-type: none"> ▶ Of the 12,700 customers impacted by the Far West outages, 577 were registered Life Support customers. During the incident, Essential Energy: <ul style="list-style-type: none"> › initiated Life Support customer welfare checks with support from NSW Police and the Rural Fire Service › sent targeted SMS updates to Life Support customers throughout the incident to convey information about potential or actual loss or restoration of electricity supply at their property › sent SMS messages reminding Life Support customers to call our high-priority customer phone number to contact us with any concerns or enquiries, and › distributed 70 2.2kVa portable generators owned by Essential Energy to vulnerable customers or critical sites in and around Broken Hill. These units were prioritised for customers with severe medical conditions or life support needs where such a generator was a fit-for-purpose backup, while generators were also provided to support some community health infrastructure such as pharmacies requiring refrigeration for medicines.
<p>a) Does Essential Energy have service levels/KPIs in relation to restoring power to Life Support equipment?</p>	<ul style="list-style-type: none"> ▶ Essential Energy's Distributor's Licence does not contain service levels or KPIs in relation to restoring power to Life Support customers. ▶ Essential Energy's approach to restoring supplies attempts to keep Life Support customers informed during an unexpected interruption through targeted SMS and/or phone calls, coordinated welfare checks, and the temporary provision of portable generators if feasible, appropriate and suitable.

11. Several stakeholders told us that their appliances like white goods were damaged during the outages, possibly caused by voltage spikes due to instability in the network.

a) Did you get reports of damaged electrical appliances? What was the cause of this damage?	▶ Essential Energy did not receive any reports of damaged appliances in the Far West during the outages in October 2024.
b) Do you have an estimate of the scale of damage across the region?	▶ Essential Energy does not have any data relating to damaged appliances or customers' insurance claims for any damage in the Far West during the outages in October 2024.
c) How could we minimise the impacts of voltage spikes during load shedding on household appliances in future?	<p>▶ If advance notice of an outage is possible, customers can help protect sensitive electrical appliances, such as computers, by switching them off and unplugging them before the outage occurs.</p> <p>▶ The use of surge protectors within a customer switchboard can also protect against voltage spikes.</p>
▶ What strategies are in place to prevent damage to electrical appliances during periods of instability in the grid?	▶ Essential Energy is undertaking several initiatives to reduce voltage fluctuations including programs to maintain voltage levels within acceptable thresholds, improve network visibility and enable dynamic operating envelope capabilities.

12. Have you considered compensation for the losses of community members and businesses?

- ▶ Under both legislation and Essential Energy's Deemed Standard Connection Contract, Essential Energy is not able to guarantee a continuous supply of electricity.
- ▶ Essential Energy regularly reviews its Customer Support Policy and compensation policies so that they are fit for purpose and responsive to customer impacts in circumstances where network incidents or operations within Essential Energy's control have resulted in financial loss.
- ▶ However, Essential Energy is not responsible for losses resulting from factors outside its control. These include damage to Transgrid's transmission network and severe storm impacts.
- ▶ Essential Energy recommends that any customer relying on a continuous supply of electricity take proactive measures to minimise any loss they might suffer in the event of a power outage.

<p>13. At the hearing, witnesses from Essential Energy referred to an 'incident management framework'.</p>	
<p>a) Is this publicly available?</p>	<ul style="list-style-type: none"> ▶ No. Essential Energy maintains response plans designed for internal use to guide and support teams in responding to a range of different types of incidents. ▶ The NSW State Electricity Supply Emergency Sub Plan and NSW Energy & Utility Services Functional Area Supporting Plan are publicly available and set out the responsibilities of Participating Organisations including Essential Energy during significant electricity supply disruptions.
<p>b) Can you provide a copy of this framework? If not, can you outline what is covered by the framework, including what types of emergencies, the communication protocols set out and how Essential Energy is supposed to work with government agencies and regulators?</p>	<ul style="list-style-type: none"> ▶ A copy of Essential Energy's Network Operations Escalation and Recovery Plan will be provided on a confidential basis for the information of the Committee. Essential Energy asks that the Committee does not publish this document, as it is for internal use.
<p>c) Are all Network Service Providers required to have an incident management framework in place? If so, which provision of the regulatory framework sets out this requirement?</p>	<ul style="list-style-type: none"> ▶ The <i>Electricity Supply Act 1995 (NSW)</i> governs requirements for operators of distribution networks and the transmission system in NSW to hold licences to operate these electricity networks. These licences must contain conditions for "ensuring that a network operator has arrangements in place to identify, assess and manage business continuity risks and manage business disruptions". ▶ Essential Energy's licence requires it to have a documented system to ensure that it has adequate arrangements in place to identify, assess and manage business continuity risks

and manage business disruptions relating to the operation of its distribution system⁹. Essential Energy understands that similar licence conditions exist for all network service providers in NSW.

Attachments have been redacted.

⁹ Ibid., Condition 4, Schedule A