Addressing bushfire risk reclassification

Non-network options screening notice

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Essential Energy

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Executive Summary

- Essential Energy has reclassified its bushfire risk zones using industry best practice bushfire risk modelling methods. This work has resulted in a shift in where areas of highest bushfire risk exist on the network.
- These newly identified areas require enhanced bushfire risk mitigation where vegetation is in the vicinity of powerlines.
- Essential Energy has determined that there are no non-network options that can form a significant part of any credible solution to appropriately mitigate this risk.

Background

Essential Energy has reclassified its bushfire risk zones using industry best practice bushfire risk modelling methods. This work has resulted in a shift in where the areas of highest bushfire risk exist on the network.

Essential Energy has determined that there are no viable non-network options that could form a *significant part* of the potential credible options to manage this changed bushfire risk allocation in a prudent and efficient manner for the long-term interests of our customers.

Essential Energy's determination was made under clause 5.17.4(c) of the *National Electricity Rules* and is published pursuant to clause 5.17.4(d). Essential Energy appreciates the intention of these clauses is to ensure all reasonable options are considered to deliver electricity services in a prudent and efficient manner for the long-term interests of our customers and to minimise the impact on their electricity bills (particularly in the current economic environment of cost-of-living pressures).

In accordance with the above provisions, Essential Energy does not intend to publish a non-network options report in relation to the proposed risk mitigation work. This work is to address the heightened risk rating to satisfy compliance requirements of Essential Energy's updated Bushfire Risk Management Plan. The background to the identified need is also described in our proposed Contingent project[1] for Bushfire Risk Reclassification. This was approved by the Australian Energy Regulator (AER) in its 2024-29 Final Determination for Essential Energy.

Essential Energy expects most of the work to involve increasing the vegetation clearances around assets in newly identified high bushfire risk areas to meet the clearance standards required in high bushfire risk areas. This is in addition to other efficient combinations of potential solutions which may include stand-alone power systems (SAPS), but these are likely to make up a minor part of the optimal solutions developed given that there are 4,026km of overhead powerlines identified with vegetation that does not meet the clearance standards and requires treatment.

Despite Essential Energy's view that there is no prudent and efficient non-network solution for the long-term interests of our customers, Essential Energy is exploring all options through the Regulatory Investment Test – Distribution (RIT-D) process and is receptive to any non-network solution suggestions though public consultation.

[1] Essential Energy - 8.03 Proposed Contingent Project - March 2024 | Australian Energy Regulator (AER)

Rationale that there is no viable non-network solution

Vegetation inspection and treatment is a necessary and continuous activity on the Essential Energy network to comply with our regulatory obligations relating to network safety and reliability. This ensures Essential Energy meets its obligations under the National Electricity Objective (specifically in terms of safety and reliability of supply of electricity for the long-term interests of our consumers) as closely as possible.

The management of vegetation in the vicinity of powerlines is mandated by the *Electricity Supply Act 1995* (NSW)[2] and *Electricity Supply (Safety and Network Management) Regulation 2014* (NSW). Under this Regulation, network operators are subject to direction (i.e. legally compelled) by the New South Wales Minister for Energy to take into account Industry Safety Steering Committee Guide for the Management of Vegetation in the Vicinity of Electricity Assets (ISSC3:2016).

To meet Essential Energy's legally binding requirements to implement ISSC3:2016, Essential Energy determines the appropriate levels of vegetation inspection and treatment activity to be undertaken based on the safety and reliability risk profile in any given location throughout the network.

There is no option to "do nothing" for trees in proximity to powerlines. All must be assessed and treated (trimmed or removed) to maintain minimum clearance space requirements and considering the risk profile associated with that location.

In areas identified as highest bushfire risk, the required standard involves the creation and maintenance of clear-to-sky vegetation corridors *in addition* to the horizontal and groundline minimum clearance spaces as defined in ISSC3:2016.

In isolated cases, alternate *network solutions* are deployed to reduce or avoid vegetation treatment where technically and economically prudent and efficient to do so, e.g. powerline relocations, undergrounding of overhead powerlines, or the use of High Voltage covered conductor.

The only alternate *non-network solution* relating to the management of vegetation near powerlines is to permanently *remove* the powerlines and therefore remove the risk of vegetation-initiated powerline bushfires.

The identified line length for this project that is subject to clear-to-sky cutting is 4,026km (for this screening notice we are focusing on the *highest* bushfire risk areas). Tens of thousands of customers are reliant on these powerlines, making their permanent removal a non-viable solution.

The case for Stand Alone Power Systems (SAPS)

Because Essential Energy is obliged to supply electricity to customers under the *National Energy Retail Law (NSW)*, removal of powerlines is only possible where there is *an alternate source of supply provided* to the customers reliant on that powerline. This is addressed by installing SAPS to affected customers. Powerline removal, coupled with the provision of SAPS for each impacted customer, is not a practicable, prudent, or efficient option to be deployed *at scale* given the 4,026km of powerlines in the newly identified P1 areas requiring risk mitigation:

- A key limiting factor to the deployment of SAPS is that for any powerline to be removed, *all affected customers* currently supplied by that powerline must be engaged with and must provide explicit informed consent to going off-grid and transitioning to a SAPS.
- For this to happen they must first have the required footprint available on their property to accommodate the solar panel array and ancillary equipment required for a SAPS and provide

[2] Objectives of this Act align with the efficient operation, reliability and safety of supply of electricity elements of the National Electricity Objective, specifically in Part 1, 3 (a) "to promote the efficient and environmentally responsible production and use of electricity and to deliver a safe and reliable supply of electricity" and (d) "to promote and encourage the safety of persons and property in relation to the generation, transmission, distribution and use of electricity".

consent to use this space. Our current experience with targeted SAPS customers is that ~30% to 40% agree to the off-grid SAPS solution when approached.

- SAPS are a bespoke solution, suitable for certain locations such as a long rural powerline i.e.: > 1km in length supplying 1-2 customers, and/or where there are known reliability or access issues. In those cases, they may be the most economically efficient solution.
- Given the relatively high cost to establish a SAPS, the number of locations within the new high bushfire risk zones where SAPS would be a credible substitution option is small, addressing < 1% of the total targeted powerline length where enhanced vegetation standards are required.
- Essential Energy will remove the potential for cost duplication from any location overlap between our approved SAPS program and the newly identified high bushfire risk zones. Furthermore, Essential Energy is committed to maximising the installation of SAPS where prudent and efficient to do so, ensuring the economic analysis for the SAPS captures the cost savings from the avoided vegetation works and the powerline maintenance activities that the removed powerline would have otherwise incurred.

Conclusion

This paper explains why Essential Energy believes that no prudent and efficient non-network solution can form a significant part of a credible option to address the need to reduce the risk of encroaching vegetation near powerlines causing a bushfire.

Managing vegetation in the vicinity of powerlines ensures Essential Energy meets its obligations under the National Electricity Objective, particularly pertaining to network safety and reliability.

This paper also examines the case for replacing the powerlines with SAPS. However, due to the scale and nature of the network requiring enhanced vegetation treatment (predominantly rural radial powerlines), SAPS are not a feasible solution for a significant portion of the 4,026km of targeted highest risk powerlines. We do recognise that there may be site-specific cases where a SAPS is a viable option and in these situations a SAPS would be deployed (subject to customer explicit informed consent) in lieu of the enhanced vegetation management proposed.

Essential Energy has therefore determined, that for this project, there are no suitable non-network options that would require the publishing of a non-network options report.

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