

Network resilience

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Challenges the network faces: Resilience



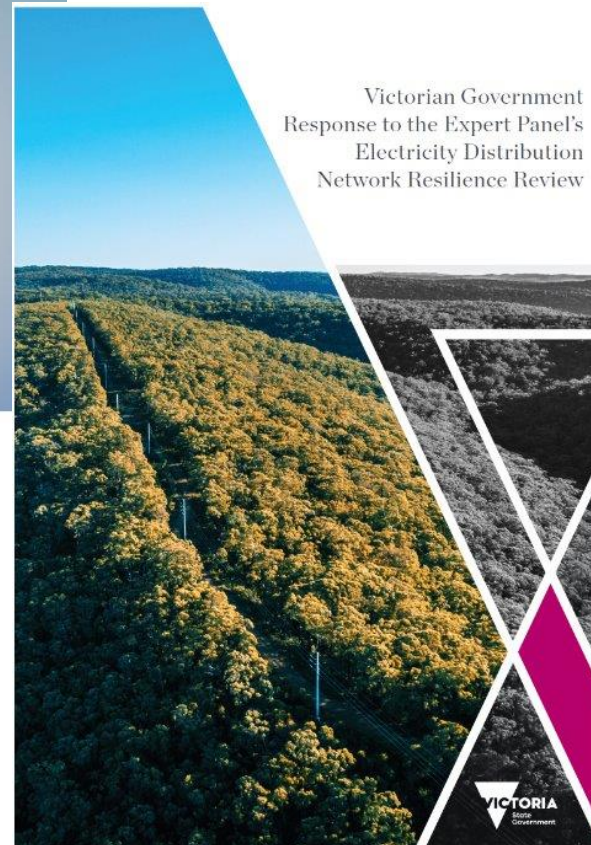
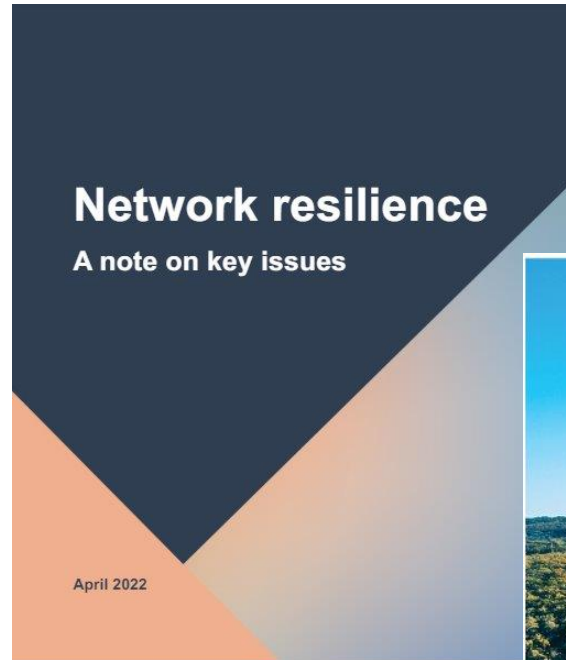
Maribyrnong river flooding on 14 Oct 2022



Storm damage 13 Feb 2024



Governance & the Victorian Government Network Resilience and Network Outage Reviews



Victorian Government Inquiry Recommendations on Network Resilience

Recommendations to help reduce the *likelihood* and *impact* of prolonged power outages

What we heard

Distribution businesses (DBs) are not proactively investing to mitigate the risk of prolonged power outages, because the national regulatory framework does not embed resilience as an objective.

Recommendations

1



Immediate reform

- A Victorian Network Resilience Investment Strategy is needed to drive DB investments in resilience solutions to mitigate the risk of prolonged outages at the highest-risk locations, informed by community needs

2



Enduring reform

- DBs required to develop an all-hazards approach to risk mitigation for the purposes of safety, reliability, security and resilience of the electricity system.

3



Longer term reform

- The national legislative framework amended to drive DB investments in resilience in the longer-term

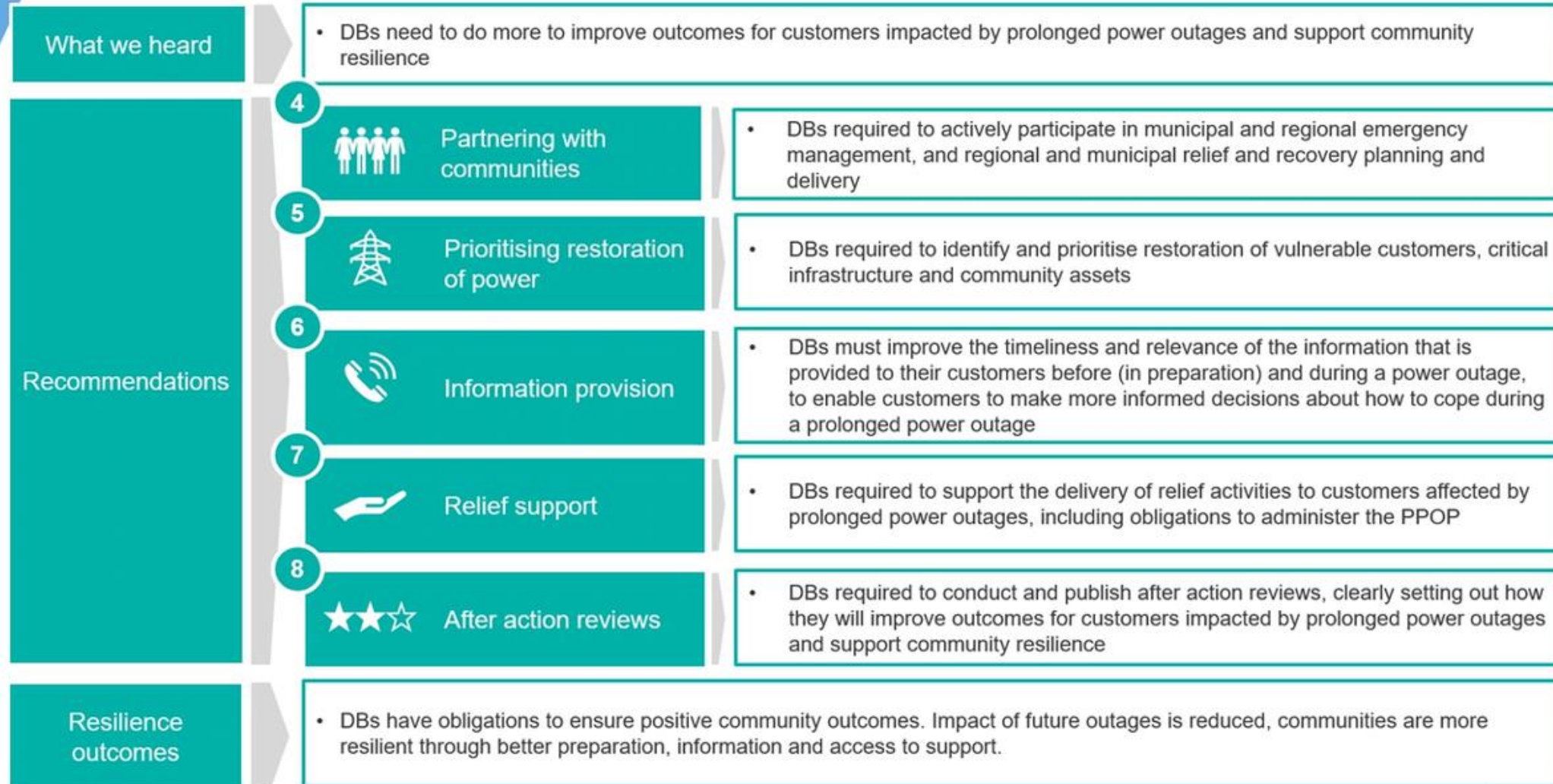
Resilience outcomes

1. Investments, by 2025, in highest-risk locations to reduce the likelihood of prolonged power outages
2. DBs have new obligations to make Network Resilience Plans, similar to the Bushfire Mitigation Plans
3. Ongoing resilience investments from 2025 onwards, enforced both through Victorian regulations and the national framework



Victorian Government Inquiry Recommendations on Network Resilience

Recommendations to help reduce the *impact* of prolonged power outages



Jemena electricity network resilience trends

Hazards	Areas of greater exposure to key hazards	Relative exposure of different asset types to select hazards
Extreme rainfall (flooding)	Sunbury and Gisborne South, West Footscray, Hadfield and Heidelberg West	About 5% of distribution lines, 4% of distribution substations and 10% of zone substations
Bushfires	Gisborne South and its surrounding regions and Woodlands Historic Park	About <1% of distribution lines and 1% of distribution substations
Extreme heat (days over 35°C and/or days over 40°C)	Relatively uniform across the distribution area	Assets across the network are similarly exposed
Extreme wind (wind gust >100 kmh)	Region surrounding Gisborne South, and in proximity to Merri Creek and Darebin Creek	About 3% of distribution lines
Sea level rise (storm surge flooding)	Williamstown	Less than 1% of distribution lines and distribution substations and about 3% of zone substations



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Developing a comprehensive Resilience Strategy

Using technologies such as LiDAR and Digital Twin Technology



Network resilience

What are the key challenges from a resilience perspective that you'd like to see us address, and specifically in our Resilience Strategy?

Given your experience and knowledge, what other considerations or advice do you have for Jemena on network resilience?

