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The role of community engagement in planning resilient microgrids

Sophie Adams, Deakin University

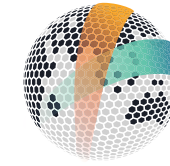
Mike Roberts, UNSW Sydney



Collaboration on Energy and
Environmental Markets



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ESKIES

Energy Sustainability through Knowledge and Information Exchange and Sharing



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Collaboration on Energy and
Environmental Markets

ESKIES is a Bushfire Community Recovery and Resilience Fund (BCRRF) project funded through the joint Commonwealth/State Disaster Recovery Funding Arrangements.

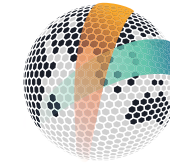


Australian Government



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Two case studies



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Coastal

Coastal community – fringe of grid

~1000 residents + holiday homes & caravan park

Significant outage from Black Summer bushfires, and peak demand constraints

In-front of meter:

- Solar PV array

- Community-scale battery

- Diesel generator

Behind the meter:

- Rooftop solar

- Batteries

Inland

Remote valley with a single feeder

Frequent, long weather-induced outages

~ 2000 people:

- small town centre

- dispersed homes and businesses

Small microgrid to support main functions of town

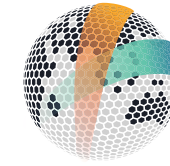
In-front of meter:

- Solar PV array

- Community-scale battery

- Diesel generator

Community engagement



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4 public meetings in community hall
~60 people

Community reference group (online)
~15 people

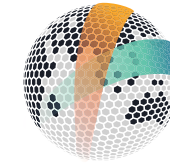
Community informing aspects of the design and
sharing investment

1st focus group (online)
~8 people

Recruitment challenges

Scope of community input unclear

How and for whom the microgrid delivers benefit



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DNISP: “The fundamental catalyst for the project was, as the demand on the network slowly increases within the locality, [the DNISP] understood it would have to invest in upstream infrastructure. They chose to trial a community microgrid because they believe it is the best possible solution for this community”

Community member: “You’re talking about the resilience of people to cope with the loss of power, not the resilience of the network?”

DNISP: “In this particular case we’re looking more at the network’s ability to actually provide network services and recover those services when subjected to disruptive events”

How the community participates



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DNISP: “We were looking at whether we could do more behind-the-meter stuff in terms of optimising what was already there, as well as potentially maybe helping customers transition faster.”

Community member: “I’m excited that we’re doing it ourselves, in partnership with [the DNISP]”

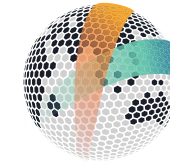
‘energy citizenship’ (Devine-Wright 2007)

Devine-Wright, P. 2007. ‘Energy citizenship: Psychological aspects of evolution in sustainable energy technologies’, in: Murphy, J. (ed.) *Governing Technology for Sustainability*. Earthscan, London, p63–88.



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Who belongs to the community



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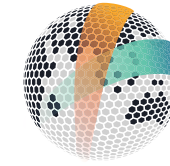
Community member: “The criteria for battery allocation is important. Issues may emerge if there’s more people who fit the criteria than batteries. It’s not a good feeling for a small community if people get left out”

Community members:

“If you’re going to service just the town, it’s the country that is going to miss out again”

“While you’re powering up the businesses in the main street, you’re not powering up the businesses that are running out of town”

Suggestions for community engagement



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- Allow lots of time for engagement and conversations
- Enable different channels of communication with the community
- Don't rely on consultants to do the talking
- Define a common language to enable shared understanding
- Be open about the scope of consultation and DNSP motivations and constraints
- Help the community to understand the issues – provide explanations at different levels and address questions and misconceptions
- Listen to community priorities and concerns and respond.
Be open and frank about where they do or don't align with DNSP's



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Thank you

energy-resilience.com.au

s.adams@deakin.edu.au

m.roberts@unsw.edu.au



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