WESTERN SYDNEY
UNIVERSITY

Arek Gulbenkoglu
General Manager
Australian Energy Regulator
GPO Box 1313
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Parramatta, 3 January 2024

Dear Mr Gulbenkoglu

Submission on Ausgrid's 2024-2029 Regulatory Proposal - Climate Resilience Business Case

Thank you for the opportunity to provide a submission on Ausgrid's 2024-2029 Regulatory Submission and specifically the Climate Resilience Business Case. I wish to provide feedback on Ausgrid's proposed Extreme Heat Project which was included as part of the business case.

I lead multidisciplinary research on the complex issue of urban heat, investigating how effective climate-responsive urban planning and design can help mitigate the impacts of heat on people, the built environment and urban ecosystems. Extreme heat is a growing area of concern as evidenced by science, media and policy developments over the past 3-5 years. By 2050, heat-related hospitalisation costs in Sydney are estimated to rise $506-570 million[1] due to climate change. The risk of urban populations experiencing a heatwave in Sydney is predicted to increase 52-fold by the end of this century[2].

I wish to provide support for the following initiatives proposed by Ausgrid:

- Enabling Ausgrid's infrastructure to coexist with tree canopy. Trees are the most effective urban cooling structures and will be increasingly important in densifying cities where urban canopy cover on private land continues to decline. This prevalent trend in all capital cities in mainland Australia means that trees on public land – like those on roadsides, in reserves and other public lands – become increasingly important to manage for appropriate crown development. Given the desire of local and state

[1] Tong et al. (2021), Heat-attributable hospitalisation costs in Sydney, p.1.
[2] Nishant et al. (2022), Future population exposure to Australian heatwaves.

government seeking to provide greener cities, it is necessary for key stakeholders, including water utilities, councils and electricity providers to work together to facilitate this management shift away from risk suppression to a multi-pronged approach that has crown expansion, and ultimately urban cooling as a first principle.

- Understanding how Ausgrid's services should counter the increasing vulnerability of customers, including Life Support customers. Assessing the impacts of climate change, including heatwaves, on the future needs of vulnerable customers, will become increasingly relevant. I support Ausgrid partnering with public health experts to apply their epidemiological models to understand the changing needs of vulnerable and Life Support customers, and apply this to Ausgrid's future service strategy. I'd like to highlight that a cooler city is also less likely to experience black-outs during extreme heat events, which connects this to the previous point raised.

- Finally, establishing evidence to quantify Aerial Bundle Cabling (ABC) network benefits and Ausgrid's role, in collaboration with councils, to enable growth of urban canopy cover, will serve to operate in concert with the above. Ausgrid proposes to co-fund a 50:50 contribution with council to rollout ABC (up to a value of $6.0M), and I support this collaborative opportunity. The benefits of ABC on urban canopy expansion and ultimately greater surface and air cooling should be empirically documented and captured in a robust Cost Benefit Analysis that scales from neighbourhoods to precincts and metropolitan regions. This type of information should be generated before 2029 to further inform how the Australian energy sector can effectively assist urban populations to adapt to rising heat and create greater resilience against climate change.

I attended Ausgrid's customer engagement event on this topic during 21 October 2023. It was obvious from this engagement that Ausgrid's customers support my points raised above and understand that the Australian energy sector has key role to play in addressing contemporary and anticipated impacts of urban heat.

Yours sincerely,

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