

VYT 2025 Entry #5

The Work in Critical Electricity Infrastructure Security and Resilience

Merry Jean Caparas

PhD, second year

School of Humanities and Social Sciences, Climate Change Adaption Lab

ORCID iD: [0000-0002-9146-1667](https://orcid.org/0000-0002-9146-1667)

[Start transcript]

Modern society runs on interconnected networks, shaping our world beyond borders. Among them, electricity stands as uniquely critical, serving as a lifeline of everyday life and fueling society's key sectors.

This forms a delicate web of interdependence, where disruption within the power grid can cascade across other systems.

Climate change is intensifying these vulnerabilities, making power grid more susceptible to failures. During such events, the power grid cannot be stopped and reset to a known state; but operations must continuously unfold.

Looking at Australia and the UK, which share both similar and unique characteristics in their power grids, my PhD aims to understand how existing electricity operational management standards are being challenged and changing under climate change.

It seeks to uncover the work that occurs during unanticipated emergencies. The goal is to identify approaches to securing a climate-resilient electricity infrastructure.

[End transcript]