BUILDING RESILIENCE IN AUSTRALIA'S ELECTRICITY INFRASTRUCTURE

Thursday 10 November 2022
Zoom Webinar

Presented by the University of Sydney Law School and the Sydney Environment Institute

THE UNIVERSITY OF SYDNEY
Law School

THE UNIVERSITY OF SYDNEY
Sydney Environment Institute

BUILDING RESILIENCE IN AUSTRALIA'S ELECTRICITY INFRASTRUCTURE

Australia has been hit by successive extreme weather events and disasters in recent years. As the IPCC's Sixth Assessment Report has warned this is going to get worse. Australia has already warmed by 1.4° C. Each of the climate-induced disasters – floods and bushfires – has had a severe impact on our electricity infrastructure. When power is lost, telecommunications also fail meaning that communities are unable to stay in contact with emergency services and with each other. This conference assesses ways in which our existing grid can be made more resilient but it also looks to the resilience of our future grid in 2040. Experts from the disciplines of law, engineering, and physics, in Australia and the United States, will share their perspectives on how this can be achieved.

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9.00 – 10.30am

Panel 1: Using the law to enhance resilience in the grid

Chair: Professor Rosemary Lyster

A legal framework for building resilience in Australia's electricity infrastructure
Professor Rosemary Lyster
Professor of Climate and Environmental Law, Co-Leader, Climate Disaster and Adaptation Cluster, Sydney Environment Institute, The University of Sydney

Protecting the grid from Texas sized storms
Professor Robert Verchick
Gauthier-St. Martin Eminent Scholar and Chair in Environmental Law, Loyola University New Orleans College of Law

Climate-induced wildfires and strengthening resilience: a California case study
Professor Daniel A. Farber
Sho Sato Professor of Law, Faculty Director, Center for Law, Energy, & the Environment, Berkeley Law

The Electricity Sector Climate Information project for electricity infrastructure resilience
Ben Jones
Manager, Reliability and Operability Forecasting, Australian Energy Market Operator

10.30 – 11.00am **Break**

11.00 – 12.30pm

Panel 2: Technologies for enhancing resilience

Chair: Associate Professor Gregor Verbic

Increasing grid resilience by decentralising the power supply
Associate Professor Gregor Verbic
Centre for Future Energy Networks, School of Electrical and Information Engineering, The University of Sydney

Smart sensors for situational awareness
Professor Benjamin Eggleton
Professor of Physics, Director of the University of Sydney Nano Institute, The University of Sydney

Cyclone resilience assessment of distributed civil infrastructure systems
Associate Professor Hao Zhang
School of Civil Engineering, The University of Sydney

Projects as a Vehicle to Build Resilience
Dr Nader Naderpajouh
Senior Lecturer, School of Project Management, Faculty of Engineering, The University of Sydney

12.30 – 1.30pm **Lunch**

1.30 – 3.00pm **Panel 3: Planning for resilience in the future grid 2040**

Chair: Professor Rosemary Lyster

Using the planning framework to build resilience: a national perspective
Professor Rosemary Lyster
Professor of Climate and Environmental Law, Co-Leader, Climate Disaster and Adaptation Cluster, Sydney Environment Institute, The University of Sydney

"Will Australia's current state planning frameworks build resilience in the future grid 2040?"

Case study: Victoria
Dr Anne Kallies
Senior Lecturer at the RMIT Graduate School of Business & Law

Case study: Queensland
Dr Philippa England
Adjunct Senior Lecturer, Law School, Griffith Law School

Case study: New South Wales
Ms Stephanie Vatala
Partner in the Planning, Environment and Government Group, Dentons, Sydney

3.00 – 3.30pm **Break**

3.30 – 4.30pm **Building community resilience to electricity infrastructure failures**
Dr Jean Renouf
Chair, Resilient Byron

Final reflections and close