



UNSW
SYDNEY

Zero and Positive Energy Buildings

Making zero-energy buildings a reality through the development of technology and design procedures that optimise energy conservation and the use of renewable energy, while delivering the best possible thermal and visual comfort and environmental quality for all who work or live in them.

Competitive advantage

- World-class application of technology to bring optimum value with minimum capital outlay and operating cost
- Proven ability to:
 - Reduce annual energy consumption and carbon emissions by up to 100 per cent
 - Decrease indoor pollutants by up to 90 per cent
 - Improve indoor thermal comfort by up to 70 per cent

Impact

- Minimising the carbon emissions of residential and commercial buildings around the world
- Reducing heat-related mortality and morbidity across the planet

Successful applications

- Technology and design of more than 50 large-scale zero-energy building projects worldwide.

Capabilities and facilities

- A fully equipped laboratory able to perform any kind of energy and environmental measurements in buildings
- State-of-the-art mobile energy bus with thermal cameras, tracer gas equipment, IAQ sensors and analysers, light and daylight measuring equipment, and a drone to perform aerial measurements
- All types of energy simulation tools for assessing the performance of buildings

Our partners

Several construction companies, and companies producing energy systems for buildings, including:

- ABB
- Daikin Chemicals
- FIBRAN
- 3E
- AVAX

More Information

Mattheos Santamouris

Faculty of Built Environment

T: +61 (0) 2 9385 0729

E: m.santamouris@unsw.edu.au

UNSW Knowledge Exchange

knowledge.exchange@unsw.edu.au

www.capabilities.unsw.edu.au

+61(2) 9385 5008