Work with us
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Email future.energy@utas.edu.au

Future Energy at the University of Tasmania

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> utas.edu.au/future-energy
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Future Energy is a research collaboration at the University of Tasmania working on energy governance, markets, culture, and technologies. The group brings together expertise from business, economics, engineering, ICT, social science, geography, marine science, architecture, planning, and the humanities to produce high quality research that interrogates and develops options for future energy provision in Tasmania and beyond.

Working with stakeholders, Future Energy seeks to position Tasmania as an international test bed for innovative and collaborative solutions to the challenges our energy sector is facing, including climate change, ageing infrastructure, market design, and maintaining appropriate governance in a fast-changing technology-intensive environment.

Solving these complex, multi-faceted and highly politicised problems requires expert, independent and interdisciplinary research. This is what the University of Tasmania provides through Future Energy.

Developing, in collaboration with energy stakeholders, a skilled, adaptable workforce in Tasmania and beyond with expert, independent research aligned to their needs.

Providing energy stakeholders in Tasmania and beyond with expert, independent research aligned to their needs.

Developing solutions to complex technical, policy and social challenges in the energy sector through interdisciplinary, evidence-based research.

For a full list of researchers in Future Energy see utas.edu.au/future-energy

Research snapshot

CONSORT Bruny Island Battery Trial

This award-winning research and field trial provides insights into future electricity systems by addressing how batteries can be used by householders to manage their energy consumption while simultaneously supporting the network.

54 battery systems have been installed in Bruny Island homes with each battery fitted with energy management software that allows homeowners to sell their power back to the grid.

CONSORT is a collaboration between the Australian National University, the University of Sydney, and the University of Tasmania, electricity network provider TasNetworks, and startup Reposit Power and is funded by the Australian Renewable Energy Agency.

For more information see brunybatterytrial.org

Reducing the cost of harnessing renewable energy with micro-grids

This research, partnering with Regen Power and funded by the Australian Research Council, aims to remove the need for energy storage in micro-grids via adoption of synthetic storage. Synthetic storage involves replacing fixed speed diesel assets with variable speed technology. This approach offers a much more cost-effective way to improve renewable penetration and reduce diesel fuel consumption in micro-grids used in remote communities by removing the need for expensive energy storage.

The expected project outcomes include reductions in cost and complexity for high renewable energy penetration micro-grids, reduced emissions and improved micro-grid reliability.

A community approach to energy efficiency capacity building

The Get Bill Smart social equity project created positive energy and thermal comfort outcomes for low income households in two Greater Hobart communities.

The project demonstrated that greater energy savings can be achieved when in-home energy upgrades and education are combined with a community capacity building program.

The three-year project was a partnership between the University of Tasmania, Mission Australia and Sustainable Living Tasmania, funded under the Federal Government’s Low Income Energy Efficiency Program.

For a full list of current Future Energy research at the University of Tasmania see utas.edu.au/future-energy

As an island state, Tasmania is well placed socially, environmentally and geographically to achieve global recognition for its energy solutions. Tasmania has a proud history as a pioneer in the development and adoption of renewable electricity generation and, because of its size and relative isolation, has had to operate and innovate with its electricity system in ways that other places have not. These are lessons that can be readily transferred.

The state’s electricity system is big enough to test new technologies, economic models and social responses, yet small enough for the effects of these to be easily measurable and contained.

Australia is at a crossroads when it comes to deciding how the nation’s future energy will be generated and consumed. For the first-time households and businesses have a choice about whether to remain connected to the centralised electricity grid. The residential battery storage market continues to grow and the capabilities and performance of a host of related digital ‘smart’ technologies is blossoming.

This pivotal transition point raises questions that cannot be answered by a single agency, sector or research discipline. There are unresolved policy challenges in managing energy sector innovation, which social scientists, humanities scholars and engineers can usefully collaborate on.

Future Energy aims to build on its significant research collaborations with energy stakeholders in Tasmania and beyond to address some of these crucial questions.
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Directors

Associate Professor Evan Franklin is an engineer with research interests in solar photovoltaics, battery storage and other distributed energy resources, the integration of renewable energy generation into power systems, and the role of energy storage in future energy systems.

Dr Clinton Levitt works in applied economics with interests in energy, natural resource and environmental economics. Clinton’s research includes investigating strategic behaviour in energy markets, power system economics and the interaction between energy and other sectors of the economy.

Professor Heather Lovell is a social scientist with research interests in processes of policy and technology change, with a focus on energy. Heather’s current projects are based around smart grids, energy storage and understanding householder experiences.

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Capabilities

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