BLUE ECONOMY
COOPERATIVE RESEARCH CENTRE

Australian Government
Department of Industry, Science, Energy and Resources

AusIndustry
Cooperative Research Centres Program

Modelling and operation of a hydrogen microgrid with 700kW electrolyser

Summary

This project supports and provides a research context for the BE CRC demonstration project now underway to build a DC hydrogen microgrid in Hobart, based on a 700-kW electrolyser and incorporating photovoltaics, hydrogen storage and a hydrogen turbine to generate electricity, as well as offtake for fuel-cell buses.

The research will focus first on modelling the components of the microgrid and the entire energy system. Then the system model and physical microgrid will be employed to emulate operating scenarios relevant to industries in the Blue-Economy Zone, to explore approaches to managing energy flows within the microgrid under realistic conditions of variable energy input from solar and simulated wind, wave etc while satisfying the demand profile of a chosen industry-relevant energy system.

Project ID
3.22.003

Research Program
RP3 Offshore Renewable Energy Systems (ORES) Program

Project Leader
Evan Gray

Duration
36 months

Partners
- Griffith University
- Department of Natural Resources and Environment Tasmania
- Optimal Group
- Pitt & Sherry
- University of Tasmania

Third Party Participants
- Hydro Tasmania

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