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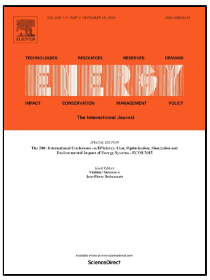

Multi-objective Optimization of a Pressurized Solid Oxide Fuel Cell – Gas Turbine Hybrid System Integrated with Seawater Reverse Osmosis

Valerie Eveloy, Peter Rodgers, Ali Al Alili

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Highlights

- Integration of a pressurized SOFC-GT hybrid system with a reverse osmosis unit
- Multi-objective, exergetic and economic optimization using a genetic algorithm
- Optimum solution delivers 2.4 MWe and 636 m^3/day of desalinated water
- Overall exergy efficiency and cost rate of 71.3% and 0.0256 USD/s, respectively
- System payback time estimated at less than six years for typical economic conditions