

# Technical Study: 100% Renewable Energy Scenarios for the SWIS Grid

Steve Gates MIEAust, Sustainable Energy Now Inc. (SEN)

Joint Electrical and Electronics Papers



## EVENT DETAILS

### Date:

Wednesday, 12 June 2013

### Time:

5.45 pm start

### Venue:

Auditorium  
Engineers Australia  
712 Murry Street  
West Perth

### Cost:

Free

### RSVP:

By COB Monday, 10 June 2013 to

<https://engineersaustralia.wufoo.eu/forms/jeep-wednesday-12-june-2013-presentation/>



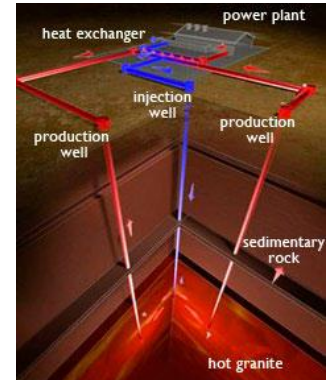
Sustainable Energy Now Inc. is a volunteer organisation in Perth with the aim of promoting renewable energy in Western Australia through research, education and advocacy. SEN has developed a simulation to allow conceptual renewable energy scenarios to be investigated, and was recently commissioned to perform a technical, costed study on the potential for renewable energy to provide 100% of the energy used on the SWIS electricity grid.

The presentation investigates two renewable scenarios for 2029 which use a diverse mix of renewables, various

forms of storage, and demand-side management to provide a reliable system capable of riding through low-weather events, while meeting the projected electricity demand. Also included are land areas, and transmission upgrades, with a comparison of costs relative to an estimated 'Business as usual' fossil-energy scenario.

## ABOUT THE SPEAKER

**Steve Gates**, Secretary and a founding member of SEN, is a Mechanical Engineer with over 30 years research and development experience in the offshore, defence, manufacturing and agricultural industries. He currently consults and is passionate about using his engineering background to solve problems particularly those relating to the environment and sustainability, and provides voluntary services to other community organisations. He has been a registered Professional Engineer in California and is a member of the Institute of Engineers Australia.



Co-contributors:

**Ben Rose**, co-author: retired, ex-Dept of Agriculture natural resource management, science / technical education and since involved with energy/CO2 emissions auditing, carbon sequestration and life cycle analysis.

**Craig Carter**, technical consultant: Adjunct Professor at the School of Engineering and IT at Murdoch University, retired Sr. Electrical Engineer at Verve Energy, involved with numerous renewable energy projects as part of Verve's Sustainable Energy Development Group.



Representing the ITEE Panel



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