



The Sustainable Engineering Society

...engineering in harmony with ecology

SENG-WA Newsletter – November 2022

In this month's newsletter, we present events looking at the offshore wind potential in Australia, as well as reminders about the World Renewable Energy Conference and EA's Climate Smart Engineering Conference.

We invite members to contribute to the SENG Accessible Sustainability Collection by submitting any relevant sustainability and climate change material useful for research, project work, policy development and education by emailing suggested links to seng.library@gmail.com.

WA businesses are also invited to let us know how they are being Sustainability Champions in their industry. Please [get in touch](#) if sustainability is at the heart of your business, or a business you know.

We hope you enjoy!

QUESTIONS AND ANSWERS

A 'Climate Change Challenges' series of webinars and forums was run in 2021 by the WA Division of Engineers Australia, in conjunction with the University of WA and Murdoch University.

During the series, over 100 questions or comments were submitted from around 1000 attendees. A 'Q&A' of the most pertinent, together with suggested answers, was put together by a group of senior EA members. The answers are NOT official EA answers; they are possible answers provided by the group as thought provokers.

In our Newsletter we will be publishing one Question and one possible Answer in each edition. We invite comments from our readers, a summary of which will be published in the following edition. Simple comments, such as agree/disagree are welcome, as are more detailed comments. These may be emailed to the [Q&A reply email](#).

This month, our question and possible answer is:

Q

How can we push government to support electric cars and green energy?

A

Write to your local politicians and newspapers, join one of the many groups promoting this agenda and raise your concerns through organisations such as EA. In addition, you can add to the weight of the public movement by actions such as buying an electric car/bike/scooter, installing PVs, and paying for green electricity.

EA is developing further advocacy on these issues. SENG provided significant contribution in October 2022 to the Engineers Australia submission on the Federal government's public consultation for the National Electric Vehicle Strategy.

SENG WA would love to hear from you about these questions and answers.

Contact us here: [Q&A reply email](#)

EVENTS

CLIMATE SMART ENGINEERING

Hybrid Conference hosted by Engineers Australia

Date: 22-23 November 2022

Location: Online and Engineers Australia – WA, 712 Murray St, West Perth WA 6005

Climate Smart Engineering 2022 (CSE22) will shine a light on projects with industry-leading sustainability credentials. The event will highlight how the engineering profession can better manage the complex challenges of achieving net zero emissions.

The 2022 conference builds on the success of last year's inaugural event which heard keynote speeches from globally influential climate-leaders such as Al Gore and Paul Polman among many others.

More information: <https://eacse.com.au/welcome>

OCEANS OF POWER – OFFSHORE WIND IN AUSTRALIA

Hybrid Event by the Australiana Institute of Energy

Date: Thursday, 24 November 2022

Location: Online and CSIRO Energy Centre 10 Murray Dwyer Circuit, Mayfield West NSW

Blue Economy CRC in their July 2021 report Offshore Wind Energy in Australia identified a combined capacity of over 25 GW of proposed offshore wind projects across Australian waters.

“While the potential for offshore wind in Australia has been overlooked for some time, the development of floating offshore wind turbines, the contribution offshore wind can make to the grid through diversity of supply, high capacity factors, very large scale projects, and employment for workers in fossil fuel industries means that the potential for offshore wind must be re-considered.”

Presenters will discuss:

- government, infrastructure and industry linkage of wind generation including NSW government support for wind power, NSW and Hunter REZ, and current proposals for offshore wind in Australia and the Hunter.
- offshore wind and current trends, as well as the Australian opportunity with focus on the Newcastle projects, including NOW's 10GW proposal 25 to 34 km offshore.

More information: <https://www.aie.org.au/eventdetails/16098/aie-newcastle-oceans-of-power>

SUSTAINABILITY IN THE RESOURCES AND INFRASTRUCTURE INDUSTRIES

Event by Innovate Australia

Date: Monday, 28 November 2022

Time: 1:30 – 4:30 PM

Location: Liberty Flexible Workspaces 197 Saint Georges Terrace Perth, WA 6000

In collaboration with the Green Deal Alliance, Innovate Australia is excited to bring together experts to share their position on innovation to create sustainable, circular economies in the Infrastructure and Resources industries.

More information: <https://www.eventbrite.com.au/e/sustainability-in-the-resources-and-infrastructure-industries-tickets-451199900047>



World Renewable Energy Congress XXI

MU Murdoch University

Renewable Energy: A Pathway to Economic Recovery & Climate Change Mitigation

Murdoch University, Perth, Western Australia, 4 – 9 December, 2022

WORLD RENEWABLE ENERGY CONGRESS XXI

Conference hosted by Murdoch University

Date: 4 – 9 December 2022

Location: Murdoch University, 90 South St, Murdoch WA 6150, Australia

The World Renewable Energy Congress (WREC) and Network (WREN) is a non-profit company set up to help foster transfer of renewable energy technology from developed countries to developing countries.

The congress provides a platform for sharing ideas, presenting the latest research, and discussing renewable energy science, technology, policy and associated social issues. The source and nature of energy, the security of supply and equity of distribution, the environmental impact of its supply and utilization, are all crucial matters to be addressed by suppliers, consumers governments, industry, academia, and financial institutions.

More information: <https://www.wrec2022.com/index.php>

MERRY ON MURRAY

Year End Function by Engineers Australia

Date: Tuesday, 6 December 2022

Time: 5:00 – 9:00 PM

Location: Engineers Australia – WA, 712 Murray St, West Perth WA 6005

This year's end of year member event in Western Australia is an extra special occasion as we will be saying farewell to our home on Murray Street. The evening will feature stories across the past 60 years of Engineers Australia in West Perth.

WA President for 2022 and 2023, Shalini Saldanha will present Engineers Australia Medals to our 2022 recipients. The Medal is awarded to recognise engineers in WA who have provided conspicuous service to Engineers Australia and its goals in a local context.

More information: <https://www.engineersaustralia.org.au/node/8941>

NEWS

WIND AND SOLAR DROUGHTS

A 42-year study shows wind and solar droughts in 100% renewable grid not as bad as thought

A newly completed study of 42 years of wind and solar output on Australia's main grid shows that while there is a risk of wind and solar droughts, they are not as bad as thought. And that might change the thinking about how much long duration storage is required, and who should build it.

The risk of wind and solar droughts – often referred to by their German name of Dunkelflaute – and an overdose of instant wind and solar are two of the biggest headaches for managers of a future grid almost entirely dependent on variable renewables (VRE).

The big debate is around how much storage and other back-up is needed for a grid supplied by wind and solar, particularly the long duration stuff from pumped hydro, and other emerging technologies such as solar thermal, compressed air and others.

The answer seems to be: Not as much as some might think.

Full article: <https://reneweconomy.com.au/a-42-year-study-shows-wind-and-solar-droughts-in-100-renewable-grid-not-as-bad-as-thought/>

AUSTRALIA'S FIRST RENEWABLE HYDROGEN MICROGRID POWERS UP WA

Australia's first remote renewable hydrogen microgrid has launched in Denham in Western Australia's Gascoyne region.

Energy Minister Bill Johnston and Hydrogen Industry Minister Alannah MacTiernan were present last Friday to celebrate first hydrogen being produced at the \$9.3 million Denham Hydrogen Demonstration Plant.

Once fully operational in early 2023, the plant is expected to be able to power the average demands of 100 households or 20% of Denham's residents and businesses. It will also offset 140,000 litres of diesel annually and provide a decarbonisation pathway for future energy systems.

The plant includes a 704-kilowatt (kW) solar farm, 348kW hydrogen electrolyser, and a 100kW fuel cell providing an innovative alternative to diesel generators.

Funding has been contributed by the WA Government (\$5.7 million), Renewable Hydrogen Fund (\$1 million) and the Australian Renewable Energy Agency (\$2.6 million). The project is being delivered by Horizon Power and Hybrid Systems Australia.

More information: <https://www.mediastatements.wa.gov.au/Pages/McGowan/2022/11/Australias-first-renewable-hydrogen-microgrid-powers-up-WA.aspx>

SUSTAINABILITY CHAMPIONS



WA SENG is giving companies a free opportunity to showcase their sustainable, innovative practices in our newsletter.

For a chance to be featured, please complete [this form](#).



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