



# The Sustainable Engineering Society

...engineering in harmony with ecology

## SENG-WA Newsletter – September 2023

In this edition of the SENG-WA newsletter, we present events by Engineers Australia and the Electric Energy Society of Australia, as well as the upcoming International Water Association Specialised Conference held in collaboration with Murdoch University. News includes the opportunity to have your say on the ACCU Scheme implementation plan, as well as the recent release of the national Critical Minerals Strategy 2023–2030.

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](mailto: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.

### 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**

*What leadership lessons do you see in the actual responses of governments and the community to COVID and potential responses to climate change?*

**A**

It is clear that governments and communities are most easily motivated by a clear and immediate threat, whether it’s COVID or bushfires, and when there is an obvious “enemy” to oppose. It’s more difficult, but not impossible, when “the enemy is us”. Citizens have shown incredible support for political leaders that have taken measures to protect public health and safety, even when private liberties are temporarily suspended, and a considerable cost is incurred to the economy and public purse. Public leaders could secure considerable support from the political centre of Australian society for action on climate change if they can: a) articulate a clear enemy that doesn’t marginalise sectors of society, b) elevate the immediacy of the threat in people’s minds, and c) propose practical actions to mitigate that threat and deliver benefits inclusively across society.

## EVENTS



### **EA-TEN: WORKING WITH NATURE CHALLENGES AND OPPORTUNITIES FOR ENGINEERS**

#### **Free Event by Engineers Australia (open to the wider public)**

Date: 6 September 2023

Time: 12:00–1:30 PM AWST

Location: Beeliar Auditorium, Engineers Australia Perth

Held on the first Wednesday of each month, the EA-Ten series is designed to nourish your mind whilst connecting to the communities we serve. This September, hear from the Western Australian Biodiversity Science Institute (WABSI), an independent, collaboration mechanism which facilitates end user driven, relevant biodiversity science research. BYO lunch and network with like-minded people, set on Level 10 of Allendale Square, overlooking the Derbarl Yerrigan (Swan River).

Faced with the dual crises of climate change and biodiversity loss, it is vital for engineers to better understand threats to biodiversity to make more informed decisions around risk and sustainability.

This presentation is timely and provides an overview of the global environment, the significance of Western Australian biodiversity as well as the challenges and opportunities for engineers to ensure a greater consideration of nature, to help elevate Environmental, Social and Governance commitments.

Registration: <https://www.engineersaustralia.org.au/event/2023/08/working-nature-challenges-and-opportunities-engineers-50106>

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### **USE OF CONCENTRATED SOLAR-THERMAL POWER (CSP) TO GENERATE ELECTRICITY**

#### **Hybrid Event by Engineers Australia**

Date: 21 September 2023

Time: 4:00 – 5:30 PM AWST

Learn about the development of Australia's first solar-thermal power (CSP) plant near Port Augusta, South Australia.

Concentrated solar-thermal power (CSP) is a technology that uses mirrors or lenses to concentrate a large area of sunlight onto a small area. The concentrated light is then converted into heat, which is used to generate electricity. The VS1 project will be located on land that was previously designated for the Aurora solar project. Vast Solar has been awarded a \$65 million grant from ARENA and plans to commence construction in 2024. The company has retained Worley as the engineers for the project. In addition to VS1, Vast Solar intends to construct a solar methanol plant (SM1) and a hydrogen electrolyser. The Vast technology uses sodium as a heat transfer fluid in generating electricity and storing energy as heat.

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More information: <https://arena.gov.au/projects/vast-solar-port-augusta-concentrated-solar-thermal-power-project/>

Registration: <https://www.engineersaustralia.org.au/event/2023/07/use-concentrated-solar-thermal-power-csp-generate-electricity-49811>

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## **NET ZERO - AUTONOMOUS NETWORKS FOR THE FUTURE**

### **Seminar by Electric Energy Society of Australia**

Date: 18 October 2023

Time: 08:00 AM – 05:00 PM AWST

Location: Mercure Hotel, Perth

The seminar will look at solutions and challenges facing industry in WA to transition to a decarbonised future. Technical solutions for the WA energy systems, plans to develop a network for the future. Presentations on microgrids that can operate with minimal direct control and meet the requirements of Net Zero. Speakers will discuss objectives to achieve the following:

- High levels of renewable energy penetration,
- Management of grid stability,
- Local control system philosophy,
- Pre-planned designed and operational storage and Renewable Energy triggered by price and system operations control.

Registration: <https://www.eesa.org.au/events/Net-Zero-Autonomous-Networks-for-the-Future/>

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## **IWA SPECIALIST CONFERENCE**

### **Conference by IWA and Murdoch University**

Date: 3 – 8 December 2023

Location: Murdoch University, Perth, WA

Good quality water is becoming scarce due to population growth and associated residential and industrial development and pollution particularly in developing countries. Furthermore, safe and adequate wastewater treatment is a significant area requiring urgent attention. It is timely that the sustainable management of water resources is widely discussed, noting that water can be recycled an unlimited number of times after adequate treatment. The principal focus of the conference will be on the necessary infrastructure to provide good quality water in sufficient quantity alongside wastewater management in the most sustainable manner. The conference will:

- Cover topics relating to water supply and wastewater management with special interest for developing countries.
- Discuss decentralised as well as centralised systems and explore new and innovative methods of treatment, a better understanding and assessment of resources and their supporting ecosystems, proper management for conservation and approaches to achieve the dual aim of economic development and ecological sustainability.

Registration: <https://iwa-network.org/events/specialised-conference-on-water-and-wastewater-management-with-special-interest-to-developing-countries/>

### WA'S CLIMATE ADAPTATION STRATEGY PUBLISHED

The WA Government's climate change adaptation strategy sets out the actions that the State Government will take to improve the climate resilience of its infrastructure, assets and services, and to enhance climate adaptation by communities, business and local government. It presents a vision that Western Australia's communities, environment and economy are resilient and continuously adapting to climate change in a forward-looking, fair and collaborative manner.

Strategy: <https://www.wa.gov.au/government/publications/climate-adaptation-strategy>

More info: <https://www.wa.gov.au/service/environment/climate-adaptation-strategy>

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### ACCU REVIEW RECOMMENDATIONS: HAVE YOUR SAY

To maintain the integrity of the Australian Carbon Credit Unit (ACCU) and support Australia's carbon market, ACCU are seeking feedback on proposed changes to the Scheme.

In 2022, an independent panel reviewed the Australian Carbon Credit Unit (ACCU) Scheme. The panel made 16 recommendations to enhance the integrity and effectiveness of the Scheme.

The Australian Government accepted all 16 recommendations in principle and in June 2023, the [ACCU Review Implementation Plan](#) was released.

ACCU are seeking feedback from stakeholders, including carbon farmers and academics, on the implementation of these plans. The areas under consideration to improve the integrity and transparency of ACCU Scheme include:

- new ACCU Scheme Principles,
- information publication requirements,
- defining the ongoing role of the Australian Government as a purchaser of ACCUs,
- delivering a new process for method development,
- identifying Integrity Committee functions,
- establishing appropriate consent requirements for Native Title consent to projects.

More information: <https://www.dcceew.gov.au/about/news/accu-review-recommendations-have-your-say>

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### NATIONAL CRITICAL MINERALS STRATEGY 2023–2030

The Critical Minerals Strategy 2023–2030 sets out the government's vision to grow Australia's critical minerals sector.

The minerals sector is well placed to utilise opportunities during the clean energy transition due to Australia's:

- geological reserves,
- expertise at extracting minerals, and
- experience as a producer and exporter of energy and resources.

The Strategy was shaped by extensive public consultation to understand the barriers and opportunities facing the Australian industry and community. Its objectives are to:

- create diverse, resilient and sustainable supply chains through international partnerships,
- build sovereign capability in critical minerals processing,
- use critical minerals to help Australia become a renewable energy superpower,
- extract more value from our resources onshore to create job and economic opportunities, including for regional and First Nations communities.

More info: <https://www.industry.gov.au/publications/critical-minerals-strategy-2023-2030>

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## PLANNING INSTITUTE AUSTRALIA RELEASE “ACHIEVING NET ZERO EMISSIONS” REPORT

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The Planning Institute Australia (PIA) report has been prepared to show where planning needs to enable early action to reduce carbon in every industry sector. The report applies a ‘theory of change’ approach, asking: if emissions reduction targets are to be met by 2050, what enabling actions would the planning profession have to take and when?

Full report: <https://www.planning.org.au/documents/item/12553>

Additional discussion papers on [Climate Conscious Planning Systems](#).

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### TALES FROM WALES

Use of wellbeing metrics to drive improved sustainability outcomes.

Sophie Howe is the world's only future generations commissioner, a new kind of government official tasked with advocating for the interests of generations to come and holding public institutions accountable for delivering long-term change. She describes some of the people-focused policies she's helped implement in Wales, aimed at cutting carbon emissions, increasing sustainability and promoting well-being as a national goal.



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