



The Sustainable Engineering Society

...engineering in harmony with ecology

SENG-WA Newsletter – July/August 2023

In this edition of the SENG-WA newsletter, we present two conferences: Energy in WA and Advancing Net Zero Mining WA, as well as the successful annual SEVENTEENx event.

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.

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

Is CO2 the real climate disruptor?

A

Greenhouse gases (GHGs) have been, and currently still are, the main climate disrupters. The three main GHGs are CO₂ (carbon dioxide), CH₄ (methane) and N₂O (nitrous oxide). But other 'real disrupters' are now coming into play, caused by the warming created by already emitted GHGs. One example is the melting of the ice caps which allows more solar radiation to be absorbed (by darker ocean) than was previously reflected (by white ice caps). Another is the melting of permafrost which releases previously stored methane, a potent GHG. There are several others, such as clearing of forests (losing their cooling effect) and increased urbanisation (increasing the heat island effect). While GHG emissions have been the real climate disrupter in the past, the major concern now is that there will be an accumulative response to these other effects that will lead to run away climate change. This is why it is critical to dramatically reduce GHG emissions in the very near future, otherwise there is a real risk that we may be too late.

EVENTS

FIRST NATIONS CULTURE AND HOW IT CONNECTS TO THE AUSTRALIAN FIRE DANGER RATING SYSTEM

Event by Engineers Australia

Date: 09 August 2023

Time: 12.00 — 1.30PM AWST

Location: EA Perth, Level 10 Allendale Square 77 St Georges Terrace

Join EA to celebrate Australia's indigenous communities with the Foundation for Indigenous Sustainable Health (FISH) and the Bureau of Meteorology for an opportunity to be part of a discussion on how to connect and care for each other and for country in the event of increasing unexpected bushfires as climate heats.

FISH provides opportunities for First Nations people to share their wisdom and insights to the broader community to teach people how to connect and care for each other and for country, whilst closing the gap and breaking generational cycles of poverty, trauma, and engagement with the justice system.

FISH Director Mark Anderson highlights the importance of learning from the old wisdom of Aboriginal people passed down from generation to generation, particularly about cool burning when it comes to caring for country.

Climate Change Focus Group, Bradley Santos (Bureau of Meteorology), unveils the New Fire Danger Rating System - First Nations resources for AFDRS using artwork of Emma Bamblett (in the event of increasing unexpected bushfires - how to be prepared, and the importance of communication when planning, preparing for fire risk and ensuring we are working together to ensure families and communities are kept safe. We delve behind the sign and understand the synergies and opportunities between the old and the new ways of fire management.

More information: <https://www.engineersaustralia.org.au/event/2023/07/ea-ten-presents-fire-and-indigenous-culture-49796>

22ND ENERGY IN WESTERN AUSTRALIA CONFERENCE

Event by the Australian Institute of Energy and Energy Policy WA

Date: 24-25 August 2023

Location: The Ritz Carlton, Perth

Energy Week is an annual program of events brought to you by the Perth branch of the Australian Institute of Energy (AIE) and Energy Policy WA.

The cornerstone event of Energy Week is the annual Energy in WA Conference. Energy Week events are developed by industry, for industry, with the aim of bringing together a diverse group of energy professionals with expert national and international speakers from across the sector, including energy retailers, consultants, energy providers, and government services.

Other events offer the perfect opportunity to network while keeping pace with emerging trends and issues in the sector. A range of in-person and online events ensure there is something for everyone, with several free events also on offer.

More information: <https://www.energywa.org.au/>

SEVENTEENx
impact worth sharing

PERTH '23
 24-08-23
 5:30PM SBDC
 Engaging the business community with the Global Goals

School of Business & Law | ECU | Small Business Development Corporation

SEVENTEENx PERTH 2023

Hybrid Event

Date: 24 August 2023

Time: 5:30 – 9:30 PM AWST

Location: Level 1 Small Business Development Corporation, Level 2/140 William St, Perth

SEVENTEENx is returning to Perth after the inaugural event last year, aiming to Educate, Engage and Enable businesses around the world with the Sustainable Development Goals.

6 speakers will each present a 17-minute keynote speech, sharing how they are using their business to make an impact in the world, and how they align with the UN Sustainable Development Goals. All speakers are home grown heroes from the Perth area, ready to inspire their community on how to do things a little differently.

A panel discussion and QnA session will follow the keynote speakers.

More information: <https://events.humanitix.com/seventeenx-perth-2023>

Event highlights:

**AMAZING
EVENTS
AND
SPEAKERS**



ADVANCING NET ZERO MINING WA CONFERENCE 2023

Event by MRIWA

Date: 29-30 August 2023

Location: Optus Stadium

MRIWA returns in 2023 in a new venue to bring the latest discussions on net zero mining.

This year is all about accelerating innovation, broadening the net zero discussions to finding critical resources, mining responsibly and creating transparent supply chains to build trust and accountability.

With plenary discussions highlighting cross cutting issues such as funding and financing, market and investment outlooks, policy and infrastructure considerations, concurrent session streams will explore the net zero journey across the mining value chain focusing on:

- Critical Minerals
- Net Zero Emission Mining
- Low Carbon Processing
- Circular Economy

The event will also bring back popular elements of the 2021 and 2022 events including practical masterclass sessions, scheduled time for delegate interaction, audience Q&A's and a networking sundowner.

More information: <https://www.mriwa.wa.gov.au/news-and-events/advancing-net-zero-mining-wa-conference-2023/>

Highlights from the 2022 event:



NEWS

DEVELOPMENT OF SECTORAL EMISSIONS REDUCTION PLANS PROPOSED

An announcement on 18 July from the Albanese government that it would develop six sectoral decarbonisation plans kicks off what is expected to be a tough process of haggling between industry and other stakeholders about net zero timelines and supporting policy and incentives.

In the announcement, Minister for Climate Change and Energy Chris Bowen announced a year-long process of consultation to establish six specific net zero plans for electricity and energy, industry, the built environment, agriculture and land, transport, and resources.

The naming of those sectors comes at the same time as a major report revealed an alarming lack of engagement from Australian businesses about the growing level of carbon emissions caused by IT and data centres.

IT and data centres – not one of the priority sectors for decarbonisation – contribute about 1 per cent of global electricity consumption and up to 2 per cent of global carbon emissions, (equivalent to the airline industry).

However, the growth in demand for data, including the use of artificial intelligence, has the potential to significantly increase the energy consumption of data centre services to around 14 per cent by 2040, the report said.

Full article: <https://thefifthestate.com.au/innovation/sectoral-emissions-targets-announced-now-for-the-built-environments-toughest-job-yet/>

FEEDBACK SOUGHT ON NATIONAL FRAMEWORK FOR RECYCLED CONTENT

The Federal Government has launched a push to introduce a national framework for recycled content traceability in products, to boost demand and confidence in recycled materials.

A discussion paper to inform the development of the scheme has been released. Public consultation is open until 31 August 2023.

The proposed framework would guide businesses on what recycled content data to collect and share, to ensure the right information is available to those who need it.

Traceability allows businesses to track recycled content from its origin to its destination, through the stages of material recovery, reprocessing, manufacturing, distribution and retail.

It will make clear key information including where recycled content has come from and how it has been processed and handled.

This is necessary to ensure recycled content is free of harmful chemicals and suitable for reuse, for example, as new food packaging.

Public consultation is open until 31 August 2023 at: <https://consult.dcceew.gov.au/developing-a-national-framework-for-recycled-content-traceability>

'WHITE' HYDROGEN HUNTED

Excitement about the possibilities of 'white' hydrogen is growing globally. Untapped reserves of geologic hydrogen deep underground could revolutionise the global energy system, offering a virtually limitless source of carbon-free power.

While the transition to renewable energy has primarily focused on wind and solar power, scientists now believe that natural hydrogen generated through geologic processes could provide a far greater supply of energy.

Geologic hydrogen is produced continuously and is believed to be created through a chemical reaction of water and iron-rich minerals.

Full article: <http://www.watercareer.com.au/news/-white-hydrogen-hunted>

More info: <https://www.forbes.com/sites/alanohnsman/2023/06/26/forget-oil-new-wildcatters-are-drilling-for-limitless-geologic-hydrogen/?sh=9a96f5f61c89>



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