

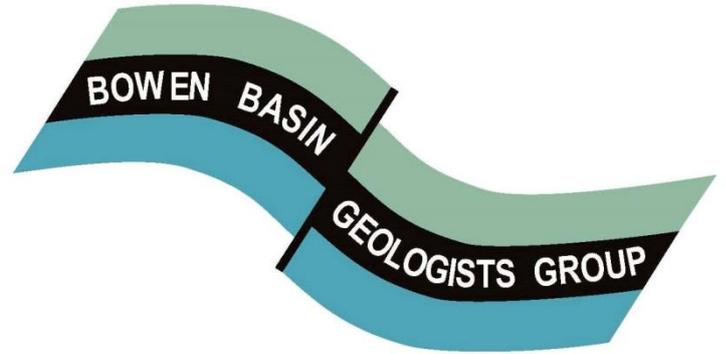


# 2021 BOWEN BASIN SYMPOSIUM

**Coal: Embracing Change and Innovation**

24 – 26 August 2021 • Mackay Entertainment and Convention Centre

*Proudly hosted by the Bowen Basin Geologist's Group*



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**Coal: Embracing Change and Innovation**



## **The Bowen Basin Geologists Group (BBGG) invites you to the 2021 Bowen Basin Symposium in Mackay from 24<sup>th</sup> to 26<sup>th</sup> August.**

The 3-day Bowen Basin Symposium is the premier event hosted by the BBGG, a volunteer-led special interest group of the Geological Society of Australia (GSA). The Symposium has been held every 5 years since its inception in 1985, making this the 8th such event (delayed by one year due to COVID-19). Each event has attracted the attendance of >300 geoscientists and associated personnel who study, explore, evaluate and mine the occurrence of coal throughout the Bowen and other basins in Queensland.

Our theme this year is **“Coal: Embracing Change and Innovation”** as we look to our future, whilst reflecting on where we have come from and where we are today. We acknowledge that our industry is at the forefront of public scrutiny when it comes to Australia’s energy mix and that, as a country, we are in the international spotlight for contributing to global climate change. We also hear the calls for all coal mining to cease immediately. This is despite arguments in favour of the coal sector, which include the substantial contributions it makes to the economies and societies of Queensland and Australia and that there is a demand for the premium quality coal that Australia produces compared with our international competitors\*. However, we know that these arguments are not always seen as reason enough to accept that Australia’s coal industry is going to continue for many decades to come. Therefore, as an industry, we are actively leading change and driving innovation to ensure our coal projects are leaders in the transition to a lower emission world and that we meet and exceed environmental, social and governance (ESG) targets.

Abstract contributions to the 2021 Bowen Basin Symposium programme have encompassed a broad range of topics, including “alternative uses of coal” and the themes of “automation” and “efficiency”. As these concepts are further developed, geologists and other geoscientists may find themselves working remotely – and not in the way that we are necessarily used to. The geologists involved in the exploration of the Bowen Basin some 60 years ago would spend months in remote locations, carrying out on-ground exploration activities and using manual methods to interpret and model the deposits. The recent past has been dominated by fly-in fly-out (FIFO) rosters, with intensive and large-scale exploration and mine development campaigns taking place on site using a hybrid method of manual data collection and computer processing.

As we move into the future, what does the workplace look like for geoscientists? Will improvements in technology result in a shift towards a reliance on remotely controlled technologies for the same activities? COVID-19 has demonstrated to many organisations – particularly in the mining industry – that the operations can still go on. It is possible that the pandemic has promoted organisations to be more innovative in regard to how they collect and use geological information.

We have an innovative and interactive technical program, with poster displays and a sponsors’ exhibition. We are also excited to include 3 excellent Keynote speakers.

Paul Willis<sup>1</sup> is our Symposium Facilitator and his Keynote presentation will discuss **“Lighting a Fire Underneath Innovation”**.

Whilst we are well supported in R&D activities by the Australian Coal Association Research Program (ACARP) and organisations such as CSIRO and the universities, we know there is more to do to make how we operate safely, efficiently and with lower environmental impacts. Paul will highlight how we can continue to be innovative, as well as considering the way we communicate our contributions

and successes to ensuring that we receive community support and continue to attract young people to our professions.

Peta Ashworth<sup>ii</sup> is updating us on “**Society's changing views on Coal**”.

As a profession, we are familiar with working and living in regional towns and communities as well as in major cities. Consequently we encounter a variety of opinions and levels of support from a variety of stakeholders regarding the exploration, mining and utilisation of coal. This often results in objection to and restriction of our activities. Peta will give us a picture of how these views have developed, are distributed throughout the community and how we can best deal with and work with them. The status and role of CCUS and its acceptance will also be considered.

Bernard Salt's<sup>iii</sup> presentation will be on “**Australia's future society and workplace**”.

Bernard will give us a picture of where and how we will live, work, commute, communicate etc. in the next 10, 20 and maybe 50 years, as well as how increased automation may well impact on where we work and our contribution to society.

Our final session will be a Panel Discussion titled “**Our Challenges and Opportunities: The Future of Our Profession**” which will consolidate our prior deliberations and highlight some critical topics. This panel will include Peta Ashworth and Bernard Salt as well as some key people from our industry and will be moderated by Paul Willis.

We hope you will join us in Mackay for this informative, ground-breaking and milestone event.

Please view the Symposium website ([www.2021bbs.com.au](http://www.2021bbs.com.au)) to register or get any other information about the event, or the BBGG website ([www.bbgg.cqu.edu.au](http://www.bbgg.cqu.edu.au)) if you would like to know more about our organisation.

David Green

BBGG / Symposium Committee Chair

## \*KEY FACTS

In 2019-20 Queensland had 50 operating mines which produced<sup>iv</sup>:

- 152.5 million tonnes of metallurgical coal (coking and PCI)
- 86.6 million tonnes of thermal coal

In 2019-20 Queensland exported<sup>v</sup>:

- 134.8 million tonnes of metallurgical coal (coking and PCI)
- 86.5 million tonnes of thermal coal
- worth A\$36 billion

This provided the following direct economic impact to Queensland<sup>vi</sup>:

- \$3.5 billion in royalties
- 32,373 full time employees
- \$59.9 billion Gross Regional Product

### Metallurgical coal

Australia is the world's number 1 metallurgical coal exporter with 177 million tonnes exported in 2019-20 (55% of global exports). 59% of this went to China with India being the next largest recipient with 10%. Metallurgical coal is primarily used to make steel. One tonne of steel made in a blast furnace uses 780kg of metallurgical coal. Metallurgical coal contains more carbon and less ash than thermal coal. Australia's metallurgical coal exports are projected to rise to reach 191 million tonnes by 2025-26 and be worth > \$30 billion (*assumed to be \$US*)<sup>vii</sup>. The largest growth in demand is expected to be in India as it increases its steel coal production from 142 million tonnes to 300 million tonnes by 2030, which will require an increase in imports from 54 million tonnes to 80 million tonnes by 2026.

*Additional info from Minerals Council of Australia (MCA) publication: "Best in Class: Australia's Bulk Commodity Giants", 2021.*

- *Australia exported 184 million tonnes (Mt) of metallurgical coal valued at AUD\$41.3 billion in 2019.1<sup>viii</sup> which was 61% of the global seaborne metallurgical coal trade of 302Mt*
- *more than 96 per cent of Australia's metallurgical coal production is exported<sup>ix</sup>*
- *India, China and Japan are the three major markets for Australian metallurgical coal<sup>x</sup>*

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<sup>i</sup> Paul Willis is an Australian palaeontologist and former Director of the Royal Institution of Australia. He is one of Australia's leading science communicators.

<sup>ii</sup> Professor Peta Ashworth OAM is Director of the Andrew N. Liveris Academy for Innovation and Leadership, and Chair in Sustainable Energy Futures at The University of Queensland (UQ).

<sup>iii</sup> Bernard Salt AM is a columnist, speaker, business advisor and media commentator and is probably Australia's best known demographer.

<sup>iv</sup> Queensland Department of Resources

<sup>v</sup> Queensland Department of Resources

<sup>vi</sup> QRC

<sup>vii</sup> less than current Qld total? May be US\$ cf A\$.

<sup>viii</sup> Australian Government, Department of Industry, Science, Energy & Resources Historical Data, June 2020.

<sup>ix</sup> Commodity Insights, Market Demand Study: Australian Metallurgical Coal, 12 October 2018, p8.

<sup>x</sup> Historical Data, June 2020, Department of Industry, Science, Energy & Resources