MCA releases new report on nuclear energy for industrial heat

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Australia's march towards Net Zero is being restrained by a failure to see nuclear energy as a key solution to reducing emissions.

To decarbonise Australia's economy in the most cost-effective way, we need all energy options on the table, to ease the burden on heavy industry and manufacturers, and ensure they maintain their international competitiveness.

Today the MCA releases its *Nuclear: Decarbonising Australia's Industrial Heat Sector* report, which outlines the difficulty the nation's industrial base faces in reducing emissions, and the obvious solution.

The report pinpoints the critical need to provide Australia's manufacturers, industrial companies and miners with the ability to properly decarbonise its heating and refining operations; where electrification is not possible.

It states that industrial energy demand accounts for 42 per cent of Australia's total final energy consumption, half of which is used for process heating.

Of that supply of industrial heat, 80 per cent is generated by fossil fuels (46 per cent natural gas, 22 per cent coal, 13 per cent oil and other hydrocarbons).

When put in an emissions context, the scenario is alarming, given the lack of current viable alternatives: Greenhouse gas emissions from industrial heat contributed 21.1 per cent of Australia's overall emissions in 2022. That's more than the entire transport sector, and second only to electricity generation.

The mining sector is not only up for the challenge of reaching Net Zero, it is playing a significant role in investing in the technology and infrastructure necessary to reduce emissions not just for our industry, but many other sectors who will benefit from new technology.

Scope one emissions from the Minerals Council's full member mining facilities declined by 9.3 per cent in the full year 2022, while scope one and two emissions fell by more than 7 per cent.

Mining and minerals companies are taking deliberate and urgent action to address climate change. They are leading the charge.

But achieving Net Zero requires a profound change.

It requires an agnostic approach to technology and energy, one that overcomes outdated ideological positions and stubborn mindsets. An approach that puts all the options on the table and explores every avenue to emissions reduction.

We must embrace all options, and as a principle, deploy what we have and develop what we haven't.

That means the development and deployment of nuclear energy, carbon capture and storage, biomethane, and renewable diesel.

These critical energy pathways are being championed by our global peers, attracting vast investment and incentives; hampering not only Australia's competitiveness in the global marketplace, where energy costs and reliability are paramount, but putting Australia at the back of the grid in the race to Net Zero.

If nuclear power is good for Canada, France, Germany, the US, South Korea, Sweden, Belgium, Space and Japan, then why isn't it good enough for Australia?

To view the task of decarbonisation through the important, but narrow lens of electricity generation, fails to comprehend the multi-pronged challenge to reduce emissions in Australia's industrial base.

We need solutions to decarbonise industrial heat, to give our industrial companies, miners and refiners and manufacturers a credible energy source that replaces traditional fossil fuels in the heating process of their operations.

Nuclear energy is complementary to renewables. An industrial furnace may require temperatures beyond 1000 degrees Celsius, and current renewable energy options are not able to meet that challenge. This is where a civilian nuclear sector can step in and assist industry to decarbonise their operations in a competitive manner, without forcing them to look to other jurisdictions for their energy supply.

This is of paramount importance for our emerging critical minerals sector, where building vertical capability will be integral to maximising the economic and social benefits of what will be a once in a century mining boom.

Australia has, in abundance, what the world needs to meet its climate ambition; the critical minerals such as copper, cobalt, lithium and nickel that form the components of electric vehicles, solar panels and wind turbines.

But to secure a vital place in the global supply chain, Australia needs the investment and capability to not only extract such rare earths and minerals, but to process them in a cost-effective and reliable way, rather than have China do it for us, only for us to buy back the finished technology.

Nuclear energy is that enabler.

Source: https://minerals.org.au/resources/mca-releases-new-report-on-nuclear-energy-for-industrial-heat/