

'Lesson learnt': CSIRO regrets not speaking up for CCS

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The CSIRO admitted it should have been more vocal in advocating for the viability and need for carbon capture and storage, which is a widely accepted emission reduction technology in countries such as Norway.

A top CSIRO executive admitted the organisation had let the science of carbon capture and storage, or CCS, "speak for itself" – leaving the energy industry to fight the "noise" of its many critics.



CSIRO's Patrick Hartley says the organisation has to communicate more on its findings to counter the "noise". **Russell Shakespeare**

Federal Energy Minister Angus Taylor on Friday will announce \$23 million in new grants for three CCS projects in Western Australia, as experts warned CCS was more important since Russia's invasion of Ukraine to help secure energy supplies.

CCS involves capturing carbon dioxide from industrial emissions or power generation that would otherwise be released into the atmosphere, and compressing and storing it, typically in depleted underground gas fields.

It has been slammed by high-profile critics such as iron ore billionaire Andrew Forrest [<https://www.afr.com/policy/energy-and-climate/forrest-slams-carbon-capture-as-failed-technology-20211002-p58wne>] and is continually attacked by environmental groups as a failed and overly costly process which only extends the life of fossil fuels.

That leaves the process lacking in social licence in Australia, in contrast to broad public acceptance for CCS projects in Norway, for example, industry sources said.

Patrick Hartley, the lead of CSIRO's hydrogen mission, said "lessons have been learnt", and the organisation has since increased communication and upped engagement on its findings instead of letting its work speak for itself.

"We probably ... we certainly realised it in the last few years ... that we were probably letting the science speak for itself for many years, I think many were," Dr Hartley told the Australian Petroleum Production & Exploration Association conference in Brisbane.

"We've been actually researching CCS for 20-plus years and that work has been well recognised internationally in the science community but perhaps didn't get out there as effectively as we would have liked to the broader community.

"So it's lessons learnt ... but we are much clearer now in understanding how we engage around our science."

Santos chief executive Kevin Gallagher said CCS was unjustly discredited as part of the growing campaign to bring a halt to oil and gas projects in Australia.

He said it would be a vital technology for energy – and therefore national security – in a world aiming for net zero emissions and called on governments around the world to support it.

Mr Gallagher is leading a fightback within the oil and gas sector to restore the credentials of carbon capture and storage, supported by the Morrison government through public funding that would not be available under a Labor government under current policies.

Federal Resources Minister Keith Pitt told the conference that a returned Coalition government would invest \$250 million in carbon capture ventures, and has already committed \$65 million to CCS hubs planned by Woodside and by Mitsui in Western Australia. The Morrison government has committed \$378 million to 17 CCS projects across Australia. The three new projects to receive grants on Friday are Deep C Store (\$5 million), Novalith Technologies (\$7 million) and Calix (\$11 million).

Mr Taylor has also proposed a \$1 billion Low Emissions Technology Commercialisation Fund to be administered by the Clean Energy Finance Corporation (CEFC), which would invest in technologies such as CCS, but the legislation never made it to parliament this term.

Labor urged to review its CCS position

Labor acknowledges the need for the technology but has opposed using public money to support it.

A Labor spokeswoman on Wednesday reiterated the party's view that funds for renewable energy should not be diverted to CCS.

"Labor is the sensible party in the middle on CCS. Labor supports any emissions reduction technology that stacks up scientifically and commercially," the spokeswoman said.

"What Labor doesn't support is the diversion of scarce renewable energy funding to non-renewables, which the government has consistently tried to do."

Labor's resources spokeswoman Madeleine King will use her speech to the APPEA conference on Thursday to thank the industry for working on CCS ventures to help meet net zero.

But Prakash Sharma, an expert in energy and climate change policy at global consultancy Wood Mackenzie, said an incoming government would need to get on board with CCS to help ensure Australia can live up to the expectations of its commodity export customers for cleaner energy supplies.

"So even if the Labor government is not very clear at this stage [on CCS], I think there is maybe the likelihood of they themselves reviewing their own stand, because it is a market demand that probably at some stage cannot be ignored," Mr Sharma said.

"Because Australian gas and LNG is required, and the expectation is that it has to be clean, at least to the extent of scope 1 and scope 2 emissions. So, the government will have to look at [CCS], I think they just can't ignore it."

Mr Sharma said the Russia-Ukraine crisis had increased pressure on CCS to work because of the resulting extreme energy shortages in the market, where fossil fuels seem to be the default option in the short term, driving up emissions.

Mr Gallagher said that while the technology has not been adopted at the scale required, it is proven to work, pointing to its use by US major ExxonMobil since 1970. It is also the only proven technology included in the International Energy Agency's net zero strategy for 2050, with others still under development.



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He called on governments around the world to put the policy settings in place to support the uptake of CCS, which would be funded by private capital just as Santos is funding its \$220 million carbon capture project at Moomba

[<https://www.afr.com/companies/energy/santos-and-beach-energy-spend-165m-on-carbon-capture-and-storage-20211101-p59529>]. That project is supported by the Coalition government's move to allow CCS projects to earn Australian Carbon Credit Units.

"Certainly the policy settings were not there and I think they are developing today, and my request of governments all around the world is to get and continue to put those policies in place, because as [IEA executive director] Faith Birol says, it's almost impossible to get to net zero without [CCS]," Mr Gallagher told the conference in Brisbane.

Dr Hartley said the days of allowing science to speak for itself were over in today's more "noisy" world, and that engagement was vital to increase broader understanding of findings.

"The world has got a much more noisy place, so that doesn't work any more. You have to communicate, and engage ... with your users, your end markets, your communities to really understand their concerns to promote opportunities as they arise and make sure everyone is with you on the journey."

Iman Hill, executive director of the International Association of Oil and Gas producers, said her association brought a balanced voice to the table to counteract the "emotional rhetoric" around oil and gas that was "not based on facts most of the time" and ignored the role of hydrocarbons to make critical everyday products such as mobile phones.

"I wanted to give some colour to the importance of bringing that balanced voice to the table so that you don't get insensitive, sometimes, to be honest, plain stupid policies being put forward that would in the end actually harm society," Ms Hill said.

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