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WORLD-FIRST TECH INNOVATION HIGHLIGHTS OIL AND GAS SECTOR'S DECARBONISATION, ENVIRONMENT AND SAFETY FOCUS

Australia's top oil and gas industry conference has heard how members are cutting carbon emissions, protecting the environment and working safer using extraordinary technological innovations.

From uncrewed vessels for offshore inspections, controlling gas production from remote facilities hundreds of kilometres away, or identifying foreign geckos with devices to protective native species, the Australian Petroleum Production & Exploration Association (APPEA) today said the initiatives showed the sector was shaping the future.

Woodside today told the APPEA 2022 Conference and Exhibition in Brisbane how it had recently utilised Fugro's uncrewed vessel to complete world-first inspections of subsea and pipeline assets in its North West Shelf operations using an underwater robot and vessel that was operated fully remotely via satellite communications technology.

Woodside Subsea IMR Technology Lead Yating Zhao said the uncrewed vessel had reduced exposure to health and safety risks while cutting emissions.

"Similar work is traditionally performed by a Multipurpose Support Vessel with more than 50 people onboard, consuming more than 20m³/day of fuel during transits," she said.

"Application of this technology is forecast to transform the costs of IMR operations vs. traditional methods, effectively eliminate carbon emissions and offshore personnel exposure hours, as well as creating opportunities for a more diverse workforce in the sector."

Woodside also told APPEA's Technical and Business Program how a remote control centre in Perth would control the production of gas over 1,500 kilometres away being piped from the Scarborough gas field to an onshore LNG facility near Karratha.

Woodside Operations Manager Thomas Pritchard said: "At the heart of this approach is the requirement to minimise the time required for personnel to be present on the facility. "This strategy will result in a lower emissions facility with reduced operating costs and offshore exposure hours."

Fellow member Chevron Australia told the conference about its comprehensive quarantine management program on Barrow Island, a Class A Nature Reserve home to its Gorgon project.

Potential non-indigenous species are detected using acoustic sensor devices that analyse animal calls and identified using isothermal amplification of tissue and scat samples, while a mobile app is enabling the workforce to participate in citizen science programs.



Chevron Australia's Barbara Marks said: "Whilst these innovative tools target species with potential to threaten Barrow Island's unique biodiversity, the technology can be adapted for other environmental monitoring."

The conference program has heard how the industry is transforming with technology such as carbon capture storage (CCS) and monitoring emissions with satellites in an effort to decarbonise.

It also heard today how a research collaboration between Beach Energy and the Bass Strait Scallop Industry Association led to greater understanding of scallop biomasses and seismic surveying.

"In turn, this can lead to investment into research to address shortfall in knowledge around impact and technical advances to mitigate potential impact," Beach Energy's Linda French and BSSIA's Andrew Sullivan said in their joint paper.

APPEA Acting Chief Executive Damian Dwyer praised the members on their creativity and drive to take their operations in a new direction.

"These are perfect examples of technological and scientific expertise combining to shape the industry's future," Mr Dwyer said.

"Some are small steps, others are big steps, but they all track in the right direction towards less emissions, more environmental protection or safer workplaces and, ultimately, smarter operations."

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