

Thank you, Shaun.

Good morning everyone.

I'd like to start by acknowledging the Larrakia People as the traditional custodians of the land where we are meeting and pay our respects to Elders past, present and emerging.

It's a pleasure to be with you again in person for this conference, which is always a thought-provoking event and comes at an important time in the national conversation just a week before the global community comes together for COP26 in Glasgow.

This year the Northern Territory has been front and centre for Santos.

Back in March we announced a final investment decision for our A\$5 billion Barossa Gas Project offshore the NT – the biggest investment in this sector in Australia for almost a decade.

Barossa also paves the way for the A\$800 million life extension of Darwin LNG, setting it up for at least another 20 years.

That's good news for jobs and local business opportunities here in the Northern Territory with 600 construction jobs, 350 long-term operational jobs and about A\$2.5 billion to be spent locally.

I am personally committed to maximising opportunities for Territorians – this will not be a FIFO project.

If your work is here, you will live here – and that will bring more families to Darwin which is good for Territory communities and good for our people as well, providing a better work-life balance.

It's not by chance that we are investing here in the Northern Territory – these job-creating decisions can only occur when companies have confidence in the stability of the regulatory environment and open, competitive markets.

Importantly, our industry enjoys bi-partisan support here and that gives us the confidence to make these multi-decade, multi-billion dollar investments which will shape the Territory's future.

Work on Barossa is running on schedule, first steel was cut for the Floating Production System's turret in July, the hull of the FPSO has also now been cut and manufacturing of subsea flowlines and trees is underway.

Cutting first steel for the hull only five months after contract award and three months earlier than planned is the result of a huge effort across Santos and our contractors.

All in all, I'm very happy with how the project is progressing, it's now 15 per cent complete and, pleasingly, within budget.

This fantastic start to work by the team means we are on track for first gas in the first half of 2025.

And the timing could not be better.

A spike in energy demand as the world opens up after COVID and a supply shortage has seen LNG spot prices go to record highs of nearly \$US60 per million British thermal units this month.

This has shaken energy markets in Britain, Europe and parts of Asia, reminding everyone that gas remains a very important part of the energy mix – and I believe it will continue to be so for at least the next two decades.

This is good for the Northern Territory and good for Australia with Barossa being one of the lowest-cost new LNG supply projects in the world – a great competitive advantage to have.

Building on that advantage, we are also rapidly transforming our business to capture the new opportunities that are opening up in low-carbon and clean-burning fuels.

This includes carbon-neutral LNG cargoes and hydrogen, enabled through carbon capture and storage, and nature-based carbon offsets.

On this front, the Northern Territory is also taking a leading position, announcing at the end of September a proposal to fast-track Darwin as an emissions reduction hub.

Santos is proud to be part of this proposal, partnering with the Northern Territory Government, Australia's national science agency, the CSIRO, and other industry participants to assess the viability of a large-scale, low emissions carbon capture, utilisation and storage hub based at Middle Arm.

At the same time, Santos is moving forward with our proposal to repurpose the existing Bayu-Undan facilities and pipeline to Darwin as a CCS project starting up in 2025.

This project would mean more jobs and investment for one of our nearest neighbours, Timor-Leste, as well as for the Northern Territory.

It also has the potential to provide a carbon solution by the middle of this decade, unlocking other gas resources in the region.

These resources could underpin low-carbon LNG expansion, the development of a hydrogen industry and the attraction of new manufacturing industries to the Territory – where they would be close to low-cost gas supplies, close to Asian markets and where they have a CO₂ solution in a low-carbon energy future.

Importantly, Bayu-Undan CCS is supported by the Timor-Leste Government and I was very pleased last month to sign a Memorandum of Understanding with Timor-Leste's petroleum regulator, ANPM, to work together in taking the project forward.

The support of the Timor-Leste government and regulator is critical in the development of this potentially very large carbon reduction project.

We are looking at a storage capacity of around 10 million tonnes of CO2 per annum in Bayu-Undan once production from the field ceases.

We know we have some of the best offshore reservoirs in the region for gas injection because we have injected gas before to improve liquids production.

Bayu-Undan CCS would store Barossa reservoir emissions from project start-up and could provide carbon storage for other resource developments and large emitters in the Northern Territory.

The significant opportunity that exists at Bayu-Undan is attracting strong interest globally and I believe, even dealing with multiple governments and joint ventures, that we will succeed because the merits of the project are so compelling.

These include:

- + Potentially capturing and storing an additional 1.5 per cent of Australia's carbon emissions each year at relatively low cost using proven technology and existing infrastructure.
- + Enabling and accelerating other gas developments and new manufacturing and hydrogen industries to Darwin.
- + Supporting a new revenue-generating CCS industry in a developing country (Timor-Leste).
- + Building a new export industry for Australia to complement Australia's existing trade and investment relationships in LNG with future trade and investment in carbon credits and clean fuels like hydrogen and carbon-neutral LNG.

It's why, in the leadup to COP26 in Glasgow, I've been calling for the opening up of international carbon markets using Article 6 of the Paris Agreement.

Article 6.2 allows countries to strike bilateral and voluntary agreements to trade carbon credits.

Australia has a competitive advantage in carbon storage and international trading in carbon credits could pave the way for Australia to become a carbon storage superpower – just as we have established our position as an energy superpower over the last half century.

One of the most important outcomes that COP26 could deliver is the implementation of Article 6 of the Paris Agreement to facilitate bilateral or multilateral carbon trading between countries.

Carbon prices in some countries are much higher than in Australia, and the ability to sell Australian Carbon Credit Units to countries such as Japan and Korea could incentivise more CCS projects to be developed, providing scale for a stronger domestic carbon market as well.

Just as Australian LNG is valued in these markets because they lack their own energy resources, carbon storage is now valued because Japan and Korea lack the geological storage or land required for nature-based offsets.

On the other hand, because of its geology, Australia has a global competitive advantage in CCS with storage capacity of up to 300 million tonnes of CO₂ per year.

There are now 26 CCS projects operating around the world and storing almost 40 million tonnes of CO₂ each year.

One of the biggest of these is Chevron's 4 million tonnes per annum project at Gorgon here in Australia.

Very soon I am hoping to be able to make a final investment decision on Santos' 1.7 million tonnes per annum project at Moomba in South Australia.

Moomba will also be one of the biggest CCS projects in the world.

The IEA's Executive Director Fatih Birol recently said that reaching net zero goals **without** CCS will be almost impossible.

In fact, the IEA says we will need a hundredfold increase in CCS by 2050, going from 40 million tonnes a year today, to 5.6 billion tonnes.

This is because CCS is the only way to reduce emissions from hydrocarbons at scale.

With 80 per cent of global primary energy still coming from hydrocarbon fuels – roughly the same as 45 years ago – we must focus on making these fuels cleaner and eventually zero-emissions.

In 1992 when the first global climate conference was held, 87 per cent of primary energy came from hydrocarbons – today it is down to 83 per cent, but in absolute terms we are consuming more hydrocarbons today than we were 30 years ago.

So, you can see there remains a huge disconnect between the world's climate aspirations and our energy consumption patterns.

Energy transitions take a long time to achieve and we need to be careful about expectations – there are still almost a billion people today who still burn wood, dung and charcoal over open fires.

All forms of modern hydrocarbons and the technologies that use them are cleaner than that.

Renewables alone cannot replace hydrocarbons in many uses beyond electricity.

This includes direct heating, the feedstock for the fertilisers at the heart of our modern food production system, the feedstock for the synthetics that provide about 60 per cent of the world's clothing fibres – not to mention building products such as cement and poly pipe as

well as the plastics which are endemic in our everyday life such as milk bottles, toothpaste and bread wrappers.

So, over the next 30 years the world will continue to demand fossil fuels.

Barossa is a good example – we have already sold that gas on a 10-year supply and purchase agreement.

Therefore, zero-emissions technologies like CCS that make hydrocarbon fuels cleaner are essential to meet the world's emissions reduction targets and start the journey to a clean hydrogen future.

The IEA's recent Net Zero Report predicted that 50 per cent of natural gas produced in 2050 will be used to make hydrogen.

Earlier this month, US company Air Products announced FID on their US\$4.5 billion hydrogen project in Louisiana which is set to be one of the world's largest blue hydrogen schemes so far.

Hydrogen made using electrolyzers that harness the sun's energy – known as green hydrogen – uses twice as much water as hydrogen from natural gas.

And, to meet IEA forecasts you would need more electricity than the total available in the US and China today, combined, along with enormous amounts of land.

The goal is to get rid of emissions, so it doesn't matter at the end of the day whether you use natural gas or the sun to make zero emissions hydrogen and you can call it whatever colour you like.

Affordability is also a key goal – we must take into account the price that our customers will pay.

If we look at the costs today, the IEA in their recent report on the role of low-carbon fuels in the power sector have green hydrogen costing at least three times that of hydrogen made from natural gas with CCS.

The IEA report finds that natural gas with CCS is currently the lowest-cost production route for low-carbon or clean-burning fuels.

This cost advantage is what positions hydrogen made from natural gas with CCS so strongly – and don't our opponents know it!

The price is realistic and on the horizon can be competitive, whereas other types of hydrogen have a much longer lead time to become cost- competitive.

If we look at current prices in Australia, hydrogen made in Moomba from natural gas with CCS would be about A\$14 per gigajoule before transport.

Green hydrogen made at Port Kembla would be at least A\$38 per gigajoule before transport – a price Australian manufacturers could not pay.

So very similar to the IEA's estimate of a threefold price differential with green hydrogen.

This significant price barrier is why at Santos we are embarking on a very deliberate strategy to build our clean hydrogen strategy first through natural gas and eventually transition to renewable hydrogen technology.

This journey will be completed over the decades to come.

According to a recent study for the Clean Energy Finance Corporation, natural gas with CCS produces the lowest-cost clean hydrogen in Australia right through the 2030s until the costs of hydrogen made with electrolyzers becomes cheaper.

I believe the oil and gas industry has a competitive advantage in CCS and clean hydrogen production because we understand how to safely produce, process, store, transport and distribute flammable gaseous products.

We have the infrastructure, and existing customer base, safety protocols and the expertise that comes with more than 60 years of experience.

Just last week, former Australian chief scientist and current Special Adviser to the Australian Government on Low Emissions Technology, Dr Alan Finkel said *"Blue or green, our future with hydrogen is bright."*

In Dr Finkel's commentary he specifically highlighted the importance of CCS and called out those trying to differentiate hydrogen by colour.

He said, *"The existing colour code that refers to blue, green and other colours of hydrogen is emotive rather than focused on the only thing that counts: atmospheric emissions of carbon dioxide."*

In closing, as I said earlier this year when I announced the Barossa FID and Darwin life extension, Santos has locked in our long-term commitment to the Territory.

With much more activity to come in the lead up to Barossa first gas, preliminary civil work to prepare for the Darwin LNG life extension project has commenced.

We have also been working onshore in the McArthur Basin, drilling a horizontal well at Tanumbirini that encountered excellent gas shows.

A second well, Tanumbirini 3H, was spudded from the same drill pad on 23 August and we are looking forward to production testing of both wells which will prove up the potential of this exciting basin.

As always, there is plenty going on and I look forward to the week's discussion as part of this very important week for our industry and the Northern Territory more generally.

I hope to get around and speak to as many of you as possible over the coming days.

At Santos, we strive to be a part of the communities where we operate. We will do the right thing, protecting water and the environment, and we are committed to supporting local employment, local businesses and Indigenous communities in everything we do.

Thank you.