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Santos

6 June 2023

The Hon Chris Bowen MP
Minister for Climate Change and Energy
PO Box 6022
House of Representatives
Parliament House
Canberra ACT 2600

Via email: Andrew.Garrett@industry.gov.au

Dear Minister

Thank you for your letter received 5 May 2023 and for taking the time to meet with me in April when you were in Adelaide. I am writing to you today having just returned from a visit to investors, financiers, customers and government stakeholders in Japan and Korea. Despite my assurances, I received very strong feedback regarding Australia's reliability as a partner in energy resources trade and investment. There are real concerns about the retrospectivity of recent policy changes in Australia, the threat to energy security for their economies and availability of large-scale CCS providing a CO2 sequestration solution for their economies.

While I appreciate you taking the time to respond to the issues I raised, I remain deeply concerned about the retrospectivity of the changes to the Safeguard Mechanism and the way in which they effectively target a single project, being the Barossa Gas Project. Barossa was already under construction and a final investment decision was taken two years prior to the changes.

You may not have seen the public comments made by JERA's Global CEO on 31 May 2023, which were widely reported in Asia:

"Traditionally, we have been buying a large volume from Australia because it has been politically stable despite relatively high costs as a stable supplier," Kani said. "However, if it turns out it is not the case suddenly that would change a premise considerably."

Despite JERA's efforts to boost its renewable capacity, should it does not happen in time, the company might need to avert its supply risk from exploring such new supply sources in Africa or the Middle East, Kani said.

"At this point, we do not have a clear answer yet but internally we are having quite serious discussions, honestly speaking," he added.

JERA is Japan's largest power generation company and an offtaker and investor in Barossa and Darwin LNG. Santos has sold its equity share of Barossa gas to another Japanese company. These projects are already factored into Japan's energy security out to at least 2040 on the basis of Australia's long-standing reputation as a safe place to invest with a reliable and stable approvals and fiscal regime, and as a place that would always honour its contracts.

Santos and our joint venture partners, JERA and Korea's SK E&S have been working proactively and voluntarily to reduce Barossa's carbon emissions through development of the proposed Bayu-Undan Carbon Capture and Storage (CCS) Project, which would make Barossa and Darwin LNG amongst the lowest-carbon LNG projects in the world. It is disappointing that this was not recognised and that the

government's retrospective changes to the Safeguard Mechanism were not accompanied by the sense of urgency that is required of governments to put in place the regulatory frameworks necessary to enable this project to proceed. I was particularly concerned to hear Mr Shane Gaddes of your Department say at the parliamentary inquiry into the London Protocol on 26 May 2023 that:

"...for projects like the Bayu-Undan project, where we would need a regulatory framework on the Timor side—so that's one where Australia would seek to export CO2 rather than import—we would need to be satisfied that there was a sufficiently robust regulatory framework on the Timor side, because it's not a party to the London protocol. So that would take, potentially, considerably more than seven years, for the Timor side to set up their regulatory framework and for us to put the gas on the other side."

When asked whether this meant 10 years, 15 years or 20 years, Mr Gaddes said:

"I couldn't speculate because it would depend on the motivation of the regulatory agencies and the companies involved. If they're all sufficiently motivated and the incentives are right, it could happen very quickly."

Santos and our joint venture partners are highly motivated and **I am therefore seeking your commitment to ensure the regulatory agencies are also sufficiently motivated to have the necessary frameworks in place within the next year so the joint venture partners can take a final investment decision on Bayu-Undan CCS and commence construction.**

With Barossa still targeting a 2025 start-up and the Safeguard Mechanism now requiring net-zero reservoir emissions from day one of production, time is of the essence to get Bayu-Undan CCS developed. The number one prerequisite is the regulatory frameworks which only the Australian and Timor-Leste governments can deliver. We are working constructively with the Timor-Leste government for which this project is important to go some way towards replacing Bayu-Undan production revenue and to provide ongoing skilled, secure and well-paying jobs for Timorese workers. However, a concerted tripartite effort will be required to deliver the necessary regulatory frameworks in both jurisdictions.

The uncertainty of the timeframe before we can take a final investment decision makes access to Australian Carbon Credit Units (ACCUs) a critical issue for Barossa and Darwin LNG. When we commenced front end engineering and design for Bayu-Undan CCS in March last year, we had been hoping to be in a position to make a final investment decision this year (per our ASX release), but there has been little movement forward on the required regulatory frameworks over the past year.

ACCU availability

Therefore, while I appreciate your assurance that market conduct will be monitored closely for manipulation or inappropriate conduct, my concerns about overall increased demand and the consequential impact on supply remain. In your letter you refer to supply that is anticipated to be developed in response to demand. This is not sufficient to assure Santos and our joint venture partners that we can commence gas production from Barossa with the certainty that we will be able to access sufficient ACCUs to meet our obligations.

Until such time as CCS opportunities are available, it is critical for us to have a guarantee that there will be sufficient market supply of ACCUs or Safeguard Mechanism Credits (SMCs) to offset Barossa's reservoir CO2 emissions for the life of the project.

Given baselines will remain production-adjusted, if Barossa does not have sufficient access to abatement or offsets, the project's only option to remain compliant would be to cease production, as far as we are aware. This is a risk not acceptable for the joint venture partners and a risk on which we need urgent and definitive clarification from you.

I therefore seek your reconsideration of our previous request for a guarantee of carbon credit availability to cover Barossa's compliance liability in a timeframe that enables the joint venture to make decisions on the timing of project start-up. Once started, the project must continue production to meet its obligations under already executed long-term gas contracts which extend to at least 2035.

Similarly, we seek a guarantee that the use of offsets will be an acceptable way to meet net reservoir CO2 requirements for the purposes of all necessary project approvals, including from NOPSEMA, for the life of the project.

Further, given the retrospectivity of the policy change and the way in which it targets one particular project, Santos and our joint venture partners consider there is a case for carbon credits to be granted on a zero-cost basis for a period of time while Bayu-Undan and/or other CCS options are developed. This could be constructed so as to create alignment and incentivise both the government and the joint venture to focus on accelerating the development of Bayu-Undan and other CCS options in the region.

No discount or limiting of ACCUs

I appreciate your confirmation that you do not plan to limit or discount the use of prescribed carbon credit units by regulation. However, I note your reference that such changes might be considered in the 2026-27 review of the Safeguard Mechanism. The continuing threat of further retrospective changes to the Safeguard Mechanism for existing and/or sanctioned projects is of great concern to Santos and our joint venture partners.

Santos has an active interest in the items flagged for review in 2026-27, including international credits given our operational footprint in Papua New Guinea and Alaska. I would welcome the opportunity for Santos to engage further on these matters as the Department's work on the Safeguard Mechanism develops.

Darwin LNG treatment

As you are aware, the changes to the treatment of reservoir CO₂ will not only affect the Barossa project, but will have flow-on effects to the Darwin LNG plant, despite it being an existing facility with different investor interests.

Your letter outlines that different treatment for the CO₂ vented at the existing DLNG plant would be inconsistent with your policy. However, it is also inconsistent with the personal assurance I was given at the time of announcement that Darwin LNG as an existing facility would not be affected and the government's repeated claims that the policy changes would not affect existing facilities. Darwin LNG is an existing facility which has been processing gas from Bayu-Undan since 2006.

There will be no change to the emissions profile at Darwin LNG as a result of Barossa gas coming online. Darwin LNG was designed to handle gas with a CO₂ content of approximately six per cent and has regulatory approvals in place for that. Bayu-Undan gas at the inlet to Darwin LNG has the same reservoir CO₂ content as the gas that will come from Barossa into Darwin LNG following initial treatment on the Barossa offshore facility. Hence Darwin LNG would continue to operate much as it does today. The Safeguard Mechanism changes unfairly penalise Darwin LNG which is an independent joint venture entity that is being paid by the Barossa joint venture to process its gas.

Again, I seek your reconsideration of our previous request to honour the government's commitment to apply the Safeguard Mechanism changes only to new facilities, not existing facilities such as Darwin LNG. Further, Santos requests that Darwin LNG be subject to the new baseline reduction guidelines to 2030 rather than having the production variable for reservoir emissions at Darwin LNG set at zero. Darwin LNG is a trade-exposed facility no different to a manufacturing facility that does not control gas feedstock quality.

Bayu-Undan CCS

While I appreciate your assurance that it is not yours or the government's intention that the Safeguard Mechanism changes would adversely affect the future of the Barossa project, this does not reflect the reality of the consequences to us of the policy changes. Reservoir CO₂ is a factor of the natural geology and geochemistry of any gas field, not any controllable process factor. It is therefore of critical importance that the Barossa joint venture is able to realise opportunities for CCS, noting that the fastest and lowest-cost option is expected to be Bayu-Undan.

Santos has been proactively and voluntarily pursuing a CCS solution for Barossa's CO₂ emissions for the past two years independent of the Safeguard Mechanism changes. As you know, the proposal involves using existing infrastructure and depleted reservoirs associated with the Bayu-Undan gas field located offshore Timor-Leste after gas production ceases later this year.

The Barossa joint venture has already taken the significant risk of making a final investment decision and committing approximately US\$700 million for the Darwin Pipeline Duplication Project, specifically to enable Bayu-Undan CCS. This risk has been taken despite prerequisite regulatory frameworks not yet being in place to clear the way for a final investment decision on Bayu-Undan CCS.

To support a final investment decision for Bayu-Undan CCS, Australian Government action is urgently needed to ratify amendments to the London Protocol, pursue and execute bilateral agreements with Timor-Leste, grant CO2 export licences and prioritise the processing and determination of regulatory approvals. The timeframe for Bayu-Undan CCS is almost entirely dependent on the implementation of actions by governments (both Australia and Timor-Leste) that are outside Santos' control. As I mentioned earlier, this project is important for Timor-Leste to help replace Bayu-Undan gas production which has provided the vast majority of the country's revenues and gross domestic product for many years.

I appreciate your assurance that the government is committed to implementing policy frameworks that will provide certainty for the development of emissions reduction projects like CCS, however, as discussed above, I am extremely concerned that your department is contemplating timeframes of seven years and more as being potentially necessary and acceptable. As above, **I am therefore seeking your commitment to ensure the regulatory agencies are also sufficiently motivated to have the necessary frameworks in place within the next year so the joint venture partners can take a final investment decision on Bayu-Undan CCS and commence construction.**

Further, I seek your commitment to treat CCS on a technology-neutral basis in all government programs for clean energy technology as is the case in the United States and many other jurisdictions.

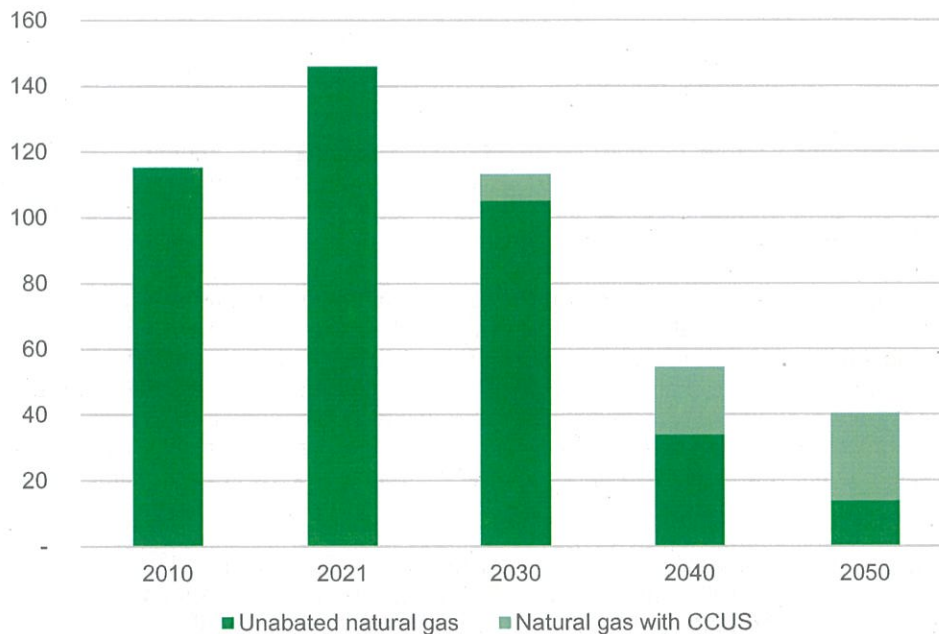
CCS technology is proven and has been operating around the world for decades, and the rapid acceleration of CCS deployment globally at scale is critical in any credible pathway to net zero by 2050. Australia has an enormous competitive advantage in CCS on many fronts, yet we are at risk of losing this new clean energy industry opportunity to other countries such as the United States, Indonesia and Malaysia.

Role of Gas – Future Gas Strategy

I acknowledge the Government's imperative to meet the recently legislated 43 per cent emissions reduction target by 2030. Abated natural gas will have a significant and growing part to play in Australia's and the global energy mix for decades to come. Even the most aggressive climate scenarios see the world demanding about 40,000 petajoules of natural gas per year in 2050, nearly seven times Australia's production today. By 2050, almost 70 per cent of global gas demand would be served with abated natural gas through CCS. Australia's gas industry will remain important for Australia and Asia for decades to come, with gas demand in Asia forecast to grow by around 50 per cent between now and 2050 (Wood Mackenzie March 2023). As noted in the International Energy Agency's World Energy Outlook 2022:

"Cutting investment in fossil fuels ahead of scaling up investment in clean energy pushes up prices but does not necessarily advance secure transitions."

Natural Gas Demand – World (EJ)



International Energy Agency World Energy Outlook 2022

Australia has a responsibility to use its competitive advantage in both gas and CCS for the betterment of the nation and to support regional stability by providing energy security and carbon solutions for our trading partners and allies in Asia.

Failure to deliver on this opportunity will not mean gas consumption reduces, but it will mean Australian jobs, business opportunities and economic development associated with gas development are lost to places like the United States, the Middle East, Russia and Africa. Wood Mackenzie’s March 2023 global gas outlook (attached) shows production in the United States and Qatar growing rapidly to meet demand in 2050, Russia and Mozambique also growing production, but Australian production slowly declining. This is despite our enormous competitive advantage in gas, our proximity to Asian markets and our competitive advantage in being able to offer large-scale CCS to manage not only Scope 1 and 2 emissions, but Scope 3 emissions as well. Under current policy settings, Australia is set to simply lose market share without any emissions reduction benefit as gas demand continues to rise in our region. A corollary of this is that the Australian domestic gas market will suffer as domestic customers lack the scale to underpin large-scale gas field development for their own needs, necessarily exposing them to imports and unmitigated international gas prices over time.

While I was in Asia last week, I was approached regarding two opportunities for green steel manufacturing in Australia, using abated gas through CCS and, depending on technology progressions, potentially transitioning to synthetic methane (or e-methane) or hydrogen over time. These are very exciting industry opportunities for Australia that could bring enormous economic benefits to the country for decades to come. However, it was also made clear to me that Malaysia, because of its support for both gas and CCS, is a strong competitor for Asian investment in green steel.

The recent budget announced the government’s intention to develop a Future Gas Strategy. This is welcomed by Santos and I strongly request that industry be involved in the development of this strategy. Given the role gas will play in supporting cleaner, affordable and reliable energy supply in Australia and Asia, it is imperative those experienced in energy markets and production are involved in its development. Whilst government may be advised to exclude the industry from this process, there is a compelling case to include the sector that has for decades invested in energy resources and development in this country, has developed skills and expertise in energy production, handling, storage and transport, and in energy markets in both Australia and Asia. As United States’ Energy Secretary Jennifer Granholm said when she addressed the Sydney Energy Forum last year:

"This transition does not have to spell the end for today's fossil fuel companies. Their products will continue to play a role in the years ahead. And their assets, experience, and skilled workforce will play a role for decades to come. As the United Nations' Intergovernmental Panel on Climate Change has made clear, the only plausible pathways to net-zero involve carbon management solutions—carbon capture and storage, direct air capture, so forth. These fossil fuel companies can stake out a place on the other side of the transition by helping us pioneer those solutions."

I would go further and add that, without the involvement of these companies, the energy transition will be slower than governments want because their capital and their expertise is essential to drive technology development, accelerate deployment of large-scale carbon sequestration and negative emissions technologies, and drive energy market transitions with customers.

In closing, Santos took a final investment decision on Barossa in March 2021 following acceptance of the Offshore Project Proposal by the regulator, NOPSEMA, in March 2018, subsequent environment plan acceptance for both pipelaying and drilling and the award of a production licence by NOPTA in July 2020, conferring the lawful property right to extract and sell gas from the title area. Since that time, the Barossa joint venture has spent around US\$1.6 billion developing the project and has made further construction and operating financial commitments of approximately US\$2.9 billion. The project is more than 55 per cent complete. Barossa gas has already been sold under long-term contracts with an expectation of first gas production in 2025.

Resolution of the issues I have raised above is critical for our decision making in relation to timing and other project matters, and I would appreciate your urgent consideration of them. Given some of the matters covered in my letter extend into the portfolio of the Minister for Resources and Northern Australia, I have copied Minister King.

Yours sincerely



Kevin Gallagher
Managing Director and Chief Executive Officer

cc: The Hon Madeleine King MP, Minister for Resources and Northern Australia