

Submission to IPC – Response to responses by DPIE and Santos

Dear Commissioners,

The first thing I need to say is that as an individual without the resources of either the Department of Planning, Industry and Environment (interesting that environment comes third in this title) or Santos I consider that the deadline of 5:00PM 21 August 2020 was too tight. Given that this development has been talked about since 2014 I do not see why another week would have been a problem. Who decided to set this deadline? Did you as Commissioners set it or did the relevant NSW Minister? I would hope it was the former rather than the latter.

Notwithstanding the above I believe that there are serious flaws with the information being provided by both Santos and the Department of Planning, Industry and Environment (DPIE). This first becomes evident through the rather crude content analysis I have performed on the two relevant documents, noted in the table below. (The third document was analysed to develop a baseline against which to measure the other two documents.) I can already hear the responses from Santos and DPIE which I presume will include words such as “unprofessional”, “simplistic”, “superficial”. I would agree with them in the detail that could emerge with further analysis which I had neither the time or the resources (such as Leximancer or NVivo) to complete. However, as I gaze out the window of my study onto a swimming pool that is crying out for me to do something, I think that this is not a level playing field. How can an individual like me compete against the resources of Santos and the DPIE? Then I straighten my back and my resolve: I do consider that in broad terms I have at the very least established a case for more work to be done in order that you as Commissioners make an informed decisions in all aspects of your functions and work going forward.

Content Analysis of the Three Documents – Word Search

All documents were PDFs which allowed me to use the Adobe Acrobat Reader word search facility. The results of these word search are summarized in the table below. To remove the confounding factor of page length for each of these documents, a percentage per page metric is also shown.

Keyword	Search Results					
	Narrabri Gas Project – State Significant Development (SSD6367), June 2020 (392 pages)		Narrabri Gas Project – Response to IPC Questions, 14 August 2020 (47 pages)		Narrabri Gas Project (SSD 6456) - Submission to IPC following public hearing, 10 August 2020 (127 pages)	
	Instances	% per page	Instances	% per page	Instances	% per page
threatened	35	8.9%	4	8.5%	14	11.0%
endangered	10	2.6%	0	0.0%	0	0.0%
bushfire	14	3.6%	1	2.1%	36	28.3%
bushfires	0	0.0%	0	0.0%	5	3.9%
specie(s)	98	25.0%	6	12.8%	17	13.4%
Koala(s)	20	5.1%	0	0.0%	30	23.6%
COVID, COVID-19	1	0.3%	0	0.0%	6	4.7%
pandemic	1	0.3%	0	0.0%	4	3.1%
recession	0	0.0%	0	0.0%	0	0.0%
economic	83	21.2%	14	29.8%	75	59.1%
benefit(s)	47	12.0%	7	14.9%	93	73.2%
environment(al)	222	56.6%	45	95.7%	73	57.5%

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	Instances	% per page	Instances	% per page	Instances	% per page
social	63	16.1%	10	21.3%	43	33.9%
costs	16	4.1%	7	14.9%	96	75.6%
projections	0	0.0%	0	0.0%	3	2.4%
require	35	8.9%	10	21.3%	13	10.2%
required	105	26.8%	9	19.1%	36	28.3%
requirement(s)	77	19.6%	0	0.0%	35	27.6%
commit	0	0.0%	0	0.0%	0	0.0%
commitment	8	2.0%	2	4.3%	8	6.3%
committed	37	9.4%	3	6.4%	20	15.7%

Using more sophisticated content analysis tools would allow greater definition of what these word searches reveal that were completed by me rather than by software. For example, with respect “economic” and “benefits” not only is there a high incidence of these words in the two documents, but also there is a high correlation between them. The same correlation does not exist between the words “economic” and “costs” (although it is interesting that there is a higher incidence in the second DPIE document when compared to the first one). Therefore, these two documents have a bias by focusing more on the economic benefits of the Narrabri Gas Project than considering the economic costs. Further it is interesting to note the relationship between the words “social” and “economic”. There are many instances where a social cost will be relieved by an economic benefit. However, the causal connection is not really explained: it is merely presumed to exist. So social costs will be eliminated through the (supposed or proposed) economic benefits that the NGP will provide. Again, to repeat, there are deeper and more sophisticated relationships that will be found about these documents by a deeper content analysis which the time constraint did not allow me to do. But that does not mean it should not be done and so I recommend that:

The IPC contracts with professional content analysis consultants to conduct a more rigorous and deeper content analysis of these two documents and any other document relevant to the NGP proposal.

The Magic Kingdom of Narrabri and its Surrounds

The second major issue I have with these two documents (as well as others that have preceded them) is their presumption that somehow Narrabri, its immediate surrounds and the Pilliga forest are part of a magic kingdom that is somehow immune from the tectonic changes we have witnessed since the beginning of 2020. These two events are the devastating bushfires that struck the eastern states of Victoria, NSW, and Queensland between December 2019 and February 2020. These bushfires also had their most significant impact on NSW compared to the other two states.

When I searched the documents for incidences of bushfire and bushfires what emerged from these documents is a lack of recognition that these devastating bushfires occurred. It is as if time has stood still. For example, most instances of these words (“bushfire” and “bushfires”) there is a focus on

what needs to be done to ensure that the NGP is not a source of a bushfire. For example, on page 40 of the Santos document is the following:

being started by a Project related activity during construction or operation. The risk of a bushfire being caused by the Project was assessed with consideration of both Project activities and surrounding environmental factors. The assessment found that with the implementation of appropriate mitigation and management measures, the:

- *risk of uncontrolled loss of gas leading to a fire or explosion was low to very low;*
- *the likelihood of bushfire ignition from a Project related activity was remote; and*
- *the overall risk was assessed to be medium given the potential consequences associated with bushfire.*

On page 44 of the Santos document is the following:

The potential for windblown debris to pass through safety flares or pilot flares and result in the ignition of a bushfire is considered negligible. This is because of the distance to potential ignitable sources of wind carried debris, and because the heavier debris types required to ignite and spread fire are most likely to be blown along or near the ground, not at the height of the flares. Small airborne particles (if they were to pass through the flares) are expected to incinerate within the flare or burn to extinction prior to reaching the edge of the sterile zone.

Astoundingly in the DPIE document there is no mention of bushfire or bushfires. The Santos document seems to have an inside looking out approach. But what if the bushfires came to the Pilliga? How will the NGP and its gas wells cope in this scenario? On this question, which deserves a better answer than provided by either document, I would suggest that more work needs to be done.

These bushfires were extensive, covering 5.4 million hectares or 7% of NSW's land area and 37% of NSW national parks. So many trees and so much other vegetation lost. Tragically, as documented by the DPIE¹:

As of 3 February 2020, there is no firm estimate of the number of animals killed in the 2019–20 fires. We do know that the fires have had a devastating effect on native animals and have affected the habitat of at least 293 threatened animals and 680 threatened plants (as of 3 February 2020).

What does the DPIE document state? As shown in the table above there are low counts for "threatened", "endangered", "bushfire", and "bushfires". Astoundingly, "Koalas" are not even mentioned once. Other sources quote up to one billion animals and lord knows how many insects were lost in these bushfires. For the Santos document "Koala" is mentioned 30 times. In most cases the discussion is inward looking. For example, on page 35 of the Santos document we find the following paragraph:

Historically, the Pilliga forests have had a koala population of variable density. Population trends appear to have fluctuated from common in the late 1800's to sparse after 1930, then increasing from the early 1980s until the late 1990s (van Kempen 1997, Kavanagh and Barrott 2001). However, it was not until recent decades that repeatable research methods provided a strong measure of koala abundance.

¹ DPIE, 2020, <https://www.environment.nsw.gov.au/topics/parks-reserves-and-protected-areas/fire/park-recovery-and-rehabilitation/recovering-from-2019-20-fires/understanding-the-impact-of-the-2019-20-fires>, last accessed 21 August 2020.

To say that these massive ecological disasters that have occurred across NSW have little or no impact on the magic kingdom of Narrabri and the viability of the NGP is at the very least a massive leap of faith.

The Magic Kingdom of Narrabri will also be spared the ravages to the Australia economy caused by the COVID-19 pandemic and the Morrison government's decisions to shut down the economy in response to this health crisis. The current economic downturn has been described as the worst since World War II. Significant sectors of the economy are still constrained, and a large part of Victoria is still in varying forms of lockdown trying to manage its second-wave outbreak. The Federal budget which as late as December 2019 was heading towards a small \$5 billion surplus. This small surplus has turned into an \$85.8 billion deficit and an "eye watering" projected \$184.5 billion deficit in 2020-21. The DPIE document has no instances of "COVID", "COVID-19", "pandemic" or "recession". The Santos document has 6, 4 and zero instances. Both the DPIE and Santos has seemed to have made the same heroic presumptions: citizens of the magic Kingdom of Narrabri are all immune to COVID-19 and that the kingdom will not suffer any adverse impacts due to the downturn of the Australia economy in general. For example, the Santos document on page 3 states:

Simply, the Narrabri Gas Project will offer large volumes of gas to the domestic market on long-term contracts. This will support Australian industries like manufacturing to drive the economic recovery out of the COVID-19 pandemic.

Indications are that the recovery will be long and slow which indicates that this assertion is somewhat heroic. In the Acil Allen Consulting – Report to Santos: Narrabri Gas Project – Update of the Economics, the COVID-19 pandemic and its economic consequences are sparsely mentioned and in most cases there is an assertion that the economic downturn will be brief followed by a quick recovery. For example, on page ii of this update is the following:

Short term spot market gas prices in eastern Australia increased from around 2016 for a number of reasons. Actual supply was lower than anticipated from Gippsland basin producing fields and from delays and closures of other fields in the southern states. This happened at the same time that low cost ramp gas was being absorbed into the LNG export facilities in Queensland. Spot prices rose to as high as \$14 per GJ in 2016 and stayed between the \$7 per GJ to \$11 per GJ level until around September 2019, when they fell as a result of new supply coming on stream in Australia and from weaker international LNG demand due to a historically warm northern hemisphere winter (which resulted in Queensland LNG exporters diverting more supply to the domestic market). Spot prices have then continued lower in the first half of 2020 primarily due to weak demand in part due to the COVID-19 pandemic. However, as demand in Australia recovers and international LNG markets (particularly in Asia) rebalance, spot market prices in Australia are expected to rise over the coming years.

On page vii is that following paragraph:

The number of jobs created for NSW is 17 per cent higher in the Moree-Narrabri region than in the original EIS and 78 per cent higher for NSW. This increase is a result of relaxing the national employment growth constraint in the modelling done for this update.

Incredulously, even within the broader context of a severe economic downturn there is the following on page 5 of this update:

The latest short-term outlook contained in the 2020 GSOO is more optimistic about supplies in the short term but identifies emerging concerns from around 2024 onwards. This is the subject of the following discussion.

This reference to GSO 2020 is to a January 2020 document. Finally, there is the following on page 25 of this update:

Base case

The revised table for the project is provided in Table 5.1. The revised NPV compared to the original NPV is as follows:

- \$1,985 million compared to \$1,535 million for the self-generated electricity option*
- \$2,088 million compared to \$1,639 million for the grid supplied electricity option*

The revised benefit cost ratios for project compared to the original benefit cost ratios are as follows:

- 1.58 compared to 1.39 for the self-generated option*
- 1.62 compared to 1.43 for the grid-supplied option*

This indicates that things have improved since the initial submissions! I would think that what has happened to the Australia economy since March 2020 has fundamentally compromised most of the analysis provided in this update and there will need to be a root and branch re-assessment of the cost benefit analysis provided. It would appear Santos's approach is to assert that the NGP will only be impacted in a minor way from the current economic downturn and probable long and slow recovery from it. To do anything will involve it and its consulting firm in a lot more work. Do you as Commissioners consider that this work needs to be done or will you accept the Santos line?

Comments on Projections

The cost-benefit analysis by Acil Allen Consulting covers the period 2021-2046. Given that even with all the resources it has at its command Federal Treasury finds it difficult to accurately project a budget outcome for the following year or even forward estimates for the next three years, I find it very heroic that this consulting firm can reliably predict outcomes over a period of 25 years. Most forecasters would agree with me to say that a forecast window of five years is about the limit in which you can develop reliable forecasts. Yet Acil Allen Consulting disagree with this view, stating on page 35:

Over the period 2021 to 2046, the Narrabri Gas Project is projected to increase real incomes raising the ability of residents to consume goods and services and to accumulate wealth in the form of

financial and other assets. This includes an increase in the real incomes of:

- residents of the Moree-Narrabri region by a cumulative total of \$833 billion, relative to the base case (with a net present value of \$403 million, using a 7 per cent real discount rate).*
- an increase of 38 per cent and 31 per cent respectively over findings of the supplementary report.*
- residents of New South Wales by \$8.2 billion, relative to the Base Case (with a net present value of \$3.5 billion, using a 7 per cent real discount rate)*
- an increase of 36 per cent and 29 per cent respectively over findings of the supplementary report.*

Just further evidence that this analysis is fundamentally flawed and needs to be rejected.

Two Documents, One Voice?

An impression I developed when undertaking the content analysis is that these two documents do not speak with two different voices but only one. For example, on page 7 of the DPIE document it states:

Several groups have advocated for the adoption of a “carbon budget”, both globally and at a national and regional level, and for its use in the assessment of the Narrabri Gas Project. However, carbon budgets have not been adopted in any international agreements on climate change and there is no policy support for their use in Australia or NSW.

While they provide useful tools for policy analysis, there are significant conceptual difficulties with developing carbon budgets for countries and regions within countries, such as NSW, and using them to assess the merits of individual projects.

Consequently, the Department does not support the use of the carbon budget approach to the Narrabri Gas Project. Instead, the project should be assessed in accordance with existing government policy, which is set out in the Mining SEPP.

There is no argument about the “significant conceptual difficulties”. Just stating that they may exist is enough for carbon budgeting to be ignored. The Santos also argues against carbon budgeting, e.g. page 18 of Appendix B. The time constraint did not allow me to explore this issue further. But if there is substantial overlap in the voices of these two documents and other documents as indicated above, then I would suggest that this should be of concern to you as Commissioners.

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