

Nina Harrison

From: Dominic Kersch <kerschdominic@gmail.com>
Sent: Friday, 21 August 2020 4:58 PM
To: IPCN Enquiries Mailbox
Subject: Narrabri submission (Dominic Kersch)

To Whom it may Concern,

I am an Australian citizen and mechanical engineer currently living overseas. I have studied Santos' latest document entitled "Submission to IPC following public hearing" and I am extremely concerned about the Narrabri Gas Project gaining approval to operate. It is a national risk to its flora & fauna, and the increased risks of bushfire and acceleration of climate change are too high.

In "Section 11.8 Koala" Santos states that "the NGP EIS included surveys for the Koala and identified the likely presence of the Koala" and "...it was not until recent decades that repeatable research methods provided a strong measure of koala abundance". Despite admitting these facts, Santos boldly states without support that "very few koalas have ever been found in the north-east Pilliga [including the project area]", and that the majority are found in "the central and western Pilliga areas supported by... fewer fires". Santos provide no names of their "Koala experts" or even a document which supports their claim that there is a low population of Koala in the project area, and they subsequently and blatantly iterate the "periodic" high risk of fire to the project region of interest (Santos downplay the risk of fire in several other places in their report). Santos states that the NGP EIS acknowledges, whether correctly cited and supported or not, that the Koala population has declined in the Pilliga in recent years, and due to this reasoning their project will not lead to "long-term extinction of a viable local population".

I say this in response. Compounded by the fires that wreaked havoc on the Australian east coast in 2019-20, it was widely reported after a year-long enquiry that "the Koala [now categorised by the International Union for Conservation of Nature as threatened and vulnerable] will be extinct in the state of NSW before 2050 unless government intervention to protect their habitat and address all other threats to their ongoing survival" [report *Koala populations and habitat in NSW - Report 3, 30/06/2020*]. In some areas the fires burnt up to 81% of their habitat, and the report said climate change was exacerbating the severity of threats to the species such as drought and fire. Especially at this time when their habitat is so vulnerable, and just prior to the next bushfire season, government intervention and/or disapproval of the Narrabri Gas Project must take place to protect their threatened livelihood. This marsupial is recognised as a worldwide symbol of Australia.

In "Section 14.1 Climate change & bushfire analysis", Santos says that "the [project bushfire hazard and risk] assessment found that with the implementation of appropriate mitigation and management measures, the overall risk [of bushfire] was assessed to be medium". This is deceptively unsupported and unclear, and fire risk could very well be viewed as "very high" or "extremely high". Santos vindicates themselves of submitted assertions, that the radiant heat flux of 150kW/m² and bushfire temperatures in the order of 1600C at the reaction zone would impact on [their] infrastructure based on CSIRO's report "Bushfire in Australia: Understanding hell on earth", by stating that these figures are not representative of a flame front expected in the Pilliga. Santos claim that these asserted heat fluxes and temperatures are not relevant as they come from studies which were undertaken for "wet sclerophyll forest with extreme fuel loads on steep slopes", and not in "Western Slopes Dry Sclerophyll Forest" which is "the dominant vegetation type in the Pilliga". This is an unsupported claim as there is no mention of a "sclerophyll" forest in CSIRO's report, and if it is rain that they are basing their defence on, the paragraph about dryness (such as to be expected in the Pilliga's "Western Slopes Dry Sclerophyll Forest") should also be considered: "Bushfire risk has a lot to do with fuel moisture. When bushfire fuel contains less than 30% moisture by weight it is impossible to ignite; ...and when it is less than 5% fire behaviour is highly erratic and fire spread is rapid. In Victoria on Black Saturday, 7 February 2009, the entire landscape for much of the afternoon had a moisture content of less than 5%. Under these conditions the slightest spark can ignite the fuel and fires will spread very rapidly".

Santos go further to calculate, supposedly correctly using NSW RFS and AS3959 standards, a 18.3kW/m² radiant heat flux using an assumed 20m setback distance from their gas well infrastructure and vegetation, and they compare it directly to the initially asserted 150kW/m² value and claim a 87.8% improvement of that which was cited during the public hearing. This 20m spherically temperature-reduced 18.3kW/m² value and the 150kW/m² at-source value (i.e. 0m value) cannot equivalently be compared to one another, and it is very possible that a true equivalent at-source temperature for the dry forest type could be orders of magnitudes larger than 150kW/m². They are assuming two different forest types above, so they have no idea of the intensity and temperatures reached in a "Dry Sclerophyll" forest, and this is all before one would assume extreme fuel loads (gas wells) on steep slopes ("Western Slopes"). With this new deceptive and false information provided by Santos, fire risk could very well be viewed as high or very high rather than medium.

In "Section 14.6 Ignition probability understated due to climate change", Santos pass off assertions, that the 150% increase in the probability of bushfire start conditions due to climate change (from 1 in 70 years to 1 in 28 years), by stating that this probable forecasting is based on the "methane gas emissions only and is highly conservative and not impacted by climate change". In "Section 5.2 Fugitive emissions", Santos are contradicting themselves as they assume that the Narrabri Gas Project will "produce 200 TJ per day of sales gas" i.e. methane gas emissions, and hence the project is directly contributing to this forecasted increase of fire starts due to climate change. It is well known that uncontained methane gas contributes 81% more than CO₂ to climate change.

It is my strong opinion that the Narrabri Gas Project should not go ahead. It is a national risk to its flora & fauna, and the increased risks of bushfire and acceleration of climate change are too high.

Sincerely,
Dominic Kersch