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Attn: Executive Director, Resource Assessments NSW Government Department of planning & environment

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SUBMISSION TO OBJECT TO THE PROPOSED "NARRABRI GAS PROJECT"

I am a concerned resident of NSW wanting to express my dissent to the proposed Narrabri gas project. I have been watching this issue and activity of the Gas company Santos in the North West of NSW for many years now and am highly alarmed that they have submitted this EIS at all; when they did earlier this year. This is because they are in fact experiencing a major financial downturn and were talking of selling the project area and yet they turned around to submit a mammoth 7,000 page EIS to the NSW government to propose the biggest gas field in this state. This is nothing short of shocking for the community to where the development is proposed and out of step with what seemed to be occurring up to this point (ie: all indications pointed to the fact they were getting ready to sell up to the minute before).¹

The lodging of Santos' EIS for this proposed gas development is also completely in the face of the overwhelming majority who oppose it; which Santos was well aware of. Why would a company submit an EIS for a project they already know has no social licence? Their research pertained in the EIS with regard to community consultation does not reflect the 96% who have voted in the region to be gasfield free.

*"*87 communities across 9 Local Government Areas (over 3.2million hectares) surrounding the Pilliga Forest that have been surveyed to date (2015). These communities have conclusively declared their districts Gasfield Free with an average of 96% rejecting plans for gasfields in the North West." ^{*ii*}

This is quite alarming considering another gas company in NSW; Metgasco, had their project licence in Bentley and the entire PEL in the Northern Rivers suspended due to being found not to have adequately consulted with community in the planning approval process stages. Is the NSW Government going to allow this same mistake to happen again? And also then, resultingly risk being sued by a gas company for 10's of millions of dollars as Metgasco attempted to do; for the NSW Government only to have to pay metgasco an extraordinary sum of tax payers money to settle the score for the gas companies mistake and incompetence for not doing their homework right in the first place. This is all getting really ridiculous when all that needs to be done is for you to listen to the people in the first place.

I have heard that you have already had over 12,000 submissions ⁱⁱⁱ objecting to this development by Santos in Narrabri and I think that would be unprecedented community response, would that be correct?

Given that the Santos EIS was a staggering 7,000 pages long, I would have to say that is also additionally a record breaking response from the perspective that it was such a long document that community may not normally get to read in full ledalone find the time to respond to. So in all I think this in itself outlines a huge objection by community in Narrabri and across the state, country wide even, that there is quite clearly no social licence for this project.

I will address and speak to prominent points which have emerged as important or concerning or where I feel they have made inaccurate assessment on each section of the EIS. To briefly outline before I go into detail though will say that the Santos EIS for the Narrabri gas project:-

THE NARRABRI GAS PROJECT IS UNSUSTAINABLE AS IT:-

- Will have a devastating effect on the Pilliga forest and biodiversity: 850 gas wells on up to 425 well pads will require major felling for the forest and an industrialisation of that land.
- Will Destroy and remove sacred aboriginal sites
- Will Pollute the land and the water including the Great Artesian Basin: having irreversible effects with spills, dumping and leaching of toxic produced waters and salt. And air emissions
- Create major public health and social ramifications: due to the air and water quality effects of a
 gasfield of this size the waste and air and light pollution it produces and the major social changes that
 will occur as a result of such a huge industrial development coming to town that relies predominately on
 FIFO workers living in man camps
- Will radically transform a predominantly farming & tourist region which is rich in beauty history, natural resources especially it rich soil and underground water for growing food, into an industrialised gasfield, the community do not want this and have virulently communicated this to all levels of government continuously.

And at what cost?

I will outline that Santos extracting gas at Narrabri is neither going to create what it claims is its imperative to progress as a project of "state significance":-

- To supply any significant jobs for the local economy; nor
- Long term profit for the region:

To be absolutely clear I deem all aspects of this project to be completely inappropriate and unnecessary development and hence;

I OBJECT TO : The Narrabri Gas Project ;

I OBJECT TO : the progressive development of a coal seam gas field comprising up to 850 gas wells on up to 425 well pads over 20 years; &

I OBJECT TO: the construction and operation of gas processing and water treatment facilities, including:

- a central gas processing facility for the compression, dehydration and treatment of gas;
- a water management facility for the storage and treatment of produced water;
- an in-field gas compression and water management facility; and

- water and gas gathering pipelines and ancillary infrastructure.

The project is the largest development ever proposed under the modern planning system, and four times the size of the only other two CSG projects assessed and approved in NSW. Santos proposes up to 850 wells on 425 well pads over 95,000 hectares. This is more than four times the size of either of the previously approved CSG projects in NSW. The proposal includes a gas processing facility for compression dehydration and treatment of gas, a water management facility for storage and treatment of produced water and brine, possible additional power generation on site, continual flaring (burning off of gas) at two locations, an infrastructure corridor through the forest between Leewood and Bibblewindi, expansion of worker accommodation, discharge of waste water into Bohena Creek, irrigation with treated water and landfill burial of tens of thousands of tonnes of salt.

To propose to use land and sink massive sums of money into a gas project of this magnitude and associated pipeline infrastructure in NSW when gas and coal have been quoted recently by one of the once biggest producers of gas AGL to "no longer be a transition fuel"^{iv} is ludicrous and will be a huge economic mistake by the NSW Government. This is gas for export and not for domestic consumption (as will be outlined below under lack of economic justification). The NSW Government need to do an about face and support projects that are sustainable and renewable in regards to energy production. And for those projects to be beneficial to communities and to making energy affordable and accessible in this state for domestic use and for manufacturing as you claim is your aim.

SECTIONS OF THE EIS I FIND INADEQUATE:-

DETAIL IS LACKING

Santos' EIS is very short on detail. It does not provide maps indicating where these 850 wells and the lines and infrastructure that run between and around them will go. Santos is seeking a blank cheque consent for this gasfield on the promise that it will decide where the wells will go afterward using a "Field Development Protocol." No project has ever been assessed this way before in NSW and the constraints Santos propose are weak and subject to change later on. This is not an appropriate way to assess the largest development project ever undertaken under the Environmental Planning and Assessment Act and the Government must insist that Santos release details to the public about the placement of its wells, pipelines and some other infrastructure. Even so, personally I oppose the development of unconventional gas in the region so I object to any resubmission by santos on the basis that it may at some point in the future provide this.

THE ECONOMIC AIMS OF THE PROJECT ARE UNJUSTIFIED

The significant harm on the social, environmental and economic values of the Narrabri Shire and New South Wales that this project will inflict needs to be weighed against the economic justification for the project, but there is no such economic justification. Santos is one of several large gas companies that threw the east coast gas market and the industries that rely on it into turmoil by opening up CSG fields in Queensland and contracting to sell more gas than those fields can produce to overseas customers. They drove up the price of gas and are plundering supplies previously available to manufacturers and power stations. The gas produced at Narrabri might be as little as 4.9% of the volume contracted for sale out of Gladstone. And it IS for export and not for domestic gas supplies as there seems to be some information floating around that it is. It's not going to bring down prices. In fact, it will force prices up, because unconventional gas like CSG is so expensive to produce and yields are so low. this trend regarding the gas price issues (which is certainly not a supply issue that requires more gas extraction here)j is discussed at length in an interview with Bruce Robertson on National Radio 3 weeks ago and was reviewed in all major newspapers. [^v] [^{vii}]

Research undertaken by gas company AGL shows that gas from the Pilliga would be the most expensive gas of anywhere in the current east coast gas market. The number of jobs the project will support once the construction is over is just 145. Weighed against damage to the land, and the Great Artesian Basin, this makes no sense. We need sustainable jobs, not plunder for profit.

Overall this project will, if approved would do so at the cost and sacrifice of many other industries in the local area of North West NSW, which over and above provide much more employment and growth in a positive and clean way to the community; particularly the farming and primary agriculture which simply has been proven not to be able to coexist with a the industry of extracting unconventional gas (in this case coal seam gas), of which casestudies of regions in Queensland at Tara and also in areas of the United states of America as such as in Texas and in Pennsyvania prove has occurred, where not only are their farming sections lost, but people are driven out of communities and also suffering with major health issues and also needing to truck in their drinking water as theirs is contamined. Read the list of the harmed in Pennsylvania US, which contains an ongoing list of people impacted by the unconventional gas extraction industry in these ways ^{ix}. The most common effects on farming community and rural region relying on clean ground water is The drawing down of the water table and their bore water, effecting irrigation of farming and also to general water source. This is the case in the north west of NSW and the great artesian basin.

GROUND WATER & THE GREAT ARTESIAN BASIN

Santos' project is expected to remove 37.5GL of groundwater over the life of the gasfield, mostly in the early years. The coal seam needs to be dewatered to release the gas, but this aquifer lies beneath the Pilliga Sandstone, part of the Great Artesian Basin recharge. Santos' EIS admits that the project will result in a loss of water from the GAB recharge aquifer over time. CSG in Queensland has drawn down GAB aquifers already. We can't afford to risk this crucial resource. This is also a national resource, this is beyond the relevance of the boundaries of the North West of NSW and will effect ALL Australian people if compromised; this is yet another reason why many people are speaking out about this issue as it is of concern to them. Just as the protecting the Great Barrier Reef is of concern to the vast majority of Australian people.

Spokesperson for the Great Artesian Basin protection group; Anne Kennedy noted "The Great Artesian Basin is rapidly running out, it's a finite resource. Before we run out of water we will run out of pressure from drilling through the aquifers. As there is no guarantee of well integrity^x

SALT DISPOSAL

The water removed from the ground by Santos will be treated, but this creates another problem: what to do with the salt? Peak salt production at Narrabri CSG will be 115 tonnes per day, or two and a half B-double truckloads per day. In the peak year, this would mean the creation of 41,900 tonnes of salt for disposal in that year, which Santos says will take place in landfill. In Queensland they are having a huge issue with disposal of salt from the coal seam gas industry, so much so that no-body knows where it is ending up. Dumping salt on arable farmland is no solution ^{xi}

CULTURAL HERITAGE & INDIGENOUS SIGNIFICANCE OF THE AREA

The Pilliga is a spiritual, cultural and social icon for Gomeroi/Gamilaraay people. Fragmentation and industrialisation cuts people off from their heritage and connection to country.

BIODIVERSITY & THE PILLIGA

The Pilliga is also the largest temperate woodland in New South Wales. Santos propose clearing nearly 1,000ha of the Pilliga, including habitat for critically endangered Regent honeyeater and for koalas, which are already in decline in the Pilliga. Spread across the whole forest, this clearing will fragment much larger areas of habitat. The gasfield will clear breeding habitat for Pilliga Mouse, which lives nowhere else, and breeding habitat for other wildlife. It will fragment and degrade the forest. Without specific information about where the wells and lines will be located, a proper ecological impact assessment can't be completed. Regardless, the Pilliga is a cherished natural and cultural icon and must be protected from becoming an industrial gasfield.

SOCIAL AND HEALTH IMPACTS

Santos' social impact assessment is three years old and utterly inadequate. The compendium of health studies produced by the Concerned Health Professionals of New York shows mounting evidence for health damage by unconventional gas operations, including water contamination and respiratory illness. The Government must insist that Santos conduct a proper health impact assessment including modelling exposure pathways, reviewing literature and engagement with the Narrabri community. In Narrabri, this project will have negative impacts on cost-of-living, the labour and housing markets. The latter is cited in as a benefit of the project but it will not benefit low-income renters. The effect of the project on cost-of-living in the Shire needs to be modelled, assessed and considered, as do the labour dynamics of the project. The project entirely surrounds Yarrie Lake, and Santos propose that wells might come as close as 200m from the Lake.

AIR QUALITY

The air quality assessment fails to include health-damaging fine particulate pollution with a diameter of 2.5 microns or less (known as PM2.5). With diesel generators at each well pad and at the water treatment and gas compression plants, there will be significant PM2.5 emissions. The air quality assessment and greenhouse section also fail to model the likely substantial escape of fugitive methane emissions

SIDING SPRINGS OBSERVATORY & THE WARRUMBUNGLE DARK SKY NATIONAL PARK

light pollution from flares, compressor stations and the water treatment plant will ruin the dark sky needed by the internationally renowned Siding Spring Observatory. The Warrumbungles National Park was also only last year in 2016 declared Australia's first "dark sky park" ^{xii} for this reason; and therefore is important for the regions need to remain unaffected by the massive light shedding that will be created by a gasfield of this magnitude. Even Rob Stokes NSW planning minister stated

[&]quot;Mr Stokes said the park's dark sky qualities will be protected with \$100,000 in funding to control light pollution through implementation of updated planning policies. A new Dark Sky Planning Guideline has also been developed with the Australian Astronomical Observatory as part of the NSW Government's review of state planning policies." ^{xiii}

WILL CONTRIBUTE TO CLIMATE CHANGE

Recent research by the Melbourne Energy Institute shows that Australia may be dramatically underestimating the fugitive methane emissions from unconventional gas, including coal seam gas. It's not needed or useful as a source of energy: we have the technology we need to replace gas with renewable energy sources.

Please, this time listen to community and do not approve this development and EIS put forward by Santos. Do not progress to expand an industry which will clearly create more problems and destruction than it proposes to give. It will have massive ramifications for the environment, for the community, for our water and for all future generations.

Yours sincerely

Sharon Wilkinson

^{iv} http://reneweconomy.com.au/agl-kills-idea-of-gas-as-transition-fuel-wind-solar-storage-cheaper-63013/

^v http://www.abc.net.au/radionational/programs/breakfast/price-crisis-but-no-gas-shortage/8536364

vi http://www.2gb.com/podcast/bruce-robertson/

^{viii} http://reneweconomy.com.au/boosting-gas-production-a-false-solution-to-confected-crisis-report-89030/ ^{ix} https://pennsylvaniaallianceforcleanwaterandair.wordpress.com/the-list/

https://www.facebook.com/CloudcatcherMedia/videos/vb.283834121806031/642542252601881/?type=2&th eater&utm_source=Rainforest+Information+Centre+NSW+Places&utm_campaign=bd1713881c-EMAIL_CAMPAIGN_2017_05_16&utm_medium=email&utm_term=0_3499c3f2a1-bd1713881c-335633589 ^{xi} http://www.queenslandcountrylife.com.au/story/4463693/farmers-fight-salt-storage-approval/

^{xii} http://www.australiangeographic.com.au/news/2016/07/warrumbungle-np-declared-australias-first-darksky-park

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ⁱ http://www.northerndailyleader.com.au/story/4445614/last-ditch-to-sell-narrabri-project/

ⁱⁱ http://www.lockthegate.org.au/hundreds_celebrate_northwest

ⁱⁱⁱ http://www.northerndailyleader.com.au/story/4668791/coal-seam-gas-project-draws-thousands-of-responses/

^{vii} https://www.theguardian.com/australia-news/2017/may/18/australias-2018-gas-shortage-will-noteventuate-report-shows?CMP=share_btn_fb