SENATE INQUIRY:
Rural Affairs and Transport References Committee Inquiry into Management of the Murray Darling Basin.

Submitted 13 July 2011

This submission is written by a concerned resident, land owner, and primary producer of NSW PEL 462, who is also an extremely concerned citizen, for the future of Tooraweenah, NSW and Australia. Comments will be general in nature as the resources are not at hand to compile original statistics. However a wealth of objective information has already been accumulated, which will certainly be reported to the Inquiry by the many and varied interested groups and organisations which have diligently collated it. Senate Inquiry members are implored to **act wisely** after assessing it.

Firstly, and very importantly, PLEASE NOTE that all private submissions come at great cost of personal time, effort and expense which is often detrimental to the normal pattern of the contributor's daily life. Coal seam gas companies go about their business and defend their positions in well paid time. Senate Inquiry members sit (as far as I know) in a paid capacity. With this in mind, please attribute just weight to the input of motivated, unpaid citizens, when carrying out your judicious assessment.

This submission will concentrate on the Coal Seam Gas (CSG) section of the Inquiry as outlined in the terms of reference following:

> The Rural Affairs and Transport References Committee, as part of its inquiry into management of the Murray Darling Basin, is examining the impact of mining coal seam gas on the management of the basin.
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> The committee will examine:
> The economic, social and environmental impacts of mining coal seam gas on:
> • the sustainability of water aquifers and future water licensing arrangements;
> • the property rights and values of landholders;
> • the sustainability of prime agricultural land and Australia's food task;
> • the social and economic benefits or otherwise for regional towns and the effective management of relationships between mining and other interests; and
> • other related matters including health impacts.

Introduction

Is coal seam gas the panacea for cleaner energy generation that it is purported to be? It is cleaner than coal but it is still a carbon based fuel creating CO_2 emissions. From the NSW Department of Planning scoping paper presented in Dec 2010, for comment by the NSW public, the place of coal and coal seam gas in the future NSW economy is not in question and **it should be.** The national aim for the future should be for a **reduction in reliance on fossil fuels**. The biosphere contains carbon in greenhouse gas forms in larger quantities than optimal. It is beyond belief that the NSW government and the Federal Government want to **accelerate** the rapid expansion of coal and gas mining, leading to the addition of more carbon into the biosphere, ultimately to become additional greenhouse gases. In the face of an imminent carbon tax it is hypocrisy in the extreme.

There is no quick way to replace Australia's reliance on carbon based power plants in the short term. But to find that Governments accept without question, the IEA, World Energy Outlook 2009 forecast for 2030, is hugely disappointing. This shows coal virtually static at 38% and gas climbing to 30%; 68% total. Keeping in

mind the rapidly increasing world demand for energy, these percentages in 2030 will be of **vastly increased absolute volumes of fuel, which is sheer lunacy.**

Forecast sources of energy to 2030

Fuel Source	2002	2030
Coal	39%	38%
Gas	19%	30%
Nuclear	17%	9%
Hydro	16%	13%
Oil	7%	4%
Other*	2%	6%

Other = solar, wind, renewables, geothermal, waste
Source: IEA, World Energy Outlook 2009

Addressing the Inquiry Headings:

Sustainability of water aquifers (are there any other kinds?) **and future water licensing arrangements.**
Coal seam gas mining will:

- - use large amounts of water to establish gas wells. Where will this water come from at a time when secure water and water rights are so limited? Will short term mining money dictate irrational allocation of scarce water resources?
- - bore through shallow aquifers of many and varied qualities, including pristine, potable supplies, to reach the deep seated coal which holds the gas. Will the gas well construction remain secure short term and into eternity (concrete and steel have finite structural lives) to safeguard the traversed aquifers? Aquifers have and will be contaminated as a result of coal seam gas mining. What price, the Great Artesian Basin and all lesser aquifers sustaining life in inland Australia? At the Tooraweenah community meeting April 12, 2011 Santos assured us that there would be no errors in process and that procedures to safeguard underground water supplies are in place and guaranteed. Failure of process by Arrow Energy's contractors was reported in the media just a few weeks later (see Supporting Reference 1.) It was not the first and will not be the last failure. Mankind, regardless of intention is fallible. Our bore water is far too precious to risk through turning the land into a pin cushion of inter-related aquifers, allowing cross contamination leakage or drainage of aquifers with unknown recharge potential
- - remove water from the deep coal seam, to enable gas release, and PLACE THIS WATER ON THE EARTH'S SURFACE. This water is ALWAYS saline and will contain, in varying quantities, a mixture of a myriad of other minerals and chemicals. The Central West Catchment Management Authority has spent huge resources monitoring water resources of all kinds over its catchments. Great effort has been expended by many government, industry and private entities to lower water tables and secure salt under the ground and carry it to depth through tree planting and sensible land management. Conventional land use management to halt and reduce salinity becomes a joke when vast quantities of previously, safely sequestered saline water is being ponded on the surface creating a large management issue for which there is little evidence of an adequate, reliable solution presented. These solutions include leaking/leaching storage ponds, with or without unreliable plastic liners; evaporative ponds leaving toxic sludge for disposal; transportation in tankers for deposit in the sea; and re-sequestering unwanted water underground causing land instability. Once salt is brought to the surface, its potential to wreak havoc with land use is largely unable to be controlled by man, in that weather will redistribute it at will. Last summer's floods in eastern Australia gave many mine waste disposal sites a "get out of jail free" card by diluting and transporting their contents away from the companies control leaving them with a clean site.

Who is to be held accountable in such an uncontrollable situation? The irresponsible allowance of surface ponding is the problem and it is Government regulated and condoned.

- -possibly use hydraulic fracturing (fracking) to enhance gas release. Pumping a chemical mixture at high pressures into the earth cannot be a precise process with all the variables involved. Apart from any geological instability created the main concern is with water contamination, both from the chemicals used and by cross contamination of different aquifers of varying water quality, after the ground structure is disturbed. This process is now on hold in the UK due to the start of previously rare earth tremors in a CSG area that had recently been fracked. Data from the USA lists a multitude of reasons why fracking is not good for humankind. Why risk this level of damage for short term gain.

The Great Artesian Basin Group should be consulted for detailed information regarding challenges to water security in NSW and QLD.

As a non irrigator, there will be no comment on water licensing conditions in this submission.

There is no such thing as risk management for possible water resource damage. Zero risk is the only acceptable risk for water supplies.

The property rights and values of landholders; (See supporting reference 2.)

- The evidence of the reduction in land values, in many cases to zero, by the presence of mining exploration licences or production licences either on the land being sold, adjacent to it, or even just in the near vicinity, **is damning**. The resultant destruction of landholder's equity and financial security is obvious. If a mining company wishes to buy the land, as with coal mining, inflated prices way beyond pre-mining market value exist for those on the mine site. This is a short term and isolated windfall for a few and decimates communities. The prospects for those adjacent to these sellers can be bleak. The future production and population of the district after mining is unknown. With coal seam gas mining, much of the surface is left undisturbed (apart from infrastructure) so the companies only wish to buy the minimum of land to give them a toe-hold into the district. Once established, remaining residents just have to deal with minimal returns from any wells on their land and to manage their lives and farming pursuits amid the labyrinth of pipelines, service roads and pumping stations between the groups of wells in the district. They may have a small power generation plant in their district as well. We are all used to seeing small industrialised areas within our rural lands, but the scale of coal seam gas development in this country will turn rural Australia into a semi-industrialised wasteland. (Seventy per cent of NSW is currently under mining or exploration licence.)
- For farming families the doubt and instability of potential CSG activity stymies investment confidence. Agricultural development and progress halts. This has obvious ramifications for associated industries.
- Freehold ownership of property counts for so little as to be useless. One can negotiate with mining companies to optimise one's position, but they invade the land and lives if they wish and change them forever. Mining potential was not evident in the Tooraweenah district until mid 2010. In addition to all the vagaries of farming – weather, markets, animal liberationists' activities, ad hoc governance and bourgeoning bureaucratic demands, mining has just about made farming A JOKE. Despite politics not being a priority, over the past 12 months, this is the fourth time that our household has made representation to government; first with regard to the Federal Productivity Commission into Rural RDC review of operations and funding in defence of continued/increased funding for agricultural research; secondly to have a voice on the NSW Coal and Gas Strategy scoping paper last December 2010; recently and ongoing in opposition to the draconian changes to NSW Non Indigenous Animals Licensing requirements which would effectively put some livestock enterprises out of business overnight; and now

to attempt to bring balance into land use in Australia to ensure food production into the future. The importance of food and fibre is so obvious that it is difficult to understand why anyone needs to be submitting to this Inquiry. Faith in any flicker of reason left in the governance of this country is waning rapidly.

- Suggestion: the Senate Inquiry members visit as many of the areas already under CSG activity and exploration as possible. Do you want to live there? Is the value of gas enough to make you live there? If you won't live there, should anyone be forced to live there, because if they can't sell they will be forced to stay or possibly be paupers elsewhere?

The sustainability of prime agricultural land and Australia's food task;

- Large tracts of the best agricultural land in Australia are now under housing. What remains in production MUST be preserved, to the best of man's ability, in its fully productive state. Rehabilitation of mined areas does not necessarily re-establish the land back to its original productivity. Fly over the Lower Hunter Valley to view examples.
- The water sustaining this productive land MUST also be preserved, to the best of man's ability, at a level that ensures optimum productivity.
- The world's population is nearing 7 billion and headed for 9 billion by 2050. Food shortages are already becoming apparent and will become more acute as population grows if we do not farm ever more efficiently. Many countries are investing off shore, many in Australia, to secure land and food ownership. To degrade our productive land makes NO SENSE in the face of future trends.
- The Liverpool Plains are sacrosanct. It is unbelievable that this magnificent resource is under such imminent threat! There are other similar, already partially degraded areas that simply defy reason – Upper Hunter Valley (the Lower Hunter was sacrificed years ago), Darling Downs, Bylong Valley etc. Protect what is left and reclaim what can be reclaimed.
- The legislation that gives mining companies so much power, as difficult as it will be, MUST be changed.

The social and economic benefits or otherwise for regional towns and the effective management of relationships between mining and other interests;

- The promises of prosperity for regional towns when mining companies arrive are overstated and deceptive. Outcomes include, dysfunctional populations where old culture is displaced by dominantly male populations with different values and living requirements to the original population; establishment of mining company enclaves where resources are brought in with limited or no benefit to local businesses; fly-in, fly-out staffing creating a discontinuous population and again bringing little business or benefit to local businesses; labour shortages, for anything but mining which pays larger wages, becoming debilitating for local businesses and agricultural enterprises, councils struggling to maintain roads carrying increased heavy traffic and housing becoming unaffordable for those not on mining wages. The two speed economy creates "haves" and "have-nots". Reports of reduced vibrancy of the communities such as Roma, Dalby and Gunnedah abound. Even the positive of one mine funded health facility had the proviso attached that no-one could publicly report any mine related health problems!
- Tooraweenah is a small, cohesive town in central western NSW. Coal seam gas activity became apparent in mid 2010. Although Santos, holder of PEL 462, is in early exploratory mode, division in the township is already appearing. It is a steep learning curve for residents. The experienced, well financed and resourced mining companies, including population behaviour experts and promotional staff have a massive advantage over honest, inexperienced (in mining) farmers and rural residents when "negotiating". In addition, mining rights place the legal ball fairly in the mining company's court. This must change to protect agriculture.

- Mining sustains some of humanity's needs and is thus necessary. **Balance** is required to ensure we can supply all other commodities for life.

Other related matters including health impacts.

No comments on health issues are made here other than;

- Reported evidence of negative health impacts in coal seam gas mining areas in the USA and other countries with long experience of coal seam gas extraction, as well as in Australia, require careful investigation by this Senate Inquiry.
- Water contamination issues will have health consequences through the food chain.
- The mounting pressures on farmers and their lack of tenure over their land just add to the causes of mental ill-health in rural Australia.

Conclusion

What does Australia gain from coal seam gas mining? Jobs for the short term; gas royalties which are a pittance of the value of the gas (and only collected once the waived period is over in NSW!); minimal profits as most companies are large multinationals and a "lesser green house gas emitting" energy supply. These are miniscule benefits to counter the pumping out of yet more carbon, degradation of our country and destruction of regional communities.

The miners come and they go. In the future, mines for coal and gas will be relegated to history. Food production though, failing some major calamity, will still be required. But if the water is gone or contaminated beyond economic resurrection, will we be able to use the scarce agricultural land that remains?

Agricultural land and the water that sustains it MUST BE SAFEGUARDED for the future.

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Member of Tooraweenah Coal Seam Gas Group

Food for thought - You can't drink or eat, energy or money.

SUPPORTING REFERENCES:

1. **Gaping Holes in CSG well's safety procedures**. The Brisbane Times, June 25, 2011.

Gaping holes in safety management have been found in the first report into a Queensland gas well leak.
On May 22, gas and salty water escaped from an Arrow Energy coal seam gas (CSG) well on a property near Dalby in southern Queensland.
Workers for contractor Gas Field Services had uncapped the Daandine 80 well to install a pump for gas production.
The Queensland government yesterday released its interim report into the incident, in which a plume of water and gas shot up to 100m high but no-one was hurt.
It also lifted a stop-work order on Gas Field Services, satisfied its safety standards had improved.
The Petroleum and Gas Inspectorate's chief inspector, Stephen Matheson, said 14 recommendations had been issued to the industry.
"First and foremost, CSG tenure operators must ensure that risk assessments are undertaken and the risk management controls and procedures are communicated with contractors," he said.
The report found a well-site handover between the companies had not been completed and no pressure monitoring equipment had been installed.

Arrow Energy voluntarily stopped all drilling and well operations in Queensland for 10 days after the incident in order to review its well control equipment and processes.
The inspectorate's full investigation is expected to be completed in July.
Inspectors will next month meet the chiefs of Arrow Energy and Gas Field Services about the report and Arrow's delayed incident notification response.

2. **"Gas plans a hot topic" Jo Studdert From: The Australian June 25, 2011** ***12:00AM***

Geoff Hickson, real estate manager at Landmark in Mackay, Queensland, says: "It's definitely having an effect (on land values). When the gas companies buy properties to put wells on, they pay very big money, which raises median prices. But mostly they don't buy".

"Where they build wells on other people's land, it's a different story. Those places are failing to sell. It's not that they sell at a discount. They don't sell at all."

This explains a discrepancy in Queensland property data that shows land values up in some CSG districts.

and

But the Queensland valuation report shows that, outside the towns, the story is very different. "Within the rural areas, softening of the market is demonstrated by a 10 per cent [price] reduction in the rural areas of Tara and Miles, Balonne Shire, south of Roma, traprock country near Warwick and Inglewood and Goondiwindi region," it says.

Bryce Keating is a Tara landowner with experience of this. "My property has been on the market for 16 months. When people see the well, they won't touch it. They don't know what to believe and they don't know what will happen in the future." The owners feel trapped.

Even farmers such as Peter Thompson, who is happy to have wells in place, and who has just signed up for more, says he would not like to try selling his property 80km northwest of Roma.

John Burke, Elders Queensland rural property manager, says: "There are not enough sales to tell if it's affected prices, but it has dissuaded some from buying."

Hickson says some buyers are willing to take the risk of buying a place with wells on it, "but the bulk of people don't want anything to do with it".

"They ask straight up if a place has wells or is in the zone of inquiry for more, and if we say yes, they say find me something else," he says.

And there are other examples cited in this reference….

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