

**Submission
No 356**

INQUIRY INTO COAL SEAM GAS

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COAL SEAM GAS INQUIRY

SUBMISSION NARRABRI SHIRE COUNCIL

Narrabri Shire recognises itself as the heart of the North West. Narrabri Shire has a resident population of over 14,000 people across 13,065 square kilometres. The Local Government area also consists of the towns Wee Waa and Boggabri and the villages of Baan Baa, Bellata, Edgeroi, Gwabegar and Pilliga.



Narrabri Shire consists of approximately 75% of agricultural land which produces Wheat, Barley, Soya Beans, Sunflowers, Citrus, Beef, Pork as some example primary products. Also the Shire is home to producer of foods for niche markets.

Coal Seam Gas exploration and extraction is becoming another factor in the diversification of the Shire and is raising issues in relation to the sustainability of agriculture and community health and well-being along with coal mining and the impact of the Murray Darling Basin Review.

A scientific basis should be used in the decision making process for all coal seam gas operations and thus take the “views” out without foundation. As a priority, the environmental impact upon all should be addressed before the issue of land rights is undertaken.

TERMS OF REFERENCE

1 The environmental and health impact of CSG activities including the : a) Effect on ground and surface water systems:

Narrabri Shire is located within the catchment of the Namoi River which ultimately flows into the Darling River as part of the Murray-Darling Basin.

The area supports a major irrigation industry producing cotton and some grains and legumes. The irrigation needs are met by water from Keepit Dam, purposely built for irrigation supply, local rainfall and a significant number of groundwater bores.

The irrigators in this Valley are participating in a water sharing arrangement auspiced by the NSW Government which will see a marked reduction in available riverine and groundwater allocations by 2015.

Nevertheless, groundwater studies undertaken by CSIRO, UNSW and private organisations have identified significant recharge issues within the Namoi catchment which identify that any further stress on already affected groundwater supplies could result in permanent loss of some aquifer resources.

The proposed Murray Darling Basin Plan will attempt to reduce extraction to improve environmental flows, further limiting the water available for farming and other uses.

Resident and farmer concerns are in 3 areas:

- high security licences for large volumes of water necessary to the gas extraction process depleting already scarce groundwater reserves

The ground water recharges and the aquifer will remain healthy as long as extraction equals recharge while ever this balance is maintained.

- drilling through water supply aquifers interfering with connected aquifer operation

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- management of extracted water from coal seams which is inherently briny, requires treatment and leaves salt residue which requires removal.

Presentations to Narrabri Shire Council (NSC) by Eastern Star Gas (ESG) geologists and hydrologists indicate that:

ESG operations do not extract water from farming and drinking water aquifers and that drilling operations are designed to prevent interference with those aquifers

The unique alignment in the Narrabri area of the coal seams containing the gas to be extracted require the use of lateral drilling without any use of hydraulic fracturing.

Council would wish any inquiry to confirm that such reassurances are accurate and that a regional long term plan for the management of water resources within the Namoi Valley is developed as a priority. Such a plan should incorporate potential water needs for sunrise industries which may develop in the area to utilise gas as a fuel and electricity produced from gas as an energy source.

The Namoi Water Study recommendations must also be incorporated into a long term Plan. Council would also expect that independent monitoring of gas exploration and extraction bores would be made mandatory by government legislation as self administration particularly in regard to the environment is inherently flawed. Council would be prepared to have representation on any oversighting monitoring body established by the government.

Section 70 of the NSW Petroleum (Onshore) Act, 1991 Exempted areas states:-

“(1) The holder of a petroleum title may not, except with the consent of the Minister, exercise any of the rights conferred by the title on land in an exempted area.

(4) In this section:

"exempted area" means an area constituted by land:

(b) held under a lease for water supply by virtue of a special lease or otherwise”

Narrabri Shire community uses mostly underground water for domestic and agricultural use however this is not specified in the Act.

Section 138 Regulations of the NSW Petroleum (Onshore) Act, 1991 states the following:-

“(1) The Governor may make regulations, not inconsistent with this Act, for or with respect to prescribing any matter that by this Act is required or permitted to be prescribed or that is necessary or convenient to be prescribed for carrying out or giving effect to this Act, and in particular, for or with respect to:

*(h) the treatment of **water** underground or at the surface and the prevention of waste or loss of **water** or petroleum or pollution of deposits of **water** or petroleum.”*

This regulation should be transparent throughout all applications and a transparent monitored process ensures the community is protected through the use of underground and above ground water courses.

Recommendation: That all CSG mining be stringently monitored through transparent framework specified to protecting all water resources.

Recommendation: That the Premier set up a CSG engagement group comprising affected shires, CSG companies and high level departmental representatives to address the social/economic impacts, infrastructure and concerns of the community and report back to the government.

Recommendation: That future use of water resources is considered to allow irrigation (including new) to continue and thrive.

Recommendation: That the pre existing water table analysis be undertaken to determine the current levels from irrigation and that the monitoring be undertaken to look at the impacts of mining and also irrigation on the water resources, the impacts over time.

Recommendation: That a process be set up to manage the waste stream from CSG operations to ensure the best usage of the water resources including the removal of evaporation ponds from the landscape.

Recommendation: That the connectivity between aquifers be established to prevent contamination.

b) Effects related to the use of chemicals

Much publicity has been given to use of 'chemicals' in gas exploration and extraction with connotations that any use of chemicals may cause health risks.

Narrabri Shire Council has been briefed by a Santos experienced petroleum engineer who has indicated that hydraulic fracturing can be conducted with water alone, so that the need for use of hydraulic fracturing and use of chemicals should be justified during application for exploration and extraction licences. Further, assessment of the case for such procedure should be on a case by case basis, taking into account all other environmental and risk conditions.

It should be noted, however, that chemicals used in agricultural production in the past and to some extent ongoing, have apparent toxicities far greater than the chemicals stated to be utilised in hydraulic fracturing. This includes weed management, large scale insect management, feral animal control and other use of chemicals in an outdoor environment where spray drift and leaching into water aquifers may be a risk.

Council would expect that any enquiry into use of chemicals for industrial and agricultural purposes within our Shire would look at ALL chemicals utilised in the outdoor environment, and not be restricted to coal seam gas exploration and extraction alone.

Council would also expect that independent monitoring of hydraulic fracturing operations would be mandatory by government legislation and may be the responsibility of the independent monitor set up to safeguard water quality.

The NSW Petroleum (Onshore) Act, 1991 does not address chemical restrictions in the process of obtaining of CSG.

Recommendation: That a thorough published review be conducted into all the chemicals used for CSG extraction and include information on chemicals which occur naturally in the environment.

c) Effects Related To Hydraulic Fracturing

The composition of chemicals used in hydraulic fracturing is extensive, with not all chemicals returning to the surface, a portion remain in the rock layers. This is concerning to the contamination of drinking water, underground aquifers and soil contamination.

Narrabri Shire has been advised by numerous 'experts', some independent of CSG operators, some working for government, that the nature of the coal seams from which gas is extracted in the areas to the south and west of Narrabri, does not require 'fracking', and that development of lateral drilling technology enable gas to be extracted more efficiently than with the use of older hydraulic fracturing processes. Council would like confirmation from the relevant approvals body at any approvals stage that hydraulic fracturing will not be deployed in gas exploration and extraction operations within the Narrabri Shire.

The comments regarding independent monitoring are implicit in this comment.

Recommendation: That within the review of chemical usage, the process of hydraulic fracturing is reviewed in view of reducing the usage of these methods for extracting CSG.

Recommendation: That an information paper be produced to outline the process of fracking in various locations (antidotal geologies differ from locations)

d) Effect On Crown Land Including Travelling Stock Routes And State Forests

The present operations within Narrabri Shire for CSG exploration and development occur, IN THE MAIN, within State Forest or other reserves and utilise Forest access roads as well as Shire roads for operators.

CSG operations are not impacting on land which supports food production and the Council considers extraction in the forested area is more appropriate than on 'prime' agricultural land.

Gas is transported via pipelines to Wilga Park Power Station where the extracted gas is used to generate electricity, rather than being vented to the atmosphere.

The debate about location of pipelines and wells encompasses concerns which are more than environmental. They relate to the impact on ability of landholders (which includes this Council in respect to Shire roads and reserves) to conduct their operations unrestricted or with any possibility of contact with CSG infrastructure. The Pilliga Scrub, or the Nandewar South Bio-Region was 'locked-up' in 2005 by NSW Government with industry restricted to Forestry and resource extraction. The inquiries at the time covered all aspects of the future of the region including environmental issues, endangered species habitat and offsets for future State approved developments.

It is hypocritical to raise the latter issues again when they have been well debated and agreed.

If the Government is serious about extracting gas from the reserves in this area for the use of NSW, then it must ensure that transportation of the gas can be undertaken with minimal impact. The use of TSRs, reserves and even Shire road reserves if appropriate offer the least impact routes. Installation of pipelines underground will allow the vegetation along such reserves to recover and continue to provide unrestricted wildlife corridors. The recovery of the trenched road reserve along the Newell Highway between Narrabri and Coonabarabran where Telstra cables have been installed is a case in point.

Unfortunately the Federal Government Native Vegetation laws enable decisions on use of such reserves to be denied.

The State Government must reach common ground on this issue as provision of adequate fuel for electricity generation is critical and will not be removed in the short term by provision of renewable energy. This matter should be a subject for debate by COAG.

A further point relates to the access roads utilised to operate individual wells. The Pilliga Scrub is a vast area which is heavily wooded and difficult to manage if a serious fire occurs. The history of fires in the area, especially in 2005, indicates that any 'road' acting as a firebreak and access for firefighters is to be encouraged.

Travelling stock routes are utilized in the Narrabri Shire and the proposed use of these routes for pipelines runs the risk of congesting these corridors in times of use. Should pipelines be structured along travelling stock routes, care should be taken that the routes remain open and non-congested.

Recommendation: That all activities conducted along Stock Routes be monitored to maintain the use of the routes throughout all times of year, with minimal impact.

Recommendation: That the removal of CSG in State Forests is strictly monitored to ensure minimal impact to the ecosystems and that full restoration is conducted prior to the evacuation of the site in accordance with the NSW Petroleum (Onshore) Act, 1991.

Recommendation: That immediately post the environmental assessment of the aquifers, 'prime' agricultural land that is strategic to the present and future well being of our Nation be identified and protected through legislation from interference.

e) Nature And Effectiveness Of Remediation Required Under The Act.

The government must ensure that remediation requirements are regulated, part of the approvals process, simple to implement, and result in restoration of land and infrastructure equal to, or better, than the standard which existed before operations commenced. Such requirements should be agreed with the Council, the CMA where appropriate, and landholders. A rehabilitation plan should be part of the approvals process.

The independent monitor recommended to monitor water quality and drilling should also monitor any rehabilitation plan implementation.

Recommendation: That all guidelines for the monitoring and enforcement of remediation under the Act be comprehensive and transparent to the communities concerned to ensure all requirements under the Act are being met.

Recommendation: That the State Government establish a representation within the region of activity to monitor the development of Coal Seam Gas extractions.

f) Effect On Greenhouse Gas And Other Emissions

Whilst some members of The Greens Party refute the evidence, the Owens Inquiry in 2007 found that gas fired electricity generation produces twice the amount of electricity for the same fuel input as coal, but produces 50% less greenhouse gas emissions. Similarly, gas as a vehicle fuel produces less emissions than petroleum fuelled vehicles.

The extraction of CSG in the Narrabri district, using lateral drilling from one drilling rig, rather than numerous drilling rigs in other CSG fields, obviously creates less greenhouse gas emissions than comparable CSG extraction, and certainly less than open cut coal mining.

It is recommended that the CSG enquiry determine accurate statistics in relation to emissions so as to better inform any decisions on future use of CSG as a fuel source in NSW.

Recommendation: That within the framework of monitoring CSG extraction, methane gas emission guidelines be established.

g) Relative Air Quality And Environmental Impacts Compared To Alternative Fossil Fuels

There are 2 aspects to this area of enquiry.

Air quality during the extraction process and air quality from emissions where gas is used as the fuel.

Again it is strongly recommended that accurate statistics be obtained to inform this inquiry.

The experience in the Upper Hunter Valley of health issues created by poor air quality related to open cut coal mining indicates that use of underground coal production and CSG production are preferred for fossil fuel related extraction developments. Narrabri Shire Council has background dust level statistics for Narrabri town collected for another dust related issue and these statistics could be made available should they form the basis for ongoing monitoring.

The independent monitor recommended to be established to monitor water quality should also have a responsibility to monitor air quality.

Air quality in cities and congested areas is already monitored by the Bureau of Meteorology and monitoring should be established in the vicinity of power stations using coal and gas to identify the anticipated improvements in air quality where gas is used as the fuel.

2. The Economic And Social Implications Of CSG Activities Including Those Which Affect:

a. Legal Rights Of Property Owners And Property Values.

The issue here is the ownership of the minerals/gas and the fact that the State grants exploration and production licences for those minerals which require physical access onto properties.

Whilst some property owners rightly are concerned at who is on their property and issues with security of animals, safety for residents, etc., there has always been this issue, whether it be access by logging companies to forested leasehold lands, by meter readers for power supply companies, council workers for grading of fenced roads through properties, etc.

The Government must either reinforce the legal situation as it exists, whilst ensuring a defined process exists for disclosure of licences, adequate notice, and negotiation of access agreements (with or without compensation where appropriate), OR make new legislation to reflect some other form of arrangement regarding ownership of minerals/gas and access for exploration and development.

In any case, Councils deserve to be given adequate notice by Government of the granting of licences which allow CSG licencees to test, explore and/or extract gas on Council road reserves and other Council property.

The proposed change to granting of licences by ensuring prior public consultation may inform this need.

Recommendation: That the Act be amended to secure the rights of property owners with consideration of environmental protection and food security.

Recommendation: That a CSG Ombudsman office be established to oversee the access agreements between landowners and CSG companies (one stop shop for all enquiries, complaints and concerns).

b. Food Security And Agriculture Activity

Australian Agriculture complies with strict mandatory guidelines to ensure food safety and environmental protection. These guidelines are closely monitored through bodies such as the EPA and all producers provide financial input into ensuring that their products meet all regulations. Coal Seam Gas mining does not have transparent and stringent monitoring of licensing conditions. There are considerable inconsistencies with the requirements of agriculture and coal seam gas mining which can allow the mining to potentially destroy prime agriculture areas for many generations to follow.

A global food shortage is being predicted by media and 'experts' with recent shortages of food and high global prices, compounded by drought, causing famine situations in North Africa in the past 12 months. It has been stated that an estimated 6M extra hectares of farmland will need to be provided annually to feed the projected 9B world population by 2050. In Australia this could equate to a 50% increase in land presently under agriculture.

On needs increased productivity of 100% from the same farm areas is required. Any reduction in existing farmland, whether for mining or as unfarmed buffer zones “offsets” and environmental reserves will only exacerbate the situation.

It may be that Government does need to decide on what land is ‘essential’ for food production with some restrictions on other activities to be defined.

There are issues that Federal legislation can over-ride some State environmental legislation regarding ‘threatened species’ and these issues need to be properly addressed and agreement reached so that there is consistency and confidence for stakeholders.

There is also the issue where properties purchased for buffer or offset reasons are parts of small communities which cannot survive once the owners of those properties leave.

There is a social impact here which needs to be addressed.

Proximity of CSG extraction to the end users of the fuel is also important. CSG can provide fuel for industries which also use agricultural outputs as their raw materials (eg ethanol plant), so CSG can unite with agricultural production to value add and create wealth for regions and the nation. Transport of gas is inherently more efficient by pipeline, and electricity produced from gas turbines will need to be transported to major centres, so proximity to electricity grids, and easements for large power lines may also impinge on agricultural production, although to a far lesser extent than a CSG production well.

Council’s position is that mining and agriculture should be sustainable, that areas of lesser agricultural importance and public lands where appropriate should be licensed for CSG exploration and development before lands of higher agricultural importance are considered.

The issue will only be resolved by development of comprehensive strategic planning from the local level up to the State and National Plans for the future of food and energy supplies for the growing population. This leads to the next term of reference: development.

c. Regional Development, Investment And Employment, And State Competitiveness.

Narrabri Shire Council acknowledges the extensive development of the region filtered from Coal Seam Gas and coal mining. The industries bring investment opportunities and employment on a large scale to rural areas. However, the competitiveness of the salaries provided by the industry as incentives leaves the agricultural sector with skills shortages and lack of staff.

There is also a demand for housing and community facilities which puts strains on Local Government as there is no rate income from the industry to subsidize these facilities. There is also the need for regular air services which also puts pressure on current Local Government infrastructure.

Namoi Councils has lobbied for 3 years for a true Regional Plan for the Gunnedah Basin to plan for future needs and the consolidation of opportunities to become a sustainable region.

The Basin is well diversified, although heavily dependent on the agricultural sector for much of its wealth.

Dr Roy Powell from UNE has identified the region as sustainable with Narrabri Shire in particular identified as the most diversified local economy in the region.

Mining activity, including CSG production provides non-agricultural sector employment, drought-proofing the economy and providing professional level jobs which will retain local young people returning from University studies. Already over 60 people are employed by Eastern Star Gas, all living locally and adding to the local economy.

The area in Narrabri Shire is well placed to support emerging industries reliant on gas as a fuel to value add to agricultural production. Not only located on the junction of the major north-south national freight corridor (The Newell Highway) with the Kamilaroi Highway, Narrabri is also strategically placed on the national electricity grid, so that electricity produced within the Shire from CSG can supply the nation.

Electricity demand, according to the Owen Inquiry is at over 81% of capacity in summer peaks in NSW and the newest power station to come on line by 2014 will only provide for 2 years of growth at the current growth rates.

To remain competitive, NSW must ensure there is adequate power. Gas stations can come on line faster than thermal coal stations and are more efficient and environmentally friendly.

Narrabri Shire's economic development section has regular discussion with persons interested in future developments which would utilise gas once production is adequate.

The proposed Inland Rail to provide fast freight for bulk freight between Brisbane and Melbourne will pass through Narrabri, giving producers in Narrabri quick access to export Ports.

Recommendation: That Local Governments be given the means to rate CSG extraction that will contribute to providing the community infrastructure necessary to support the industry and help address the resultant skill shortage.

d. Royalties Payable To The State

This Council advocates a monetary return to this LG area to enable Council to maintain and improve the infrastructure utilised by the CSG developments, including support for the new families moving into the area.

Council roads are impacted by increased heavy transport for drilling rigs and service vehicles, whilst increase in use of all Shire facilities needs to be managed. With rates capping and Council unable under the Local Government Act to rate CSG production like it can mineral production, Council is reliant on grants funding which is also diminishing.

Firstly, LG needs the capability to raise a gas production rate as it does a mining rate and/or have the ability to set a rate on the exploration license areas.

Secondly, it is not unreasonable to expect a return from royalties to the regions supporting the production, since this is where the costs of support are located.

Self-sufficiency and sustainability for the local economy relies on everyone paying their fair share.

Council has joined with its fellow Councils in the Namoi Councils Group to call on the State Government to deliver a percentage of royalties back to our regions. Likewise, we submit that the Local Government Act must be amended as a matter of urgency to enable proper rating of CSG production.

Recommendation: That the State Government review the allocation of a percentage of royalties be returned to the Local Government Area directly affected to support infrastructure.

e. Local Government Including Provision Of Local/Regional Infrastructure And Local Planning Control Mechanisms.

The matters of rates and royalties are mentioned above.

Likewise the impact on roads which must be properly built and maintained to support both the local region and the individual developments.

Conditions must be made on licensed developments to ensure sealing of roads to support traffic and reduce dust issues; to ensure bridges are adequate to support heavy loads where appropriate, and to ensure consultation with the community on an ongoing basis.

The present exploration licence for ESG makes no requirement for a compulsory Community Consultative Committee as is the case for coal mine developments. This matter must be redressed.

Timely advice to Councils who represent the local people is essential for any gas activity, be it exploration, testing or production. Such advice should include indications of areas planned for licensing by the State, well in advance, so that the cumulative impacts of new gas development can be incorporated into the Regional Plan mentioned above.

This enables Councils and Government agencies, as well as private investors, to plan for the necessary physical and social infrastructure which will be required to support growth.

Presently, Council only has the approvals process for coal mining to judge how planning has failed to inform communities.

Improvements to enable true strategic planning at all levels would be made possible by having a regional strategic planning committee oversight the regional plan. Such a committee can be small but include a representative of LG, Department of Planning, Transport infrastructure, community and environment and should be able to meet at regular intervals to fast track inputs into the Regional Plan. This committee can inform the approvals authority for State significant developments and cut down the time taken for responses from individual agencies, LG, etc.

Certainly, State Government knows well in advance of its intention to advertise licence availability for gas exploration.

Councils and the Community need better advice of intentions to test on Shire Roads and reserves, than a letter from a contractor well after the licence has been issued. Consultation and communication are the keys to better outcomes for our region.

Recommendation: That CSG mining sites be considered to be rated by Local Governments to support community infrastructure to meet the demands of the influx of population and operations of the mining activities.

Recommendation: That the process of allocating licenses for CSG be reviewed to include an active consultation with Local Government and community for all license applications to ensure the co-existence of mining and agriculture.

Recommendation: That the affected Councils be given the ability to set a rate on exploration and extraction leases and or mining sites.

3. The Role Of CSG In Meeting The Future Energy Needs Of NSW Including The:

a. Nature And Extent Of CSG Demand And Supply

Future predictions show that the demand of CSG will consume the supply of CSG within 20-30 years with estimates showing that the current usage will double. Currently 10% of all energy use in NSW is from Gas and 90% of that gas is from other States. The CSIRO estimates that NSW harbors over 250 trillion cubic feet of gas yet to be exhumed.

This is an indication that gas is alternative fuel that the Nation wishes to utilize and with extensive availability in NSW it has the prospect of continuing supply for millennia. Narrabri Shire Council would like to host this production within the region to further develop greener energy provisions through a structured framework of drilling and extraction.

The debate over energy security and cost to the community must occur in conjunction with any debate over the future for CSG production.

An Inquiry based on the Owens Inquiry but looking seriously at electricity demand, the role for gas as a fuel for transport and industry, and gas fired power stations as a mechanism to respond to peak demands quickly should be a strong recommendation from this CSG Inquiry.

b. Relative Whole Of Lifecycle Emission Intensity Of CSG Versus Other Energy Sources.

A full lifecycle emission intensity analysis of coal seam gas needs to be conducted. Through all documentation there is no thorough independent analysis of this issue. There is considerable information that the CSG releases 70% less green houses gasses than other energy sources yet a full lifecycle analysis needs to be conducted in order to verify if this alternative is completely a greener solution.

c. Dependence On Industry On CSG For Non Energy Needs

Large industrial businesses have targeted their products to meet the needs of the CSG industry through the supply of machinery and chemicals. Businesses tailor their

products to meet demands of available markets to ensure sustainability. Businesses who have redirected their supply to target CSG will depend on the productivity of these industry successes. However, Australia is not the only country that hosts CSG and should this industry fail the USA is the largest facilitator of CSG and there may be and opportunity for exportation.

d. Installed And Availability Costs Of CSG Compared Versus Other Stationary Energy Sources.

The initial installation of CSG is costly to the consumer; however over reduced usage charges the initial cost is subsidized. Availability of CSG as a power source is more common to the east coast of Australia however, costs in rural areas maintain similar to the east coast areas. The maintaining of lower cost for CSG will only be maintained on reduced exportation, as this increases Australia is open to world gas pricing.

This maintains the energy source as sustainable although through transparency and competition this will remain a viable source of energy for all of Australia.

e. Proportion Of NSW Energy Needs Which Should Be Base Load Or Peaking Supply And The Extent To Which CSG Is Needed For That Purpose.

The consumption of energy is to continue to rise rapidly in base load and peak, as a consequence of extending population, urban expansion and industry. To broach the shortfall of energy supply CSG and renewable energy should all be maximized to support NSW's energy supply to ensure reliability. Coal will remain the largest provider of energy, followed by CSG, with future views of reducing usage of coal and counterbalancing with CSG and renewable energy in a staged process to maintain ongoing supply. However at this stage there is evidence that renewable energy has matured to the point where CSG would not be required to bridge the gap in supply with wind farms in NSW currently becoming a strong energy provider.

f. Contribution Of CSG To Energy Security And Transport Fuel

CSG is a substantial contributor to energy security and transport fuel. As a building industry with extensive supplies in NSW CSG has the capacity to contribute to energy security for NSW into the future by meeting any shortfalls in the increasing demand.

4. The Interaction Of The Act With Other Legislation And Regulations, Including The Land Acquisition (Just Terms Compensation) Act 1991.

The need for amendment to the LG Act is already mentioned.

The Petroleum Act needs major overhaul to not only provide for CSG operations but to improve on the equivalent Queensland Act where experience can offer better options for legislation.

An independent monitor needs to be established and whether this can occur under the Petroleum Act or needs its own legislation must be quickly identified.
The review of the EP&A Act currently under way must also look at areas which need modification to accommodate the issues raised by CSG production and transportation.

Land Acquisition (Just compensation) Act 1991

The Land Acquisition (Just compensation) Act states that compensation is based on land value at acquisition, special value, loss attributed to severance, loss attributed to disturbance and solatium. This is solid benchmark for assessing compensation for land use unlike the guidelines in the NSW Petroleum (Onshore) Act, 1991 which is to be agreed between parties which leaves a disadvantage to landholders not aware of the legalities., However the Land Acquisition (Just compensation) Act does not pinpoint the continued loss of production through the years for land that is left unfarmable during the acquisition.

Environment Planning and Assessment Act 1979

Concerns have been raised through the issues currently highlighted in Queensland for water and land contamination and lack of assessment and monitoring of production sites. The Environmental Planning and Assessment Act requires certain sized operations to undergo certain planning approval streams through the Minister for Part 3A and Part 5 applicable applications or through Local Government for Part 4 Applications. This highlights that there is not a consistent framework of regulation on the extraction sites. This framework for approval requires further input of Local Government and communities in the Part 3A and 5 applications with LEPs and water courses, above and underground and aquifers, being taken into consideration directly with these applications as well as being streamlined so that all CSG extraction is approved and consistent with a framework that protects the industry and the communities surrounding the extraction.

It is noted that through State SEPPS there is the assessment considerations of impacts of water and ecosystems, however with the lack of transparency of CSG extraction specific frame worked regulations this is of concern as consideration of ecologically sustainable development is not transparent in approvals by the Minister.

State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007

Section 12 of the State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 states the following:

“12 Compatibility of proposed mine, petroleum production or extractive industry with other land uses

Before determining an application for consent for development for the purposes of mining, petroleum production or extractive industry, the consent authority must:

(a) consider:

*(i) the existing uses and approved uses of land in the vicinity of the development, and
(ii) whether or not the development is likely to have a significant impact on the uses that, in the opinion of the consent authority having regard to land use trends, are likely to be the preferred uses of land in the vicinity of the development, and
(iii) any ways in which the development may be incompatible with any of those existing, approved or likely preferred uses, and
(b) evaluate and compare the respective public benefits of the development and the land uses referred to in paragraph (a) (i) and (ii), and
(c) evaluate any measures proposed by the applicant to avoid or minimise any incompatibility, as referred to in paragraph (a) (iii)."*

This stage of an application is not a transparent process and should be instigated with Local Government involvement and community consultation to provide an environment to support both CSG and agriculture.

Environment Protection and Biodiversity Conservation Act 1999

The CSG licenses must also meet approval under the Environment Protection and Biodiversity Conservation Act 1999. An environmental assessment must be carried out before this decision is made. However, under a bilateral agreement between NSW and the Commonwealth (permitted under the Act), the Minister may rely on an assessment carried out under Parts 3A, 4 or 5 of the NSW Environmental Planning and Assessment Act 1979.

This allows the process to be streamlined for efficiency but also sidelines Local Government and the community in relation to the issues relevant to approval under this Act.

The Water Management Act, 2000

The Water Management Act states that water management plans are required for interference with aquifers, however most Part 3A applications under the EP & A Act forfeit this requirement under the Act.

5. The Impact Similar Industries Have had In Other Jurisdictions

The CSG industry in Queensland has come into interest with recent issues of water contamination and chemical spills. The industry has been ingrained in Queensland for a number of years and the current issues highlight the need to develop strict environmental guidelines for this industry and exclusion of agricultural zones. These guidelines are required to be produced as efficiently as possible for the future growth of the CSG industry development in NSW to protect all industries and communities.

Impacts may occur due to adverse effects on water aquifers and quality and this may have consequences throughout the Murray Darling Basin.

Impacts will occur on areas through which gas pipelines may be built.

Impacts will occur at Ports where gas is destined for export.

Impacts will occur where workers migrate from their present locations to work in the CSG, power and associated sectors, leaving skills shortages in their present locations. But there can be positive impacts with demand for new training in gas production and management; demand for more research enabling university trained professionals to remain in regional areas; the provision of a more efficient supply of energy to fuel growth; emerging industries using gas to produce value-added commodities for the nation and export; the development of a centre of excellence in CSG production which can lead the world.

