



APPEA submission to the Chief Scientist 's Review of CSG Activities in NSW

Siobhan Barry to: csg.review@chiefscientist.nsw.gov.au

26/04/2013 10:50 AM

History: This message has been replied to and forwarded .

Dear Professor O'Kane,

Please find attached a cover letter and submission to your Review of CSG Activities in NSW from APPEA.

Regards,

Siobhan

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APPEA submission to Chief Scientist - cover letter - 24 April 2013.pdf

24 April 2013

Professor Mary O'Kane
NSW Chief Scientist & Engineer
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SYDNEY NSW 2001

email: csgr.review@chiefscientist.nsw.gov.au

Dear Professor O'Kane,

Review of coal seam gas activities in NSW

The Australian Petroleum Production and Exploration Association (**APPEA**) welcomes the opportunity to provide a submission to your review of the NSW coal seam gas (**CSG**) sector.

APPEA acknowledges that resource developers need to have broad community support in order to proceed with their projects. We believe that appropriate scientific research and technical data have a key role to play in answering community questions.

Our submission will highlight:

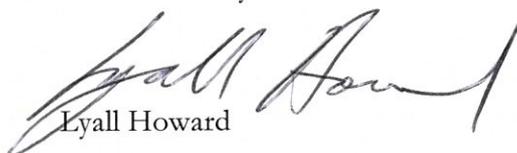
- the typical consultation activities our industry routinely undertakes in NSW,
- raise issues about scientific independence and shared governance along with barriers to communicating about technical information with communities,
- examples of best practice, community-led science from the NSW CSG industry, and
- provide comments specifically addressing your Terms of Reference.

Please be assured of our commitment to full co-operation with this important review. APPEA's member companies are providing detailed scientific reports and underlying technical data in their own submissions relating to issues including risk, groundwater, noise, air quality and the various technologies used within their projects.

Following each APPEA Annual Conference, a scientific and technical journal incorporating all the papers presented is compiled. Should it be of use, the APPEA Journal can be provided to assist your Review. We look forward to providing you with further technical information at our upcoming meeting.

Please find attached APPEA's submission and do not hesitate to contact Siobhan Barry, Senior Policy Adviser on (02) 8241 1902 or at sbarry@appea.com.au if you would like further information.

Yours sincerely



Lyall Howard

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APPEA Submission

24 APRIL 2013

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1. OVERVIEW

The Australian Petroleum Production & Exploration Association (**APPEA**) is the peak national body representing the oil and gas exploration and production industry, including the coal seam gas (**CSG**) and liquefied natural gas (**LNG**) industries. Collectively our membership accounts for around 98 per cent of Australia's oil and gas production.

NSW is competing for gas supply with other states at a time of constrained supply. With no indigenous gas development, NSW households and industry will be at a significant disadvantage. At this time of pressing need for new gas supply, exploration and development in NSW, the regulatory burden has increased significantly.

The Fraser Institute, an independent Canadian public policy research and educational organization,¹ conducts an annual Global Petroleum Survey. It shows that the cost of regulatory compliance² in NSW is a more significant deterrent to investment than in all other Australian states and territories, including in the Commonwealth offshore jurisdiction. In the Institute's All-Inclusive Composite Index of 2011, NSW was ranked at 45 of 135 jurisdictions, down five places from a rank of 40 of 133 in 2010 and behind all other Australian states, the NT and offshore.

The latest overall rankings put NSW at 63 of 147, a drop of 18 places. Additionally, NSW scored last when it came to environmental regulations as a deterrent to investment and also last when it came to uncertainty regarding protected areas.³ This evidence, along with the recent announcements of suspended activities by Dart Energy and Metgasco mean that confidence and investment certainty are being challenged in NSW.

A key way to rebuild is to ensure that any further decisions made in NSW are firmly founded on scientific evidence. APPEA's position is to support clear, transparent and scientifically based regulation for resource exploration and development in NSW.

In summary:

1. Support independent and credible science
 - a. Role of science is important - it needs to be proactive in the debate not reactive, leadership of the Chief Scientist is critical;
 - b. Coordination between State and Federal Government scientific and regulatory agencies, such as the IESC is necessary and must avoid duplication;
 - c. Land & Water Commissioner is a key way to identify community issues early, and address them within the existing framework.
2. Industry, with community involvement, can contribute to better science, and has done so in the past and this will continue in the future;
3. Adaptive management is essential to ensure that the science is matched to the risk involved, and that it reflects new information as it becomes available. Leading practice should be monitored and adapted when appropriate.

¹ The Fraser Institute – see Global Petroleum Survey, 2011 edition - Oceania region www.fraseramerica.org

² Question 5 Cost of Regulatory Compliance: re-filing permit applications, participating in hearings, etc <http://www.fraserinstitute.org/research-news/display.aspx?id=17762>

³ *Fraser Institute Global Petroleum Survey, 2012* Figure 30: Environmental regulations, Figure 33: Uncertainty regarding protected areas

While the underlying scientific foundation for the industry is critical, it is no less important that communities are informed of, involved in, and have an appreciation of the applicable science which underpins the standards, protections and regulations.

The CSG industry in NSW currently communicates technical and scientific data to the community on a regular basis in a variety of ways, some of which are listed below.

- Community Reference Groups – Dart (Fullarton Cove), AGL (Camden, Gloucester, Hunter), Santos (Narrabri and Gunnedah) and Metgasco (at Casino, commencing in May)
- Regular printed newsletters for activities or on a monthly or quarterly basis
- Regular advertising and notices in local newspapers and on local radio
- Community information offices – Narrabri, Gunnedah, Casino, Gloucester, Singleton, Camden
- Information stands at annual local agricultural shows – in some cases for more than 5 consecutive years
- Presentations to local community groups, to councils, MPs, government departments and business chambers
- Fact sheets and frequently asked questions
- Environmental, geological and technical presentations and reports,
- Field trips/ visits to sites
- Information evenings at local halls near where activity is planned
- Letterbox drops to neighbours and communities
- Drop in sessions and open days to offices
- Websites
- Posters on local notice boards and at Council offices
- 24 hour information phone lines
- Hire of specialist staff for landowners and community members
- Scale models, demonstrations and animations
- Participation in and support of local groups.

These channels provide a large flow of information throughout the areas of Petroleum Exploration Licences (**PEL's**) where our member companies are focussed.

A key issue faced by the industry is that members of the community do not understand the requirements placed on our sector by Government, or the governance structures and standards the industry operates under. Chief amongst these is that at PEL does not entitle a CSG company to enter land or to undertake activities. An access arrangement is required along with an environmental approval.

2. SCIENTIFIC INDEPENDENCE AND SHARED GOVERNANCE

One of the areas APPEA sees that the ‘Review of Coal Seam Gas Activities in NSW’, and the Chief Scientist & Engineer’s report to the NSW Premier and to the Minister for Resources and Energy can assist is by encouraging fact based, accessible scientific discussion about the issues communities want to understand.

As noted above, we believe there is a key role for the Land and Water Commissioner to play in making sure the issues communities want more information on and to understand are addressed.

To do this very important work there are new partnerships and ways of doing things that need to be found, adapted and implemented. These developments will enable independent meaningful data collection and research to take place. The funding models currently available for these types of collaborations are either not well known, or parts of the community find this governance lacking, particularly when communities want independent scientific advice.

Unfortunately, there are numerous examples of people ignoring independent, relevant and transparent research findings simply on the basis that it was industry funded. These claims, taken to their logical conclusion, mean that all researchers and scientists can be bought and that professional standards mean nothing. This could not be further from the case and we strongly believe that there is a role for the Chief Scientist and this Review to comment on, and inform the community about the standards that apply to research and regulatory requirements here in NSW and in Australia generally.

APPEA would like the Review to consider the issues surrounding:

- funding models from other sectors, in Australia and internationally, that may assist in achieving greater acceptance of the methodologies and standards used;
- governance structures at the neighbourhood, community and regional level that have assisted collaboration between communities and industry; and
- scientific independence in terms of the NSW CSG sector, along with transparency, shared governance and good communication with local communities.

3. COMMUNITY AND SCIENCE IN THE CSG SECTOR

The coal seam gas sector in NSW has been a leader in greater transparency of scientific information and often sharing control of these studies with local communities. In some cases, additional governance structures have been specifically set up to assure communities and stakeholders that scientific studies are independent. Over the last 3 to 5 years, CSG explorers have generally been providing more information to communities at an earlier stage of exploration. This section of APPEA's submission will briefly highlight some of these examples for the information of the Review of coal seam gas activities in NSW.

An early example of this type of collaboration started with the meetings to determine the Terms of Reference for a Namoi Catchment Water Study in late 2008, which was set up by a former Minister with input from farming, irrigation, mining, local government, the community and coal seam gas sectors.

There are a number of leading examples of CSG companies partnering with local communities to come up with a joint way to address issues, through greater transparency and information sharing.

Examples of these types of initiatives in the CSG sector include:

- the Broke Groundwater Monitoring Program,
- Santos' monitoring of farm water bores within 2 kilometres of proposed activities,
- the voluntary establishment of community reference groups or consultation committees,
- Santos' water portal, and
- the AGL Camden air quality monitoring network.

A short description of each initiative follows for the information of the Review. Further detailed information is available from the relevant member company and APPEA can assist in arranging this.

Broke Groundwater Monitoring Program

A groundwater investigation and monitoring program was developed in 2009 by Parsons Brinckerhoff (PB), AGL and the Bulga Community Consultative Committee (BCCC) to help the local community understand what impacts, if any, there might be on groundwater as a result of exploration for natural gas. The groundwater monitoring program came out of company and community discussions about future exploration activities at the existing pilot wells near Broke. The community wanted the study to prove that there would be no potential for cross contamination or leakage of groundwater from the alluvial aquifers down to the coal seams before any exploration could take place. As a result, the groundwater study had to be completed and prove this before exploration testing of the pilot wells was carried out.

To provide confidence in the results of the study, both the monitoring process and the results were independently peer reviewed by Professor Garry Willgoose of the University of Newcastle. Professor Willgoose was selected jointly by the community representatives on the BCCC and the company.

The pilot testing of the wells at Broke only took place (from May to October 2010) when the Independent Peer Review of the Broke Groundwater Study found that there was unlikely to be an impact on the aquifers due to the proposed testing of the pilot wells.

Santos' monitoring of farm water bores

If landholders agree, Santos will monitor private groundwater bores within a two kilometre radius of its field activities in order to establish a solid baseline record of current groundwater quality and movement.

A number of studies are underway to ensure there is an extensive baseline groundwater database. This includes groundwater modelling, surface water sampling, a study on the dependency of local ecosystems on groundwater and also broader regional assessments.

These will build on existing knowledge and will ensure Santos can accurately monitor the aquifers during the life of the proposed project.

The production wells will be remotely monitored, Santos is currently developing a network of shallow and deep aquifer monitoring bores which will be continuously monitored prior to, during and post development activities.

The data collected on these bores will be made available to the public online, similar to the portal set up for the more advanced Queensland operations.⁴

Establishment of voluntary community committees and local Government

Community committees have been voluntarily set up across the resources sector in NSW to ensure that the various parts of local communities could be kept up to date and involved in projects. The majority of the committees operating in the CSG sector today were set up voluntarily by the relevant companies and communities - that is four of the six currently in existence today.

Local councils have a positive contribution to make in providing a safe, constructive place for discussions between industry and communities. A number of Councils have very clearly shown they can provide the opportunity for meaningful and transparent discussion between communities and companies, while keeping separate their role to decide and represent their local communities.

APPEA believes that real leadership has been shown in providing this opportunity for discussion by the Gunnedah, Richmond Valley and Upper Hunter Shire Councils. It is strongly recommended that the Review contact these Councils to discuss this further, particularly in relation to our suggestions in relation to comments on shared governance in Section 2.

Santos water portals with real time public data

Santos has been monitoring surface water quality since 1999 in Roma and extended this in 2009 to monitor groundwater quality and pressures in local aquifers surrounding its gas fields including Roma, Fairview and Arcadia Valley.

Aquifers above and below the target coal seams are monitored and Santos is committed to ensuring that no landholders' groundwater supply is materially impacted due to activities conducted by the project.

This monitoring detects early changes in the aquifers, allowing potential impacts to be managed well in advance.

Landholders in the monitoring program may have monitoring equipment which collects live-time-data on water levels in their bore throughout the day. Santos is extending its

⁴ www.santoswaterportal.com.au

water monitoring program to provide landholders with the ability to tap into data about the activity occurring at their water bore anytime, anywhere.

The water monitoring equipment is installed onto landholders' bores and collects live-time-data on the water levels within their bore throughout the day. Landholders can obtain this real-time information at the click of a button by simply logging into a program via the internet. Each landholder has their own individual log-on which allows them access to their own bore information. Santos' experienced water team can quickly respond if there are any questions from the landholder. It also brings a new level of information to landholders which help them manage their own bore usage.

AGL Camden air quality monitoring network

AGL has been developing a new methane emissions monitoring program in response to issues raised, and this was recently shared with the local community. It will make the Camden Gas Project the first coal seam gas operation in NSW to monitor for methane emissions in the atmosphere.

This directly responds to concerns about the possibility methane could leak from wells and operations into the air. The testing will be in addition to regular checks of pipelines and equipment.

The monitoring program has been developed in consultation with the Office of the NSW Chief Scientist & Engineer, the NSW Environment Protection Authority, and the NSW Department of Planning and Infrastructure.

Members of the community, local councils and the Environment Protection Authority recently joined AGL at a briefing session to discuss the specific locations for the monitoring program.

The first phase of the program will run for three months. Specialist consultants will operate the air monitoring equipment, collecting weekly samples from up to 20 sites across the Wollondilly, Campbelltown and Camden local government areas. A report and results will then be reviewed by the CSIRO and presented to the community consultation group.

Then the findings of the air quality testing will be shared with the community and regularly updated on the website.

These enhanced monitoring programs will mean communities will have access to more information than ever before on the local groundwater systems and air quality around the Camden Gas Project.

4. COMMENTS ON THE TERMS OF REFERENCE

APPEA comments on the Chief Scientist's CSG review Terms of Reference are outlined below:

1. *undertake a comprehensive study of industry compliance involving site visits and well inspections. The Chief Scientist's work will be informed by compliance audits undertaken by regulatory officers, such as the Environment Protection Authority and other government agencies*

APPEA notes that many of the requirements for the CSG sector in NSW that have been announced have not yet been implemented. The review will need to take care to ensure the appropriate requirements are being tracked. For example, the newly revised Petroleum Exploration Licence (PEL) title conditions were only finalised and signed by our member companies in February and March of this year, so these new conditions will only apply from the date both the companies and Minister (or delegate) signed off.

Similarly, the Strategic Regional Land Use Plan announced in September 2012 is only partially implemented, with key measures such as the Gateway process yet to be gazetted and practice notes and guidance materials for many elements of the package, including the Aquifer Interference Policy still be finalised. Therefore some requirements may not yet apply as they are not yet in place or will only apply when activities are proposed.

This will be difficult to track as the exploration activity levels in NSW have been severely limited since APPEA started collecting industry data in January 2011 (attached). Based on these very low activity levels, many of the findings of the Independent Audits required by the Division of Resources and Energy, the Department of Planning and the Environment Protection Authority would still be applicable. The Audit of Coal and Petroleum Exploration Licences in NSW, Phase 2 – Report from April 2012⁵, the underlying data provided to the Government by companies and the independent auditors who completed that work for some companies may assist the Review.

2. *identify and assess any gaps in the identification and management of risk arising from coal seam gas exploration, assessment and production, particularly as they relate to human health, the environment and water catchments*

APPEA notes that many of the potential risks arising from the CSG sector are well known and are currently adequately managed through NSW's existing, stringent environmental and regulatory regimes. Issues arising from noise, air quality, soil and water and management, visual amenity, cultural heritage and chemicals are well understood and managed under the existing NSW-wide regime which already applies equally to the CSG sector.

At this point, it would be very useful to the industry if the Review's consideration of gaps focused on ensuring that the current regulation of CSG is understandable, transparent and manageable for government, the industry and the community.

⁵ http://www.resources.nsw.gov.au/_data/assets/pdf_file/0004/429610/Report-on-audit-of-coal-and-petroleum-exploration-licences.pdf

Environmental management aspects are addressed in the International Organization for Standardization (ISO) 14000 family, which are widely used amongst APPEA member companies. It provides practical tools for companies and organizations looking to identify and control their environmental impact and constantly improve their environmental performance and there are also focusing on specific environmental aspects such as life cycle analysis, communication and auditing.

Human health

Oil and natural gas exploration and development has existed for more than 60 years in Australia and for 100 years in the United States and around the globe. As a result, there are studies looking directly at this development and its impacts on public and worker health. There is a large amount of data and experience from international jurisdictions that shows natural gas development does not negatively impact public health.

Health Watch: a long term, independent Australian study

Since 1980, the Australian Institute of Petroleum (AIP) has sponsored the development and operation of an independent epidemiology program called Health Watch⁶. It is a university-based research program which studies people who have worked in the Australian petroleum industry to find out what happens to them in terms of their health. Health Watch has followed about 19,000 past and present employees during their time in the industry and after they leave or retire. Along the way, Health Watch records any occurrence of cancer and eventually, the cause of death.

By comparing this information for different jobs within the petroleum industry and with the general Australian population, Health Watch tries to provide useful information about risks in jobs in the petroleum industry and risks in lifestyle. The information from the Health Watch study is important in identifying factors that may be a risk to health and ways in which these risks may be controlled.

The Health Watch Study has always been conducted independently, first at the University of Melbourne and then, from 1998, at the University of Adelaide. In 2005 the study was transferred to the Monash Centre for Occupational and Environmental Health, a leading international centre for epidemiological programs and collaborative research at Monash University.

APPEA can provide you with an appropriate contact at the AIP or at Monash University to further assist.

International scientific research

APPEA is compiling a list of international scientific research that may assist your Review and be potentially relevant to human health, the environment and water catchments. This information is being sourced from international regulators, universities and industry bodies.

Similarly, in relation to technical standards and engineering, the American Petroleum Institute⁷ is the global repository for the international standards our members apply along with the other State and Australian guidelines.

- 3. identify best practice in relation to the management of CSG or similar unconventional gas projects in close proximity to residential properties and urban areas and consider appropriate ways to manage the interface between residences and CSG activity*

⁶ <http://www.aip.com.au/health/ohs.htm>

⁷ <http://www.api.org/>

APPEA believes that the CSG industry can undertake projects and operate safely within residential areas and with minimal impact on local communities. AGL's coal seam gas project at Camden has been operating safely in a largely residential area for over 10 years and has done so with no impact on community health or wellbeing.

We note that the scientific risks of CSG in or close to residential areas are minimal. It should also be noted that other industries exist within residential zones, and these include the Lucas Heights Nuclear reactor, gas, electricity and telecommunication transmission lines and heavy industry.

Qualitative risk assessments for CSG have been undertaken pursuant to the existing NSW requirements (HIPAP 5) and the Department of Planning has published Locational Guidelines based on these assessments for local Councils. APPEA understands that AGL intends to provide this information, however, should you require further assistance, please let us know.

4. *explain how the characteristics of the NSW coal seam gas industry compare with the industry nationally and internationally*

The Standing Council on Energy and Resources (SCER), which comprises Australian, State and Territory Energy and Resources Ministers, discussed in 2011 how all jurisdictions could work together on the regulatory framework of the coal seam gas industry. To that end, SCER agreed to undertake a stock take of existing Australian requirements (including legislation, regulations and standards) for CSG wells in each jurisdiction to allow a determination of:

- (1) where common ground already exists between jurisdictions on well integrity and water management and monitoring, including hydraulic fracturing and chemical use for CSG; and
- (2) where gaps may exist in a comprehensive approach to well integrity for CSG within and between jurisdictions.

Norton Rose Australia was engaged by the Commonwealth Department of Resources, Energy and Tourism (on behalf of SCER) to undertake the legislative stock take and the gap analysis. Norton Rose produced two reports. The first was a Stock Take Report, followed by a Benchmarking Report.

Environmental consultants, SKM, were also engaged by DRET to identify principles of leading practice in the CSG industry. In its report entitled *Leading Practice for Coal Seam Gas in Australia Advisory Report* (SKM Leading Practice Report) SKM has identified a set of leading practice strategies. The Norton Rose Benchmarking Report should be read in conjunction with the SKM Leading Practice Report.

The *Fraser Institute Global Petroleum Survey 2012* highlights the 10 jurisdictions that in 2012 had the worst scores for uncertainty concerning environmental regulations. These jurisdictions were New South Wales, Argentina—Santa Cruz, Tanzania, Italy, California, France, Victoria, US Offshore—Alaska, Russia—Other, and Quebec. (*Fraser Institute Global Petroleum Survey, 2012 page 85*)

The report also included a number of quotes from respondents, in New South Wales some of the respondents' quotes included:

- “Overlapping and conflicting jurisdictions”

- “Public and political ignorance (even hostility) of the industry”
- “In experienced and confused government employees who appear to lack sufficient direction”

5. *inspect and monitor current drilling activities including water extraction, hydraulic fracturing and aquifer protection techniques*

Notwithstanding that hydraulic fracturing has a proven safe record of over 2 million operations, there have been no fracture stimulation activities undertaken in NSW since those undertaken by AGL at Gloucester in May 2009. The APPEA industry statistics (attached) track most CSG industry activities on a cumulative basis from January 2011, including:

- numbers of exploration and production wells drilled and remediated
- fracture stimulations
- water production
- number of water monitoring bores
- land access agreements and formal access disputes
- employment, and
- community engagement events and contributions.

More detailed historical and current operational information is available directly from our member companies or the service providers that contract to the industry.

As there is limited drilling activity occurring in NSW, APPEA could assist the Review in arranging site visits or contacts amongst our member companies, particularly with non-NSW companies, given most of our NSW members and service providers have been contacted by the Review.

It is worth noting that the recently released Codes of Practice for Well Integrity, Fracture Stimulation and Land Access (CSG) were developed with the help of APPEA.

6. *produce a series of information papers on specific elements of CSG operation and impact, to inform policy development and to assist with public understanding. Topics should include:*

- *operational processes*
- *NSW geology*
- *water management*
- *horizontal drilling*
- *hydraulic fracturing (fracking)*
- *fugitive emissions*
- *health impacts*
- *wells and bores*
- *subsidence.*

APPEA strongly supports a requirement for the Chief Scientist’s Office to produce a series of information papers or fact sheets on specific elements of CSG operations. A range of

CSG fact sheets can already be accessed on CSG company web sites, on APPEA's web site and the new State Government web site. However, information papers and fact sheets with a scientific orientation based on technical data would provide further confidence in a public debate where industry information is often dismissed as favouring one side of the argument. Chief Scientist fact sheets are particularly useful for the media and could be a summary of longer documents for those interested in more detail.

5. APPENDIX – MEMBER COMPANY COMMUNITY OVERVIEWS

Metgasco

Metgasco's recent (12 month) activities:

- presentations to community meetings, including Richmond Dairy and meatworks meetings;
- advertising in local newspapers (eg; water quality results);
- dinner meetings with a diverse range of community leaders;
- shop-front openings
- Letter plus video to landholders
- responses to phone calls and email messages
- company website

Our program over the last 18 months has been much stronger than before. We also filled two new positions: a dedicated External Relations Manager and a Community Relations Manager.

We plan to continue a similar program, with the addition of a new community consultation committee – the first meeting planned for May this year.

AGL Energy

Between May 2011 and January 2013 AGL's community relations team delivered almost 150 separate community engagement activities from community updates, community consultative committee meetings and direct mail including:

- o Face to face engagement with over 19 separate community information sessions
- o 4 separate community sessions in Camden attracting over 50 people from the local area
- o Running our community information centre at Singleton for richer, more personal communication on our Hunter project
- o Our community relations activities are focussing on providing an "experience of AGL" including four separate drill rig inspections at Gloucester and 8 community site tours at our Camden facility

Since January the team has undertaken a series of major consultation and communication projects. Here are two examples:

Hunter Drilling Showcase: AGL has been drilling groundwater monitoring bores and core holes at our property at Yellow Rock. We wanted to use this drilling as an opportunity to show how coal seam gas exploration can and is coexisting with agriculture and viticulture, with minimum impact to land, water and the environment.

The showcase involved inviting key stakeholders to visit our drilling to meet AGL staff and see our operations first hand. It involved the setup of a large marquee beside the drilling site to hold information panels and host presentations by AGL staff. The showcase operated from 25 February through to early April. Invites were sent to a range of targeted stakeholders including local MPs, Federal MPs, Councillors, Council staff, schools, agricultural organisations, the Chamber of Commerce, neighbours and local businesses.

The objectives of the showcase were to:

- build relationships, demonstrate openness
- answer questions and respond to concerns
- allow people to see our operations with “their own eyes”

Over 330 people attended the showcase from MPs to local Government councillors, children and business leaders.

Importantly the visit appeared to get “cut through” which can be illustrated in these ways:

- Federal MP Joel Fitzgibbon delivered a speech in Federal parliament where he said: “I took the opportunity to inspect one of AGL's projects in a small village called Broke in my electorate...It is a pretty impressive example of how good the industry can be—providing gas supply, wealth and jobs, and water-saving comes with it. If we get it right it can be a wonderful thing for the Hunter Valley, bringing similar wealth as coalmining without anything like the footprint that open-cut coalmining brings, for example. But we have to get the balance right and I think this initiative strikes the right balance.”
- The head science teacher wrote to AGL after the visit to say: “Overall the students had a very positive experience and appreciated the friendliness of the AGL staff who did their best to ensure everyone went away with more knowledge and information than they arrived with.” This is a great endorsement of our on the ground work. It builds relationships, trust and deepens understanding of our work.

Camden Water and Air Emissions Monitoring: AGL is working hard to assess the potential impacts of coal seam gas on air and water resources. We’re doing that by funding a new air monitoring and expanded water monitoring program at Camden Gas Project. AGL recently shared with the community our work on developing a new methane emissions monitoring program, which will make Camden the first coal seam gas project in New South Wales to monitor for methane emissions in the atmosphere. This directly responds to concerns about the possibility methane could leak from our wells and operations into the air. The testing will be in addition to our regular checks of our pipelines and equipment.

AGL consultation in April included community members, members of the Camden Community Consultative Committee, the Environmental Protection Authority, the Department of Planning and Infrastructure, an expert on water and the environment from the University of Western Sydney, representatives from the three local councils and a local MP.

AGL briefed the community on the proposed methodology and locations for emissions monitoring, the criteria for choosing the sites and sought the community’s input on the locations. An important part of these programs is sharing the results with the community and the group provided feedback on the best methods to do that. The community group will reconvene on completion of the first phase of the emissions monitoring and the report and results being reviewed by the CSIRO.

Santos

Santos has been exploring for coal seam gas in NSW since 2008. Until its acquisition of Eastern Star Gas’ Narrabri assets in November 2011, Santos was focussed on exploration around Gunnedah and the Upper Hunter.

Santos has sought to communicate openly and transparently about our activities in the region. We have built an increased presence in the towns in which our staffed are based.

In Gunnedah, we first established a shopfront office in early 2010 and have recently moved to a larger premises, prominently located in the main shopping strip, which we have fitted out in the style of an information centre to encourage locals to visit us to have their questions answered.

In Narrabri, we opened a similar shopfront in the main shopping precinct, making it easier for locals to access information. Santos has undertaken a range of local community engagement activities such as:

- Establishing Community Consultation Committees in the Narrabri and the Upper Hunter Shires. Santos has held more than 100 community information sessions, Community Open Days and site tours and briefings for local community groups.
- Santos has had information stands at the AgQuip field days in Gunnedah over the last 5 years (100,000 attendees annually),
- We have had information stands at various community events and 7 agricultural shows in the region over the last two years. On these occasions we ensure we have various technical staff on hand from our geology, water, drilling and environment teams on hand to answer queries of a technical nature and describe our processes in detail.
- We also regularly present to local councils, local business and community groups, service clubs, local interest groups and also offer them visits to our field operations. Last year we held over 100 meetings with groups about our work and coal seam gas more generally.
- Over the past year we have also conducted 10 community forums in Gunnedah and Narrabri, these incorporate a chance to speak with our technical experts and visit our operational sites at Kahlua and in the Pilliga. This year we also conducted the first public tour of our Pilliga operations which was advertised in the local paper, allowing any interested community members to attend. These tours will take place bi-monthly for the rest of the year.
- We regularly contribute to local media stories regarding our work and advertise our monthly activities in the Narrabri area via the local paper.
- Our website gives access to information on our work, factsheets on specific aspects of our work and regulatory documents we have lodged as part of our work program. A 1800 number is also set up to take enquiries.
- We focus our sponsorship on the communities in which we work and seek to assist a wide variety of local community groups and charities. Last year we spent more than \$300,000 on sponsorships, community events etc.

We are undertaking and planning a number of studies to increase community confidence in our work and to gather essential baseline data on groundwater:

- we are setting up a network of shallow and deep aquifer monitoring bores around our areas of operation, which will be continuously remotely monitored, with the data available to public via internet portal.
- local landholders who live within a two kilometre radius of our activities can have their water bores monitored by Santos

- Surface water sampling is underway as are regional groundwater assessments and studies on groundwater modelling and impact assessment and groundwater dependent ecosystems.

We are also undertaking a number of ecological studies on specific flora and fauna in the area.

Santos has recently announced its intention to seek approval for a gas production Project based around our interests in the Pilliga State Forest. We have already begun community engagement around this, prior to lodging a Preliminary Environmental Assessment with the State and Commonwealth Governments.

Dart Energy

Dart Energy has been committed to engaging with the community and being open and transparent about its proposed activities.

In general, the degree of community engagement has been proportionate to the level of proposed activity for the licence area. A good example is Fullerton Cove which was Dart's main focus in NSW where a pilot project was being planned.

Fullerton Cove Community Engagement

From July 2011 to March 2013, Dart undertook over 500 separate external stakeholder consultation events, from individual discussions with landholders and other stakeholders (including MPs, councils) to information sessions for the wider community.

Dart's approach was to engage as extensively as possible with stakeholders. Dart undertook stakeholder mapping of the Fullerton Cove area to understand who the main community stakeholders were. We analysed stakeholder's issues and our consultation activities reflected this.

Our community consultation activities included:

- A Community Reference Group (CRG), reflecting the major stakeholder groupings in the area (with positive and negative support and an independent Chair appointed) with the meetings involving participatory discussions on key CSG issues;
- Weekly updates to the CRG;
- A community partnership with the Hunter Wetlands Centre;
- One-on-one discussions with landholders/ residents adjacent to the proposed pilot;
- Two public information sessions to outline proposed activities and provide an opportunity for questions and answers;
- Several community updates in the local papers;
- Community notifications (letter box drops) to local residents on proposed activities;
- Regular liaison with and presentations to the Department, local MP's, the local Port Stephens and Newcastle Councils and essential services such as the local Police;
- Engagement with the business community through the Hunter Chamber of Commerce;

- Regular liaison with local media and response to all media requests;
- A Dart 1800 free-call community number and community email and information provided on our website.

Development of consultation over time

Over the period of time, consultation activity widened beyond the immediate local council area of the proposed activity because of increased interest across the wider community, partly fuelled by wider media interest and protest activity. In line with the wider area of engagement, Dart also began to widen its group of stakeholders it engaged with beyond the local area. For example, Dart joined the Hunter Chamber of Commerce attending events to dialogue with the business community about gas supply concerns .