



**Standing Committee on Environment
and Planning**
Inquiry into Unconventional Gas in Victoria

July 2015



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The Australian Pipelines and Gas Association (APGA) is the peak body representing Australasia's pipeline infrastructure, with a focus on gas transmission, but also including transportation of other products, such as oil, water, slurry and CO₂. Our members include constructors, owners, operators, advisers, engineering companies and suppliers of pipeline products and services. APGA's members support the development of natural gas for the domestic and export markets.

APGA encourages the development of Australia's natural resources in a sustainable manner with minimal impact on the environment. Our members have a long record of working constructively with governments, regulatory agencies and local communities across Australia to safely and efficiently develop and operate critical energy infrastructure.

Executive Summary

- The pipeline industry has a record of working successfully with landholders, regulators and other stakeholders to develop land access guidelines and industry Codes of Practice.
- Landholders and resource companies are successfully negotiating land access agreements. Approximately 5000 land access agreements for unconventional gas activity are in place across Queensland and New South Wales. This suggests that the gas industry and landholders have arrived at agreements, including monetary compensation, that are acceptable to both parties.
- There are positives for agricultural productivity from the beneficial use of water generated from coal seam gas activity.
- Information from the 2011 Census confirms benefits for coal seam gas regions in Queensland in the form of higher household incomes, higher employment levels, improved education outcomes and the retention and growth of key demographics in the population.
- More natural gas in the energy mix will assist in reducing the nation's greenhouse gas emissions.
- A number of current and comprehensive scientific and regulatory reviews unambiguously state that the risks from unconventional gas activity can be managed with the appropriate engineering and regulatory standards.



The environmental, land productivity and public health risks of onshore unconventional gas activities can be effectively managed

In existing resource precincts, evidence shows that environmental, land productivity and public health risks can be effectively managed. Oil and gas extraction have been taking place in Australia for many years in a safely regulated manner. Exploration and extraction approvals are contingent on a range of state authorisations, including planning, environmental approvals and strategic agricultural land use. Commonwealth legislation that applies to the industry includes the *Environmental Protection and Biodiversity Conservation Act 1999* and the *Native Title Act 1993*.

The Australian pipeline industry has historically been successful in managing safety and environmental risks in constructing and operating gas transportation infrastructure. The industry is also focussed on working to formalise and further strengthen industry best-practice.

For example, in cooperation with the Queensland Government, APGA and the industry have developed a Code of Practice for Upstream Polyethylene Gathering Networks in the Coal Seam Gas Industry which is now referenced in Queensland legislation. This Code of Practice provides clear guidelines for the safe and efficient construction and operation of gathering lines in CSG fields, minimising environmental impact. This Code of Practice is currently being assessed for suitability by NSW authorities in cooperation with the industry and Queensland authorities.

Onshore unconventional gas activities can coexist with existing land and water uses and benefit local communities

The pipeline industry recognises the need for the coexistence of alternative land uses, and has a strong track record of working cooperatively with landholders, local communities and other stakeholders in land access and management.

APGA consulted with the Victorian Farmers Federation (VFF) in 2005 to develop an easement guideline on land acquisition processes for the purpose of pipeline construction. This Guideline details landholder consultation plans, privacy obligations and factors taken into account for route selection. It also details landowner's rights and suggests good practice for land access protocols and processes for notification to landowners about intended entry. Although only a guideline, the Pipeline Easement Guideline was endorsed by the VFF and subsequently updated in 2009. The Guideline is routinely applied by our



members in their engagement processes and, importantly, provides a clear outline for landholders of what to expect during an access negotiation.

APGA also publishes a Code of Environmental Practice for Onshore Pipelines for its members. This Code of Practice was first published in 1999 and most recently revised for the fourth time in 2013. Regular revision reflects the changes in jurisdictional regulations and strengthening of environmental standards, many of which were driven by the industry's experience in developing coal seam gas in Queensland. The Code of Environmental Practice assists our members in meeting the standards and conditions set by state regulatory agencies and is widely referred to in regulatory guidance, including in Victoria.

In Queensland, where Australia's unconventional gas industry is most advanced, agricultural producers, other private landholders, and the industry are learning to coexist successfully. As at the end of March 2015, in Queensland, approximately 4478 land access and compensation agreements had been finalised between landholders and gas companies¹.

Public confidence in land access frameworks is critical to successful coexistence. A robust land access system in Victoria would serve to protect the legal rights of landholders and give certainty to the resources sector.

Additionally, the development of unconventional gas resources in Victoria would stimulate a degree of regional investment, employment growth and the opportunity for retention of younger people in the regions. For example, reports by the CSIRO and KPMG, following the 2011 Census have explored the positive economic and community impacts of unconventional gas development in the Surat and Bowen Basins. These reports show higher incomes, population growth and the retention and increase of males and females in the key demographics of the 20 to 24 and 25 to 29 age groups.

The Queensland Gas Fields Commission² has reported on the policy of beneficial use of water from coal seam gas operations and the requirement for this water to be, 'fit for purpose', if used for irrigation or livestock production. The Gas Fields Commission also features case studies on the successful use of water from coal seam gas operations for the irrigation of cotton, grain and fodder crops. If such on-farm diversification is sustained, it can be expected to contribute to the resilience of farm businesses in the face of the variability of seasonal conditions in Australia.

¹ Queensland Gas Fields Commission – Landholders are not required to inform the Queensland Government of access agreements made with resource companies so a central register is not maintained. Numbers can be deduced from various sources of public information.

² Queensland Gas Fields Commission – CSG Water Treatment and Beneficial Use



Onshore unconventional gas resources can provide a competitive, affordable, secure and low-emission fuel for Victoria

The development of onshore gas has the potential to help Victoria transition away from its reliance on emissions-intensive brown coal.

In 2014, the Bureau of Resources and Energy Economics (BREE) reported that Victoria generated 56 per cent of its electricity from brown coal and 19 per cent³ from natural gas. Another BREE report⁴ has compared the emissions intensity of competing forms of energy. It found that the burning of brown coal for electricity can emit more than twice the greenhouse gases per MWh of electricity produced in comparison to natural gas.

Observation of the shale gas boom in the US shows the potential for unconventional gas to provide a competitively priced, low-emission fuel source for Victorian households and industrial customers. Increasing domestic gas prices in the US helped spur exploration activity and technical innovation that led to a significant expansion in the production of shale gas. This placed downward pressure on energy prices and is credited with contributing to the recovery of the US economy, while also (in conjunction with shale oil production) leading to a fundamental improvement in US energy security and a decline in annual carbon dioxide emissions of 212 million metric⁵ tonnes.

The eastern Australian gas market is undergoing fundamental change due to the construction of liquefied natural gas (LNG) export facilities in Queensland. The first of these facilities began exporting LNG in January 2015 and the forecast ramp up of LNG production over the next three to five years has seen upward pressure on domestic gas prices across the eastern market for both households and large industrial users. Despite this, the current regulatory settings in Victoria prevent gas producers from seeking to develop conventional onshore gas resources to respond to changing market demand.

Additionally, as wholesale gas prices across eastern Australia rise, the potential for customer fuel switching from gas to electricity will increase, which could be detrimental to efforts to meet Australia's emissions reduction targets.

³ Energy In Australia 2014 - BREE

⁴ Australian Energy Technology Assessment – 2012

⁵ US Energy Information Administration – Annual CO2 Analysis October 2014



Work in other jurisdictions demonstrates that appropriate policy and regulatory safeguards can be developed

Other jurisdictions have demonstrated that appropriate regulatory frameworks which enhance public confidence can be developed through robust evidence-based scientific work. With a robust regulatory regime in place and best-practice engineering standards, the environmental risks associated with unconventional gas extraction, including hydraulic fracturing, can be safely managed.

In September 2014, the NSW Chief Scientist completed the comprehensive *Independent Review of Coal Seam Gas Activities in NSW*. This review took 17 months and included the commissioning of 22 technical papers, covering gas extraction, geology, community concerns, horizontal drilling, groundwater impacts, seismicity, risk management and regulatory review.

The Review⁶ concluded that the technical challenges and risks posed by the CSG industry can in general be managed through a revised legislative framework and high standards of engineering and professionalism in CSG companies.

In February 2015, the *Report of the Inquiry into Hydraulic Fracturing in the Northern Territory* was released.

The Report commented:

"The major recommendation, consistent with other Australian and International reviews, is that the environmental risks associated with hydraulic fracturing can be managed effectively subject to the creation of a robust regulatory regime."

It also found that, *"the substantive weight of agreed expert opinion leads the Inquiry to find that there is no justification whatsoever for the imposition of a moratorium of hydraulic fracturing in the NT"*.

The New Zealand Parliamentary Commissioner for the Environment completed an interim report in November 2012, titled *Evaluating the Environmental Impacts of Fracking in New Zealand*.

The high-level conclusion from the work done to date in this investigation echoes, and is broadly consistent with, the reviews of fracking that have been done elsewhere in the world.

⁶ NSW Chief Scientist Final Report - <http://www.chiefscientist.nsw.gov.au/coal-seam-gas-review/final-report-september-2014>



That conclusion is that the environmental risks associated with fracking can be managed effectively provided operational best practices are followed by proponents and backed up with effective regulation.

The New Zealand reports also provide information about standards for best-practice in resource extraction and environmental regulation.

The development of the CSG industry in Queensland can provide a useful guide to best practices and the successful management of landholder issues, environmental outcomes and safety.

The South Australian Government has produced an online resource⁷, *The Facts about natural gas and fracture stimulation in South Australia*. This resource provides information about the regulatory structure, the industry itself and a history of hydraulic fracturing in that state. Such information plays an important role in building community confidence that the state's regulatory frameworks will protect the environment, providing certainty to industry and landholders and unlock the economic benefits of unconventional gas production.

The Environment and Public Affairs Committee of the WA Parliament is currently inquiring into the implications for Western Australia of hydraulic fracturing for unconventional gas.

The Royal Society and the Royal Academy of Engineers in 2012 published a joint report⁸, commissioned by the UK Government. This report independently reviewed the scientific and engineering evidence associated with hydraulic fracturing.

It concluded that the risks can be managed effectively in the United Kingdom as long as operational best practices are implemented and enforced through effective regulation.

⁷ <http://www.statedevelopment.sa.gov.au/upload/Fracking/thefactsguide.pdf>

⁸ Shale gas extraction in the UK: a review of hydraulic fracturing – June 2012