

COAG Energy Council Gas Supply Strategy

4 December 2015 (revised August 2017)



COAG
Energy Council

COAG ENERGY COUNCIL GAS SUPPLY STRATEGY

Australia is a major user and exporter of gas; for household use, as an essential input to a wide range of manufactured products and a key export commodity.

Australia's primary source of gas has been offshore reservoirs. However, in the last 20 years, diverse sources of onshore gas have grown to become a critical supply source for Australia's gas needs.

The diversification of gas sources and the rapid growth of Australia's liquefied natural gas (LNG) export industry, has raised new challenges and is transforming the east coast gas market. The LNG export industry has linked Australian domestic prices to international gas prices. While new LNG projects that were originally expected to source all their gas requirements from designated reserves, various constraints on production has meant these projects are now sourcing supply from third parties. This has, in part, led to supply constraints in the east coast gas market.

To ensure the nation's energy needs are met, the COAG Energy Council (Council) seeks to maximise the benefit to the Australian community from the responsible development of gas resources.

In keeping with the Council's *Australian Gas Market Vision 2014*, it has agreed that its resources should be better utilised to meet community expectations. This Gas Supply Strategy, released in December 2015, is the Council's commitment to improve collaborative efforts between jurisdictions to achieve this. The Gas Supply Strategy also forms part of the Council's Gas Market Reform Package (August 2016) which considers how to address the issue of gas supply, taking account of each state and territory's circumstances. Gas supply is one of four priority areas identified in the Gas Market Reform Package – the other three priorities are market operation, gas transportation and market transparency.

In August 2017, the Gas Supply Strategy was amended by the Council to recognise onshore conventional gas more explicitly and include offshore gas and underground gas storage, as part of a more holistic approach to national gas supply.

A detailed plan for implementing this commitment was developed in the first half of 2016 in consultation with stakeholders and agreed by the Council (except Victoria) in August 2016.

The Council amended the implementation plan in August 2017 to reflect agreed additional collaborative actions and other administrative changes. The Council will also communicate its expectations in those areas where it considers industry should be showing greater leadership, collaboration and consultation.

NEW OPPORTUNITIES AND CHALLENGES

Gas production in Australia commenced almost fifty years ago in Victoria's offshore basins, the Cooper Basin in South Australia, the Surat-Bowen Basin in Queensland and the Perth Basin in Western Australia. Offshore reservoirs remained the primary source of gas produced in Australia until recently, and will continue to be vital in ensuring Australia's domestic gas supply. Onshore conventional gas presents further opportunities for investment as supply from offshore gas basins declines, given existing infrastructure and the comparatively low cost of production. Any development of these reserves must be subject to careful consideration of geoscientific and environmental evidence, and community views. Furthermore, underground gas storage presents opportunities to increase the security and reliability of gas supply, particularly to meet peak winter gas demand in the southern states and mitigate supply interruptions.

Australia has three distinct gas markets: the western gas market (Western Australia), the northern gas market (Northern Territory), and the eastern gas market (Queensland, Victoria, New South Wales, South Australia, the Australian Capital Territory and Tasmania). The northern and eastern gas markets will be physically connected once construction of the Northern Gas Pipeline between Tennant Creek (Northern Territory) and Mt Isa (Queensland) is completed in 2018.

Natural gas fuels half of Western Australia's primary energy and 60 per cent of its electricity generation needs. Western Australia is Australia's largest domestic gas market, accounting for around 40 per cent of Australia's domestic gas consumption and almost as large as the combined New South Wales, Victoria and Queensland gas markets. The western gas market is principally supplied via offshore gas sources (<95 per cent) with the remainder from onshore sources in the Perth Basin. The onshore Perth and Canning Basins are currently

being actively explored for conventional and unconventional gas resources. However, due to the Canning Basin's remoteness, lack of infrastructure and harsh conditions, supply of domestic gas from the basin is not anticipated for some time.

In the northern gas market, offshore gas production supplies LNG exports and the Northern Territory Power Water Corporation's gas needs for electricity generation. Onshore, the Amadeus Basin fields supply Alice Springs, Tennant Creek and the MacArthur River Mine. It is probable that these fields have production life that extends beyond 2030 and may eventually play a role in transporting gas via the Northern Gas Pipeline to the east coast market.

Gas from unconventional reservoirs is already an important component of Australian domestic supply. Over 40 per cent of gas flows to consumers in the eastern market is CSG. Although 98 per cent of the CSG the east coast uses is from Queensland, it is a major driver of price and availability of gas for residential and business customers across eastern Australia. CSG also supports world scale investment in a major new liquefied natural gas (LNG) export industry in Queensland.

The role of gas from unconventional reservoirs is set to grow. Eastern Australia's CSG resources are four to seven times larger than established, conventional resources in eastern Australia.

This is not a unique story to Australia; gas from unconventional reservoirs is playing an increasingly important role globally. The shale gas industry has transformed the North American economy and seen it become reliant on its own energy resources, rather than imports. Many other countries are also looking to the benefits of this industry and are investing in its development.

That said, the rapid expansion of this sector in Australia has not been without its challenges. There has been community concern about the impact of CSG operations and the possible impacts of an emerging shale gas industry. In response, industry, landholders and regulators have had to develop new knowledge and skills in a short period of time. Regulatory approaches have had to adapt and the market has struggled to make judgements on price and availability issues.

The effects of this change have been felt by landholders and investors alike, and led to tighter domestic gas markets across the country, not just in those jurisdictions which have an active CSG industry.

While many of these challenges are common to other extractive industries, the scale and pace of the move into CSG, particularly given its spread across wide areas and different land uses, makes responding to these challenges more difficult than with traditional mining. Across Australia, landholder rights issues are appropriately a regular feature of community debate.

Regulation of gas supply is primarily a state and territory responsibility, and individual jurisdictions have been taking active steps to address these issues in a manner which meets the expectations of their local communities.

This national Gas Supply Strategy recognises there is more that can be collectively done to assist individual efforts to determine the role that onshore unconventional gas, onshore conventional gas, offshore gas and underground gas storage play within individual jurisdictions. Specifically, the strategy commits each state and territory to greater collaboration on improving information resources, and sharing knowledge on scientific, technical and regulatory issues.

It will remain the right of individual jurisdictions to determine how they use this shared capacity in navigating this complex policy landscape.

ROLE OF THE COUNCIL IN GAS SUPPLY ISSUES

A common gas supply strategy was a key component of the Council's *Australian Gas Market Vision 2014*, which outlined a commitment to improve the ways the gas market works, as well as to investigate opportunities for greater cooperation on supply issues. The primary driver was to assist supply to respond flexibly and responsibly to market conditions.

The Council already pursues harmonised approaches to land use and resource development. Most notably, the Council's *Multiple Land Use Framework* (MLUF) provides a national approach aimed at addressing challenges arising from competing land use, land access and

land use change. Development of the MLUF was underpinned by a comprehensive study examining issues in multiple and sequential land use, including extensive stakeholder consultation and drawing on international leading practices. At its heart are a set of coexistence principles which enable government, community and industry to:

- instil a shared commitment to multiple and sequential land use;
- better inform public discourse; provide merit based land access decisions;
- deliver better outcomes for affected communities and landholders.

In parallel, the *National Harmonised Regulatory Framework for Natural Gas from Coal Seams* (NHRF) built on the MLUF by putting in place a suite of leading practice principles focused on technical aspects of good practice around managing CSG development. As leading practice regulation is not static, the NHRF is updated on a continuing basis by jurisdictions to maintain currency with leading practice across Australia.

In implementing these common approaches, particularly in light of a significant study of CSG issues across jurisdictions, it has become apparent that there is a need for deeper exchange on technical, regulatory and community engagement issues specific to gas from unconventional reservoirs. Further collaboration on onshore conventional gas, offshore gas exploration and development, and underground gas storage will also contribute to assisting supply to respond flexibly and responsibly to market conditions.

State and territory governments have primary responsibility for regulating onshore gas exploration and production activities, including environmental protection, licensing and land access arrangements, as well as responsibility for gas operations within three nautical miles of its coastlines. Western Australia maintains regulatory control in excess of the three nautical mile limit in areas off the north west coast where the state maritime boundary has been extended to incorporate a number of islands and islets and those areas to the mainland. State and territory governments are also consulted on offshore operational decisions in Commonwealth waters (from three nautical miles to the continental shelf), where its territory is the closest to that operation. The Australian Government's environmental regulator is involved in the decision making process where an activity is likely to have a significant impact on a matter of national environmental significance under the *Environment Protection and Biodiversity Conservation Act 1999*.

Individual jurisdictions will determine their level of participation in this gas market development work and how they will use the outcomes of this strategy. Council members will continue to share information and experiences, regardless of individual government policy positions.

OPPORTUNITIES FOR FURTHER COLLABORATION

The Council has considered key developments in each jurisdiction, including the outcomes from recent domestic reviews and inquiry recommendations (Appendix A). Out of this, officials have identified four opportunities for deeper collaboration. These are intended to improve collective understanding of the issues associated with onshore conventional and unconventional gas, offshore gas, and underground gas storage, a rising reliance on gas from unconventional reservoirs, improve the information available to the community and regulators on development activities, and lead to refinements to existing Council frameworks. These opportunities are:

1. Improving information on gas reserves and production potential for onshore conventional and unconventional gas, offshore gas, and potential underground gas storage.
2. Improving public availability and accessibility of rigorous science and factual information on all types of gas sources and extraction methods.
3. Consideration of leading practice regulatory frameworks that effectively manage the risks and address issues for onshore conventional and unconventional gas, offshore gas, and underground gas storage.
4. Supporting leading practices in industry for responsible development of onshore conventional and unconventional gas, offshore gas and underground gas storage.

OPPORTUNITY FOR COOPERATION 1: IMPROVING INFORMATION ON GAS RESERVES AND PRODUCTION POTENTIAL FOR ONSHORE CONVENTIONAL AND UNCONVENTIONAL GAS, OFFSHORE GAS, AND POTENTIAL UNDERGROUND GAS STORAGE

There remains significant uncertainty in the market about Australia's future supply potential, and how quickly this gas can be brought to market. The Council has access to some key data sets and the collective expertise of its technical agencies. One example of how this expertise is used is the annual report on upstream unconventional gas resources, reserves and production data based on data collected and published by individual Council members, Australia's various geoscience agencies and other organisations.

The Council will seek to increase publicly accessible knowledge about gas in onshore conventional and unconventional reservoirs, offshore reservoirs, and underground gas storage formations, by:

- a. Increasing cooperation in the provision of well targeted pre-competitive geoscience information.
- b. Sharing information about drilling activity and well performance.
- c. Improving certainty around supply availability by reporting on resources, reserves and production data.

Specific proposals to enhance this cooperation and data access will be considered as part of the implementation plan for this strategy.

OPPORTUNITY FOR COOPERATION 2: IMPROVING PUBLIC AVAILABILITY AND ACCESSIBILITY OF RIGOROUS SCIENCE AND FACTUAL INFORMATION ON ALL TYPES OF GAS SOURCES AND EXTRACTION METHODS

The Council acknowledges there are community concerns related to the development of gas from onshore unconventional and conventional reservoirs, in particular the impacts on water quality, availability and usage. Other key concerns focus on the need for early consultation, engagement, land use and access (including compensation), health and safety, and socioeconomic impacts.

It is the responsibility of both industry and governments to help build community trust and confidence in the development of gas resources in regions where the industry may be active. Governments have a responsibility to demonstrate the effectiveness of their regulations.

The Council will further facilitate the sharing of information, scientific capabilities, regulatory learnings and assist jurisdictions to respond to community concerns about potential local impacts of gas developments by:

- a. Supporting more research and alliances between the community, academia, industry and governments.
- b. Developing and maintaining information on key issues that can be used by each jurisdiction to increase community understanding.
- c. Improving public availability of baseline environmental and monitoring results.
- d. Further sharing of information about costs and benefits, risk management and opportunities in relation to social, natural, economic environments and governance.
- e. Continuing to learn from community engagement experiences from jurisdictions (internationally and domestically) and share related communications tools and resources that are proven to be successful.

OPPORTUNITY FOR COOPERATION 3: CONSIDERATION OF LEADING PRACTICE REGULATORY FRAMEWORKS THAT EFFECTIVELY MANAGE THE RISKS AND ADDRESS ISSUES FOR ONSHORE CONVENTIONAL AND UNCONVENTIONAL GAS, OFFSHORE GAS, AND UNDERGROUND GAS STORAGE

Extractive resources industries, like other industries, come with risks and uncertainties, but this does not necessarily mean unacceptable risk. Risk can be effectively monitored, assessed and responded to by industry through leading practice, and by governments through effective regulation.

The Council will contribute to leading practice regulatory frameworks by:

- a. Continuing to share experiences and engage with domestic and international expertise on regulatory developments, social, natural and economic matters.

- b. Supporting and facilitating exploration, development and production approval frameworks that include processes for meaningful stakeholder consultation and balanced consideration of landholder views.
- c. Continuing to share learnings about land access, communication protocols and frameworks for dispute resolution.
- d. Continuing to encourage industry to ensure they have a social licence to operate.
- e. Updating the *National Harmonised Regulatory Framework for Natural Gas from Coal Seams* to reflect new scientific knowledge.

OPPORTUNITY FOR COOPERATION 4: SUPPORTING LEADING PRACTICES IN INDUSTRY FOR RESPONSIBLE DEVELOPMENT OF ONSHORE CONVENTIONAL AND UNCONVENTIONAL GAS, OFFSHORE GAS AND UNDERGROUND GAS STORAGE

The Council acknowledges that the development of gas from onshore conventional and unconventional reservoirs, offshore reservoirs, and the development of further underground gas storage will need to remain internationally competitive over decades and in volumes sufficient to meet demand. Further, the Council considers it is the primary responsibility of industry to:

- invest in exploration and development to supply gas into markets, and
- protect the environment and maximise benefits by eliminating or minimising adverse impacts on landholders and communities.

Council also recognises that the commercial interests of industry will strive to:

- develop and use cost-effective technological solutions, and
- increase productivity and reliability in production profiles.

The Council acknowledges that government, university and industry research collaboration opportunities are already being leveraged to support industry development of cost-effective technologies.

The Council's *Gas Market Vision* also recognised the importance of investment settings including pre-competitive data, access to capital and skills, a strong research and

development sector, efficient fiscal regimes, and trusted, efficient regulatory regimes including the provision and regulation of infrastructure.

In particular, the Council intends to work with the industry-led, energy resources focused growth centre being established under the Australian Government's Industry Growth Centres Initiative. The growth centre aims to boost productivity and competitiveness for operators and contractors in the oil, gas, coal and uranium energy resources sectors. The growth centre will have national reach.

The Council will facilitate and enhance industry leading practices to promote responsible development by continuing to:

- a. support technology development, and
- b. promote industry collaboration through opportunities such as the Growth Centres Initiative.

Officials will identify further opportunities to target this work in consultation with industry and the growth centre.

GAS SUPPLY STRATEGY - IMPLEMENTATION PLAN FOR COLLABORATIVE ACTIONS

The Council has tasked officials with developing implementation plans for their individual jurisdictions and for collaborative work for each of the four areas. It will also work with industry, communities and other interested stakeholders to communicate its expectations around those areas where industry should be showing improved leadership.

These implementation actions will include:

- formalising protocols to guide the sharing of information, expertise and learnings between jurisdictions and the broader community,
- evaluating the opportunity to expand collaborative research models,
- incorporating lessons learnt into the National Harmonised Regulatory Framework for Natural Gas from Coal Seams to maintain its currency and relevance, and
- fostering closer links with international experts to import learnings from other countries.

The *Gas Supply Strategy Implementation Plan for Collaborative Actions* was adopted by the Council on 19 August 2016.

In August 2017, the Council added new collaborative actions to recognise opportunities for onshore conventional and unconventional gas, offshore gas and underground gas storage.

The Council receives regular updates on the progress of the Gas Supply Strategy Implementation Plan for Collaborative Actions and may agree to additional collaborative actions at any time.

APPENDIX A

REVIEWS AND INQUIRIES TAKEN INTO ACCOUNT DURING THE GAS SUPPLY STRATEGY DEVELOPMENT PROCESS

- COAG Energy Council *National Harmonised Regulatory Framework for Natural Gas from Coal Seams*, endorsed May 2013
(<http://scer.govspace.gov.au/files/2013/09/National-Harmonised-Regulatory-Framework-for-Natural-Gas-from-Coal-Seams.pdf>)
- COAG Energy Council *Multiple Land Use Framework*, endorsed December 2013
(<http://scer.govspace.gov.au/files/2013/12/Endorsed-MLUF.pdf>)
- A framework for the next generation of onshore oil and natural gas in Queensland, 2014 (https://www.dnrm.qld.gov.au/_data/assets/pdf_file/0015/201183/framework-deep-gas-oil.pdf)
- New South Wales *Gas Plan*, 2014
(http://www.resourcesandenergy.nsw.gov.au/_data/assets/pdf_file/0005/534830/NSW-Gas-Plan.pdf)
- Australian Government *Domestic Gas Strategy*, 2015
(<http://www.industry.gov.au/Energy/EnergyMarkets/Documents/Domestic-Gas-Strategy.pdf>)
- Northern Territory Government response to the *Independent Inquiry into hydraulic fracturing in the Northern Territory*, 2015
(<https://nt.gov.au/industry/mining-and-petroleum>)
- Tasmanian Government *Policy Statement on Hydraulic Fracturing*, 2015
(http://dpiw.tas.gov.au/Documents/Tasmanian%20Fracking%20Policy%20Statement_26-2-15.pdf)
- Queensland *Gas Supply and Demand Action Plan*, 2015
(<https://www.dnrm.qld.gov.au/our-department/policies-initiatives/mining-resources/gas-supply-demand-action-plan>)
- Queensland coal seam gas engagement and compliance plan 2014/15
(https://www.dnrm.qld.gov.au/_data/assets/pdf_file/0008/119672/csg-engagement-compliance-plan.pdf)
- Victorian Parliament *Inquiry into onshore unconventional gas in Victoria*, 2015
(http://www.parliament.vic.gov.au/images/stories/committees/SCEP/GAS/Report/EPC_58-03_Text_WEB.pdf)
- Victorian Auditor-General's Office *Unconventional Gas: Managing Risks and Impacts*, 2015 (<http://www.audit.vic.gov.au/publications/20150819-Unconventional-gas/20150819-Unconventional-gas.pdf>)
- Dr. Alan Finkel, *Independent Review into the Future Security of the National Electricity Market*, 2017 (<http://www.environment.gov.au/system/files/resources/1d6b0464-6162-4223-ac08-3395a6b1c7fa/files/electricity-market-review-final-report.pdf>)