

Queensland's LNG Industry

*A once in a generation opportunity for a
generation of employment*

November 2010



Foreword



The State's LNG Industry offers Queensland a once in a generation opportunity for a generation of employment.

A \$15 billion financial investment decision by British Gas in October 2010 is the first commitment from an industry anticipated to create 18 000 direct and indirect jobs in the state, with many of these flowing to our regional communities.

The first Blueprint for Queensland's LNG Industry was released on 17 September 2009 and outlined the Queensland Government's commitment to work with industry and local communities to ensure the LNG industry is developed and progressed for the benefit of all Queenslanders.

A year later this new industry is becoming an exciting reality, bringing both new challenges and tremendous opportunities for Queensland.

So far, two LNG proponents have received high-level State and Commonwealth approvals. Both projects have 900 conditions attached to their approval. A further project has been cleared by state processes with nearly 600 conditions and is now progressing through the Commonwealth approval process.

This process has taken up to two years of intense examination and assessment and includes some of the most stringent environmental conditions ever imposed on an industry. This reflects my Government's commitment to strike the right balance between development and our precious environment.

As the LNG industry enters this next phase of its development it is our priority to make sure it meets the highest environmental standards, and we have put in place the monitoring and compliance regimes to make sure this happens.

Over the past year, significant progress has been made, but more work is still to be done.

This document ties together the policy work that has been undertaken and identifies future priorities.

The LNG Cabinet Sub-Committee delivers my Government's oversight of this industry at the highest level, and guides the strategy and direction in which the industry develops. It considers all aspects of the LNG policy landscape and ties together the work of multiple agencies into a comprehensive government position.

The Cabinet Sub-Committee is composed of the:

- Treasurer and Minister for Employment and Economic Development (Chair)
- Minister for Natural Resources, Mines and Energy, and Minister for Trade
- Minister for Primary Industries, Fisheries, Rural and Regional Queensland
- Minister for Infrastructure and Planning
- Minister for Climate Change and Sustainability

New legislation has been introduced and existing legislation amended to preserve landholder rights, manage water resources, protect the environment and ensure safety. Policies and programs are being developed that will manage community growth, address infrastructure needs, deliver training opportunities and tangible benefits for local businesses. Communities are being regularly informed and compliance frameworks strengthened.

By working with all stakeholders at this embryonic stage, the Government can ensure managed and sustainable advancement of the LNG industry.

We will continue to work hand in hand with communities, industry and other governments to transform regional economies and realise jobs and prosperity for a fresh generation of Queenslanders.

A handwritten signature in blue ink, reading "Anna Bligh". The signature is fluid and cursive, with a large loop at the end.

The Honourable Anna Bligh MP
Premier of Queensland
and Minister for the Arts



Realising a once in a generation opportunity

There are currently seven announced LNG projects in Queensland – six are proposed for Gladstone and one for Bowen. Together they would provide over 50 million tonnes per annum (Mtpa) of LNG for export from Queensland. A medium-sized LNG industry producing around 28 Mtpa has been modelled by the government to inform planning.

It is anticipated a medium-sized industry of this size would generate over 18 000 direct and indirect jobs in Queensland.

This could increase gross state product by over \$3.2 billion (one per cent), generate private sector investment of over \$40 billion and provide royalty returns of over \$850 million per annum.

LNG projects by nature are difficult to advance to completion as they are subject to global demand fluctuations, project costs and fluctuating credit availability.

Each project must undertake a comprehensive and rigorous environmental assessment by state and federal governments. For example, the two Environmental Impact Statements (EIS) completed for the Gladstone LNG Project and the Queensland Curtis LNG Project contained more

than 27 000 pages of information and Queensland's Coordinator-General's report placed over 600 conditions on each project. The Commonwealth Government has placed a further 300 conditions each for these projects, making them subject to some of the most stringent environmental conditions ever imposed on an industry.

Approval of the Australia Pacific LNG Project is also subject to a range of stringent conditions.

The proposed projects are:

- Australia Pacific LNG Project (ConocoPhillips/ Origin Energy)
- Gladstone LNG Project (LNG Ltd)
- Queensland Curtis LNG Project (QGC a BG Group Company)
- Shell Australia LNG (Arrow CSG (Australia) Pty Ltd/ Petrochina)
- Gladstone Liquefied Natural Gas Project (Santos Ltd/ Petronas)
- Sojitz Corporation
- Energy World Corporation – proposed for Abbott Point near Bowen.

Exercising good governance

Government recognises the vital importance of having the right legislation and policy in place to facilitate industry development.

To achieve this goal, in March 2010 the Queensland Government formed a separate LNG Cabinet Sub-Committee.

Government is committed to the sustainable development of this industry and the LNG Cabinet Sub-Committee guides the strategy and direction in which the industry develops. The Committee ensures necessary decisions are considered from a whole of government perspective, given the wide ranging policy needs arising from the development of the industry.

Managing CSG/LNG industry development

The LNG Industry Unit within the Department of Employment, Economic Development and Innovation (DEEDI) was established in early 2009 as a single point of contact for policy and legislative changes related to the CSG/LNG industry. It ensures that the activities of agencies are planned and coordinated and that progress on these activities is monitored and reported to the LNG Cabinet Sub-Committee.

The Department of Infrastructure and Planning (DIP) provides facilitation for projects completing an EIS. Each project is provided with a dedicated project manager to ensure that issues raised by government agencies and the community are rigorously addressed as a part of the EIS.

The LNG Industry Unit provides dedicated case management of the permits and approvals required subsequent to the Coordinator-General's EIS Evaluation Report. Case management includes development of a schedule for the project, negotiation/monitoring of the information required and timing of approved matters.

Providing certainty for investment

Over the past twelve months the Queensland Government has created investment certainty and facilitated sustainable development of the industry by addressing a number of critical issues such as:

- assigning state significant project status to eligible projects
- acquiring the Callide to Gladstone pipeline corridors
- the assessment and conditional approval (for three) of the comprehensive EIS's for the major projects
- completion of the Gladstone Port Western Basin Master Plan
- establishment of the Curtis Island Environmental Management Precinct
- extending the Gladstone State Development Area
- establishment of dedicated approval teams in government agencies
- case management of EIS process and subsequent approvals and conditions
- changes to legislation to address specific industry and community needs
- increasing government resources on the ground to ensure industry compliance with the conditions of approval
- establishing a stable, fair, and settled royalty regime
- developing a policy for preserving Queensland's domestic gas resources if required
- identifying future social and other infrastructure needs through community development strategies and regional planning mechanisms
- establishing clear policy frameworks around issues such as BTEX, fracking, beneficial use of water, and CSG water and salt management
- negotiating more balanced and clearer laws for industry and landholders on land access and compensation
- developing comprehensive workforce and training strategies to skill workers for the industry
- consulting and informing communities about CSG/LNG industry and the government frameworks to support sustainable development.

Environmental Impact Statements

A robust environmental impact assessment process provides the necessary balance between economics, the environment and community welfare. The assessment of LNG projects may be able to be undertaken through the *State Development and Public Works Organisation Act 1971* or the *Environmental Protection Act 1994* (EP Act). Major development proponents need to consider the merits of each and make a decision as to which approach is the most suitable.

The Coordinator-General's declaration of a project as a 'significant project requiring an environmental impact assessment' under Section 26 of the Act can occur if the project includes some of the following elements:

- complex approvals, including local, state and Australian government involvement
- a high level of investment in the state
- potential effects on infrastructure and/or the environment
- provision of substantial employment opportunities
- strategic significance to a locality, region or the state.

The declaration of a project as a 'significant project' does not imply government approval, or support for, or commitment to the project. The declaration means that the project requires rigorous environmental assessment involving centralised whole-of-government coordination.

The declaration does not exempt the project from the need to obtain all necessary development approvals under Queensland legislation, including the requirement to comply with all relevant planning and environment laws and planning instruments.

Environmental Impact Statement (EIS) progress to date

Of the seven LNG projects currently announced, the Gladstone LNG Project has its environmental approvals issued under the EP Act, and the Gladstone LNG Project, Queensland Curtis LNG Project and Australia Pacific LNG Project have been given conditional state approval by the Coordinator-General.

The Australian Government has approved the Gladstone LNG Project and Queensland Curtis LNG Project with further conditions to reduce the impact on matters of national environmental significance.

Queensland Curtis LNG Project has obtained some approvals under the Queensland Fisheries Act for significant works near Curtis Island.

The substantial areas of impacts addressed by the Coordinator-General and the Queensland Government lead agencies responsible include:

- **environment** (Department of Environment and Resource Management—DERM)
- **CSG water management** (DERM)
- **social impact** (Department of Infrastructure and Planning—DIP)
- **regional community consultation committee** (DIP)
- **industry monitoring group** (DIP)
- **transport** (Department of Transport and Main Roads—DTMR).

Environmental authority conditions—gas fields

Gas field developments are subject to a number of environmental conditions. Compliance will be monitored by Department of Environment and Resource Management (DERM) via annual third party audits.





Stable, fair royalty regime confirmed

Government has confirmed the current royalty level of 10 per cent. This approach produces a satisfactory return to Queenslanders and is consistent with other royalty levels in our state.

To provide additional certainty on the manner in which royalties will be calculated and ultimately the amount of royalties that would be paid, Government amended (on 29 January 2010) the Petroleum and Gas (Production and Safety) Regulations to provide the Minister for Natural Resources, Mines and Energy, and Minister for Trade, the power to determine well head valuations for gas.

Maintaining Queensland's domestic gas supply

To ensure sufficient gas is available for Queensland's domestic use as well as supporting the LNG industry, Government has completed the first Annual Gas Market Review of the Queensland gas market. The 2010 review provides confidence that the existing and future gas markets are adequately supported by the gas reserves available in our state.

A Gas Commissioner was appointed in July 2010 to oversee future reviews. The Gas Commissioner also provides an independent, single point for ongoing dialogue between government and industry stakeholders on gas market issues.

The Government has reserved the right to set aside future gas fields for future domestic supply if needed, and rejected an option to require a percentage of gas from all fields to go to domestic supply. The secure supply of gas at reasonable prices is essential to the continued development of Queensland's industry. To support competitive gas supply and pricing, Government is working to establish a short-term trading market, consistent with the market introduced in New South Wales and South Australia in October 2010.

Supporting new jobs

Economic studies indicate a 28 Mtpa LNG industry could generate over 18 000 direct and indirect jobs in Queensland. Over 4 300 of these jobs are expected to be in the Surat Basin region.

Government is committed to helping Queenslanders participate in this new industry by supporting skills and training for future employment opportunities in the CSG/LNG industry. Initiatives include:

- Providing avenues for people to register their interest in working in the industry via web and phone.
- Skills Queensland, Queensland's Skills Commission, has been created to drive workforce development and skills priorities across the state.
- Energy Skills Queensland (ESQ) has prepared a workforce plan covering the production phase of the LNG industry which identifies the new jobs that could be created in the industry.
- A \$10 million CSG/LNG Industry Training Program funded 50/50 by the Government and industry has been established to specifically support training for jobs in the production side of the industry. The focus of training is in the areas of drilling, process plant operations and process control. Contracts for training in excess of \$3 million have been issued. These contracts support training activities for Arrow Energy, Origin, QGC and Santos and a number of supply chain enterprises.
- Construction Skills Queensland (CSQ) and ESQ have partnered to develop a workforce plan covering the construction phase of the LNG industry. The report *Construction Skills Queensland CSG/LNG Construction Labour Demand Analysis*, identifies priority skilling needs, including occupations that will be most needed during the peak labour demand period of construction. This report was released on 4 November 2010 and is available on the CSQ website.
- To support the development of an appropriate workforce, CSQ has allocated \$5 million from the

Building and Construction Industry Training Fund (BCITF) to support skilling for the construction phase of the LNG industry. This fund will represent a commitment from industry to the development of workforce planning initiatives and will ensure appropriate resources are pre-allocated in expectation of a rise in demand for construction skills training once CSG/LNG projects begin.

- An industry-based *CSG/LNG Skills Formation Strategy* has been established for two years to November 2011. This *Skills Formation Strategy* facilitates effective workforce development and the development of the necessary training responses for the industry. The strategy has developed innovative programs to create training and employment pathways in the industry, especially for Indigenous people and jobseekers in areas of high unemployment.
- Support for Queensland Minerals and Energy Academy Gateway Schools Program. It provides school-to-work transition for 28 schools around Queensland to support careers in the resources sector, including 10 schools in the Surat Basin.
- Preparation of a detailed workforce development plan for the Surat Basin which will guide the implementation of training strategies is currently underway, and is on target to be completed in December 2010. This will ensure potential workers have access to relevant training so they can be employed in the industry.
- Upgrading TAFE facilities and providing additional funding to support the delivery of relevant industry training to the Central Queensland and Southern Queensland Institutes of TAFE.

Delivering local business benefits

Small-to-medium-sized companies make up the majority of the Queensland supply base. Government will work to build the skills and capacity of our local companies to capture LNG opportunities and ensure they receive full, fair and reasonable access to LNG procurement.

To maximise the benefits of these projects to the economy, each proponent is required, by the Coordinator-General's EIS approvals, to take actions that ensure the involvement of local suppliers. This information is to be provided in the Local Industry Participation Plan (LIPP) for each project.

A breakdown of work packages for the projects has been undertaken to identify those that can always be sourced locally (non-contestable); those that can be sourced locally or offshore (contestable); and those that will always be imported (non-contestable).

Local industry and small businesses will be provided with an opportunity to participate in the development of the LNG industry through:

Project opportunity briefings held regionally to educate suppliers about specific project requirements, opportunities and programs available to help position companies to tender successfully. Six of these seminars were conducted in the Surat Basin region in 2009–10 attracting 550 attendees. A similar number of seminars will be delivered in 2010–11.

Business matching where Government has provided an extra \$1.2 million of funding to the Industry Capability Network (ICN) each year until 2013-14 to support delivery of the Local Industry Policy and local industry's access to major private sector projects. This funding also allows for two additional ICN staff to be placed in Toowoomba and Gladstone to support supply chain development, identify opportunities and undertake business matching on CSG/LNG projects.

Major Project Supplier Program being delivered direct to individual companies to help them tender for contracts on LNG projects. The program is supported by the full range of DEEDI's innovation and productivity improvement programs.



Managing cumulative impacts on communities

In considering the project EIS, the Coordinator-General has also put in place arrangements to mitigate the direct and cumulative impacts of major projects on communities.

Conditions have included requirements for housing to accommodate a permanent workforce, road upgrades, maintenance and traffic management measures, and environmental and local workforce mitigation initiatives.

The Coordinator-General reports also include actions that have been negotiated with proponents. These actions encompass a range of issues including preparation and implementation of Social Impact Management Plans, contribution of funds for social infrastructure and services, and the establishment of Regional Community Consultation Committees and Community Partnership Programs to ensure communication between the community and industry.

Queensland is expecting continued growth in the resources industry, reaching regions and communities with little previous major resource activity. As well as opportunities, this growth can bring a range of changes to communities.

The Queensland Government has committed to preparing a cumulative growth management framework aligned with the *Sustainable Resource Communities* policy. This will assist in managing the impacts on services and infrastructure of multiple major projects in Queensland's resource regions. There is uncertainty about how many major projects will proceed, when they will proceed, and the level of associated population and economic growth that will occur.

The management framework will be of use to local, state and Commonwealth government agencies and stakeholders. This framework will provide an annual cycle of review and assessment of the likely growth from major projects to provide data that agencies can use to program services and infrastructure in growth areas.

Involving and informing our communities

The Queensland Government is committed to ensuring Queensland communities are well-informed and have the opportunity to provide comment about the CSG/LNG industry.

Government has consulted regularly with representatives of the agricultural community and local governments. This includes hosting community cabinet in Roma to engage with the community on CSG/LNG matters.

The Queensland Government has also hosted a series of nine community forums both to inform and to listen to community concerns.

Government appointed a Director of CSG Engagement on 26 July 2010 to facilitate community involvement in the Surat Basin. This role involves regular liaison with stakeholders and community groups. The Director CSG Engagement can be contacted via the Queensland Government's CSG/LNG hotline on 13 25 23.

To expand the community engagement process in the future three new consultative groups are being established.

The first of these groups - the Surat Basin CSG Consultative Committee - will mainly focus on strategic, high-level issues and matters of concern relating to the whole of the Surat Basin. This group will be supported by two CSG Local Consultative Committees which will focus on district-specific issues and matters of concern for the respective local areas. The Local Consultative Committees will be established in the Dalby and Roma areas. These district committees will comprise local representatives from community organisations, regional councils, CSG companies, rural industry organisations, and government departments.

An LNG industry website (lng.industry.qld.gov.au), CSG/LNG hotline (13 25 23) and e-newsletter have been developed to provide information to the community and other stakeholders.

LNG proponents are also required by the Coordinator-General to report on aspects of their projects to company initiated regional consultative committees.

Developing the *Surat Basin Future Directions Statement*

Community involvement in determining the future of the area is being enhanced through the *Surat Basin Future Directions Statement*. This initiative was launched on 4 March 2010. The statement provides an effective framework to shape a prosperous and sustainable Surat Basin region to 2030.

It also identifies the major issues facing the region, and by working directly with key regional stakeholders, develops an integrated approach to address these issues. The *Surat Basin Future Directions Statement* establishes clear mechanisms to coordinate the work of the Queensland Government and local governments in the Surat Basin.

A series of headline initiatives drive delivery of the initiative and address fundamental issues. These include:

- planning and settlement pattern
- transport
- economic development
- housing
- workforce development.

The statement also covers:

- implementing policies relating to coal seam gas water management
- strategic cropping land
- land access.

These will inform the final statement report in February 2011.

The outcomes of these headline initiatives will influence the way in which the resources of all participants, including the Queensland Government, are directed in the future.

A Steering Committee comprising representatives from federal, local and state government, unions, industry, industry peak bodies and community is overseeing the delivery of the Statement.

Sustainable resource communities fund

The Sustainable Resource Communities policy was launched in August 2008. The aim of the policy is to improve liveability in communities affected by resource development, and to foster stronger partnerships between industry, communities, and the state and local governments.

This initiative covers the regions of the Bowen Basin, the Surat Basin and the North West Queensland Minerals Province. The policy was underpinned by \$100 million over three years for social and economic infrastructure.

The Surat Basin received \$27.95 million in March 2010. The projects funded include:

- \$4.7 million for an upgrade to the Roma Airport
- A total of \$5.8 million for road safety improvements
- \$4.5 million to establish a Surat Basin Trade Training hub at Miles
- \$2.7 million for affordable housing for key service workers
- A total of \$0.15 million for refurbishment of SES buildings in Mitchell and Surat
- \$4.6 million for upgrades to the Dalby Aquatic Centre
- \$2.6 million to replace the Chinchilla Community Centre
- \$2.9 million for Emergency Services Staff housing in the Surat Basin.

2010-11 Budget community infrastructure spending

Government remains committed to supporting community infrastructure through the budget process. For example, funding provided to communities in the broader Darling Downs / West Moreton region in the 2010-11 State Budget (over and above Sustainable Resource Communities Funding listed above) included:

- \$37.5 million over the next four years for a new integrated cancer service at the Toowoomba Hospital, in partnership with the Australian Government
- \$16.8 million of \$35 million for intersection improvements on Gatton-Esk Road between the Warrego Highway and the former Esk Shire boundary



- \$8.1 million of \$10.9 million to widen and seal a section of the New England Highway, south of Crows Nest
- \$4.7 million for an upgrade of the Toowoomba Aerodrome
- \$2.3 million to complete the \$7.2 million National Carriage Factory at the Cobb+Co Museum in Toowoomba
- \$1.9 million to provide faster emergency care at Toowoomba Hospital
- \$1.6 million annual funding to support the CareFlight helicopter based at Toowoomba
- \$1.4 million to complete the \$2.5 million replacement fire and rescue station at Kitchener Street, Toowoomba
- \$1.3 million to complete the \$1.5 million upgrade of science laboratories at Dalby State High School
- \$1 million for the Macintyre Brook Water Supply Scheme
- \$0.56 million to complete the \$0.76 million upgrade of science laboratories at Toowoomba State High School
- \$0.28 million to construct a swimming pool at Inglewood, a multipurpose community auditorium at Highfields State School, a cycling track at Freyling Park and to redevelop the Clive Berghofer Stadium at Toowoomba.

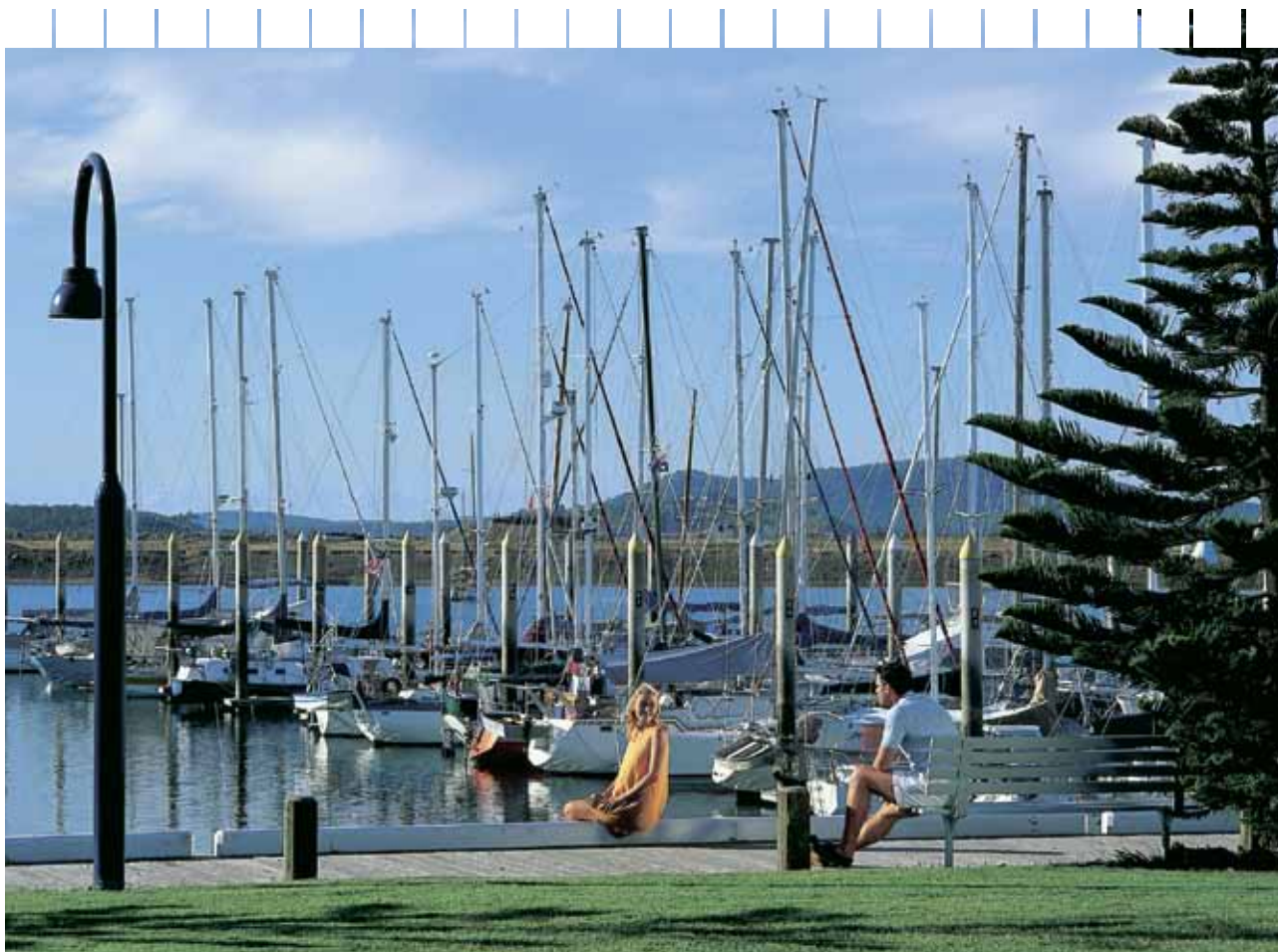
Planning for Gladstone's future

To ensure the Gladstone community's needs and social impacts arising from the LNG industry are addressed, industry will be able to make contributions to the Gladstone Foundation. This foundation is a joint industry, Government, council and community collaboration.

Future investment in community facilities will be guided by a *Social Infrastructure Strategic Plan* and a *Draft Voluntary Industry Contributions Framework for Gladstone* which was released in October 2010. The framework makes sure that companies invest in social infrastructure.

Delivering environmental outcomes

The state is committed to delivering environmental outcomes in balance with economic and social considerations. The environmental values of surface and ground waters are managed under the EP Act and its subordinate legislation. Environmental values include human use (such as drinking water), agricultural use and aquatic ecosystem values.



Protecting groundwater resources

CSG operations in Queensland are subject to world-class environmental compliance standards in order to protect important groundwater resources. The potential impact of CSG extraction on the quantity and quality of these groundwater resources is a key concern. To ensure that Queensland protects the environmental values of groundwater and has an appropriate and adaptive approach to groundwater management, the government has:

- Announced the expansion of the independent Queensland Water Commission's (QWC) functions to include oversight of the cumulative groundwater management regime.
- Introduced legislation that:
 - » includes trigger thresholds for bores and springs. The bore trigger threshold will assist in protecting existing and new water supply bores from the impact of the extraction of underground water by requiring petroleum tenure holders to take a proactive approach to entering "make good" agreements with bore owners. Similarly, the trigger threshold for springs will assist in protecting natural springs from groundwater extraction impacts.
 - » extends the existing 'make good' provisions to include all water bores that tap the coal seams or adjacent aquifers.
 - » provides a new cumulative impact management regime to monitor and manage impacts on aquifers in areas of intensive development where the impacts of individual tenure holders overlap. These areas will be known as 'cumulative management areas' (CMAs).
- In addition, CSG water discharged to surface waters, or injected to aquifers, needs to be of an appropriate quality to ensure environmental values are protected. Discharges will be conditioned through an environmental authority (EA) issued under the EP Act.

Hydraulic fracturing

The Government has committed to legislation to establish new administrative and regulatory requirements to better protect environmental and groundwater impacts arising from the CSG hydraulic fracturing (fracking) process.

Fracking is the process of creating or enlarging cracks in underground coal seams to increase the flow and recovery of gas out of a well.

This new regulatory framework will deliver improved monitoring and reporting systems including new conditions that require the following:

- CSG producers must notify government and landholders at least ten days prior to any fracking activity.
- Before an environmental authority is issued, CSG producers must provide to DERM detailed information on the proposed fracking chemicals to be used, and to track what happens to these chemicals throughout the production process.
- The implementation of a CSG water and groundwater bore water quality monitoring program, for both salinity and fracking chemicals.
- Ongoing monitoring and reporting of any significant change in the salinity of CSG water from the well to DERM.
- Advise landholders and DERM of any water quality problems in bores or wells, within 24 hours after they are detected.

Government has regulated the use of petroleum compounds commonly used overseas for fracking activities. Specifically, compounds containing benzene, toluene, ethylbenzene and xylenes, known as BTEX, may not be used in CSG fracking /stimulation fluids. Government is monitoring this as part of a proactive Compliance Plan.

Performance reports and inspection

All CSG producers are required to undertake a range of monitoring and reporting activities on the impacts of their projects on the environment and their performance on their tenements. These reports and the assessment of the reports will be made available by DERM as they are completed. The first reports are expected in 2011.

QWC will be responsible for developing underground water impact reports in any declared cumulative management area. These reports will provide:

- an assessment of monitoring results
- a projection of future likely water level impacts using progressively updated groundwater flow models
- a spring impact mitigation strategy, and
- an updated monitoring strategy.

This adaptive management regime will allow progressive improvement in the understanding of impacts and also to support timely implementation of make good arrangements.

Proactive compliance

DERM has established a compliance program which supports the environmental assessment and approvals processes and is adding 20 new officers to the region to manage and investigate complaints in addition to monitoring the compliance of CSG companies.

The compliance program will include undertaking planned inspections of sites where petroleum and gas activities (including CSG activities) are carried out. This will be in addition to any compliance inspections undertaken in response to environmental complaints, company notifications and issues identified through other departmental work.

Work has also commenced on a project to sample some 300 groundwater bores per year in 2011 and 2012 to monitor the impacts on groundwater quality from CSG activity.

Increasing the groundwater sampling regime is an extra safeguard to ensure that groundwater monitoring reports provided by CSG producers are accurate and verified.

Managing produced water

Building the knowledge base

Regulatory arrangements for CSG activities will ensure that the best available scientific knowledge is used to protect groundwater resources and manage produced water. Environmental impact assessments and related investigations continue to add to a scientific knowledge base.



Beneficial use of produced water

The *Coal Seam Gas Water Management Policy* sets out preferred management options for CSG water. The preferred management options include treating water and reinjecting it into aquifers (aquifer injection). Alternatively an option is to treat water for beneficial purposes such as urban drinking water supplies, irrigation, stock water supplies, industrial use and aquaculture.

Water removed from coal seams in the production of CSG provides a potential opportunity for regional development.

To ensure that the produced water is managed in an environmentally responsible manner, government has:

- Developed the *Coal Seam Gas Water Management Policy*, establishing guidelines for water management options
- Developed a hierarchy of beneficial uses for CSG water
- Identified and monitored appropriate flow requirements
- Required that if water discharge into watercourses is deemed necessary, especially ephemeral streams, this release will be controlled to avoid discharges during naturally dry periods to minimise impact on flow
- Required that the injection of appropriately treated CSG water (preferably to stressed aquifers) be assessed by DERM as part of the adaptive management regime to deal with CSG water
- Identified appropriate conditions for CSG water quality in the environmental authority for the activity
- Supported policy development for regulating the CSG industry through continuing to build on the knowledge already collected through the *Healthy Headwaters Coal Seam Gas Water Feasibility Study*, funded by the Australian Government
- Banned the use of evaporation dams as the primary means of CSG water disposal through amendments to the EP Act from 5 July 2010
- Developed standards for CSG water dams to ensure the environment is protected
- Required that existing evaporation dam sites be rehabilitated within three years
- Produced model environmental authority conditions
- Published new guidelines for the preparation of environmental management plans for the petroleum industry to ensure provision of better information to support an application for an environmental authority
- Required all gas producers to prepare a coal seam gas water management plan outlining how the produced water will be used, including how it will be treated to prevent environmental harm and protect environmental values
- Implemented an adaptive environmental policy approach to allow responsive changes to be made in relation to CSG water impacts.



Management options for produced water

The *Coal Seam Gas Water Management Policy* released in June 2010 sets out government guidelines for the disposal and re-use of CSG water along with preferred management options including aquifer injection. This is to mitigate against both environmental risks and long-term impacts on aquifers. Aquifer injection will be assessed to determine on what terms this should be the preferred approach to dealing with CSG Water. Aquifer injection feasibility will be discussed with proponents on a case by case basis. Approval conditions imposed by the Federal Government in October 2010 also highlight the importance of this policy.

Protecting surface water resources

The state's surface waters have significant importance for both human and aquatic ecosystem uses. That is why water quality and quantity will be closely monitored. Through the *CSG Water Management Policy*, any proposals to discharge treated CSG water to surface waters must clearly demonstrate to DERM that no other management options are feasible for sound environmental, technological, or economic reasons.

If discharges of this nature are deemed necessary, the water quality volume and timing of CSG water discharged to surface waters will be conditioned through an environmental authority (EA) issued under the EP Act. Ephemeral systems naturally experience periods of dryness and low-flow as well as periods of wetness and inappropriate releases of water may have a negative environmental impact. Any unauthorised discharges that may result in environmental harm must be notified to DERM for investigation, and occupiers of land, as soon as the company becomes aware of the discharge.

Protecting urban drinking water supplies

Government has developed new regulatory requirements under the *Water Supply (Safety and Reliability) Act 2008*. These amendments establish rigorous requirements specifically to cover treated CSG water. These requirements will ensure that public health is protected and provide public confidence in the framework.

Options for disposal of CSG recycled water currently include release into a water source (including to a watercourse, lake, dam, weir or aquifer) or by directly supplying treated CSG recycled water into a drinking water service provider's water supply.

This proposed adaptive approval regime will be seamless with existing regulatory requirements under the *Environmental Protection Act 1994*. Currently the Act is being used to regulate impacts on urban drinking water supplies. New regulatory requirements will include a requirement for a recycled water management plan (except where there is no material impact on an urban drinking water supply source).

The new framework will further reinforce Government's commitment to ensuring the safety of water supply quality and will provide certainty to industry on regulatory requirements.

Salt management

The *Coal Seam Gas Water Management Policy*, provides a very specific management framework for the salt that is a by-product of the CSG water after it has been treated. A management hierarchy for salt from the most preferred to least preferred options has been developed. Any option regarding the management of salt will be subject to environmental assessment before approval is granted for a CSG project.

The hierarchy is:

- Reuse to create useable or saleable salts or products such as sodium bicarbonate, soda ash, table salt, caustic soda and calcium carbonate
- Inject underground when it can be demonstrated through risk assessment and trials that there will be no adverse environmental impacts
- Dispose into the ocean through pipelines. This requires scientific analysis to demonstrate that there will be no adverse impact on the ocean
- Dispose of solid salt into a waste disposal facility. There are rigorous requirements in relation to the location, design and construction standards of these facilities.

Any option regarding the management of salt will be subject to environmental assessment before approval will be granted.

Food safety

Where beneficial use of the treated CSG water is planned, for example aquaculture, livestock watering or irrigation, the use of CSG water must satisfy a set of minimum standards outlined by various levels of government. Specific standards are also set out in the guideline *Approval of coal seam gas water for beneficial use*.

All producers including feedlots must comply with the *Model Code of Practice for the Welfare of Animals*, which requires that drinking water is fit for consumption by livestock, including consideration of toxic elements and compounds.

The adaptive environmental approval regime provides a further mechanism for taking action if new information becomes available on water quality issues, such as the introduction of new standards or changes to codes, or if adverse affects are observed. Matters relating to water quality are dealt with by DERM.

Performance reports and inspection

All CSG companies are required to undertake a range of monitoring and reporting. This includes the impacts of their projects on the environment and their activities on their tenements. These reports, and the assessment of the reports, will be made available as they are completed. The first reports are expected in 2011.

Performance reports and inspections, subject to Right to Information requirements, will be made available to the public via government websites.

The DERM *Annual Compliance Plan 2010-11* commits to a proactive multi-tiered inspection regime for the CSG sector. This will be in addition to any compliance inspections undertaken in response to environmental complaints, company notifications and issues identified through other departmental work. Conditions imposed in EISs are also monitored and reported by DIP.

Complaint management

Public complaints are taken seriously. Issues including noise, spills, water and salt management, waste, land rehabilitation, regulated dams, environmental harm, air, monitoring programs, and community issues are dealt with in accordance with existing complaints management policy and procedures.

A single phone number (07 4688 1186) and email address (CSG.Enquiries@derm.qld.gov.au) has been established for complainants to register complaint details in relation to these issues. DERM will assign an individual case manager to each complaint.

An independent review process via the Queensland Ombudsman's Office is also available after formal departmental processes have been completed.

Protecting landholder rights

The success of the LNG industry is also dependent upon achieving the right balance between the agricultural and resource sectors. Mineral, petroleum and gas resources are owned by the entire state and are developed to provide benefits to all Queenslanders.

Strategic cropping land

In August 2010 Government released a draft *Strategic Cropping Land Policy Framework*, which will protect Queensland's best cropping land by assessing potential impacts of development on what is considered strategic cropping land – a non-renewable invaluable resource.

The strategic cropping land policy framework paper was released on 23 August for public comment. It is Government's intention to introduce new legislation in early 2011. The framework will require any proposed development, which may impact on Queensland's best cropping land, to be assessed to ensure it does not cause permanent damage to the very best of the State's agricultural land.

Draft trigger maps were also released in August 2010 as the starting point for identifying strategic cropping land and are based on the best soil, land and climate information currently available. However, each project's assessment will be supported by on-the-ground confirmation of the land against strategic cropping land criteria.

Land access laws

New laws have been enacted to ensure landholders have a more even footing when dealing with resource companies. The new laws relating to the petroleum and gas industry came into effect on 29 October 2010 and set required standards of conduct and consultation and provide a framework for negotiated compensation.

Under the new land access laws companies are also required to comply with the *Land Access Code*. The *Land Access Code* also came into effect on 29 October 2010 and clearly sets out the Government's expectations of resource companies in relation to communication, consultation and behaviour when operating on private property.

The changes include a requirement for companies to notify landholders before entering land to conduct activities that won't disturb the land, and to negotiate an agreement about conduct and compensation before coming onto a property to undertake larger scale activities that are likely to have a significant impact on the land.

The new land access laws clarify the rights of landholders and authority/tenure holders. The laws also provide more flexibility and options in resolving disputes in addition to broadening the jurisdiction of the Land Court. This approach will allow landholders and resource companies to have land access issues dealt with in one court.

The changes also limit the civil liability of landholders against certain legal actions and allow for legal and some other professional costs incurred in negotiating a resolution to be part of any compensation.

Land access – compensation

Compensation arrangements associated with resource tenures have been clarified and strengthened to provide better certainty and protections for landholders. The new land access laws define effects for which compensation may be available and require that compensation is agreed with landholders as part of the *Conduct and Compensation Agreement* prior to activities likely to have a significant impact on the land commencing.

The changes will provide a more equitable approach to negotiations by allowing accounting and valuation costs incurred in negotiating a resolution to be part of any compensation discussion.

Government has developed and released a package of information to assist landholders in negotiations with companies about land access and compensation. A factsheet on tips for landholders negotiating with petroleum and gas companies which provides information to guide landholders on the type of issues and conditions to consider in their negotiations. The Government has recently released a *Standard Conduct and Compensation Agreement* and a *Standard Deferral Agreement*. The standard agreements are templates provided as a guide to assist landholders and resource companies when undertaking negotiations around access and compensation related to proposed exploration and development activities.

Land rehabilitation

All land rehabilitation is in accordance with the EP Act and the *Petroleum and Gas (Production and Safety) Act 2004* or the *Petroleum Act 1923*.

Environmental authority conditions imposed by the Queensland Government and landholder requirements will be used to ensure that, where practical, rehabilitation of land is undertaken progressively over the life of CSG projects. Land rehabilitation responsibilities imposed through environmental authority conditions can continue to apply after the surrender of the petroleum tenure.

Rehabilitation goals include detailing and agreeing on final land use and demonstrating that the final rehabilitated land is safe, non-polluting and self-sustaining.

For example, if CSG dams are not required by the landholder, or a third party, they will be decommissioned. The remaining water in dams will be treated, used or disposed. Any remaining salt, sediment or sludge will be removed and disposed of in accordance with the EP Act.

To ensure rehabilitation is completed, a financial assurance will be lodged with DERM by each company seeking approval to extract CSG. This assurance covers a number of matters, including the cost of rehabilitating areas disturbed by petroleum activities if the company defaults on their responsibility.

Ensuring public safety

The Queensland Government is committed to maintaining a high standard of safety and health for industry, workers and the community alike. DEEDI's Petroleum and Gas Inspectorate oversees this commitment to safety and health through a comprehensive statewide compliance program. The compliance program includes a range of education, monitoring and enforcement activities within the petroleum and gas industry.

To ensure the compliance program is resourced and efficiently delivered ten new petroleum and gas inspectors have been appointed throughout Queensland. This will allow the industry to maintain growth while operating within best practice regulatory requirements for safety and health.

The additional inspectors will ensure the industry is monitored and audited at an appropriate frequency and coverage of inspections is at an effective level. As the industry grows, Government will regularly review and improve these processes to identify and adapt to issues associated with changed work practices or emerging technologies.





The way forward

The next three years will see major steps in the development of the LNG industry.

- Further new projects may receive commercial and regulatory approvals
- Construction of pipelines and processing infrastructure will proceed
- Gasfield development will expand
- Thousands of new workers will be directly employed as the industry gathers pace
- Billions of dollars in new investment will flow through the whole economy
- Our first exports of LNG will leave Gladstone port in 2014–15.

The Queensland Government recognises that achieving the goal of balanced growth while realising LNG's full potential for all Queenslanders, especially those in regional Queensland, requires ongoing vigilance.

Building on the significant progress made over the past year, the Queensland Government has three priorities to guide the way forward for the LNG industry:

1. **Develop the industry:** facilitate a competitive, world class industry that generates jobs for Queensland.
2. **Protect our natural resources:** implement a strong regulatory system for the industry, based on science and rigorously enforced, meeting the standards the community expects.
3. **Maximise benefits for communities and businesses:** ensure regional communities and local industry are prepared for the growth of the industry and maximise the opportunities that this brings.

These actions of government are directed to providing confidence that the industry, as it develops, will be well-managed, providing real benefits to Queenslanders.

To meet these priorities, the Government will continue to listen to community input in identifying issues that need to be addressed to get the balance right.

Involving and informing our communities

Partnerships with community, industry and all levels of governments underpin our priorities in this Blueprint. This is critical to getting the balance right.

Informing the community

Over the coming year we will continue to seek new opportunities for community involvement and will consider a range of options to provide information and seek feedback from the community.

Open and online

As monitoring data is received, it will be made publicly available through the CSG Groundwater Portal. The website lng.industry.qld.gov.au will be constantly updated with information on new developments and we will continue to publish an e-newsletter for interested members of the community.

Engagement in the Surat

We will build upon the strong local relationships developed over the past year through the establishment of three new consultative groups in the Surat Basin.

These groups will provide a continuous opportunity for community members to be informed of any changes related to the industry and to have their say on how the industry should develop. The groups will comprise a broad-based Surat Basin CSG Consultative Committee and two local Consultative Committees to ensure local needs of the Dalby and Roma areas are addressed.

Engagement in Gladstone

The Gladstone community will also be provided with the opportunity to learn more about the development of this important industry and to have their say on how it is developing through an engagement program tailored specifically for their region.

Develop the industry

Facilitate projects

The Queensland Government will continue to work with project proponents to develop this new industry with such potential. We will:

- **Continue case management** – The permits and approvals required by projects will be case-managed to assist projects in meeting their agreed timeframes.
- **Review tenure framework** – The tenure framework will be reviewed to ensure it provides for optimum resource use and certainty for ongoing investment into both the coal and CSG/LNG industries.

Jobs and skills

The LNG industry offers thousands of job opportunities for Queenslanders in a wide range of occupations. Accessing the right skills, and enough of them, is a very important issue for the industry. To help Queenslanders get jobs in the industry, and the industry to get the right skills, the Queensland Government will:

- **Identify skills and employment opportunities** – Industry and Government will work to identify and respond to key skills required and the employment opportunities that will be available for Queenslanders.
- **Fund a CSG/LNG industry training program** – Government and industry will continue the CSG/LNG training program and will continue to develop this program with industry to ensure we deliver the skills necessary for future employment.
- **Invest in the Queensland Minerals and Energy Academy Gateway Schools** – Investment in the Gateways Schools Program will be maintained to provide school leavers with the chance to gain employment in the industry.
- **Spearhead workforce development and skilling** – The Queensland Government established the Queensland Skills Commission to identify and drive the workforce development and skills needs for the industry, helping to ensure Queenslanders can gain the skills required to secure employment.
- **Partner with industry** – The Queensland Government will work with its industry partners to establish skills information and advisory centres in Gladstone and the Surat Basin.

Market frameworks for gas

While there is sufficient gas available for domestic purposes today we need to ensure that this gas is available into the future to support our continued growth. We also need to ensure that the development of the industry does not negatively impact on the optimum use of coal resources. This is a balance between growing the industry that will improve our economy, while protecting other resource industries that also make a significant economic contribution. It is an issue of achieving the right balance between industry facilitation, resource management and, perhaps most of all, ensuring safety.

To achieve this balance we will:

- **Conduct an annual gas market review** – The second annual review of the Queensland gas market will be completed in 2011.
- **Identify gas network capacity constraints** – Identification of capacity constraints in key infrastructure will be a priority of the annual gas review.
- **Implement domestic market gas legislation** – As committed by government, legislation will be implemented so that if necessary, gas produced from identified future sites must be offered to the domestic gas market.
- **Establish a short-term trading market** – A short-term trading market, consistent with that introduced in New South Wales and South Australia, will be established to provide more trading opportunities and greater transparency of gas prices.

- **Implement a state-wide safety compliance program** – A comprehensive state-wide safety compliance program including education, monitoring and enforcement activities will be continued.

Protect our natural resources

The Queensland Government has committed to protecting our natural resources as part of the balanced growth of the LNG industry.

A comprehensive EIS has been conducted for each of the LNG projects approved so far. We are committed to ensuring that this rigorous process applies to all future projects, and addresses the potential impacts on land, water and greenhouse gas emissions.

Greenhouse gas emissions

The development and operation of the LNG industry will contribute to increased greenhouse gas emissions in Queensland. Approvals for LNG projects have included conditions for greenhouse gas management and this requirement will continue to be a key element of the approval process for future projects.

The Queensland Government understands that greenhouse gas emissions are a concern for all Australians. Consistent with Australia's international commitments to reduce greenhouse gas emissions, the Queensland Government is working with the Commonwealth to ensure that all projects in Queensland conform to any Australian policy on greenhouse gases.



Safeguarding our water resources

A settled policy on produced water is vital. This is critical to provide certainty to industry and to enable this water to be used in ways to both assist in sustaining aquifers and also provide opportunities for agricultural development.

We will:

- **Introduce a new regulatory framework for fracking** – As committed by Government, a new regulatory framework for fracking including stronger environmental conditions, monitoring requirements and reporting systems will be introduced.
- **Regulate petroleum compounds** – As committed by Government, the ban on potentially harmful compounds containing benzene, toluene, ethylbenzene and xylenes in fracking will be legislated.
- **Manage long-term impacts on aquifers** – Options will be investigated to ensure that the regulatory framework manages adverse long-term impacts on aquifers to address the situation where companies may become insolvent.
- **Improve information on salt disposal** – All options for the disposal of salt will be subject to a rigorous environmental assessment through the CSG water management plan that is required to be developed annually by CSG companies. These plans may be subject to Right to Information legislation.
- **Improve bore data** – Government will work with industry to provide landholders with bore assessment data which can be used as a basis for future make good negotiations.

Injection

Injection plays an important role in the adaptive management regime as it provides for the return of CSG water and reduces the risk to aquifers under stress. As part of the implementation of the environmental conditions from State and Federal Government, injection will continue to be a priority.

Industry proponents are already undertaking substantial trials in relation to injection and the State is assessing the scope for injection in specific locations such as the Condamine Alluvium. It is important to recognise the technology limitations in relation to the scope of injection, such as aquifer integrity.

The long-term framework for injection will be finalised in consultation with all stakeholders during the early implementation of the strict environmental conditions.



An independent perspective

As an independent body the Queensland Water Commission (QWC) will assist in the management of potential groundwater impacts from CSG water extraction. A regional approach to water impact assessment will be adopted in areas of intensive development and where the impacts of water extraction by different tenure holders overlap.

The regional approach is necessary to ensure assessment and management of potential water impacts is of a high standard and that information is regularly provided to protect this important resource. The regional areas where intensive development is occurring, and where QWC will be responsible for monitoring impacts, will be known as 'Cumulative Management Areas'.

QWC's specific role will be to:

- Undertake regional groundwater assessment and modelling to identify potential impacts from CSG water extraction on water levels in the coal seams and adjacent aquifers
- Develop strategies for assessing risks to springs and preventing or minimising these impacts
- Assign responsibility for individual tenure holders in relation to matters such as groundwater monitoring
- Prepare periodic underground water impact reports for each of the declared areas
- Maintain a database of relevant groundwater information about baseline data and the results of ongoing monitoring
- Advise the Government regulator (DERM) on matters relating to current and predicted impacts on groundwater resulting from the extraction of water by CSG producers.

Rigorous enforcement

We have listened to the community and have put in place, through legislation and project approvals, the standards that the industry must meet to ensure the right balance between our environment and the development of the CSG industry. These are standards that must be met. Compliance with the environmental standards will be actively enforced and we have increased our compliance and inspection efforts. This is important so, in addition to the changes already made, more work is planned to ensure the highest standard of compliance and enforcement activities.

We will:

- **Increase environmental compliance capacity** – 20 new compliance officers will be employed in the region
- **Release compliance information** – Information on non-compliance by CSG companies will be made available to the public through the Right to Information framework
- **Provide performance reports** – Key environmental and water reports related to CSG production will be made available by Government
- **Independently monitor and model water impacts** – QWC will provide assessment of industry groundwater reports and predictions of possible impacts from groundwater extractions
- **Conduct groundwater sampling programs** – Sampling of some 300 groundwater bores in 2011 and a further 300 in 2012 will be undertaken to monitor the impacts on groundwater quality from CSG activity. This increase in groundwater sampling is essential to ensure that industry groundwater monitoring reports are verified
- **Manage and monitor operational complaints** – A new process for managing and monitoring operational complaints associated with the petroleum and gas industry will be developed and implemented
- **Work with the Commonwealth** – Ensure the effective, integrated management of conditions imposed by State and Commonwealth governments to provide clarity for industry, and to promote efficient and effective compliance.

Land and landholders

The success of the LNG industry is dependent upon managing the coexistence of the agricultural and resource sectors.

The Queensland Government recognises there may be conflicts between existing land uses and new resource development and is committed to proactively managing these conflicts, and improving negotiations between the sectors

The government will:

- **Implement the strategic cropping land policy** – Government will finalise and implement the strategic cropping land policy
- **Ensure independent legal and professional advice** – A requirement for industry to fund reasonable independent legal and professional advice for landholders as a part of land access negotiation will be mandated
- **Finalise and implement land access laws** – Changes to the new land access laws will be finalised and the laws implemented. Information sessions about the new laws will be provided across the state for agricultural and resources sectors
- **Provide land information** – Government will require that plans detailing planned CSG operations and development are available to the community to provide more certainty about industry growth
- **Assist landholder negotiations** – We will implement a series of regular ‘farm shed’ meetings at landholders own properties to assist landholder groups to better understand their rights and negotiate opportunities when dealing with the CSG industry.



Maximise benefits for communities and businesses

Managing growth in regional communities

The rapid growth of the resources sector provides both opportunities and challenges for regional communities. These need to be managed to maximise the benefits for these communities and minimise any negative consequences. A particular focus needs to be ensuring these communities are provided with infrastructure and services that meet their future needs. This means changing the way planning is done, to better understand and anticipate the impacts of cumulative growth, and to bring together a holistic approach to dealing with it. This is an area where all levels of government have responsibility, and so too does industry.

We will:

- **Deliver the Surat Basin Future Directions Statement** – In early 2011, the Government will release the *Surat Basin Future Directions Statement*, an overall plan for the region including key areas like economic development (including agriculture), transport, housing and workforce development. This will include a regional planning framework which will identify strategies to ensure stability in terms of population growth, service provision, employment, infrastructure, housing and community services.
- **Implement the Cumulative Growth Management Framework** – This framework addresses potential development impacts from resource sector growth and guides planning to address these impacts.
- **Condition projects for local impacts** – Conditions will be included in the Coordinator-General's reports to fund housing, roads, maintenance, traffic management and environmental mitigation initiatives. These will be enforced to ensure community impacts are addressed.
- **Monitor growth** – The Coordinator-General will establish a CSG Industry Monitoring Group to assess and report on the cumulative environmental and social impacts of the CSG industry and recommend any necessary changes to legislation, policies and guidelines.
- **Examine work camps** – Amendments to resource legislation requiring companies to notify local government about temporary CSG project-related and other work camps will be considered.



Business opportunities for local industry

The LNG industry will create new jobs and increase opportunities for local business. We will act to provide every possible advantage for Queenslanders and Queensland companies to participate in the industry. There is a high level of interest in jobs in the industry with more than 1000 calls to the jobs hotline already.

Government will aim to ensure that Queenslanders are skilled and Queensland companies are tender-ready to increase our chances to benefit from the employment and capital that these projects bring.

We will:

- **Support Local Industry Participation Plans** – Project proponents will prepare Local Industry Participation Plans which describe how local industry will be advised of work opportunities and engaged in delivering these works.
- **Brief suppliers on project opportunities** – Workshops will be arranged to educate local suppliers about project requirements, opportunities and programs available to help position companies to tender successfully.
- **Implement a major project supplier program** – Assessment of a supplier's capability against specific major project standards for CSG/LNG projects will be conducted to provide an enhanced opportunity to secure project work.
- **Match businesses to suitable contracts** – The Industry Capability Network will work with project proponents to identify business opportunities for local suppliers and will match local suppliers to these opportunities.
- **Investigate new business opportunities** – The feasibility of a preassembled module site for Queensland is being assessed. This may provide for higher participation in the LNG industry development by Queensland companies and workers.
- **Increase Indigenous employment** – Opportunities to increase the number of Indigenous people participating in the LNG industry will be progressed with each project proponent.

References and LNG Industry Information

Queensland Government

- LNG Industry Unit
- Fact sheets
- E-newsletter subscriptions
- Studies

Visit the website: lng.industry.qld.gov.au

CSG/LNG Hotline

Information and complaints telephone 13 25 23

Environmental Impact Statements for LNG Projects

Visit: www.dip.qld.gov.au/projects.html and select project name

Additional information on Queensland's LNG industry is available from:

LNG Industry Unit
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and Innovation

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Further information

LNG project web sites

- BG Group/QGC Ltd: www.qgc.com.au
- ConocoPhillips/Origin Energy:
www.originenergy.com.au
- Energy World Corporation: www.energyworldcorp.com
- LNG Limited/Arrow: www.LNGlimited.com.au
- Santos Ltd/Petronas: www.santos.com
- Shell Australia/PetroChina: www.shell.com
- Sojitz Corporation: www.sojitz.com

Current legislation guiding and regulating the LNG industry

State Development Act 1997

Environmental Protection Act 1994

Water Act 2000

Petroleum Gas Act 2004

Geothermal Energy Act 2010



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