Queensland 2012 Gas Market Review

Submission by the DomGas Alliance

July 2012

THE DOMGAS ALLIANCE

The DomGas Alliance represents natural gas users, infrastructure investors and prospective domestic gas producers. The Alliance promotes security and affordable of gas supply.

Alliance members represent around 80 percent of Western Australia's domestic gas consumption and transmission capacity, and supply gas and electricity to the State's 800,000 households and 200,000 small businesses.

The Alliance includes members with operations in Queensland and welcomes the opportunity to provide a submission to the 2012 Queensland Gas Market Review.

KEY POINTS

- The market has failed in Queensland. As the *Consultation Draft* found:
  - gas customers cannot access basic market information from producers such as forward prices, volumes or potential delivery timeframes;
  - in the past year, no customer seeking gas has been able to secure meaningful volumes of gas;
  - whatever supply was available has only been for small volumes for short-term supply; and
  - LNG proponents have now entered the market as major gas customers and have been securing contracts.
- Had the State implemented a 15% reservation policy in 2007, it is unlikely that the serious gas shortages and sharply rising prices would be occurring today.
- A rise in prices from $3/GJ to $6/GJ could cost the State an extra $420 million in annual energy costs. A rise to $12/GJ could cost an extra $1.8 billion. The cost would be borne by every business and household in Queensland.
- The State should now implement reservation commitments for future LNG projects or future new LNG trains for existing projects.
- A 10% reservation policy applied on new LNG trains could deliver 103 PJ of gas per year. This is equivalent to 43% of Queensland's current annual consumption or 13% of Eastern Australia's.
- A 15% reservation could deliver 154 PJ per year, equivalent to 64% of Queensland's annual consumption or 20% of Eastern Australia's.
- This additional supply would help sustain existing businesses, support new manufacturing and processing investment, and enable a shift in energy use from coal to clean natural gas.

1. THE MARKET HAS FAILED TO DELIVER

Despite a massive expansion in gas production, Queensland is experiencing serious gas shortages and sharply higher prices. As the 2012 Gas Market Review *Consultation Draft* found:

- Gas is in short supply for new contracts both pre- and post-2015.
- The market is experiencing a high level of uncertainty in terms of supply and pricing.
- Ramp-up gas which was previously assumed to be a feature prior to the commencement of LNG exports has not materialised due to producers' actions and gas swaps between LNG proponents.
- Customers seeking new domestic contracts have been unable to access basic market information (forward prices, volumes available, potential delivery timeframes).
- In the past 12 months, no customers seeking domestic supply reported achieving a term sheet for large gas volumes. Whatever gas was available was for small volumes for short-term supply.
- A major development was the entry of LNG proponents as customers for other producers. In contrast to domestic gas customers, LNG proponents have been able to access the required information and contract for gas.[1]

As a consequence, industry and jobs are being lost overseas as businesses cannot sustain existing operations or make new investments. Households face even higher gas and electricity costs.

1.1 The cost to Queensland can be quantified

As a result of the serious gas shortages, gas prices have risen from $3-4 per gigajoule to $6-7/GJ with producers instead targeting exports through Gladstone LNG. East Coast gas producers are now talking publicly of even higher prices of up to $8/GJ (Origin and AGL) and up to $9/GJ (Santos).

With the Queensland energy market characterised by shorter term gas contracts, the hit to industry and households will be harder and faster than in Western Australia where the market is characterised by longer term contracts.

The impact of higher gas prices can be quantified. Queensland currently consumes around 140 PJ of natural gas each year.[2] A rise in prices from $3/GJ to $6/GJ could cost industry and households an extra $420 million in annual energy costs.

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[1] 2012 Queensland Gas Market Review: Consultation Draft, p. ix-x.
[2] ABARE, *Energy in Australia 2010*.

A rise in prices to $12/GJ, as projected by the *Consultation Draft* under a high price scenario, could cost the State an extra $1.8 billion in annual energy costs assuming current consumption levels are maintained.

This cost would be borne by every business and household in the state. It would have a major impact on the State's value-adding manufacturing industries dependent on affordable energy.

Table: Impact of higher gas prices

	Annual Gas Bill	Additional Cost
$3 gas prices	$597 million	
$6 gas prices	$1.2 billion	**$597 million**
$12 gas prices	$2.4 billion	**$1.8 billion**

The above figures only seek to quantify the increased cost of energy from sharply higher gas prices. They do not take into account flow-on effects in terms of lost industry investment, business closures, job losses and falling tax revenues.

Nor do they quantify the environmental impact from higher greenhouse gas emissions. While governments have assumed that natural gas will play an increasing role in electricity generation, this shift from coal to lower-emission gas is unlikely to occur without secure and affordable gas supply.

1.2 Producers are not responding to market signals

In recent years, the Queensland market has undergone significant transformation from one characterised by a large number of potential gas producers, to one characterised by a small number of large producers.

Of the seven producers that currently supply the Queensland market, only two (AGL Energy and Mitsui/WestSide/Molopo) are not participants in the four LNG Projects. Of these two producers, AGL Energy currently supplies 29% of the eastern Australian market, while Mitsui/WestSide/Molopo supplies just 1.5%.[3]

For the other producers (Origin, Australia Pacific LNG, Santos, Arrow and QGC), there is a clear focus on maximising LNG exports through multi-billion dollar LNG contracts with a handful of overseas customers, rather than selling to many smaller Queensland businesses. While this might be legitimate commercial practice, it does not ensure supply to the Queensland market.

[3] *Consultation Draft*, p.4.

Evidence of this market failure is that customers seeking domestic supply have been unable to access basic market information (forward prices, volumes available, potential delivery timeframes). In contrast, LNG proponents have been able to access the required information and contract for gas.

The *Consultation Draft* correctly warns that even of current LNG projects reach production capacity, it cannot be assumed that gas reserves might be made available in the future to the domestic market. There is the potential for producers stockpiling reserves to retain the option of developing further LNG trains.[4]

The current experience demonstrates that market signals alone will not ensure adequate supply to the Queensland market and that decisions are being taken by gas producers on considerations other than price.

In the absence of a functioning gas market, domestic gas obligations are an essential policy instrument to ensure supply.

2. DOMESTIC SUPPLY OBLIGATIONS

2.1 A reservation policy would have ensured supply

In 2009, energy users alerted the Queensland Government to the risk of sharply rising gas prices and domestic gas shortages from LNG exports. Energy users urged the State to implement a reservation policy similar to that implemented in Western Australia.

The four LNG Projects have a combined project size of 59.5 million tonnes per annum of production. This is equivalent to around 2898 billion cubic feet of natural gas or 3042 petajoules of energy.[5]

A modest 5% domestic gas reservation would have - had it been implemented - delivered 152 PJ of gas a year to the Australian market. This would have been sufficient to supply 63% of Queensland's current gas consumption or 19% of Eastern Australia's.[6]

A 10% domestic gas reservation would have delivered 304 PJ of gas per year, while a 15% reservation would have delivered 456 PJ of gas per year.

[4] Consultation Draft, p.38.
[5] Conversion factors: 1 million metric tons LNG = 48.7 billion cubic feet of natural gas; 1 billion cubic feet (Bcf) natural gas = 1.05 PJ.
[6] Queensland gas consumption 240 PJ per year, Eastern States (including Queensland) gas consumption 780 PJ per year. Sources: BREE, *Energy in Australia 2012*; *Consultation Draft*.

Table: Domestic supply had the State implemented a reservation policy

	Domestic supply commitment	% current Queensland consumption (240 PJ)	% current Eastern Australia consumption (780 PJ)
5% reservation	152 PJ	63 %	19 %
10% reservation	304 PJ	127%	39 %
15% reservation	456 PJ	190 %	58 %

Domestic supply would have commenced in 2014 with the first LNG Project start-up if not earlier. Importantly, supply would have increased over time as the LNG Projects achieve full production capacity. This would have delivered energy security to Queensland over the 25+ year life of the projects by ensuring a minimum level of supply.

Had the State implemented a reservation policy, it is unlikely that Queensland would have experienced its current gas shortages and sharply higher prices.

2.2 The field reservation policy has failed

The Prospective Gas Production land Reserve (PGPLR) policy has proven to be ineffective. Under the policy, the State may when granting a tenement, require that any gas produced from the area be supplied only to the Australian gas market.

This acreage reservation policy has proven to be ineffective. To date, no gas field has been set aside for domestic gas only development despite the State's worsening gas shortage. Even if the policy was activated now and a suitable gas field identified, it could take up to 7 years before gas could flow to local industry and households.

Importantly, an acreage reservation policy does not provide the certainty of a production reservation policy. Such certainty is important for investment decisions for gas producers and gas users alike. It also creates two tiers of gas producers and would not achieve any efficiencies from major LNG project developments.

3. DOMESTIC SUPPLY OBLIGATIONS SHOULD BE ENFORCED ON FUTURE LNG EXPANSION

The DomGas Alliance supports the *Consultation Draft's* recommendation that the State Government consider the security of domestic gas supply and market liquidity in the planning and approval process for development of future new LNG trains.

In the Alliance's view, this must involve domestic supply obligations for future LNG projects, or future new LNG trains for existing LNG projects.

3.1 A reservation policy would secure supply for Queensland

While the State "missed the boat" by not implementing reservation commitments for the initial LNG projects, it has the opportunity to do so for future LNG expansion.

Of the four LNG Projects, three (Australia Pacific LNG, Gladstone LNG, Queensland Curtis LNG) have commenced construction or development of two LNG trains each, for a total of six LNG trains. The fourth project (Arrow LNG) has released an Environmental Impact Statement for public consultation.

Of the three LNG Projects currently under construction or development, Queensland Curtis LNG and Gladstone LNG have proposed an additional train each, while Australia Pacific LNG has proposed a further two trains.

Table: Proposed LNG expansion[7]

	Additional trains proposed	**Gas use per train PJ per annum**	**Additional LNG production PJ per annum**
Australia Pacific LNG	2	270	540
Gladstone LNG	1	234	234
Queensland Curtis LNG	1	255	255
TOTAL			**1029**

[7] *Consultation Draft*, pp. 9-10.

A modest 5% domestic gas reservation applied on new LNG trains would deliver 51 PJ per year of gas, equivalent to 21% of Queensland's current consumption or 6% of Eastern Australia's.

A 10% reservation would deliver 103 PJ per year. A 15% reservation would deliver 154 PJ per year, equivalent to 64% of Queensland's annual consumption or 20% of Eastern Australia's.

This supply would help sustain existing businesses, support new manufacturing and processing investment in Queensland and the East Coast, and enable a shift in energy use from coal to clean natural gas.

Table: Domestic supply if a reservation policy was applied to new LNG trains

	Domestic supply commitment	**% current Queensland consumption (240 PJ)**	**% current Eastern Australia consumption (780 PJ)**
5% reservation	51 PJ	21 %	6 %
10% reservation	103 PJ	43 %	13 %
15% reservation	154 PJ	64 %	20 %

3.2 Domestic gas reservation in Western Australia

Domestic gas reservation has been a feature of the WA gas market since the 1970s. The North West Shelf Project domestic supply commitments delivered stable energy supply underpinning economic growth, investment and employment in the State for over 25 years.

The 2003 Gorgon State Agreement provides for a domestic reservation commitment of 2000 petajoules (2 Tcf) and at least 300 TJ/d of gas.[8] The Gorgon partners have begun contracting gas to domestic customers pursuant to the domestic supply obligations.

In 2006, the Carpenter State Government implemented a 15% domestic gas reservation policy. The purpose of the policy is to ensure secure, affordable domestic gas supply to meet WA's long term energy needs and to sustain economic growth, development and value-adding investment.[9]

The policy has been affirmed by Barnett State Government and the State is now working to strengthen the policy, while providing sufficient flexibility to LNG producers in how they meet domestic supply commitments.

[8] Barrow Island Act 2003 (WA), Schedule 1, clause 17.
[9] Department of Premier and Cabinet, *WA Government Policy on Securing Domestic Gas Supplies: Consultation Paper*, October 2006 ("the Policy").

3.3 The reservation policy has secured new supply in Western Australia

While the WA reservation policy was introduced in 2006 to address the State's serious gas shortage, it will take time for the policy to take effect as new projects come on-stream and help meet WA's gas shortage.

Wheatstone is expected to begin supplying the WA market in 2016. The Gorgon Project (with a reservation commitment pre-dating the 15% policy) is scheduled to begin supplying in 2015.

Without reservation commitments however, it is unlikely that these major LNG projects would supply the domestic market. The recent WA Parliamentary Inquiry into Domestic Gas Prices found that:

> "The Domestic Gas Reservation Policy is an essential policy instrument for ensuring that an appropriate level of gas is supplied into the local market to achieve reasonable price outcomes. This instrument should be part of a suite of policy responses, the primary aim of which should be to improve the overall level of liquidity, competition and transparency in the Western Australian domestic gas market."[10]

Importantly, the Parliamentary Committee concluded that:

> "In the absence of a gas reservation policy, it is unlikely that LNG producers would develop adequate domestic gas processing facilities."[11]

LNG producers have confirmed that it was the domestic supply obligation and not market signals that ensured domestic supply from the Gorgon Project. As the Committee noted:

> "Whilst there has been evidence that these prices have generated a substantial supply response from the market (Devil Creek and Macedon), over 40% of the new domgas capacity now being built is directly attributable to commitments made under a state agreement. Appearing before the Committee on behalf of the Gorgon Domgas sellers, Mr Chris Sorensen confirmed that the Gorgon Project's domgas plant was not built in response to market signals: 'It was not our decision; it was a state obligation.' The Gorgon Domgas plant will play a critical role in alleviating current capacity constraints (if demand observes historic trends) and offers evidence that government intervention can occur without generating adverse market outcomes." [12]
>
> "It is not evident that LNG producers would, of their own accord, commit to a domestic gas project in the absence of some form of

[10] Economics and Industry Standing Committee, *Inquiry into Domestic Gas Prices*, March 2011, Finding 19 ("Domestic Gas Inquiry Report").
[11] Domestic Gas Inquiry Report, Finding 20.
[12] Domestic Gas Inquiry Report, para.303.

> reservation obligation. BP, in another example, has averted a reservation obligation by having gas from its Io field processed into LNG by the Gorgon Joint Venture. Given the current level of concentration in the upstream sector, reservation requirements are needed to expedite the diversity of supply now required to reduce the inordinate advantages enjoyed by incumbent producers in the marketplace." [13]

Assertions by gas producers that "the market should be allowed to work" are therefore not supported. There is clear evidence in Queensland and Western Australia that market signals alone will not ensure supply.

The argument that higher gas prices will lead to more production and encourage domestic supply has been proven wrong. If this was the case, the domestic market would already be in surplus. The reality is that any new gas has been diverted to the LNG market. LNG producers have now entered the domestic market as gas customers.

This makes domestic reservation an essential policy instrument for Queensland.

3.4 The Wheatstone Project is a useful model

The Wheatstone Project provides a useful model for how domestic reservation obligations could work in Queensland. As part of the Project, Chevron and its partners have committed to building a domestic gas processing plant with capacity and production equivalent to 15 per cent of LNG sales.

The foundation phase of the Project will include two LNG trains with 8.9 million tonne per annum (mtpa) capacity, which would equate to around 187 terajoules per day (TJ/d) of domestic gas. First domestic gas supply is targeted for 2016 to coincide with first LNG production.

Importantly domestic gas supply will increase over time to around 500 TJ/d with completion of the full 25 mtpa LNG export project. For local industry, this means energy certainty over the 25+ year life of the Project.

3.5 Policy flexibility

While the reservation commitments should be strictly applied to LNG expansion in Queensland, producers should be given sufficient flexibility in how they would meet domestic supply obligations.

This could be achieved through gas swaps and trading mechanisms which would allow producers to, for example, meet commitments from outside a project or outside a field. **Appendix 1** illustrates how a trading arrangement might work in practice.

[13] Domestic Gas Inquiry Report, para.304.

Any trading arrangement should support the following principles:

- It should ensure timely monetisation and supply – it should not allow producers to indefinitely delay domgas supply through commitment shifting;

- It should be a transparent mechanism; and

- It should deliver the same volume of gas.

Such arrangements would be eminently workable in Western Australia where the gas industry is characterised by large, discrete projects. They would be especially workable in Queensland where gas projects, producers and end-customers are linked by the East Coast gas pipeline network.

As the *Consultation Draft* notes, LNG producers are already active in the market place as customers of each other. In contrast to customers seeking domestic supply of gas, LNG proponents have been able to access the required information and contract for gas.

3.6 Domestic reservation has not discouraged investment or exploration in Western Australia

Domestic reservation obligations will not discourage investment or exploration in Queensland. Western Australia's 15% reservation policy attracted intense criticism by LNG producers, APPEA and the then Federal Minister for Resources, Energy and Tourism when it was announced in 2006.

Opponents claimed the policy would discourage exploration, drive away investment and increase sovereign risk (see for example APPEA's submission to the WA Government in **Appendix 2**). Little evidence was provided to support these claims.

These concerns have proven to be unfounded. Major projects underway or already completed in WA include Wheatstone, Gorgon, Devil Creek, Macedon and Pluto. Exploration expenditure has also significantly increased following the announcement of the reservation policy in 2006.

The WA Parliamentary Committee similarly found no evidence to support claims that the State's reservation policy deters investment:

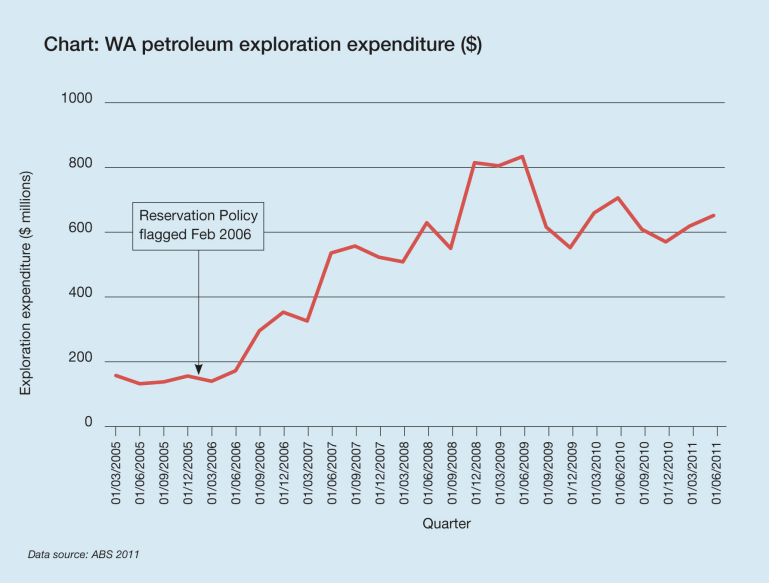
> "The Committee is not persuaded by producer arguments that reservation policies will deter ongoing investment in the LNG industry. In support of this point, the Committee notes the Fraser Institute's 2010 survey of international petroleum industry executives. In this latest survey, which measures the extent of barriers to investment, Western Australia has moved into the 'most attractive' quintile of international jurisdictions. Notwithstanding the current regulatory climate, Western

> Australia has improved 35 places from 2009 to be 21st out 133 destinations."[14]

Importantly, the Committee dismissed claims that the WA reservation was the reason for Inpex's decision to shift its Ichthys LNG processing plant from WA to Darwin:

> "Importantly, Inpex confirmed that its decision to locate its Ichthys LNG processing plant in Darwin was not due to the Reservation Policy, but to a failure to gain approval to use the Maret Islands as the company's production site. Inpex advised the Committee that it had been prepared to negotiate an outcome surrounding the Reservation Policy and that, '…it was not a deal breaker at all in our consideration.'" [15]

Chart: WA petroleum exploration



3.7 Other governments have acted to prioritise domestic supply

As the US Energy Information Administration has observed, "many countries that are LNG exporters have some form of domestic reservation regime in place to encourage local consumption".[16]

The United States has conditioned approval of new LNG exports from the Sabine Pass on gas producers prioritising the local economy and ensuring affordable prices for US industry and households.

[14] WA Parliamentary Inquiry, para. 306.
[15] WA Parliamentary Inquiry, para. 309.
[16] Cited in the WA Parliamentary Inquiry report, para. 279.

To ensure compliance, new LNG contracts from the United States have been priced on a formula that rejects any linkage between US domestic gas prices and energy-starved Japan or Korea. BG Group recently contracted 3.5 million tonnes per annum of LNG for 20 years with the price indexed to Henry Hub domestic prices, i.e. Henry Hub price + 15% + tolling fee + shipping. This delivers a profitable return to LNG exporters while at the same time ensuring competitive gas prices for US industry.

Canada requires export permits and export price tests to ensure the domestic market is not disadvantaged in any way from gas exports. The export market is served as a second priority to the domestic market in terms of reliability of supply.[17]

Egypt has a 67% reservation policy that reserves one-third of natural gas for exports, one-third for domestic use and one-third "to save for our children". The policy has not discouraged Apache Energy from exploring or investing in Egypt which accounts for the company's largest acreage position and 30% of global revenue.

Qatar, the world's largest LNG exporter, has a moratorium on further expansion of LNG exports until 2013 because of uncertainty over gas reserves. Qatar has around eight times Australia's natural gas reserves and one-twentieth the population.

Reservation commitments will not discourage LNG investment in Queensland. They have not discouraged LNG projects in Western Australia or other major gas exporting countries.

[17] Innovative Energy Consulting, *Submission to the WA Strategic Energy Initiative 2030*, 2011.

CONCLUSION

The market has failed in Queensland. As the *Consultation Draft* found:

- gas customers cannot access basic market information from producers such as forward prices, volumes or potential delivery timeframes;
- in the past year, no customer seeking gas has been able to secure meaningful volumes of gas;
- whatever supply was available has only been for small volumes for short-term supply; and
- LNG proponents have now entered the market as major gas customers and have been securing contracts.

Had the State implemented a 15% reservation policy in 2007, it is unlikely that the serious gas shortages and sharply rising prices would be occurring today.

A rise in prices from $3/GJ to $6/GJ could cost the State an extra $420 million in annual energy costs. A rise to $12/GJ could cost an extra $1.8 billion. This would be borne by every business and household in Queensland.

The State should now implement reservation commitments for future LNG projects or future new LNG trains for existing projects.

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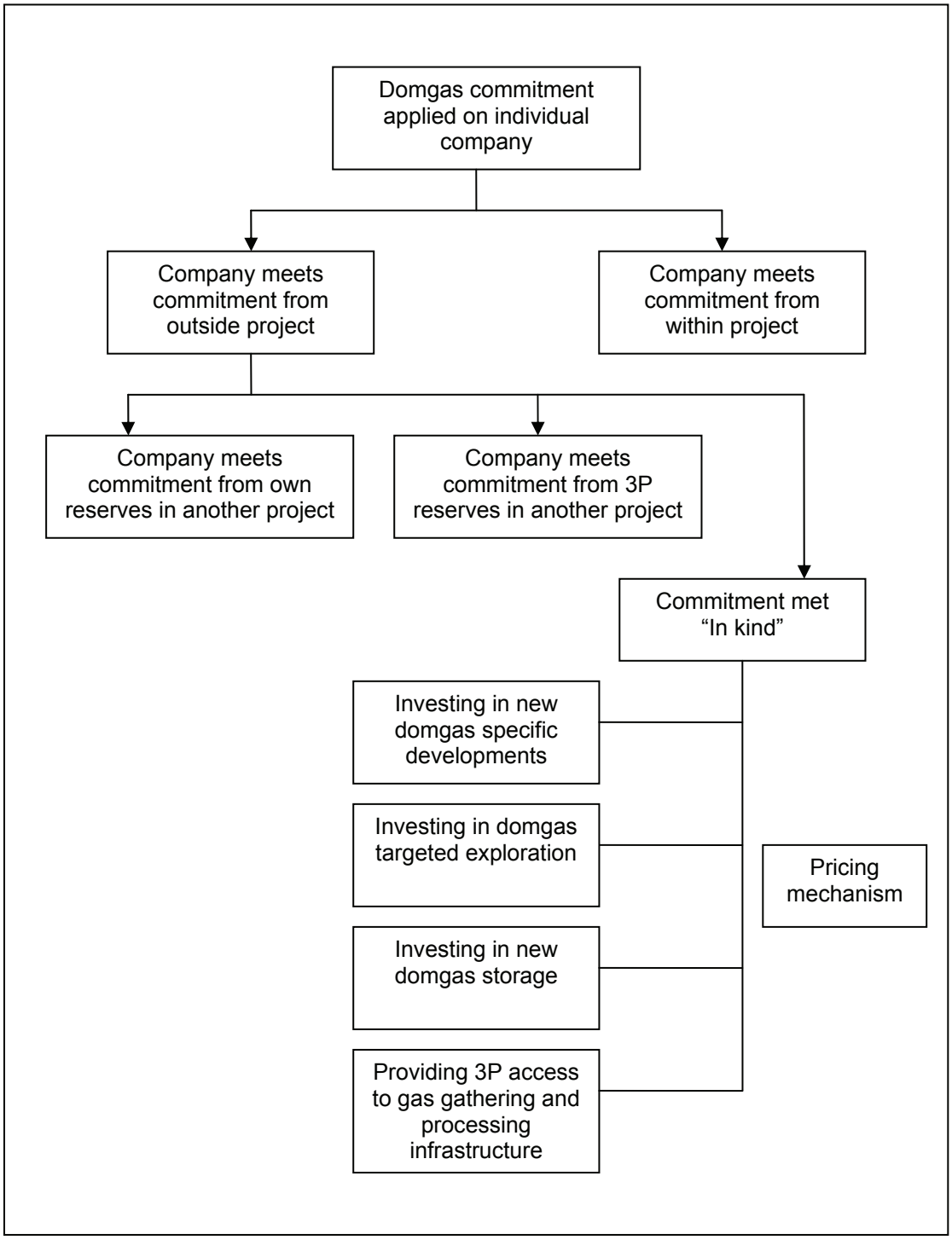
A 15% reservation would deliver 154 PJ per year, equivalent to 64% of Queensland's annual consumption or 20% of Eastern Australia's.

This additional supply would help sustain existing businesses, support new manufacturing and processing investment, and enable a shift in energy use from coal to clean natural gas.

APPENDIX 1: TRADING ARRANGEMENTS



APPENDIX 2: APPEA SUBMISSION ON THE WA RESERVATION POLICY [18]

We'll all be ruined, APPEA claims …

"A Domestic Gas Reservation policy would, if adopted:

- reduce the international competitiveness (for sales and for capital) of one of Australia's largest and most rapidly growing export sectors;
- potentially render some LNG projects uneconomic and unable to be developed for the domestic market without very large increases in gas prices;
- be economically inefficient and divert gas from its highest value use;
- treat LNG projects inequitably and disadvantage dedicated domestic gas producers;
- impact on the viability of WA's existing domestic gas suppliers;
- act as a form of taxation or appropriation of property without just compensation, thereby increasing sovereign risk and reducing Western Australia's attractiveness for petroleum investment;
- distort the WA gas market by creating a large gas overhang which could result in large increments in gas supply being introduced into the WA market at subsidised prices;
- maintain an uncompetitive and unsustainable price cap on domestic gas prices thereby leading to sub-optimal exploration for domestic gas and investment in new domestic gas production infrastructure;
- increase (not reduce) the long term risk of rapidly rising prices and gas shortages as the maintenance of uncompetitive prices leads to reduced investment and less diversity of supply;
- distort field development decisions potentially resulting in reduced resource recovery and reduced returns to governments and the community from the depletion of their gas resources;
- add a significant new risk to WA petroleum investment which does not arise in eastern Australia or in parts of the world which have attractive, vibrant and expanding petroleum industries;
- harm Australia's reputation for security of title and be inconsistent with the rights to petroleum embedded in Australian and West Australian petroleum legislation and the benefits and entitlements that those rights convey;
- be inconsistent with Australian Government policy that petroleum prices be determined by world markets with no consequential price relief or subsidy for domestic industry and consumers affected by increasing international prices; inconsistent with National Competition Policy Agreements made by the Australian and State Governments (including WA) and Australia's free trade agreement commitments (including its WTO commitments)."

[18] APPEA, *Submission on WA Government Policy on Securing Domestic Gas Supplies*, April 2006, available at: http://www.appea.com.au/content/pdfs_docs_xls/PolicyIndustryIssues/policysubmissions/WAGasReservationSubmission.pdf