

Senate Standing Committee on Economics

ANSWERS TO QUESTIONS ON NOTICE

Resources, Energy and Tourism Portfolio
Additional Budget Estimates 2009
26 February 2009

Question: AR-4
Topic: Oil and Gas
Proof Hansard Page: Written

Senator Bushby asked:

1. What is the current capacity of Australia's oil and gas reserves in the areas where economically viable resources have been located?
2. What is the capacity and dollar value for each known reserve?
3. What percentage of Australia's onshore and offshore frontier areas are covered by petroleum permits?
4. What are the projected export sales of gas for the period 2009-2015?
5. What is the Rudd Government planning to do to encourage domestic production of petroleum so as to offset the costly importation of this resource in particular?
6. What will the Rudd Government do, as a matter of priority, to reduce the skills shortage in the oil and gas industries?
7. What is the Rudd Government doing to secure Australia's critical energy infrastructure projects from possible acts of terrorism?
8. What plans does it have in place to protect Australia's oil supply routes?

Q1 Answer: Australia has substantial natural gas resources with proved and probable reserves estimated at over 150 trillion cubic feet (Tcf). The vast majority of natural gas reserves are located in the Carnarvon, Browse and Bonaparte Basins in the north west of Western Australia. However a large percentage of gas reserves are currently held under retention lease, much of which awaits commercial development.

Approximately 50% Australia's proved and probable natural gas reserves are located in the Carnarvon Basin, with 19% in the Browse Basin, 18% in the Bonaparte Basin, 5% in the Cooper/Surat-Bowen Basin, 5% in the Gippsland Basin, 2% in the Bass/Otway Basins and 1% in the Perth Basin.

Australia's economic demonstrated resources of crude oil are 1086 million barrels and 1618 million barrels of condensate. (Department of Resources Energy and Tourism's *Release of Offshore Petroleum Exploration Areas Australia 2008*).

Q2 Answer: Australia's oil and gas reserves are indicated in the answer to question 1.

Regarding the value of commercial gas reserves, the Department of Resources, Energy and Tourism (RET) cannot provide a dollar value for each known gas reserve as the value of the gas is dependent on commercial negotiations and contract prices which vary from project to project. The value of the reserve also depends if the gas is sold on the domestic market or exported as LNG. Larger reserves are usually processed and exported as LNG under long-term contracts, which are negotiated on a project by project basis. Terms of the contracts are commercial in confidence.

Regarding the value of oil reserves, the value of crude is dependent on its grade. However, assuming a crude price of A\$73.85 per barrel (a weighted West Texas Intermediate, Brent & Dubai cash crude price as at 20 March 2009) the value of 776 million barrels identified in 1 January 2006 is approximately A\$57 billion.

Q3 Answer: A frontier basin is viewed as one with no established hydrocarbon production or with no significant hydrocarbon resource identified. The percentage of Australia's onshore and offshore frontier areas covered by petroleum titles is in the order of 10%. Note that this estimate will vary depending on the definition of frontier area used and whether hydrocarbon production in one structural element of a basin means that the entire basin is then no longer considered frontier.

Q4 Answer: According to the Government's latest forecast, the Australia Bureau of Agricultural and Resource Economics (ABARE) expects Australian LNG exports to continue to increase over the period 2009-2014 to reach almost 27 million tonnes per annum by 2014.

Table 1 - LNG Exports

Year	Exports (million tonnes per annum)
2009-10	18.2
2010-11	19.7
2011-12	23.0
2012-13	23.9
2013-14	26.7

Source: ABARE, 2009, *Australian Commodities March Quarter*.

Q5 Answer: Australia possesses many proven, world-scale petroleum bearing basins, with over 40 onshore and offshore basins awaiting in-depth exploration to determine their full potential. Encouraging exploration in these areas is a high priority for the Australian government. In encouraging further exploration and thus enhancing the likelihood of additional discoveries of petroleum. The Australian Government encourages exploration and investment by; regularly releasing acreage in prospective areas; providing access to free or low cost pre-competitive geoscientific data; maintaining an international competitive profit-related tax system that recognises the risks of exploration; and having a attractive, transparent and certain legal system and titles framework for oil and gas development.

Q6 Answer: The oil and gas sector, as with all sectors of the Australian economy, competes in a global economy for markets, capital and skills. To ensure that industry is best placed to be competitive, the Australian Government is instituting a range of measures and initiatives. This includes the industry skills programs such as the Productivity Places Program and increasing the Skilled Migration program. The Government is also participating in the Australian Petroleum Production and Exploration Association's (APPEA's) Australian Upstream Oil and Gas Industry Strategy, an industry-led initiative with aims including improving research and development in the sector, providing a consistent and efficient regulatory regime for the industry and implementing a skills and vocational training scheme.

In 2008, APPEA developed a National Skills Shortage Strategy, a component of the Australian Upstream Oil and Gas Industry Strategy. The project, with funding provided by the Department of Education, Employment and Workplace Relations, developed a workplace planning and skills development model for the oil and gas industry.

Q7 Answer: Critical infrastructure protection (CIP) is a responsibility shared between business and the Australian, state and territory governments. CIP brings together strategies, plans and procedures that deal with the prevention, preparedness, response and recovery arrangements for disasters and emergencies, including those resulting from acts of terrorism. The Attorney-General's Department (AGD) is responsible for the development of Australian Government policy relating to the protection of Australia's critical infrastructure. AGD is also:

- the central coordination point for the Trusted Information Sharing Network for Critical Infrastructure Protection (TISN); and
- responsible for the Critical Infrastructure Protection Modelling and Analysis (CIPMA) Program which aims to identify and analyse the relationships and dependencies between critical infrastructure, including energy, and the consequences of infrastructure failure.

RET supports and manages the Secretariat for the Energy Infrastructure Assurance Advisory Group (EIAAG), which is part of the Attorney-General's TISN. As part of this network, RET takes an "all hazards" approach to critical energy infrastructure protection. Such hazards include terrorism as well as bushfires, extreme weather events and deliberate action.

RET supports and facilitates Australian involvement (both government and industry) in the International Electricity Infrastructure Assurance Forum (IEIAF). Other members include the United States, the United Kingdom, Canada and New Zealand. The forum facilitates the sharing of information and knowledge to enhance electricity integrity, reliability and security in those countries.

In 2008, RET and energy sector representatives participated in the Mercury 08 counter-terrorism exercise which included simulated terrorist acts targeting critical Australian energy infrastructure.

In 2008, RET published the *Coal mining and initial processing industries Risk Context Statement*, which provides a description of the current security environment in the context of terrorism relevant to that industry, and highlights issues such as the threat from the trusted insider and the security of explosives.

Q8 Answer: RET is not involved in the preparation of plans to protect Australia's oil supply routes.