

The following member country profile is an excerpt from Chapter 4 of the publication Energy Supply Security 2014 and is not intended as a stand-alone publication.

CHAPTER 4: Emergency response systems of individual IEA countries

The ability of the International Energy Agency (IEA) to co-ordinate a swift and effective international response to an oil supply disruption stems from the strategic efforts of member countries to maintain a state of preparedness at the national level. Energy security is more than just oil, as the role of natural gas continues to increase in the energy balances of IEA countries. The most recently completed cycle of Emergency Response Reviews (ERRs) reflected this change by assessing, for the first time, the member countries' exposure to gas disruptions and their ability to respond to such crises. This chapter provides general profiles of the oil and natural gas infrastructure and emergency response mechanisms for 29 IEA member countries.

Each country profile is set out in the following sequence:

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Australia

Key data

Table 4.1.1 Key oil data

	1990	2000	2005	2010	2011	2012	2018*
Production (kb/d)	643.0	802.4	545.3	561.5	490.4	480.0	553.4
Demand (kb/d)	737.9	872.4	1 027.6	1 059.7	1 104.6	1 126.1	1 094.6
<i>Motor gasoline</i>	297.9	308.0	327.9	315.4	313.5	316.6	-
<i>Gas/diesel oil</i>	175.3	229.3	298.7	351.9	381.4	399.9	-
<i>Residual fuel oil</i>	41.7	36.6	36.4	28.9	30.2	27.4	-
<i>Others</i>	223.0	298.6	364.6	363.6	379.5	382.2	-
Net imports (kb/d)	94.9	70.0	482.3	498.2	614.2	646.1	541.2
Import dependency (%)	12.9	8.0	46.9	47.0	55.6	57.4	49
Refining capacity (kb/d)	675.0	812.4	755.0	761.8	761.8	761.8	-
Oil in TPES** (%)	36	32	32	32	34	33	-

* Forecast.

** TPES data for 2012 are estimates.

Table 4.1.2 Key natural gas data

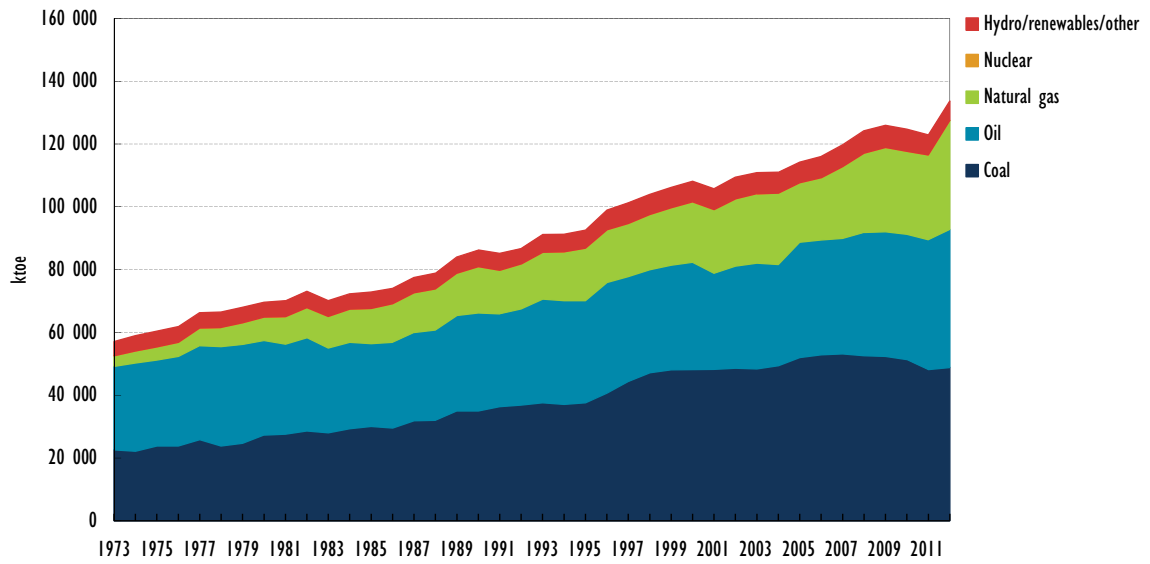
	1990	2000	2005	2010	2011	2012*	2018**
Production (mcm/y)	20 475	32 819	35 840	48 370	51 244	53 850	140 577
Demand (mcm/y)	17 684	22 567	28 717	35 370	37 905	48 662	55 121
<i>Transformation</i>	4 893	5 184	6 915	11 353	13 128	0	-
<i>Industry</i>	7 180	8 730	9 819	9 715	9 788	0	-
<i>Residential</i>	2 259	2 983	3 290	3 652	3 756	0	-
<i>Others</i>	3 352	5 670	8 693	10 650	11 233	0	-
Net imports (mcm/y)	- 2 791	- 10 252	- 7 123	- 13 000	- 13 339	- 5 188	- 85 456
Import dependency (%)	- 15.8	- 45.4	- 24.8	- 36.8	- 35.2	- 10.7	- 155
Natural gas in TPES (%)	17	18	17	21	22	26	-

* 2012 data are estimates.

** Forecast.

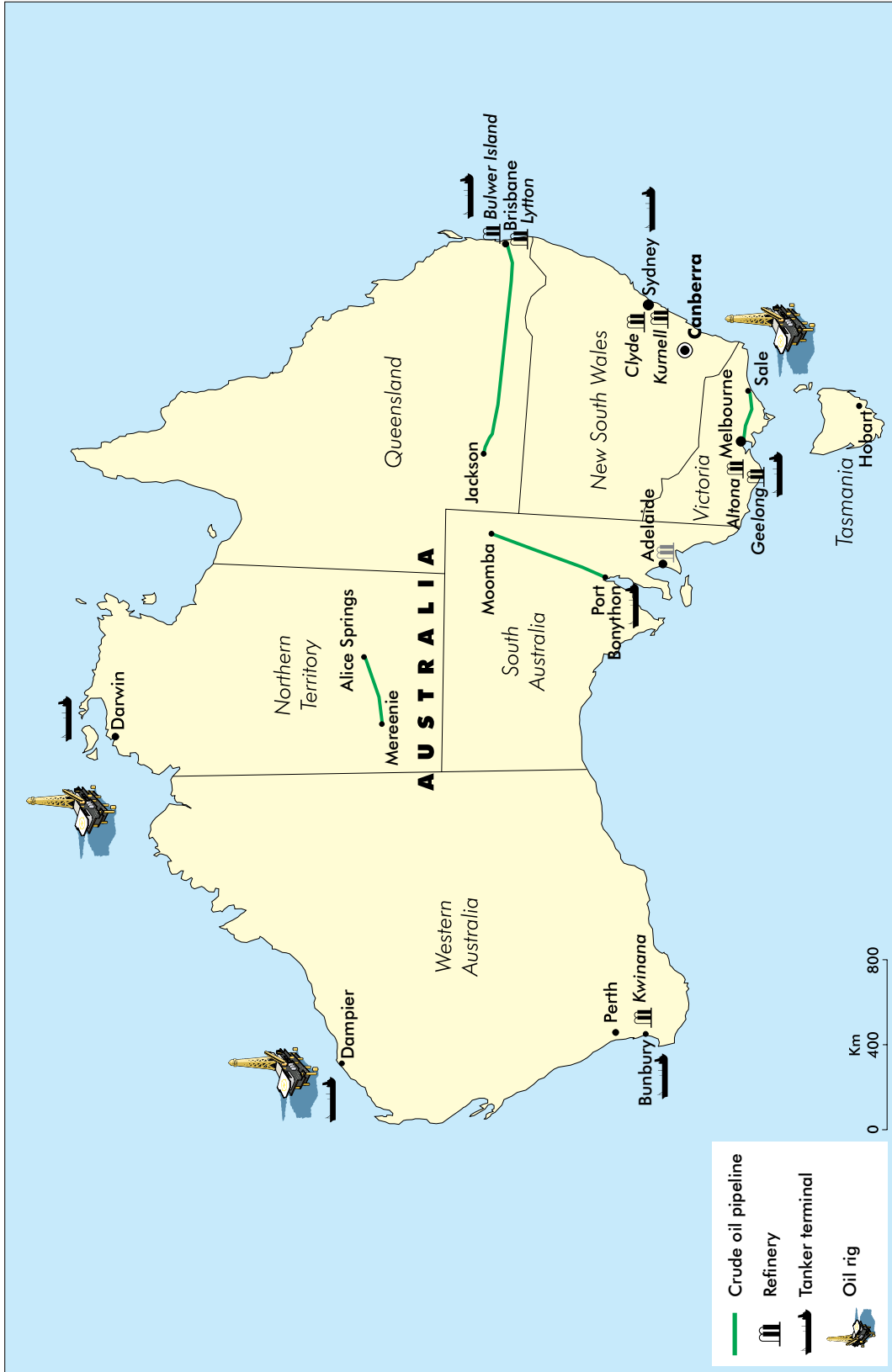
Note: This section on the emergency response systems of individual member countries was written by the IEA. All countries provided valuable information and comments. All opinions, errors and omissions are solely the responsibility of the IEA.

Figure 4.1.1 Total primary energy source (TPES) trend, 1973-2012



Note: unless otherwise indicated, all tables and figures in this chapter derive from IEA data and analysis.

Map 4.1.1 Oil infrastructure of Australia



Country overview

Together, oil and natural gas accounted for 59% of Australia's total primary energy supply (TPES) in 2012. In the case of natural gas, domestic production will more than satisfy the country's gas needs for the foreseeable future, and Australia's gas export capacity will continue to increase. However this is not the case for oil, where a growing share of future oil demand will be met by imports of refined products.

Australia does not impose minimum stockholding requirements on oil companies, nor does it have public stocks; all oil stocks in Australia are held by industry on a commercial basis. Until 2000, the year in which its domestic crude production peaked, Australia was either a relatively marginal oil importer or an occasional net oil exporter. As such, Australia's commercial stockholdings more than adequately met the requirement of the International Energy Agency (IEA). Since 2000, declining domestic oil production coupled with oil demand growth has resulted in a steady rise in net imports, and thus the amount of oil stocks necessary to meet Australia's IEA obligation.

Australian emergency policy relies on the domestic market to respond to supply shortfalls in the first instance, including consumer response to price signals. Australia's capacity for short-term surge production and fuel switching is limited. In a declared state of emergency, the Australian government has legislative powers to control the storage, transfer, sale and production of liquid fuels. Initial light-handed demand restraint measures and a rationing scheme at the wholesale level can quickly be escalated to invoke heavier-handed measures including retail rationing. Australia's state and territory governments have constitutional powers for planning and co-ordinating emergency response within their territorial boundaries. In the case of a major oil crisis affecting more than one jurisdiction, ministers have agreed that the National Oil Supplies Emergency Committee (NOSEC), which includes the fuel industry, will advise on appropriate actions.

The management of temporary gas shortfalls is primarily undertaken by gas market participants and jurisdictional governments, depending on the nature and size of the event. In the case of a major gas crisis affecting more than one jurisdiction, the National Gas Emergency Response Advisory Committee (NGERAC) will advise energy ministers across jurisdictions, who in turn are able to enact emergency powers within their corresponding jurisdictions. These powers can include issuing directions for production, transmission, distribution and allocation of natural gas.

Oil

Market features and key issues

Domestic oil production

The largest of the country's petroleum producing basins are the Carnarvon Basin in the northwest of Australia and the Gippsland Basin in the southeastern Bass Strait. Production of crude oil and condensate from the Carnarvon Basin, which accounted for around 77% of total production in 2010-11, is mostly exported. Production from the Gippsland Basin has declined steadily since its peak in the mid-1980s and accounted for under 15% of total production of crude oil and condensate in 2010-11. Production from this basin is predominantly used in domestic refining.

Most of Australia's crude oils are of a high quality, light-sweet grade, as represented by its main crude streams (Gippsland, Bayu-Undan and Cossack). These are similar in quality to the condensates produced primarily by the country's giant offshore gas fields.

In addition to crude oil and condensate production, Australia produces natural gas liquids (NGLs) in the form of naturally occurring liquefied petroleum gas (LPG).

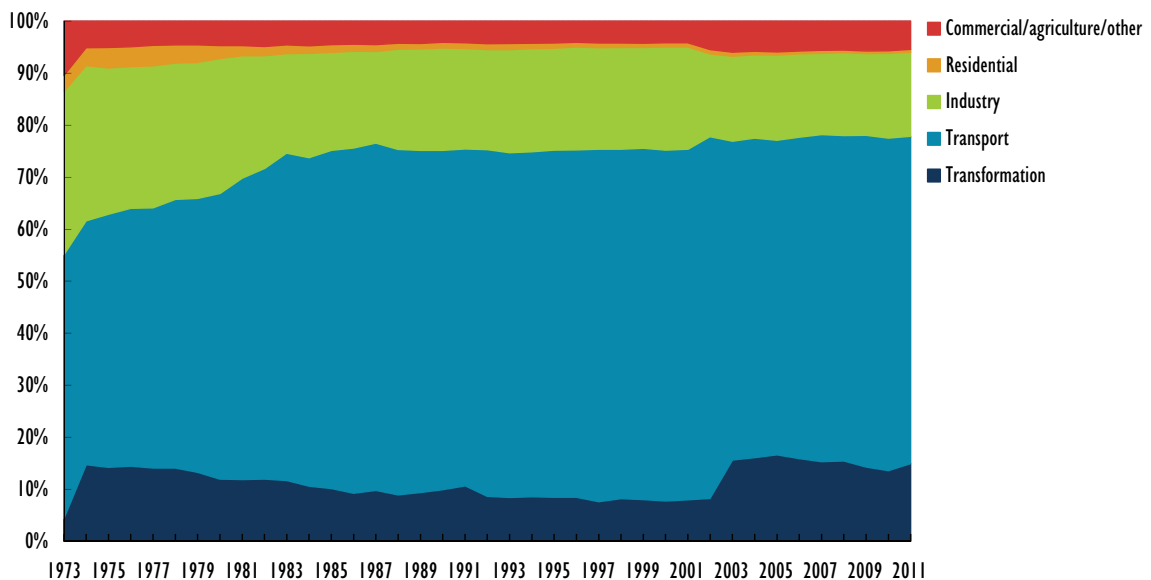
Total Australian crude oil and condensate production peaked in 2000 at some 687 kb/d. Production has since declined and averaged around 410 kb/d in 2012 (an additional 70 kb/d of LPG was also produced in 2012). On average, the downward trend is expected to continue as older fields mature and slowly decline.

In the outlook for the longer term, Australia’s crude oil and NGLs production is projected to decline at an average rate of 3.8% annually to 2050. This does not include any potential future production from significant unconventional oil resources. Production of naturally occurring LPG is projected to increase at an average annual rate of 0.4% in the period to 2050. Over the same period, consumption of petroleum products is expected to grow at an average annual rate of 1.1%. Total net imports of liquid fuels are projected to increase by 2.1% a year.

Oil demand

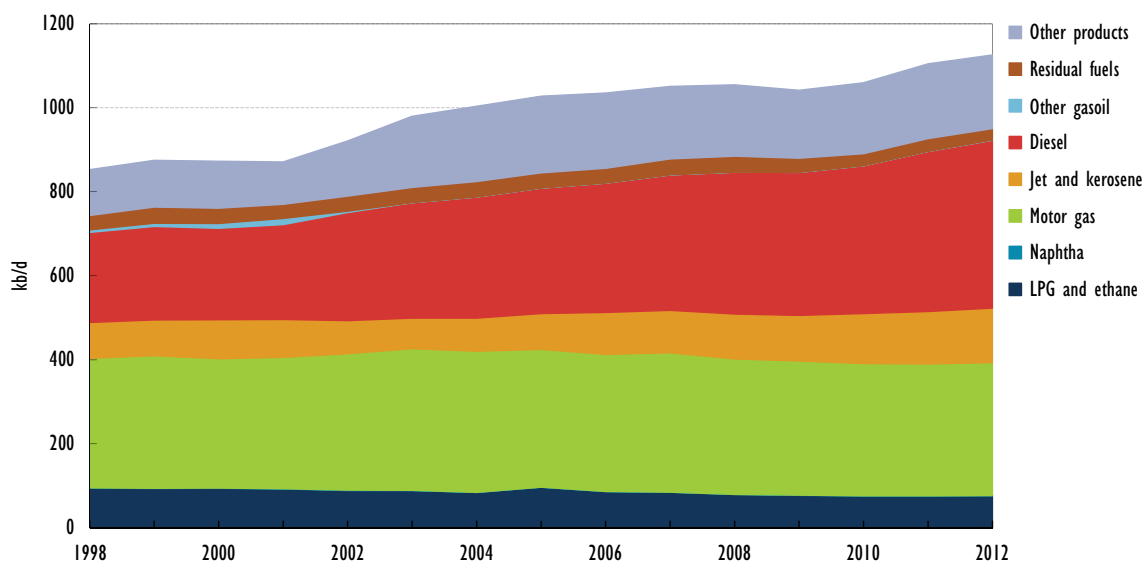
Oil demand in Australia averaged 1 126 kb/d in 2012, up from 1 060 kb/d in 2010. Total oil use has grown at an annual average rate of around 1% since 2000. The transport sector, which accounts for nearly two-thirds of all oil used in Australia (63% in 2011), has been the primary factor leading oil demand growth. In addition, the mining sector – where diesel is the primary fuel used – has continued to expand in Australia and also contributed significantly to an increase in diesel demand.

Figure 4.1.2 Oil consumption by sector, 1973–2011



Diesel surpassed gasoline as the largest single component of the country’s total oil demand in 2010. It accounted for 36% of the country’s total oil demand in 2012, up significantly from 25% in 1998. Gasoline stood at 28% of total oil demand in 2012, down from 36% in 1998.

Figure 4.1.3 Oil demand by product, 1998-2012



Imports/exports and import dependency

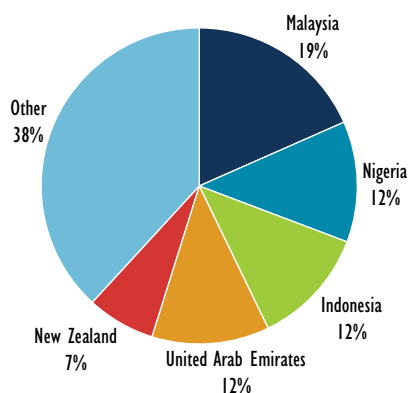
Australian net oil imports averaged 646 kb/d in 2012, up from 614 kb/d in 2011 and 482 kb/d in 2005. Until 2000, the year in which its domestic crude production peaked, Australia was either a net oil exporter or relied only marginally on oil imports to meet domestic demand.

A large portion of Australia's domestic crude oil production is exported, as the quality of the oil and its geographic location of production (coming primarily from the northwest coast) makes it attractive for Asian refineries.

At the same time, the majority of domestic refinery capacity is located close to the major demand centres on the east coast, where refiners process primarily domestic crudes coming from the southeastern fields and lower-quality imports from Southeast Asian producers. In 2012, total imports of crude oil amounted to some 499 kb/d, primarily sourced from Malaysia, Indonesia, Nigeria and the United Arab Emirates (UAE).

Imports of refined products have also steadily increased in recent years, rising from just under 200 kb/d in 2004 to 379 kb/d in 2012. Australian product imports in 2012 included 245 kb/d of middle distillates, and were sourced predominantly from Singapore (51%), followed by Korea (16%) and Japan (9%).

Figure 4.1.4 Imports of crude oil by origin, 2012



Oil company operations

While there are many oil companies with upstream activities in Australia, four companies account for the vast majority of Australia's domestic oil production: Woodside, ExxonMobil, BHP Billiton and Apache. Regarding downstream activities, there are four companies operating Australia's six refineries: BP, Caltex, ExxonMobil and Shell.

Oil supply infrastructure

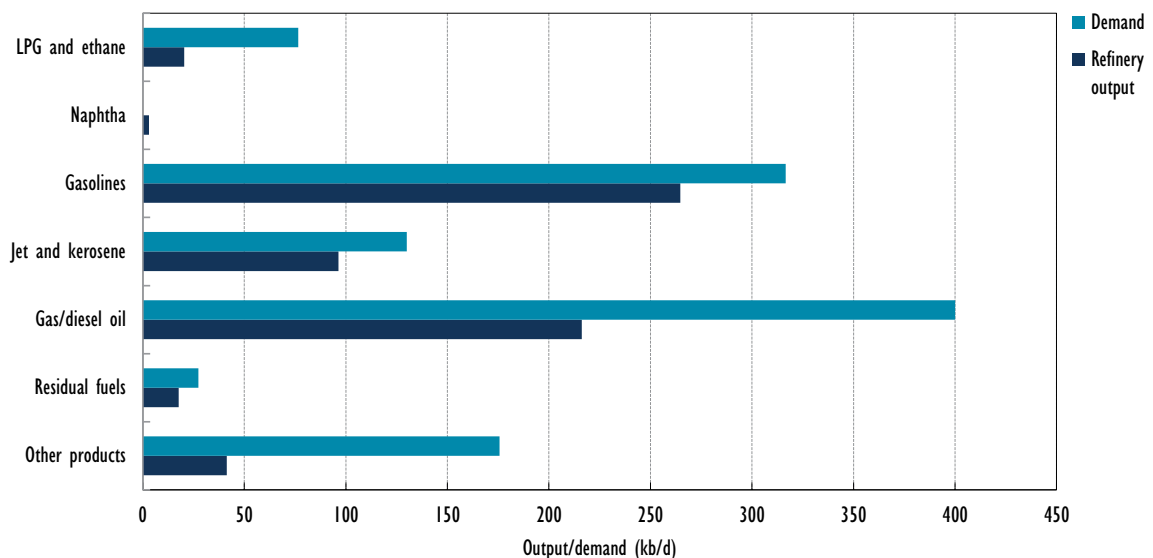
Refining

There are six refineries in Australia, with a total crude distillation capacity of 680 kb/d. While mostly constructed in the 1950s and 1960s, these have undergone extensive upgrading, in particular in 2005-06. Australia's refineries are relatively small by global standards, with the largest, the Kwinana refinery (south of Perth), at just over 142 kb/d, representing roughly 21% of the country's total distillation capacity.

Australian refineries face considerable competition from mega-refineries in Asia, with Singapore product prices largely determining their profitability. There have been two Australian refinery closures in recent years. In 2003, Port Stanvac (75 kb/d) in Adelaide was mothballed for economic reasons. Its owner, Mobil, decided to demolish the refinery and remediate the site in 2009. In October 2012, Shell ceased refining operations at its Clyde refinery (82 kb/d) near Sydney and turned the plant into a fuel import terminal.

Australian refineries use both domestic and imported crude, primarily from the country's Bass Strait production in the south and from Southeast Asian producers. Over two-thirds of Australia's refinery input requirements came from imports.

Figure 4.1.5 Refinery output vs. demand, 2012



Refiners produce mostly gasoline and middle distillates, as well as smaller volumes of bitumen and LPG. In 2012, motor gasoline accounted for 40% of refinery output, diesel for 33% and jet fuel and kerosene for 15%.

Ports and pipelines

Australia has three main trunk lines for transporting oil and oil products by pipeline. The company Epic Energy operates a pipeline carrying crude oil and a mixture of NGLs

659 kilometres (km) from Moomba to Port Bonython. Santos operates the Mereenie to Alice Springs line that covers 270 km. In addition, ExxonMobil operates the Longford to Long Island Point pipeline (southeast of Melbourne), which runs for 190 km.

Australian exports of crude oil and condensate are increasingly sourced from the west coast, while exports of refined product are largely sourced from the east coast. In addition to the six refineries which have port facilities for importing crude oil and exporting refined products, Australia has 58 refined product import terminals. Of these, 11 are major deepwater ports which also have facilities to export petroleum liquids. The port at Fremantle in Western Australia, near Perth, is the country's largest oil exporting centre.

Storage capacity

All storage capacity in Australia is held commercially within the supply chain.

According to IEA figures, the level of crude oil and product stocks held in Australia in 2012 was 38 million barrels (mb), down from 42 mb in 2011. However, while these figures represent the latest available data they do not include all storage capacity in the country, as information from smaller industry participants and independent importers is not always included in the data.

Decision-making structure

The Minister for Industry is responsible for co-ordinating emergency response in the event of an oil supply disruption. The Department of Industry, which has responsibility for the energy portfolio, functions as the permanent core of the national emergency strategy organisation (NESO). In a disruption, this core would expand to include NOSEC, which is composed of representatives from Australian state and territory governments (which have constitutional authority for energy emergencies within their jurisdictions), as well as from industry and the Australian Institute of Petroleum. The NOSEC manages the National Liquid Fuel Emergency Response Plan (NLFERP) which details how Australian governments would respond to a fuel disruption with national implications.

In the event of a disruption, the minister would initially consult with NOSEC to assess potential implications and appropriate response measures. The minister would also consult with other relevant Commonwealth Government agencies including the Department of the Prime Minister and Cabinet, the Department of Foreign Affairs and Trade, the Treasury and the Office of National Assessments.

The Governor-General may, when circumstances require, declare a national liquid fuel emergency under the Australian government's Liquid Fuel Emergency Act of 1984 (LFE Act). Such a declaration must be made by way of proclamation, upon the recommendation of the minister. A national emergency can only be declared if the Governor-General is satisfied that the situation meets the following criteria: the use of emergency powers is in the public interest; there is no real prospect of averting the shortage through voluntary augmentation of supplies by oil companies; and the minister has provided the opportunity for prior consultation with the relevant ministers for energy in all Australian states and territories.

Stocks

Stockholding structure

Australia does not impose minimum stockholding requirements on oil companies, nor does it have public stocks; all oil stocks in Australia are held by industry on a commercial basis.

The Australian government does have statutory powers over industry stocks in a declared state of emergency under the LFE Act. The Act also empowers the Commonwealth Minister responsible for energy to impose specific reporting and establish stockholding requirements on industry, including in the planning stages prior to a declared state of emergency.

Crude or products

Australia's industry held some 39 mb of oil stocks at the end of April 2013, 32% of which consisted of crude oil.

Location and availability

All Australian oil stocks are held on Australian territory. Australia has a bilateral agreement with New Zealand, where Australian oil companies may tender and hold stocks on behalf of the New Zealand Government with a guarantee that Australia will not impede the release of these stocks to New Zealand. However, no stocks were held under the Australia-New Zealand bilateral agreement in 2012.

Monitoring and non-compliance

Companies report stock levels to the Australian government on a monthly basis through the Australian Petroleum Statistics collection. If necessary, more frequent reporting of stock levels could be implemented to monitor compliance with a directive issued under the LFE Act. The Act also sets out penalties for failure to comply with reporting directives.

Historically, Australia has been a relatively minor net importer, and an occasional net exporter of oil. Therefore, Australia's commercial stockholdings were more than adequate to meet the IEA obligation. Beginning around 2001, declining domestic oil production coupled with oil demand growth has resulted in a steady rise in net imports, and thus assured the amount of oil stocks necessary to meet Australia's IEA obligation.

Stock drawdown and timeframe

Australia's major industry suppliers of petroleum products are represented on NOSEC by their national supply managers. Thus, decisions by the Australian NESO in response to a supply disruption would include their close consultation. The role of stocks in the country's overall response would be through their participation with NESO, and any stockdraw would be through the normal supply and distribution system.

Financing and fees

As they are purely commercial stocks, all stockholding costs are managed on a commercial basis.

Other measures

Demand restraint

At the first sign of an oil disruption, the Australian government's policy is to allow market price mechanisms to operate in order to reduce demand, i.e. to allow oil price increases to flow through to consumers. The government would monitor the effect of natural price increases that flow from the supply disruption on patterns of demand without intervening in the market.

If price increases did not lead to an adequate decline in consumption, the Australian government would pursue a voluntary, industry-based bulk rationing strategy. This would involve seeking the co-operation of industry to voluntarily place its large consumers and retailers on allocation systems, e.g. fuel purchasers would be able to purchase a set percentage of their normal fuel purchases. Allocations usually commence at 100% of allocation by removing spot sales (which account for 5%) from the market. This approach considers that the use of voluntary, industry-based measures to influence bulk sales is an efficient and effective response tool that would reinforce the normal operations of the market and minimise government intervention.

The National Oil Emergency Demand Restraint Strategy (NOEDRS) establishes the purpose and principles of Australia's demand restraint strategy. It provides a range of light-handed demand restraint measures, supported by policies and procedures, to complement industry initiatives and build on incentives created by price pass-through. The NOEDRS extends options available to Australia by introducing a list of actions which can be utilised to complement market-based mechanisms, including the promotion of eco-driving, corporate information campaigns, carpooling campaigns and public transport campaigns.

Where a further government response to a fuel supply shortage is required, measures would focus on regulatory controls which could be placed on either bulk or retail sales of petroleum products and further demand-side management responses with the objective of reserving supplies for essential users and ensuring that other users have petroleum supply for as long as possible.

Fuel switching

The Australian potential for reducing oil use through fuel switching – from oil to coal or natural gas – in power and heating plants is limited. Oil is only a minor input fuel for electricity generation in Australia, accounting for 1.2% of total electricity generation.

Other

Short-term surge production capacity in Australia is considered inconsequential. Around 95% of Australia's crude oil production (including condensate) is from offshore production facilities. While it may be technically possible to achieve small increases in production from some of these offshore facilities within a 30-day period, it would not be possible to achieve an increase that would alleviate a short-term production crisis in a meaningful way.

Gas

Market features and key issues

Gas production and reserves

Australia's total natural gas production was some 53.9 billion cubic metres (bcm) in 2012, up from 48.4 bcm in 2010. Roughly two-thirds of domestic production came from Western Australia, primarily linked to liquefied natural gas (LNG) projects sourced from the Carnarvon Basin. Gas production in Western Australia has grown substantially in recent years.

Over the medium term, the production of gas is expected to continue to rise as developments now under construction or in the advanced stages of planning are

completed. Total production is forecast to exceed 140 bcm by 2018. The Australian government's long-term outlook is for gas production to reach nearly 220 bcm by 2030.

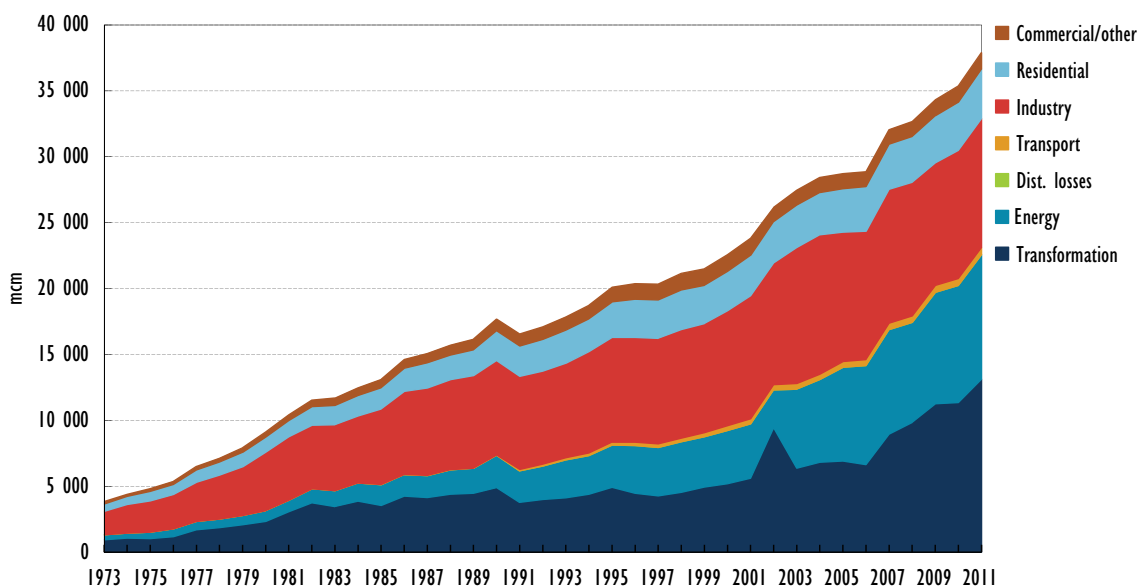
Australia has significant volumes of natural gas reserves that are increasingly being developed both for domestic use and for LNG exports. Around 90% of estimated recoverable reserves of conventional gas are located in the Carnarvon, Browse and Bonaparte basins off the northwest coast. In addition to conventional gas resources, there is growing commercial utilisation of Australia's resources of coal seam gas (CSG). Most of these resources are located in the black coal deposits of Queensland and New South Wales. Tight gas accumulations are located onshore in Western Australia, Queensland and South Australia, while potential shale gas resources are located in the Northern Territory, Queensland, South Australia and Western Australia.

Identified conventional gas resources have increased threefold over the past 20 years while identified CSG resources have grown substantially in recent years. Combined, these identified resources were in the order of 11 trillion cubic metres (tcm) or 431 706 petajoules as of April 2012, the equivalent to roughly 184 years of gas at production rates at the time of the estimate. Potential undiscovered resources and inferred CSG (resources that can be expected to exist based on geological formations but requiring further appraisal) are substantial and could add significantly to total identified reserves in the future.

Gas demand

Domestic gas consumption in Australia totalled some 48.7 bcm in 2012, compared to 35.4 bcm in 2010. In 2011, the transformation sector accounted for 35% of total gas demand, followed by the industry sector with 26%. The industry sector includes metal product industries (mainly smelting and refining activities), the chemical industry (fertilisers and plastics) and the cement industry. In third place, some 25% of gas was consumed in the energy sector, which includes amounts consumed in the production of LNG. The residential sector, characterised by a large number of small-scale consumers where uses of gas include water heating, space heating and cooking, accounted for 10% of total gas consumption.

Figure 4.1.6 Natural gas consumption by sector, 1973–2011



Gas-fired electricity generation has been the largest factor driving domestic natural gas consumption during the period from 2004 to 2013. The rate of growth for natural gas consumption during this period was 4% annually. The share of gas-fired electricity has increased in recent years, accounting for an estimated 19.3% of electricity generation in 2011/12, compared to 9.8% in 2005/06.

Natural gas demand is projected to continue to grow, reaching 55 bcm by 2018.

Gas import dependency

Australia is a net exporter of natural gas. In 2012 the country produced 48.2 bcm of natural gas which, once domestic demand of 28.9 bcm is taken into account, left a surplus of 19.3 bcm available for export. Australia also imported an additional 10.9 bcm of gas via pipeline from Timor Leste, which it then re-exported through the Darwin LNG terminal.

All Australia's natural gas exports are exported as LNG. Australia exported a total of 30.3 bcm of natural gas in 2012, up from 25.5 bcm in 2011 and 24.7 bcm in 2010. In 2012 the country became the third largest supplier of LNG in the world after Qatar and Malaysia.

Gas company operations

The Australian gas industry comprises around 150 gas companies active in different parts of the gas value chain. After the 1990s, large parts of the gas industry were privatised. While some state and territory governments still have interests in gas retail companies, there is no local, state or Australian government ownership or shareholding in the upstream sector.

In the 1990s, vertically integrated gas utilities were disaggregated and most government-owned transmission pipelines were privatised. If transmission pipelines are determined to be anti-competitive, they are regulated under the National Gas Law and National Gas Rules. Major transmission pipeline companies include the APA Group, Jemena and Epic Energy.

The major gas distribution systems in Australia are privately owned but regulated by government to ensure gas can be transported on reasonable terms by third parties. There is some duplication among companies owning transmission and distribution networks, including Jemena and APA Group.

Gas supply infrastructure

Ports and pipelines

Australia has three LNG terminals (as of the end of 2012) with a combined capacity of 33.2 bcm annually. These are: the Darwin LNG terminal in the Northern Territory; the NorthWest Shelf LNG terminal in Western Australia; and the 5.9 bcm Pluto LNG terminal that came on line in 2012, also in Western Australia.

A major expansion of Australia's LNG export capacity is underway, with an additional seven LNG terminals under construction as of May 2013. These terminals, with a combined capacity of around 83 bcm, are scheduled to come on line between 2014 and 2018.

In addition to its three LNG export terminals, Australia also has a single international natural gas pipeline. This pipeline supplies the Darwin LNG terminal with natural gas imported from the Joint Petroleum Development Area (JPDA) with Timor Leste (10.9 bcm in 2012). (Australia's gas production statistics exclude production from the JPDA).

Domestically, Australia has more than 33 000 km of high-pressure steel pipelines, of which more than 25 000 km are used for natural gas transmission. The country is divided into three separate gas markets: the eastern market (Queensland, New South Wales, Australian Capital Territory, Victoria, South Australia and Tasmania); the western market and the northern market. These markets are geographically isolated from one another, making transmission and distribution of gas between markets generally uneconomic, and as a result there is no interconnection between them. Australia's natural gas production is therefore either consumed within each market or exported as LNG.

Storage

There are four underground natural gas storage facilities operating in Australia and one LNG peak shaving plant – with a total working capacity of 1.3 bcm. The combined peak output capacity from Australia's natural gas storage facilities is around 20 million cubic metres per day (mcm/d).

The country's underground gas facilities are widely distributed – with facilities in Victoria, Western Australia and the Cooper Basin which straddles western Queensland and South Australia. However, the majority of Australia's gas storage capacity (over 1.1 bcm) is located in the eastern market as this region is the most prone to seasonal variations in demand caused by increased heating demand during winter. The Dandenong LNG storage facility in Victoria provides peak shaving and security of supply services for the Victorian transmission system as well as supporting wholesale trade in LNG used as fuel for transport vehicles.

Storage facility contracts and terms of access are worked out on a confidential bilateral basis between storage providers and customers. No public storage is held by the Australian government and access to storage facilities is not regulated.

Emergency policy

The management of temporary gas shortfalls is primarily undertaken by gas market participants and jurisdictional governments, depending on the nature and size of the event. For larger issues, each state and territory has legislation which confers emergency powers which may be exercised in natural gas emergency situations affecting only one jurisdiction.

In the case of a major gas crisis affecting more than one jurisdiction, the NGERAC will advise energy ministers across jurisdictions. The NGERAC is chaired by a representative of the Commonwealth, and includes government representatives from each jurisdiction as well as industry representatives. This includes producers, transmission system owners and operators, retailers, wholesale market operators, distribution network owners and operators, and major gas users.

NGERAC was developed following the Memorandum of Understanding (MoU) agreed to in 2005 by the former Ministerial Committee on Energy (now the Standing Committee on Energy and Resources (SCER)). The MoU set out a National Gas Emergency Response Protocol which seeks to provide for more efficient and effective management of major natural gas supply shortages. The protocol provides guidance to gas suppliers, gas retailers, the natural gas market operator, and state and territory jurisdictions on their roles and responsibilities during natural gas supply shortages. The protocol recognises the need for commercial arrangements among gas suppliers and users to balance gas supply and demand and maintain system integrity for timely management of natural gas supply shortages. Government intervention in the market would occur as a last resort.

The legal framework for natural gas is the National Gas Law 2008. Additionally, the National Gas Rules govern access to natural gas pipeline services and elements of

broader natural gas markets. The rules have the force of law and are made under the National Gas Law.

Emergency response measures

Strategic gas stocks and drawdown

There are no strategic stocks of natural gas in Australia, as there are no government stocks or requirements placed on grid owners, system operators or other industry participants to hold minimum reserves of natural gas.

Demand restraint

For larger disruptions affecting only one jurisdiction, each state and territory has legislation which confers emergency powers which may be exercised in a natural gas emergency. For emergency situations that may affect more than one jurisdiction, the NGERAC (or a sub-committee of the NGERAC) would be convened to consider the situation and provide advice to the SCER energy ministers. The SCER ministers, in turn, are able to enact emergency powers within their corresponding jurisdictions. These powers can include issuing directions for production, transmission, distribution and allocation of natural gas.

The NGERAC has rarely been convened, as to date the management of temporary gas shortfalls have been undertaken by market participants, natural gas system operators and state and territory governments, depending on the nature and size of the event.

Fuel switching

There are no policies in Australia to promote fuel switching away from natural gas in an emergency. However during a gas crisis, power plants and large industrial customers can use a number of strategies, including fuel switching.