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COUNTRY ANALYSIS BRIEFS

Australia

Last Updated: January 2007

Background

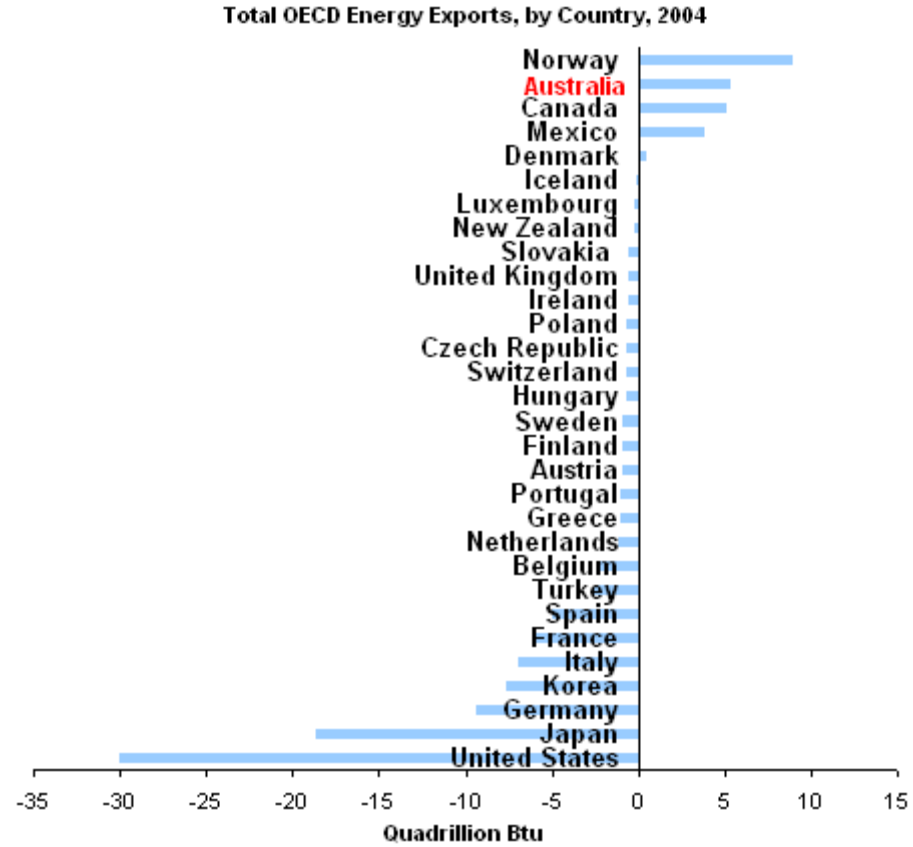
Australia is rich in energy resources and leads the world in total coal exports.

Australia has exhibited robust economic growth over the last decade, in spite of a strong Australian dollar that has depressed exports. However, in 2006, severe drought, increasing inflation, and high oil prices all contributed to a deceleration of economic growth. The country achieved a 2.5 percent increase in real gross domestic product (GDP) in 2006, down from a 2.7 percent GDP growth rate in 2005.

Energy Overview

Australia is rich in natural resources with significant petroleum, natural gas and coal reserves. Australia's energy consumption is dominated by coal, which fuels most of the country's power generation. Petroleum accounts for a large share of energy consumption, but due to declining output, Australia is facing a growing dependence on petroleum imports. Over the past two decades, Australia has steadily consumed increasing amounts of natural gas, which is likely to continue over the medium term.

Australia is one of the few countries belonging to the Organization for Economic Cooperation and Development (OECD) that is a significant net energy exporter. Australia is the world's largest coal exporter and is the fifth largest exporter of liquefied natural gas (LNG). Australia's prospects for expanding energy exports in the future are promising as Asian demand for both coal and LNG rises. However, Australia can expect increasing export competition from China (coal) and Indonesia (coal and LNG).



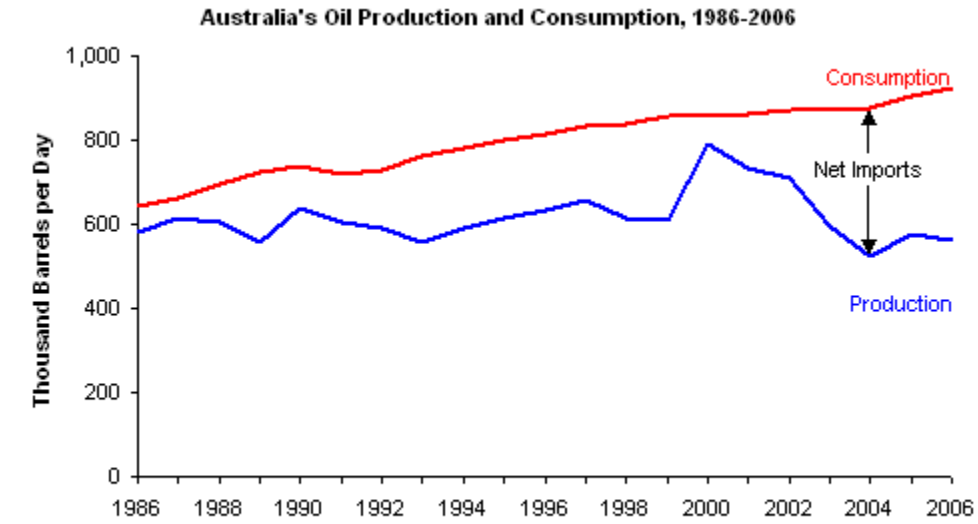
Source: EIA *International Energy Annual 2004*

In July 2005, the Australian government formed the Australian Energy Regulator (AER). The AER is responsible for economic regulation in Australian energy markets. In addition, the AER promotes investment in the energy sector to ensure supply security, while monitoring prices faced by end users. In 2006, Australia's 13 government bodies transferred energy regulation responsibility to the AER. The AER is seeking $23 billion in infrastructure investments over the next 15 years.

Oil

With increases in petroleum consumption and decreases in petroleum production, Australia's net oil imports have been increasing.

According to *Oil and Gas Journal* (*OGJ*), Australia had 1.6 billion barrels of proven oil reserves as of January 1, 2007. The majority of these reserves are located off Western Australia in the Carnarvon basin and in the Bass Strait off Southern Australia. Oil production in Australia has increased gradually since 1980, peaking in 2000 at 805,000 thousand barrels per day (bbl/d). In 2003, production fell dramatically to 630,522 bbl/d. In 2006, Australia produced approximately 562,000 bbl/d of oil. Australia has experienced decreasing oil production due to oil producing basins such as Cooper-Eromanga and Gippsland experiencing natural declines, coupled with a lack of new fields coming online.



Source: EIA *International Energy Annual 2004; Short Term Energy Outlook December 2006*

In 2006, Australia consumed approximately 925,000 bbl/d of oil, which resulted in net imports of around 362,200 bbl/d, or 39 percent of total consumption. By comparison, net oil imports in 2000 averaged only 65,000 bbl/d, or 7 percent of total consumption. The Australian government expects petroleum import dependency to increase to around 80 percent by 2010. The majority of Australia's imported crude comes from the UAE, Malaysia, Vietnam, and Papua New Guinea. Australia's key oil producers, Santos and Woodside, have shown signs of increasing domestic exploration and bringing new projects online in hopes of increasing domestic oil supplies and reducing imports.

Sector Organization

Australia's management of oil exploration and production is divided between the state and commonwealth (federal) governments. Australia's state governments manage the applications for onshore exploration and production projects, while the commonwealth government shares jurisdiction over Australia's offshore projects with the government of the adjacent state or Territory. The Ministry of Industry, Tourism and Resources (MITR) and the Ministerial Council of Energy (MCE) both function as regulatory bodies over Australia's oil sector. In place of a national oil company (NOC), the Australian government supports privately held Australian companies, which include Woodside Petroleum Limited, Santos and BHP Billiton. Additional foreign players in Australia include Apache Corporation, Chevron, ExxonMobil, and Shell.

In 2004, the Australian government introduced a tax incentive designed to promote offshore petroleum exploration. Because of high cost and risk, around 50 percent of Australia's offshore basins have not been explored. The tax incentive, which applies to frontier blocks opened between 2004 and 2008, will help to lower some of the exploration cost incurred by the oil companies. In addition, the Australian government made a four-year, $30 million commitment to fund AGSO-Geoscience Australia, a national agency that provides petroleum and natural gas companies with seismic and geological data.

Exploration and Production

New projects being brought online could help stabilize the country's oil production over the next few years. In June 2006, AED Oil brought its Puffin field online, which added 25,000 bbl/d to Australia's production. In July 2006, Woodside brought online the Enfield project. However, while the project was planned to have reached 100,000 bbl/d, output peaked at just 74,000 bbl/d, before dropping to 10,000 bbl/d due to water and sand in one of the main wells. Woodside has estimated that production from Enfield will average 50,000 bbl/d throughout 2007. In 2008, BHP Billiton has plans to bring online its Stybarrow field (80,000 bbl/d), while Woodside is planning to bring its Vincent field (100,000 bbl/d) online. In addition to new projects, Santos increased production at its Mutineer-Exeter project by drilling the first of three new wells on the fields. The first well increased production by 20,000 bbl/d to 55,000 bbl/d. Once all three wells are drilled, the Mutineer-Exeter project is expected to have production levels between 70,000 bbl/d - 90,000

bbl/d.

Unconventional Oil Reserves

Australia has shale oil reserves in Queensland estimated as high as 30 billion barrels. Southern Pacific Petroleum (SPP) tried to develop the resource (the Stuart project), but funding issues and environmental agencies brought the project to a standstill. In 2004, Queensland Energy Resources Ltd (QERL) purchased the shale oil interests from SPP. QERL has been studying the economic viability of producing oil from the shale reserves, but it is unclear if, or when the resource will be developed.

Licensing Rounds

The Australian government is continuing to issue new exploration permits in hopes of increasing domestic petroleum supply. In 2005, the government opened bidding for exploration permits in 29 new offshore areas in 13 regions. Larger blocks included areas in the Outer Exmouth Plateau, Bremer Sub-basin and Otway basin, while medium to smaller block areas were in the Northern Browse basin and Carnarvon basin. In May 2006, the government opened a licensing round, with 36 new offshore blocks for tender. Over half of the blocks being offered were located off the coast of Western Australia, while the remaining blocks were located off the Northern Territory and in the south off the coast of Victoria and Tasmania. Some of the blocks closed for bidding in November 2006, and the others will close for bidding in May 2007.

Pipelines

Australia has a well-developed oil and natural gas pipeline network. The Australian Pipeline Trust, with 4,350 miles of pipeline, is the largest operator. Epic Energy is the second largest, with 2,500 miles of pipeline. Santos operates two major domestic pipelines that are used for carrying oil and oil products, which include the Jackson to Brisbane line that spans 500 miles, and the Mereenie to Alice Springs line that covers 167 miles. In addition, Epic Energy operates the 432-mile Moomba to Stony Point pipeline, which is used for carrying crude oil and a mixture of natural gas liquids (NGLs). Finally, Esso Australia Ltd operates the Longford to Long Island Point pipeline, which runs 115 miles.

Refining

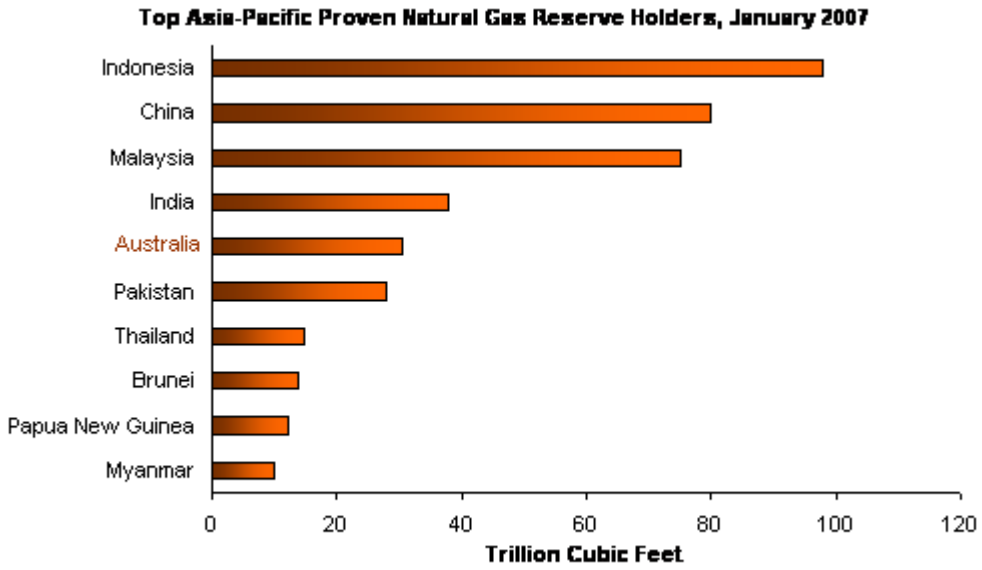
According to *OGJ*, Australia has seven major refineries, with total crude oil refining capacity of 704,659 bbl/d. Three refineries are located along Australia's eastern coast in Queensland, three are located along the southern coast in Victoria and one is located in Western Australia. Feedstock for the refineries primarily comes from oil produced in Australia's Bass Strait and other oil producing countries throughout South East Asia. Australian refineries mostly produce gasoline and diesel fuel, followed by some jet fuel, bitumen and liquid petroleum gas (LPG). Caltex controls roughly 30 percent of Australia's refining industry. The company operates two refineries, Kurnell and Lytton, with total combined capacity of 214,109 bbl/d. BP operates the Kwinana refinery and the Bulwer Island refinery, with capacity of 132,050 bbl/d and 85,500 bbl/d, respectively. Shell operates the Geelong and Clyde refineries, while ExxonMobil operates the Altona refinery.

All seven refineries have experienced declining gross margins for several years, which is mainly due to competition from foreign refineries. Another factor hurting the country's refiners is an oversupply of refining capacity in Asia, coupled with the high cost of transporting crude oil to Australia. Beginning in 2006, Australia enacted higher fuel quality standards, forcing most of the refineries to make costly facility upgrades.

Natural Gas

Australia has sizable natural gas reserves located in offshore basins, and the country is the fifth largest exporter of liquefied natural gas (LNG) in the world.

According to *OGJ*, Australia had 30.4 trillion cubic feet (Tcf) of proven natural gas reserves as of January 2007. According to the Australian Department of Industry, Tourism and Resources, Australian offshore basins may hold 130 Tcf of undeveloped natural gas reserves. Reserves are located in all of Australia's states except New South Wales and Tasmania. The most abundant reserves are located offshore of the northwestern coast in the Carnarvon basin, an area more well-known as the Northwest Shelf. Other important basins, including the Cooper/Eromanga basin in Central Australia and the Bass/Gippsland basin, are located offshore Southern Australia. Natural gas production in Australia has increased steadily over the last decade, from 930 billion cubic feet (Bcf) in 1994, to 1,300 Bcf in 2004. In the same time period, consumption has grown as well, from 660 Bcf in 1994 to 931.3 Bcf in 2004. Australia is expected to maintain natural gas self-sufficiency for the ensuing decade at a minimum.



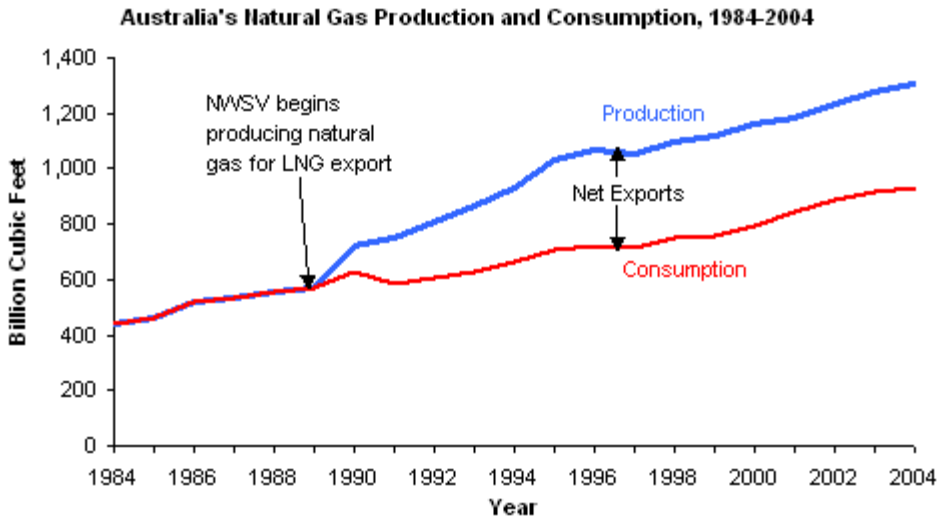
Source: *Oil and Gas Journal*

Sector Organization

The Australian government has no ownership stake in the domestic natural gas industry. The industry is regulated by the Ministry of Industry, Tourism and Resources (MITR) and the Ministerial Council of Energy (MCE). The Australian government created the MCE in 2001 in order to build policy coordination between the commonwealth and state governments. The MCE functions as the director of natural gas policy. Major domestic and foreign players operating in Australia include Santos, Woodside, Chevron, ConocoPhillips, ExxonMobil, and Shell.

Exploration and Production

Recent natural gas exploration in Australia has resulted in several important discoveries. In 2005, Woodside and ConocoPhillips made significant offshore discoveries at Pluto-1 and Caldita-1, respectively. Pluto-1 could contain upwards of 4 Tcf of contingent natural gas resources (according to Woodside), while Caldita-1 is estimated to contain 1.5 Tcf of natural gas reserves. In July 2006, Chevron announced a new discovery at its WA-268-P Block, which is located adjacent to the prolific Jansz natural gas field. In August 2006, Apache noted positive showing of natural gas from its Reindeer/Caribou field in Australia's Carnarvon basin. Apache is studying the possibility of constructing pipeline infrastructure for the field, which the company would like to bring online by 2008. In 2009, ExxonMobil (operator) plans to bring the Kipper field online. Kipper is estimated at having recoverable natural gas reserves up to 620 Bcf, which will be used to supply the Gippsland region in southern Australia over the medium term. Intec Engineering and WorleyParsons will conduct the front-end engineering and design contract on Kipper. Further natural gas discoveries will likely be made inadvertently as a byproduct of Australia's recent surge in petroleum exploration, as past exploration in the deep waters off Southern Australia has primarily resulted in the discovery of natural gas.



Source: EIA *International Energy Annual 2004*

Timor Sea

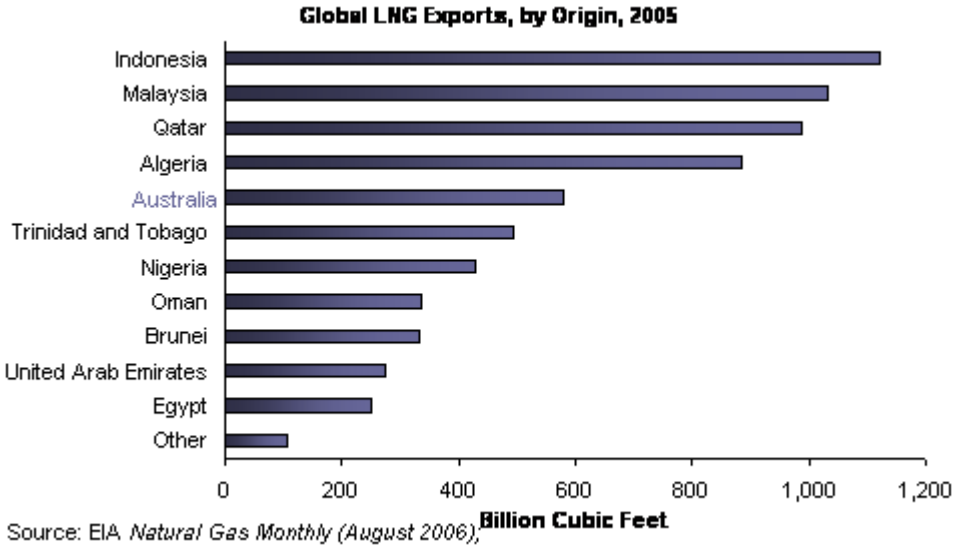
ConocoPhillips and Santos discovered natural gas in the Timor Sea in September 2005. The companies have been in the process of drilling appraisal wells and shooting a 3D seismic survey over the area to determine commerciality of the discoveries. ConocoPhillips is operator of the jointly held NT/P69 license, with partner Santos. Control in the Timor Sea region has been contested during the past few years. However, in March 2003, the Timor Sea Agreement came into force, creating a Joint Development Area (JDA) between East Timor and Australia and setting the division of royalties from hydrocarbon production at 90:10 in favor of East Timor. Only the Bayu Undan natural gas field (3.4 Tcf), which began operation in February 2004, lies wholly within the JDA. Eighty percent of the Greater Sunrise field (9.3 Tcf) is located outside of the JDA. The Timor Sea also contains natural gas in the Evans Shoal, Petrel, and Tern natural gas fields, which are estimated to contain 4 Tcf of natural gas combined.

Natural Gas Projects Currently Under Construction				
Project	**Location (Basin)**	**Operator**	**Reserve Estimate (Tcf)**	**Expected Start-up**
Gorgon	Western Australia (Carnarvon)	Chevron	40	2010
Browse Gas Project	Western Australia (Browse)	Woodside	20.5	2011
Greater Sunrise	Northern Territory (Bonaparte)	Woodside	8.4	On Hold
Scarborough	Western Australia (Carnarvon)	ExxonMobil	7	Planning Stage
Pluto	Western Australia (Carnarvon)	Woodside	4.1	Planning Stage
Angel	Western Australia (Carnarvon	Woodside	1.8	4Q 2008
Northwest Shelf Train 5	Western Australia (Carnarvon	Woodside	N/A	4Q 2008
Source: Australia Department of Industry, Tourism and Resources, Woodside Petroleum, ExxonMobil, Global Insight				

Liquefied Natural Gas (LNG)

Over the past decade, Australian LNG exports have increased by 58 percent. In 2005, Australia exported 13.8 million tons of LNG, which made the country the fifth largest exporter of LNG in the world. Japan is the primary destination of Australia's LNG exports (12.3 million tons in 2005), with

smaller shipments to South Korea, Taiwan, and India. In 2002, Australia secured contracts to supply LNG to China, and Australia is also negotiating with the United States regarding possible export of LNG to markets on the US west coast.



Source: EIA *Natural Gas Monthly (August 2006)*; IEA *Natural Gas Information 2006*

The North West Shelf Venture (NWSV), a consortium of six energy companies led by Woodside, operates four offshore LNG trains. It relies on natural gas supplied from North Rankin and nearby fields in the Northwest Shelf (NWS). The majority of LNG produced by the NWSV is exported to Japan, with occasional spot sales to the United States, Spain and Korea. In June 2005, Chevron announced plans for adding a fifth LNG train to NWSV facilities. The fifth train will increase export capacity by 4.2 million tons to a total of 16 million tons per year. The cost of the project is estimated at $1.6 billion, with startup in late 2008. China's need for LNG imports has also given support to the fifth train's development.

Although the NWSV dominates Australia's LNG market, additional LNG projects are also being developed. Chevron (operator), along with Shell and ExxonMobil, are expected to make a final investment decision on how to proceed with the Greater Gorgon Gas project, which contains proven and probable reserves of 40 Tcf. The Gorgon project entails constructing a pipeline to transport natural gas from Gorgon field to Australia's Barrow Island, where Chevron plans to have a liquefaction plant with an annual capacity of 5.6 million tons per year. In December 2006, Australia's Environment Minister announced that the Gorgon project could proceed as long as members of the joint venture adhere to strict environmental conditions. The consortium has already pledged $80 million towards a series of environmental initiatives. In addition, there are plans to construct a carbon dioxide sequestration plant for emissions produced by natural gas processing at the LNG facility.

In February 2006, ConocoPhillips unloaded the first LNG from its Darwin plant. Darwin is located on Australia's northern coast and is supplied with natural gas from the Bayu/Undan field. In March 2002, ConocoPhillips arranged to sell 3 million tons of LNG per year from the Darwin plant to Tokyo Electric Power Company and Tokyo Gas Company for 17 years beginning in 2006. ConocoPhillips operates the project with partners Santos and Eni. Woodside Petroleum is leading another LNG project that is taking place in Browse Basin. The project includes construction of two LNG trains processing natural gas from various fields off Australia's west coast. The project could come onstream as early as 2011. Woodside, with a 50 percent stake, would be joined by BP, Chevron, Shell and BHP Billiton.

Pipelines

Australia's pipeline system is designed to carry natural gas from centrally located fields to coastal urban hubs like Sydney and Melbourne. However, due to offshore projects on the rise, a large investment in the country's pipeline network will be necessary to bring additional natural gas into the grid. Australia estimates that it will require $5.5 billion of new investment over ten years to efficiently use natural gas to generate power. At present, the Australian Pipeline Trust (APT)

operates over 4,350 miles of pipelines (oil and gas combined), while Epic Energy operates around 2,485 miles of pipelines (oil and gas combined). Australian Gas Light (AGL) is the leading owner of natural gas pipelines in the country, which APT operates.

In May 2006, APT announced plans to develop a 170-mile natural gas pipeline that will link the offshore Blacktip field to the natural gas plant at Wadeye. In September 2006, owners of the Dampier to Bunbury Pipeline (DBP) received approval to upgrade its pipeline with investments of $534 million. The company will lay new pipe along existing lines, which will increase capacity by around 17 percent. The DBP connects offshore natural gas fields in the NWS to markets in Western Australia. The owners of DBP expect to see capacity increases from the investment by the first quarter of 2008.

Coal

Australia is the world's fourth largest coal producer and largest net exporter.

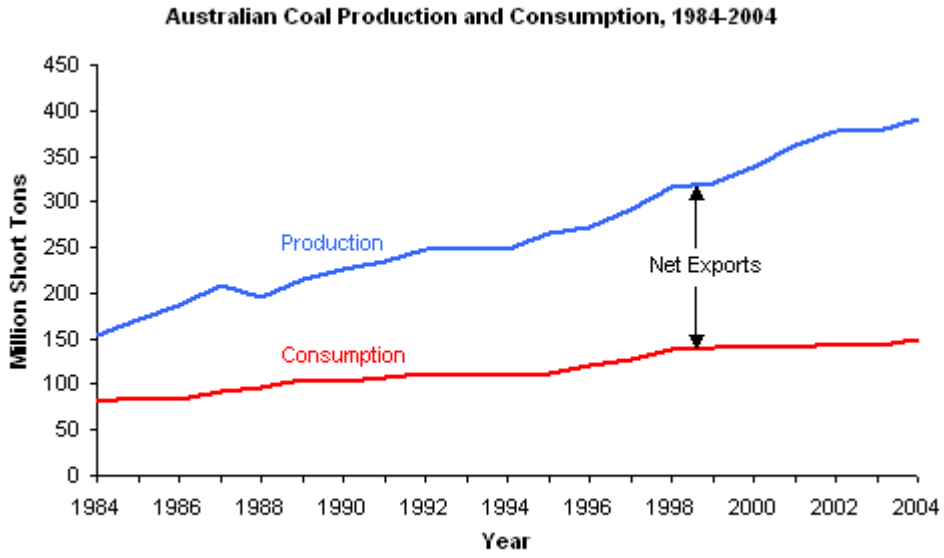
As of 2004, Australia contained 86.5 billion short tons (Bst) of recoverable coal reserves, the majority of which are concentrated along the country's eastern seaboard. The Bowen basin in Queensland contains the largest reserves (37.8 Bst). Reserves in the Sydney-Gunnedah basin and surrounding areas of northern New South Wales (NSW) contain about 32.1 Bst. Minor reserves are also located in Southern and Western Australia as well as Tasmania.

Sector Organization

Australia has more than 100 privately owned coal mines located throughout the country. Around 60 of these mines are open pit operations, with the remainder being mined underground. As a result of several consolidations in recent years, Australia's coal industry is dominated by BHP Billiton, Anglo American (UK), Rio Tinto (Australia-UK), and Xstrata (Switzerland).

Coal Production

Australia is the world's fourth largest coal producer. In 2004, Australia produced 390.9 million short tons (MMst). Together, Queensland and NSW account for almost 97 percent of Australia's annual coal production and 100 percent of Australia's black coal exports. While both states produce both coking and thermal coal, production of coking coal is significantly higher in Queensland, while NSW leads in thermal coal production. Over the last decade, coal production in Australia has grown by 36 percent, with new projects continuing to come online every year.



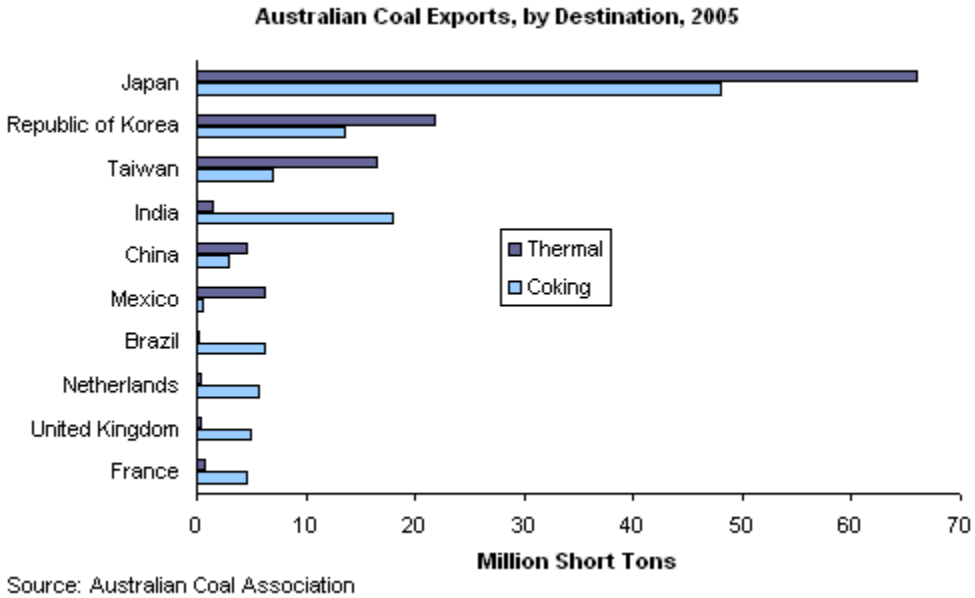
Source: EIA *International Energy Annual 2004*

Coal Exports

Australia exports approximately 60 percent of its annual coal production, making it the largest net exporter of coal (29 percent of global coal exports) in the world. Australia dominates the coking coal market, where it is responsible for over half of all world exports. Australia also leads the world in thermal coal exports, accounting for 21 percent of that market. However, Australia's thermal coal exports recently began to face new competition from China, raising the possibility

that its share of that market may shrink in the future.

Japan is the destination for over 60 percent of Australia's coal exports. Additionally, some analysts are expecting China to be a growing market for Australian coking coal in the next few years, as the Chinese economy and need for raw materials both grow. Other important export markets include the rest of Asia and Europe. Australian suppliers set prices for their coal exports directly with Japanese utilities. The annually negotiated price of these contracts has a large effect on Australia's coal export earnings.

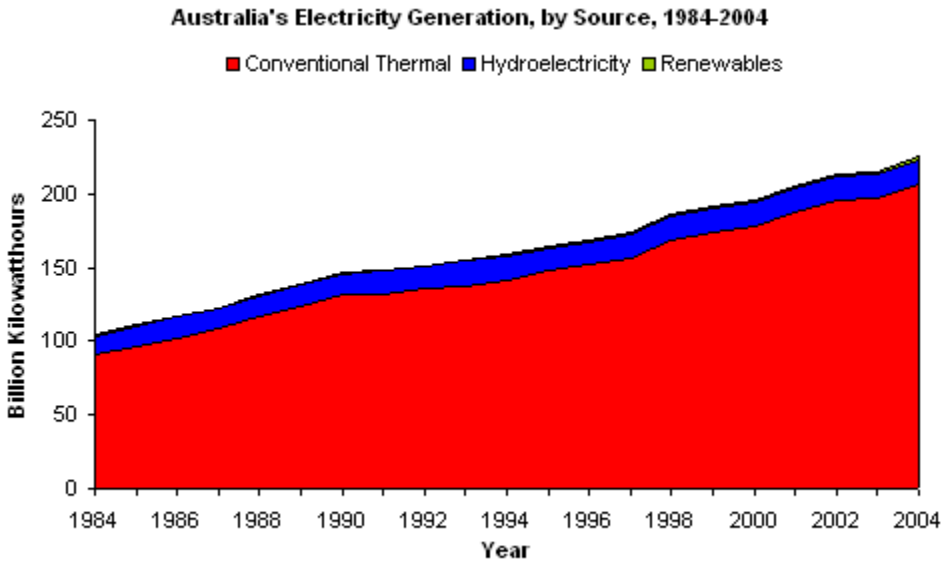


Source: Australian Coal Association

Electricity

Australia is heavily dependent on coal to generate electricity.

As of 2004, Australia had 48.6 gigawatts (GW) of installed electric generating capacity. Approximately 75 percent of electricity produced in Australia is from coal with around 55 percent coming from black coal. In 2004, Australia generated around 225.3 billion kilowatthours (Bkwh) of electricity. After accounting for the electricity used by the power plants and other losses, Australia consumed 209.5 Bkwh in 2004.



Source: EIA *International Energy Annual 2004*

Sector Organization

Prior to 1996, Australian state governments owned the electric utilities, but 1996 reforms privatized many of them. Key to these reforms was the creation of the National Electricity Market (NEM), a wholesale "pool" operated by the National Electricity Market Management Company (NEMMCO). The NEM serves Queensland, New South Wales, the Snowy Mountains, Southern Australia, Tasmania, and Victoria via an interconnected national electricity grid. Western Australia and the Northern Territories are not members of the NEM. In November 2002, the government of the state of Western Australia adopted its own plans for reforming its electricity sector by unbundling the state's regulated utility, Western Power and establishing a wholesale power market in 2005.

Domestic Expansion

Australian Gas Light (AGL), the largest power retailer, has plans to build a 370-MW power plant in the state of Queensland. The state has a liberalized power market, and AGL wishes to increase its generation capacity there with a new natural gas-fired plant. NEMMCO has warned that during peak demand times, Queensland may risk a power generation shortage by 2008-2009. AGL has indicated that it will have the plant in operation by 2009. In 2005, AGL acquired Southern Hydro from Meridian Energy Limited. Southern Hydro has a total generating capacity of 736 MW and is the largest, privately held renewable energy company in Australia.

In August 2006, French-based Alstom completed the design, supply, construction and commissioning of the Braemar power station. The natural gas-fired Braemar project has a 450 MW capacity and will provide power to Queensland. NewGen Power, an independent power producer (IPP) that is owned by Babcock and Brown, ERM Power will operate the power facility. The Queensland government has required that 13 percent of electricity sold in-state must come from electricity generated by natural gas. In addition to Braemar, Alstom is currently constructing the 320-MW Kwinana power project in Western Australia and the 400-MW Tallawarra power project in New South Wales.

Renewable Energy

As of 2004, Australia generated 2.5 Bkwh of electricity from renewable sources. Australia's Mandatory Renewable Energy Target (MRET) is set at 9.5 Bkwh of total electricity generation. By 2010, Australia hopes to attain the MRET. Currently, there are numerous investments being made in the renewable energy sector across Australia. The three most prominent companies investing in renewable energy include Babcock and Brown Wind Partners, AGL and Pacific Hydro.

Environment

Australia aims to help the environment by increasing renewable energy.

Because energy commodities are a major source of export earnings in Australia, development of these resources in a sustainable manner is a primary policy goal of the government. Improving end-use efficiency in various economic sectors remains a key element of Australia's sustainable energy policy, as does the utilization of renewable energy resources. Australia's Mandatory Renewable Energy Target (MRET) mandates that 9.5 Bkwh of total electricity generation come from renewable sources by 2010.

In 2004, Australia accounted for 1.4 percent of the world's total energy-related carbon dioxide emissions. Although coal constitutes a major part of Australia's energy mix, increasing urban air pollution levels are more a consequence of automobile usage than coal consumption.

Click here to view the full environmental report.

Profile

Country Overview

Chief of State	Queen Elizabeth II – February 6, 1952
Head of Government	Prime Minister John Winston Howard – March 11, 1996
Location	Oceania, continent between the Indian Ocean and the South Pacific Ocean
Independence	1 January 1901 (federation of UK colonies)
Population (2006E)	20,264,082

Economic Overview

Minister of Trade	The Honorable Warren Truss, MP

Currency/Exchange Rate (1/3/2007)	1 Australian dollar (AUS) = 0.7915 USD
Inflation Rate (2006E)	3.5%
Gross Domestic Product (GDP, 2006E)	$753 billion
Real GDP Growth Rate (2006E)	2.5%
Unemployment Rate (2005E)	5.1%
External Debt (2005E)	$323.4 billion
Exports (2006E)	$124.6 billion
Exports - Commodities	coal, gold, meat, wool, alumina, iron ore, wheat, machinery and transport equipment
Exports - Partners (2006E)	Japan 20.3%, China 11.5%, South Korea 7.9%, US 6.7%, NZ 6.5%, India 5%
Imports (2006E)	$134.2.6 billion
Imports - Commodities	machinery and transport equipment, computers and office machines, telecommunication equipment and parts; crude oil and petroleum products
Imports - Partners (2006E)	US 13.9%, China 13.7%, Japan 11%, Singapore 5.6%, Germany 5.6%
Current Account Balance (2006E)	-$33.7 billion

Energy Overview

Minister of Industry, Tourism and Resources	The Honorable Ian Macfarlane, MP
Proven Oil Reserves (January 1, 2007E)	1.6 billion barrels
Oil Production (2006E)	562 thousand barrels per day, of which 77% was crude oil.
Oil Consumption (2006E)	925 thousand barrels per day
Crude Oil Refining Capacity (2006E)	705 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2007E)	30.4 trillion cubic feet
Natural Gas Production (2004E)	1.3 trillion cubic feet
Natural Gas Consumption (2004E)	931.3 billion cubic feet
Recoverable Coal Reserves (2003E)	86,531.4 million short tons
Coal Production (2004E)	391 million short tons
Coal Consumption (2004E)	150.1 million short tons
Electricity Installed Capacity (2004E)	48.6 gigawatts
Electricity Production (2004E)	225.3 billion kilowatt hours
Electricity Consumption (2004E)	209.5 billion kilowatt hours
Total Energy Consumption (2004E)	5.3 quadrillion Btus*, of which Coal (45%), Oil (33%), Natural Gas (19%), Hydroelectricity (3%), Nuclear (0%), Other Renewables (0%)
Total Per Capita Energy Consumption ((Million Btu)E)	264.5 million Btus
Energy Intensity (2004E)	8,921.6 Btu per $2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2004E)	386.2 million metric tons, of which Coal (56%), Oil (30%), Natural Gas (14%)
Per-Capita, Energy-Related	19.4 metric tons

Carbon Dioxide Emissions ((Metric Tons of Carbon Dioxide)E)	
Carbon Dioxide Intensity (2004E)	0.7 Metric tons per thousand $2000-PPP**
Environmental Issues	soil erosion from overgrazing, industrial development, urbanization, and poor farming practices; soil salinity rising due to the use of poor quality water; desertification; clearing for agricultural purposes threatens the natural habitat of many unique animal and plant species; the Great Barrier Reef off the northeast coast, the largest coral reef in the world, is threatened by increased shipping and its popularity as a tourist site; limited natural fresh water resources
Major Environmental Agreements	party to: Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Marine Life Conservation, Ozone Layer Protection, Ship Pollution, Tropical Timber 83, Tropical Timber 94, Wetlands, Whaling signed, but not ratified: Climate Change-Kyoto Protocol

Oil and Gas Industry

Organization	Woodside Petroleum, Santos Inc., BHP Billiton, Shell Australia, ExxonMobil Australia (The government does not own any of the oil or natural gas businesses)
Major Oil/Gas Ports	Sydney; Melbourne; Geelong; Fremantle; Adelaide; Brisbane
Foreign Company Involvement	ExxonMobil, BP, Chevron, Shell, ConocoPhillips, Anglo American, Rio Tinto (partially Australian owned) and Xstrata
Major Oil Fields	Roller, Skate, Bass Strait, Wanea-Cossack Laminaria, Corallina
Major Natural Gas Fields	Bass Strait, Cooper Basin, North Rankin, Goodwyn, Gorgon
Major Refineries	BP Amoco – Bulwer Island (85,500 bbl/d), BP Amoco – Kwinana (132,050 bbl/d), Caltex – Kurnell (105,500 bbl/d), Caltex – Lytton (108,609 bbl/d), ExxonMobil – Altona (78,000 bbl/d), Shell – Clyde (85,000 bbl/d), Shell – Geelong (110,000 bbl/d)

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.
**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links
EIA - Country Information on Australia

U.S. Government
CIA World Factbook - Australia
U.S. Embassy in Australia
U.S. State Department's Consular Information Sheet - Australia
U.S. State Department Background Notes on Australia

Associations and Institutions
Australia Institute
Australian Coal Association
Australian Gas Association
Australian Greenhouse Office
Australian Institute of Petroleum
Australian Petroleum Production and Exploration Association
Australian Pipeline Trust
Australia's Uranium Information Centre
Energy Supply Association of Australia
Enviromission Limited
Securing Australia's Energy Future ("The White Paper")

Foreign Government Agencies
AGSO-Geoscience Australia

Australian Bureau of Agricultural and Resource Economics
Australian Embassy in the United States
Australia's Department of Industry, Tourism, and Resources

Oil and Natural Gas
Apache Corporation
BHP Billiton
Caltex Australia
ConocoPhillips Australia
Epic Energy
ExxonMobil Australia
Oilex
Origin Energy
Santos
Shell Australia
Southern Pacific Petroleum/Central Pacific Minerals
Woodside Petroleum

Coal
Australian Mines Atlas

Electricity
AGL
National Electricity Market Management Company
Pacific Hydro

Sources

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Australian Petroleum Production and Exploration Association Ltd.
Australian Financial Review
Canberra Times
Coal Week International
Dow Jones News wire services
Economist Intelligence Unit ViewsWire
Electricity Gas Australia
Financial Times
GlobalInsight
Hart's Asian Petroleum News
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Petroleum Intelligence Weekly
Platt's International Coal Report
The Australian
The Times (London)
U.S. Commerce Department, International Trade Administration -- Country Commercial Guides
U.S. Energy Information Administration
World Markets Energy

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