



**17**

**MINING AND ENERGY**

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## ***References***

### **ABS Publications**

*Manufacturing Industry, Australia* (8221.0)

*Manufacturing Production, Australia* (8301.0)

## Introduction

Data relating to the Victorian mining industry is contained in this chapter. Also detailed in this chapter is information on the changing activity in the energy sector, including the recent restructure of the electricity and gas industries.

## MINING

### Overview

The Victorian Government has committed \$13.2 million over three years for airborne geophysical surveys which will document the States potential resources and ensure the provision of high quality geological information to explorers.

In 1993-94, the Victorian mining industry contributed 21.2% of the Australian mining component of Gross Domestic Product (GDP) at factor cost. In the same year, the mining industry accounted for 3.6% of Victoria's Gross State Product (GSP) at factor cost.

The mining component of GDP includes the extraction of minerals occurring naturally as solids, such as coals and ores, liquids such as crude petroleum, and gases such as natural gas.

TABLE 17.1 MINING ACTIVITY (a), VICTORIA

Year	Establishments at 30 June	Employment (b)	Wages and salaries (c)	Turnover	Stocks		Purchases, transfers in and selected expenses	Value added (d)
					Opening	Closing		
	no.	no.	\$m	\$m	\$m	\$m	\$m	\$m
1988-89 (e)	12	1 507	73.3	1 616.1	46.1	49.5	140.1	1 479.3
1989-90	163	3 286	155.8	3 504.6	103.6	93.2	343.7	3 150.5
1990-91 (e)	9	1 517	100.4	4 037.9	35.2	33.2	130.6	3 905.3
1991-92 (e)	11	1 031	124.5	3 630.6	46.1	61.5	170.9	3 475.1
1992-93	116	2 108	90.1	4 310.5	82.7	65.5	332.6	3 960.7
1993-94 (e)(f)	28	2 200	138.3	4 066.1	46.9	43.8	327.8	3 735.1

(a) ASIC/ANZSIC Subdivisions not available for separate publication.

(b) At 30 June, including working proprietors.

(c) Excludes drawings of working proprietors.

(d) Value added is calculated by adding to turnover the increase (or deducting the decrease) in value of stock and deducting the value of purchase and selected items of expense. All components needed to calculate value added are only collected triennially.

(e) The 1988-89, 1990-91, 1991-92 and 1993-94 (truncated) censuses differ from previous mining censuses in that the construction materials and other non-metallic minerals industries have been excluded.

(f) Brown coal mining operations of the former State Electricity Commission of Victoria are now included in the mining sector.

Source: *The Australian Mining Industry* (8414.0)

**Oil and gas production**

In December 1992, the Gippsland Basin was estimated to contain 12% of Australia's natural gas reserves.

In 1993-94, Victoria produced 17,221 megalitres (58%) of Australia's crude oil, and 4,999 gegalitres (31%) of Australia's natural gas.

**TABLE 17.2 OIL AND GAS PRODUCED, VICTORIA AND AUSTRALIA, 1993-94**

Crude oil-stabilised (incl. condensate)	megalitres	17 221	29 583
Natural gas (a)	gegalitres	4 999	15 959
Ethane	gegalitres	181	202
Liquefied petroleum gases (b) -			
Propane	megalitres	1 400	2 115
Butane	megalitres	1 267	1 622

(a) Includes field and plant usage.

(b) Excludes refinery production.

Source: *The Australian Mining Industry* (8414.0)

**TABLE 17.3 REFINING CAPACITY, VICTORIA, AT 31 DECEMBER 1994**

Refinery	Location in Victoria and year refinery came on stream	Primary processing capacity (a)
Shell Lubricating Oil Plant	Geelong, 1964	3 000 b/sd (140 000 tonnes/year)
Shell Refining (Australia) Pty Ltd	Geelong, 1954	110 000 b/sd (5 343 000 tonnes/year)
Mobil Refining (Australia) Pty Ltd	Altona, 1949	108 000 b/sd (5 013 000 tonnes/year)

(a) b/sd: Barrels per stream day.

Source: Australian Institute of Petroleum Ltd: *Oil and Australia Statistical Review*.

The total Australian refining capacity as at 31 December 1994 was 743,500 b/sd or 34,513,270 tonnes per year. The Australian lubricating oil refinery capacity at the same date was 15,000 b/sd or 695,000 tonnes per year. It should be noted that refineries do not and cannot operate at 100% capacity for 365 days per year. In general, maximum operating capacity is about 85-88% of designed capacity. Actual capacity at any given time depends on the type of crude oil being processed.

**TABLE 17.4 ESTIMATED HYDROCARBON RESERVES, VICTORIA**

	Unit	At 30 June		
		1992	1993	1994
Crude oil and condensate	gegalitres	120	106	113
Natural gas	giga cubic metres	151	144	139
LPG	gegalitres	40	37	36

Source: Department of Energy & Minerals, Victoria: *Annual Report* 1993-94.

**Gas reticulation**

The most significant restructure in the 26 year history of natural gas supply in the State occurred in 1994-95.

The proclamation of the Victorian Government's *Gas Industry Act 1994* resulted in the restructure of the former Gas and Fuel Corporation of Victoria into two independent statutory corporations: Gas and Fuel (the trading name of Gascor), which owns and operates the 22,600 kilometres distribution system and undertakes gas marketing; and Gas Transmission Corporation (GTC), which owns and operates the 2,300 kilometres transmission pipeline network. The Gas and Fuel Corporation of Victoria was formally wound up on 21 June 1995.

Gascor came into existence in December 1994. Its key roles are the distribution and marketing of natural gas throughout Victoria and to Albury and Moama in New South Wales. As stated previously, Gascor trades as 'Gas and Fuel'.

Gas and Fuel purchases Gippsland Basin natural gas under contract from Esso/BHP and Otway Basin natural gas from GFE Resources Ltd. The gas is transported to the Melbourne metropolitan area and to over fifty regional centres on behalf of Gas and Fuel under contract by the Gas Transmission Corporation through its transmission pipeline system. The natural gas is then distributed to over 1.3 million homes, businesses and factories. In addition, Gas and Fuel supplies reticulated tempered liquefied petroleum gas to four regional centres in western Victoria.

In 1994-95, gas sales revenue was a record high of \$1,112 million, representing a 10.4% increase over 1993-94. (Gas sales totalled 174,403 terajoules, of which 43.5% was to domestic customers, 11.8% was consumed by commercial customers and 44.7% was used by industrial customers). Of the 1,332,561 customers at 30 June 1995, 1,292,381 were domestic consumers, 35,953 were commercial consumers and 4,227 were industrial consumers.

At 30 June 1995, Gas and Fuel personnel numbered 3,091.

**Brown coal**

Most of Australia's measured resources of brown coal are located in Victoria's Latrobe Valley, with 52,000 megatonnes considered to be economically viable. Brown coal is Victoria's most valuable solid mineral commodity, with the 1992-93 production (47.9 million tonnes) valued at an estimated \$411 million. Production in 1993-94 was 48.2 million tonnes, with a value of \$401 million.

**Metallic minerals**

Victorian gold production increased dramatically from a low base of 41 kilograms in 1979-80, largely as a result of the Wonga open cut mine at Stawell coming on stream. In 1990-91, Victorian production peaked at 4,863 kilograms of gold bullion (doré) and 1 tonne of gold concentrate, valued at \$70.9 million. Gold production then fell by over 30% in 1991-92 before stabilising at around 4,000 kilograms over the three years to 1994-95.

The only other metallic mineral produced in any quantity in Victoria has been bauxite. However production has always been sporadic and there has not been any bauxite mined since 1991-92.

Table 17.5 MINERAL PRODUCTION, VICTORIA

Year	Fuel minerals		Non-metallic minerals			
	Brown coal	Metallic minerals		Diatomite (refined and unrefined)	Gypsum	Kaolin (refined and unrefined)
		Bauxite	Gold			
	'000 tonnes	tonnes	kg	tonnes	'000 tonnes	'000 tonnes
1989-90	45 960	2 466	3 515	396	302	169
1990-91	49 389	7 925	4 863	3 000	49	146
1991-92	49 542	5 021	3 346	3 000	53	88
1992-93	47 898	0	3 993	1 375	180	115
1993-94	48 214	0	4 173	n.a.	n.a.	n.a.
1994-95	n.a.	0	p4 100	n.a.	n.a.	n.a.

Source: Department of Energy and Minerals, Victoria: *Annual Report* 1993-94.

## ENERGY

### Overview

In 1993-94 Victoria contributed 28.8% of the electricity, gas, and water component of Australia's Gross Domestic Product (GDP) at factor cost. The electricity, gas, and water industries represented 4.0% of Victoria's GSP at factor cost in 1993-94.

The electricity, gas, and water component of GDP includes the transmission and distribution of gas through reticulation systems. It does not include the extraction of crude petroleum or natural gas.

### Electricity generated

The State Electricity Commission of Victoria (SECV) was established in 1919 to oversee the development of the industry in Victoria and to exploit the large reserves of brown coal in the Latrobe Valley. The SECV was initially developed as a mining, generation and transmission utility, with distribution undertaken by private companies and councils. As the SECV extended its network throughout the State, it absorbed all the independent distributors, except for eleven Municipal Electricity Undertakings (MEUs) in metropolitan Melbourne. By 1994, the MEUs were responsible for around 15% of the State's electricity distribution.

In 1993, the State Government embarked upon a major restructuring of the electricity industry along competitive lines. The move from monopoly to independent businesses initially resulted in the creation of three state owned bodies to operate the generation, transmission and distribution components of the SECV. The second stage (in late 1994) resulted in the creation of the following eight State owned companies operating in a competitive framework:

Victorian Power Exchange - an independent company created to administer the wholesale electricity market;

Power Net Victoria - a company which controls the high voltage electricity transmission system;