



Minerals and energy

Major development projects – April 2009 listing

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Minerals and energy

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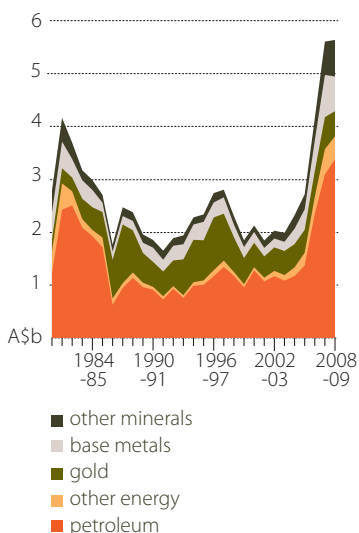
- In 2008-09, expenditure on exploration in Australia’s minerals and energy sector is estimated at \$5.6 billion, the highest on record and more than twice the annual average expenditure of the past 25 years.
- In the six months to April 2009, 18 major minerals and energy projects with a capital expenditure of \$5.2 billion were completed. A further 74 projects were at an advanced stage with projected expenditure of \$80 billion.

Exploration expenditure

Investment in mineral exploration affects the ability of Australia’s minerals and energy sector to grow and expand its contribution to national economic performance over the medium and longer term. It represents an investment in knowledge about the potential size, location and quality of mineral deposits, and the decision to make this investment depends on the probability of discovering an economic deposit, or extending the resource base of a known deposit.

A range of factors influence the decision to invest in mineral exploration, including: current and expected future prices; mining and processing technologies; input costs; and the availability of, and access to, land. Government policies also have a role in providing overall economic, social and environmental foundations which determine the security and potentially the cost of the investment.

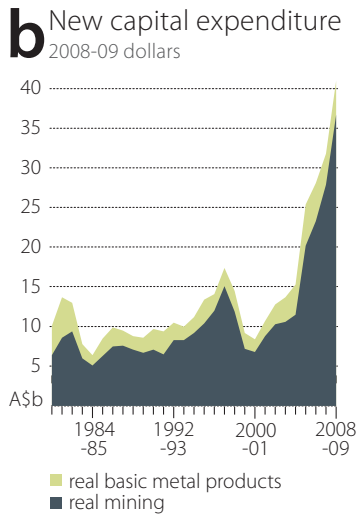
a Australian private minerals and energy exploration expenditure 2007-08 dollars



Source: ABS

Based on ABS data it is estimated that expenditure on mineral exploration in Australia (including petroleum) was \$5.6 billion in 2008-09, similar to 2007-08 levels. In real terms, this would be the highest on record and more than double the average of the past 25 years. Expenditure on mineral exploration in Australia since 1980-81 (in real terms) is shown in figure a.

Higher expenditure on exploration over the past five years has been a response to high and rising world prices for minerals and energy commodities as world supply has not been sufficient to meet rising demand. While actual Australian Bureau of Statistics data has only been published until the end of 2008, it is expected exploration expenditure for the first half of 2009 will be 13 per cent lower than for the same period in 2008. This would be consistent with historical trends of exploration expenditure decreasing when commodity prices fall.



In recent years, brownfield exploration expenditure, (exploration around existing or known deposits), has accounted for an increasing proportion of total exploration expenditure. There are two factors which have contributed to this trend. First, higher world prices have encouraged companies to reassess reserves previously considered uneconomic. Second, brownfield mining is attractive for companies because infrastructure often already exists which means extraction can start sooner and capital costs are lower.

In 2008-09, exploration expenditure on all major minerals and energy commodities is estimated to have increased. Petroleum exploration expenditure is estimated to have risen by 36 per cent to \$3 billion, the highest on record, reflecting record global oil prices.

Exploration expenditure on iron ore is estimated to have increased by 14 per cent in 2008-09 to \$512 million. This follows a 58 per cent increase in exploration expenditure in 2007-08.

Exploration expenditure on base metals, (copper, nickel, silver, lead, zinc and cobalt), is estimated to have fallen by 16 per cent in 2008-09 to \$656 million. The expected fall in base metals exploration expenditure reflects sharp downward price movements in the second half of 2008. Despite the gold price remaining at relatively high levels during 2008-09, expenditure on exploration is estimated to have decreased by 20 per cent to \$475 million.

Over the medium term, a common set of factors is expected to influence exploration expenditure in each sector of Australia's minerals and energy industry. These include the price outlook for each commodity, Australia's prospectivity, expected future costs of exploration and development (costs of labour, fuel and other inputs), and Australia's relative attractiveness as a destination for mineral exploration and extraction.

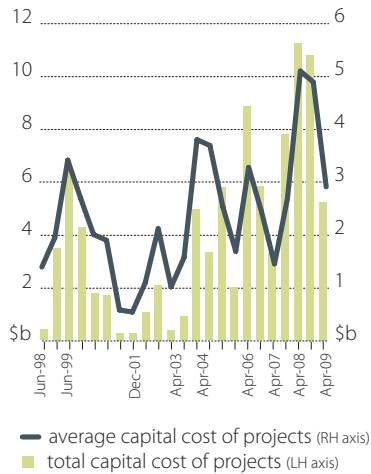
Capital expenditure

New capital expenditure in mining and metal products industries provides a guide, in aggregate terms, of the pace and scale of development in the minerals and energy sector (figure b).

Capital expenditure in mining refers to spending on equipment, plant and assets directly related to mining ores, concentrates or other raw materials. Expenditure on basic metal products refers to spending on equipment, plant and assets for basic processing of mine output. Australia has a strong comparative advantage in mining, but is at a comparative disadvantage in basic mineral processing. Therefore a larger proportion of capital expenditure is directed to mining rather than basic metal processing.

C Completed projects

June 1998 to April 2009



Based on ABS survey data, new capital expenditure in the mining sector in 2008-09 is estimated at \$36.7 billion. This represents an increase of 14 per cent from 2007-08, and is more than three times the average annual expenditure since 1980-81. The scale and pace of expenditure estimated by the ABS is consistent with recent trends shown in ABARE's full list of development projects.

Capital expenditure in the metal processing sector in 2008-09 is estimated to have been \$4.2 billion, 13 per cent higher than 2007-08.

Recently commissioned projects

In the six months ended April 2009, 18 major minerals and energy projects, with capital expenditure totalling \$5.2 billion, were completed (table 1).

Energy projects

In the six months ended April 2009, seven energy projects (including energy infrastructure projects) were completed at a total capital cost of \$1.8 billion. Three of these were coal projects, at a combined capital cost of \$1.3 billion, while there were three gas pipeline projects, together costing \$425 million, and a uranium project (\$28 million).

The largest coal project completed was the US\$726 million Lake Lindsay mine located in Queensland's Bowen Basin. The mine has a production capacity of 4 million tonnes, comprising 1.9 million tonnes of hard coking coal, 1.8 million tonnes of PCI and 0.3 million tonnes of thermal coal. The mine is a joint venture between Anglo Coal Australia and Mitsui. Also completed in Queensland's Bowen Basin was the 4 million tonne Vermont Coal Project at a cost of \$264 million. In New South Wales, Whitehaven Coal commissioned the Rocglen mine which has an annual production capacity of 1.5 million tonnes of thermal coal. The project, which is located in the Gunnedah Basin, had a capital cost of around \$35 million to construct.

During the six months to April 2009, three gas pipeline projects were completed: two in Queensland and one in the Northern Territory. The QSN Link was completed at a cost of \$165 million and connects the South West Queensland Pipeline to the Moomba gas hub in north-east South Australia. The link has a gas transport capacity of 60 petajoules a year and will allow for coal seam methane produced in southern Queensland to be transported to the Moomba-Adelaide and Moomba-Sydney pipelines. Also completed in Queensland was the Berwyndale to Wallumbilla pipeline at a capital cost of \$110 million. The 110 kilometre pipeline will connect the coal seam methane fields around Berwyndale (300 kilometres north-west of Brisbane) to the Wallumbilla gas hub.

ABARE's list of major minerals and energy development projects

The full list

ABARE's list of major minerals and energy projects expected to be developed over the medium term is compiled every six months. Information contained in the list spans the mineral resources sector and includes energy and minerals commodities projects and mineral processing projects. The information comes predominantly from publicly available sources but, in some cases, is supplemented by information direct from companies. The list is fully updated to reflect developments in the previous six months. The projects list is released around May and November each year.

What's in the list?

The latest projects list contains information on 321 projects, providing the following details:

- project name
- location
- expected startup date
- capital cost of the project
- proponent company or joint venture
- project status
- additional output capacity
- additional employment, where available.

With one industry exception, ABARE's list provides details of each announced project for which total capital expenditure is expected to exceed \$40 million. The exception is the gold industry, which typically has a relatively large number of smaller projects. For gold, the expenditure threshold for inclusion in the list is \$15 million.

In general, included projects are at relatively advanced stages of planning. That is, for new projects, stage of planning categories range from 'pre-feasibility study underway' through to 'under construction'.

Projects are listed by the principal mineral commodity to be produced, under the broad headings: 'Mining projects – energy', 'Mining projects – minerals' and 'Mineral processing facilities'. The listing includes new greenfield projects as well as expansions of existing projects.

Where to get the list

The list is available only as an electronic product.

The list can be downloaded from 'latest releases' at www.abare.gov.au

enquiries: abareproducts@abare.gov.au

or phone +61 2 6272 2010.

In the Northern Territory, the Bonaparte gas pipeline was completed, which will link the offshore Blacktip gas field in the Bonaparte Basin to the Alice Springs-Darwin pipeline. Gas from the Blacktip Gas field will supply the Northern Territory market under a 25 year agreement that was scheduled to start in early 2009.

Energy Resources Australia (ERA) completed an upgrade of its Ranger laterite processing plant at a cost of \$28 million. The expansion of the processing plant will enable additional annual production of 4000 tonnes of uranium oxide.

Mineral mining projects

In the six months to April 2009, nine mineral mining projects were completed at a capital cost of \$3.4 billion. The largest project, in terms of capital expenditure, was the expansion of the Cape Lambert iron ore port, which is owned by Rio Tinto and Robe River and is located near Dampier in Western Australia. The US\$952 million expansion will enable the port to handle an additional 25 million tonnes a year of iron ore.

1 Major mineral resource developments - projects completed, October 2008 to April 2009

commodity	project	location	company	capital expenditure \$m
Energy projects				
Black coal	Rocglen (Belmont) opencut	NSW	Whitehaven	35
	Lake Lindsay opencut	Qld	Anglo Coal Australia/Mitsui	US\$726
	Vermont Coal Project	Qld	QCMM	264
Petroleum	Bonaparte gas pipeline	NT	Australian Pipeline Trust	150
	QSN Link	Qld/SA	Epic Energy	165
	Wallumbilla pipeline	Qld/SA	AGL	110
Uranium	Ranger Laterite Processing Plant	NT	Energy Resources of Australia	28
Mineral mining projects				
Copper	Prominent Hill	SA	OZ Minerals	1 150
Gold	Ballarat East	Vic	Lihir Gold	120
	Bendigo (Kangaroo Flat)	Vic	Bendigo Mining	300
	Wiluna	WA	Apex Minerals	62
Iron ore	Cape Lambert port expansion	WA	Rio Tinto/ Robe River	US\$952
Lead-zinc-silver	Handlebar Hill	Qld	Xstrata	US\$61
	McArthur River concentrator expansion	NT	Xstrata	US\$37
	McArthur River conversion to opencut	NT	Xstrata	110
Nickel	Sinclair	WA	Xstrata Nickel Australia	125
Mineral processing projects				
Copper	Mount Isa smelter expansion project	Qld	Xstrata	60
Nickel	Forrestania Nickel concentrate plant	WA	Western Areas	30

The largest mining project, in terms of capital expenditure, completed during the six months to April 2009 was OZ Minerals Prominent Hill copper mine. The mine has a capacity of 110 000 tonnes of copper, 115 000 ounces of gold and 420 000 ounces of silver. The mine was completed at a capital cost of \$1.15 billion.

Three gold projects, with total additional annual production capacity of more than 435 000 ounces of gold a year, were also completed during the period at a combined cost of \$482 million. In Victoria, Bendigo Mining's Kangaroo Flat project will add 30 000 to 40 000 ounces to current capacity and cost \$300 million. Also in Victoria, Lihir Gold's Ballarat East mine was completed at a cost of \$120 million and has an annual production capacity of 200 000 ounces. In Western Australia, Apex Minerals' Wiluna project was completed. The mine will be capable of producing 200 000 ounces a year and cost \$62 million.

In the past six months three lead/zinc projects and a nickel project were completed at a total cost of around \$375 million. All four projects are owned by Xstrata. In the Northern Territory, the McArthur River mine was converted to open-cut production and the concentrator at the mine was upgraded at a total cost of \$160 million. The concentrator was expanded to process an additional 110 000 tonnes of lead/zinc concentrates. Also in Queensland, the Handlebar Hill mine was completed at a cost of US\$61 million.

Xstrata's nickel subsidiary, Xstrata Nickel Australia, completed the Sinclair nickel mine in Western Australia. The mine has a capital cost of \$125 million and a capacity of 5000 tonnes.

Mineral processing projects

Two mineral processing projects were completed in the six months to April 2009: the Mount Isa copper smelter and the Forrestania Nickel processing plant in Western Australia. The Mount Isa copper smelter, which is owned by Xstrata, was completed at a cost of \$60 million. The Forrestania Nickel processing plant is capable of producing 13 000 tonnes a year of nickel in concentrate. The plant is owned by Western Areas and cost \$30 million to construct.

Advanced projects

At the end of April 2009, there were 74 projects at an advanced stage of development on ABARE's project list (table 3). Projects in this category are either committed or under construction. This is the lowest number since April 2005 and is down from 85 in October 2008 as more projects have been completed (18 projects) than have progressed to an advanced stage (11 projects) during the past six months. In addition, a number of advanced projects were placed on hold in the past six months as proponents responded to falling commodity prices.

Total capital expenditure of the 74 advanced projects at the end of April 2009 comes to \$80 billion, an increase of 16 per cent from October 2008 and 12 per cent compared with a year earlier. However, it should be noted that the depreciation of the Australian dollar

2 Completed projects, June 1998 to April 2009

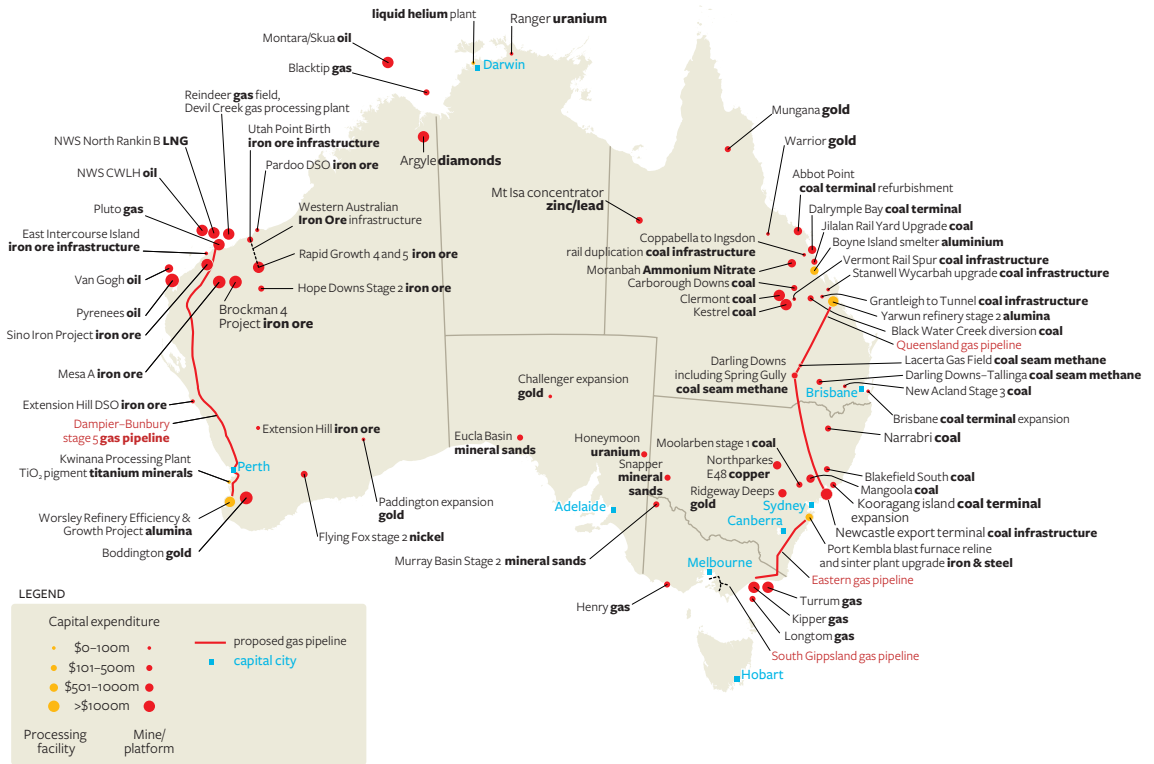
	number of projects	total capital cost of projects	average capital cost of projects \$m
Six months ending			
June-98	3	415	138
December-98	18	3 500	194
June-99	19	6 500	342
December-99	16	4 300	269
June-00	9	1 800	200
December-00	9	1 700	189
June-01	5	282	56
December-01	5	262	52
June-02	10	1 082	108
December-02	10	2 110	211
Four months ending			
April-03	4	400	100
Six months ending			
October-03	6	937	156
April-04	13	4 956	381
October-04	9	3 328	370
April-05	23	5 812	253
October-05	12	2 012	168
April-06	27	8 854	328
October-06	24	5 824	243
April-07	23	3 314	144
October-07	29	7 795	269
April-08	22	11 264	512
October-08	22	10 805	491
April-09	18	5 246	291
Total	336	92 498	275

3 Advanced projects, April 2009

number and estimated capital cost, by state

	energy projects		mineral projects		mineral processing		total	
	no.	cost (\$m)	no.	cost (\$m)	no.	cost (\$m)	no.	cost (\$m)
New South Wales	7	4 032	2	695	2	505	11	5 232
Victoria	5	3 981	1	209	0	0	6	4 190
Queensland	19	7 348	4	1 265	3	3 451	26	12 064
Western Australia	8	26 832	15	26 747	2	3 260	25	56 839
South Australia	1	89	2	425	0	0	3	514
Tasmania	0	0	0	0	0	0	0	0
Northern Territory	2	1 085	1	41	0	0	3	1 126
Australia	42	43 367	25	29 382	7	7 216	74	79 965

1 Advanced minerals and energy projects April 2009



against the US dollar between October 2008 and April 2009 has resulted in the value of US dollar denominated projects increasing in Australian dollar terms. The fall in the value of the Australian dollar is estimated to account for around half of the increased capital expenditure between October 2008 and April 2009.

Energy projects

As of April 2009, energy project developments accounted for 42 of the 74 advanced projects on ABARE’s list and around 54 per cent (or \$43.4 billion) of committed capital expenditure. Estimated capital expenditure on energy projects has increased by around 13 per cent since October 2008 and 12 per cent since April 2008.

In terms of capital expenditure, Woodside’s Pluto LNG project, which has an announced capital cost of \$12 billion, is the largest commitment to a single project in Australia’s minerals and energy industry. This project will have an annual production capacity of 4.3 million tonnes of LNG and is scheduled for completion in late 2010. The gas has been purchased under long-term contracts with Tokyo Gas and Kansai Electric in Japan.

Eleven other petroleum developments account for a further \$19.1 billion in capital expenditure. In December 2008, the North West Shelf Joint Venture (Woodside, BHP Billiton, Shell, Chevron, BP and Japan Australia LNG) approved the US\$1.5 billion NWS CWLH project. The project will allow for continued production from the Cossack, Wanea, Lamarina and Hermes fields beyond 2013. A significant proportion of the investment will be spent on the purchase of a new floating production, storage and offtake vessel.

The North West Shelf Joint Venture is also undertaking the US\$5.1 billion North West Shelf North Rankin B project in Western Australia, which is due for completion in 2012. Other significant petroleum projects include the US\$1.7 billion joint venture Pyrenees oil field, 55 kilometres north of Exmouth in Western Australia which is scheduled for completion in early 2010; the US\$1.25 billion Turrum natural gas and condensate field in Bass Strait due for completion in 2011; and the US\$1.1 billion Kipper gas and condensate field off the coast of Gippsland also scheduled for completion in 2011.

At the end of April 2009, there were four natural gas pipelines at an advanced stage of development. In March 2009, the Dampier Bunbury Pipeline owners committed to constructing the Stage 5B expansion. The \$700 million project will result in the pipeline being able to transport an additional 40 petajoules a year when complete in 2010. SP AusNet is undertaking expansions to two of its pipelines: the Eastern Gas Pipeline (Longford, Victoria to Wollongong) and the Queensland Gas Pipeline (Wallumbilla to Gladstone). The expansion of the Eastern Gas Pipeline will cost \$41 million and will increase capacity by 20 petajoules a year. The expansion of the Queensland Gas Pipeline will increase capacity by 25 petajoules a year at a capital cost of \$112 million.

Coal mine and coal infrastructure projects account for 24 per cent (or \$10.4 billion) of the estimated \$43.4 billion capital cost of all advanced energy projects. The largest coal mine development is Rio Tinto's US\$1.3 billion Clermont opencut mine in Queensland. The Clermont mine, due for completion in 2010, will produce 12 million tonnes of thermal coal a year and is expected to replace production from the existing Blair Athol mine. Another Rio Tinto project, the US\$991 million Kestrel project near Emerald in Queensland, will have an increased annual production capacity of 1.7 million tonnes of coking coal. Rio Tinto has identified this project as one where construction work will slow in response to falling coking coal demand, however at this point the project is still scheduled for completion in 2012.

In New South Wales, Xstrata Coal's \$1 billion Mangoola (Anvill Hill) opencut mine development near Muswellbrook is expected to produce 10.5 million tonnes of thermal coal each year from 2011. Another large coal mine under construction in New South Wales is Stage 1 of the Moolarben project. The \$405 million project will enable 8 million tonnes of production from an opencut mine (2010) and 4 million tonnes of production from an underground mine (2012). Apart from those already listed, five other advanced coal mine developments in Queensland and New South Wales are expected to raise coal production capacity by around 7 million tonnes a year over the next three to four years. The combined capital cost of these five projects is \$1.2 billion.

The large number of coal projects recently commissioned and scheduled for completion in the short to medium term has provided the impetus for expanding coal infrastructure (rail and

port) capacity. At the end of April 2009, there were seven coal terminal expansions and five rail expansions either committed or under construction.

In terms of capital expenditure, the largest of these projects is the first stage of the Newcastle Coal Infrastructure Group's export terminal at the Port of Newcastle. When completed in early 2010, the US\$1.1 billion terminal will have a coal loading capacity of 30 million tonnes. Further upgrades to the terminal could increase annual coal handling capacity to 66 million tonnes a year. Also at the Port of Newcastle, Port Waratah Coal Services is expanding and refurbishing the Kooragang Island Coal Terminal. The \$456 million project will result in an increased annual coal loading capacity of 11 million tonnes.

In Queensland, the Abbott Point Coal Terminal X50 expansion at Bowen is due for completion in 2011. At a cost of \$818 million, the expansion will increase annual coal loading capacity from 25 million tonnes to 50 million tonnes a year. The Dalrymple Bay Coal Terminal 7X expansion project, due for completion in mid-2009, is expected to expand coal loading capacity by 17 million tonnes to an annual capacity of 85 million tonnes at a project cost of \$679 million. Major rail projects include the \$500 million Jilalan Rail Yard upgrade, duplication of the track between Coppabella and Ingsdon and the Stanwell to Wycarbah upgrade.

In total, coal infrastructure projects have an estimated capital cost of \$4.5 billion or 43 per cent of total committed capital expenditure in the coal industry.

Mineral mining projects

At the end of April 2009, there were 25 advanced mineral mining projects collectively valued at around \$29.4 billion. Ten iron ore projects account for 70 per cent (or \$20.4 billion) of the total expected capital cost of advanced mineral mining projects.

In the six months to April 2009, eight mineral mining projects were added to the advanced project list, with a combined capital value of \$8.6 billion. The largest of these was BHP Billiton's Rapid Growth 5 iron ore project valued at US\$5.7 billion. The capital cost includes expanding mining operations by 45 million tonnes a year and expanding associated rail and port infrastructure. The project is scheduled to be completed in 2011.

Other prominent iron ore projects on the advanced list, in terms of capital cost, include CITIC Pacific Mining's US\$3.5 billion Sino Iron project in Cape Preston, Western Australia, which will have a production capacity of 27 million tonnes of iron ore pellets and concentrates, and BHP Billiton's US\$2.2 billion Western Australian Iron Ore Rapid Growth Project 4 at 26 million tonnes of iron ore production. Rio Tinto's US\$1.5 billion Hammersley Iron Brockman 4 project in Western Australia is scheduled for completion in 2010. The Rio Tinto/Robe River joint venture Mesa A project in Western Australia is expected to produce 25 million tonnes of iron ore from 2010, with the project costing around US\$900 million.

Three iron ore infrastructure projects are under construction in Western Australia, including the recently approved expansion to the public access loading facilities at Utah Point at Port Hedland. The project will allow for an additional 18 million tonnes a year to be loaded at the

port and will be utilised by iron ore producers who rely on third party infrastructure access. The \$225 million project will be completed in 2010. As part of its Rapid Growth 5 project, BHP is expanded its rail and port handling capacity to 300 million tonnes a year. The capital expenditure is included in the total project cost of US\$5.7 billion and will be completed in 2011.

The largest advanced gold project is Newmont and AngloGold Ashanti’s US\$2.6 billion to US\$2.9 billion redevelopment of the Boddington gold mine near Pinjarra in Western Australia. The redevelopment is scheduled to be completed in mid-2009 and is expected to provide new capacity of 900 000 to 1 050 000 ounces of gold. In New South Wales, Newcrest is undertaking the \$545 million Ridgeway Deeps mine expansion near Orange. The expanded mine will have an annual production capacity of 180 000 ounces of gold and 22 000 tonnes of copper. During the six months to April 2009, three gold projects were added to the list of projects, which could produce a total of 107 500 ounces a year at a cost of \$38 million.

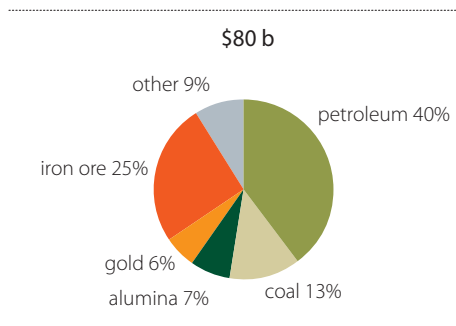
Mineral processing projects

At the end of April 2009, there were eight advanced mineral processing projects with a combined capital expenditure of \$7.2 billion. In the six months to April 2009, there were no new mineral processing projects added to the list of advanced projects.

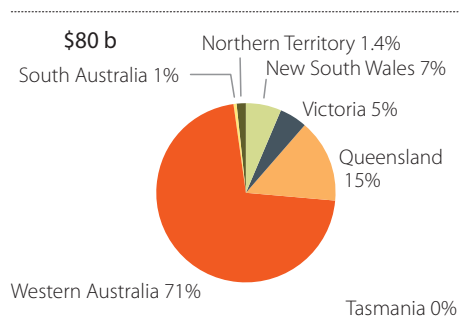
The two largest projects in the list together account for 80 per cent of the expected capital expenditure on all the advanced mineral processing projects. The Worsley Refinery Efficiency and Growth project near Bunbury, Western Australia, is a joint venture between BHP Billiton, Japan Alumina and Sojitz Alumina. The expansion project, due for completion in 2011, has an expected capital cost of US\$2.2 billion and is expected to increase annual alumina production capacity by 1.1 million tonnes. Rio Tinto’s Yarwun alumina refinery expansion, near Gladstone in Queensland, is due to be completed in late 2012 at a capital cost of US\$1.8 billion and is expected to add 2 million tonnes annually to production.

Figure d provides a breakdown of proposed capital expenditure on advanced projects, by major commodity grouping. Figure e shows the estimated capital cost on a regional basis.

d Value of advanced projects, by commodity April 2009

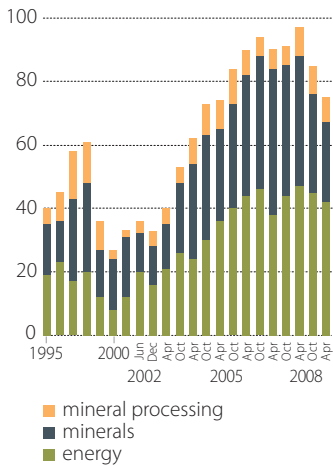


e Value of advanced projects, by state April 2009

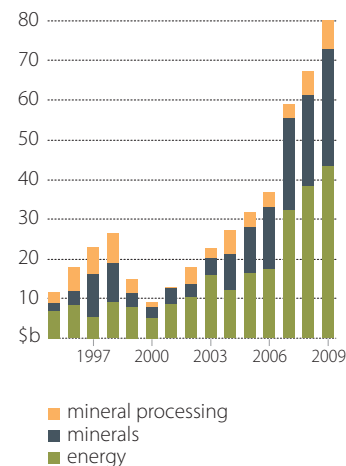


At the end of April 2009, while there was a lower number of advanced projects (figure f), the total value of advanced projects (figure g) was at an historically high level (in 2008-09 dollars). The average value of advanced projects, in real terms, at the end of April 2009 (\$1.1 billion) was well above the average for all years since 1995 (\$442 million) as shown in figure h. This reflects a combination of high input costs, the relatively large scale of projects being developed and a depreciation of the Australian dollar.

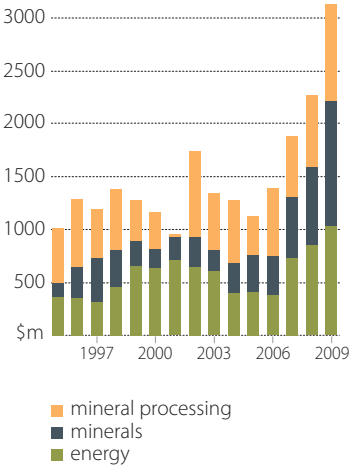
f Number of advanced projects



g Value of advanced projects in 2008-09 dollars



h Average value of advanced projects in 2008-09 dollars



Less advanced projects

Projects considered to be less advanced are either undergoing a feasibility (in some cases, pre-feasibility) study, or have not yet been subject to a final investment decision since the completion of a feasibility study. Some of these projects may not proceed for several years, as they may confront changes in economic or competitive conditions, or may be targeting the same emerging market opportunities, necessitating rescheduling. In addition, securing finance for project development, even for high quality projects with a high probability of success, is not guaranteed.

Despite the uncertainty inherent in projects at these earlier stages of consideration, the significant number of large scale projects at less advanced planning stages is expected to provide a firm platform for future growth in Australian minerals and energy production in the medium term and beyond.

Of the 321 projects in ABARE's April 2009 project list, 77 per cent (247 projects) remain uncommitted. Table 4 contains a summary of the numbers and commodity distribution of the 247 uncommitted projects, together with the potential capital expenditure. The potential capital expenditure data should be used as an approximate guide only. Capital expenditure data for many early stage projects are either not available or, if available, likely to change

significantly if these do proceed to development. In addition, changes in market conditions can often lead to significant variations in capital expenditure estimates.

However, most of the projects which will ultimately proceed to development in the medium term are included in ABARE's current list of 247 less advanced projects.

Among the more notable large scale projects in ABARE's April 2009 list that are still undergoing feasibility studies are 13 proposed LNG developments. These projects include the Browse, Gorgon, Ichthys, Sunrise and Wheatstone projects off the coast of Western Australia and four coal seam methane based LNG projects in Queensland.

4 Number of less advanced projects, April 2009

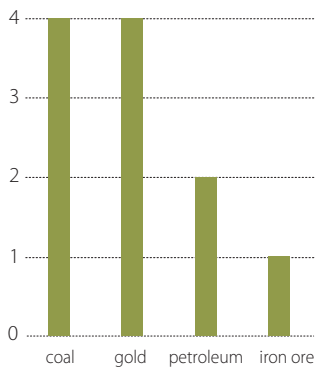
Commodity	NSW	Vic	Qld	WA	SA	Tas	NT	Aust	potential capital expend. \$m
Mining - energy projects									
Black coal	22	0	37	0	0	0	0	59	38 584
Coal seam methane	4	0	1	0	0	0	0	5	640
Petroleum	2	4	9	11	0	0	7	33	174 556
Uranium	0	0	2	2	4	0	2	10	1 779
Sub-total	28	4	49	13	4	0	9	107	215 559
Mining - minerals projects									
Bauxite	0	0	2	0	0	0	0	2	2 130
Copper	2	0	5	0	7	0	0	14	1 800
Gold	5	0	6	16	2	0	1	30	3 338
Iron ore	0	0	0	29	4	0	0	33	25 888
Lead-zinc-silver	6	0	2	1	1	0	1	11	2 002
Mineral sands	2	3	0	3	0	0	0	8	375
Nickel	0	0	4	11	0	0	0	15	14 453
Rare earths	0	0	0	1	0	0	1	2	1 122
Tin	0	0	1	0	0	1	0	2	375
Vanadium	0	0	0	2	0	0	0	2	879
Other commodities	3	0	2	5	0	1	2	13	3 954
Sub-total	18	3	22	68	14	2	5	132	56 316
Mineral processing									
Alumina	0	0	2	1	0	0	0	3	4 700
Copper	0	0	0	0	1	0	0	1	na
Crude iron and steel	0	0	1	0	0	0	0	1	536
Magnesium	0	1	0	0	0	0	0	1	25
Nickel	0	0	0	0	0	0	0	0	na
Titanium minerals	0	0	0	1	0	0	0	1	170
Zinc	0	0	1	0	0	0	0	1	na
Sub-total	0	1	4	2	1	0	0	8	5 381
Total	46	8	76	82	16	2	14	247	277 256

BHP Billiton’s proposed Olympic Dam expansion in South Australia, currently undergoing an environmental impact assessment, aims to more than double the mine’s current output of copper, uranium, gold and silver. Among the less advanced iron ore projects, five have an estimated capital expenditure of \$1.5 billion or more. These are Aquila Resources’ West Pilbara mine (\$3.5 billion); Australasian Resources’ Balmoral South magnetite project (\$2.7 billion); Gindalbie Metals’ Karara magnetite project (\$1.7 billion); Atlas Iron’s Ridley magnetite project (\$1.6 billion); and Crossland Resources’ Jack Hills Stage 2 mine (\$1.5 billion).

Projects new to ABARE’s list

There are 11 projects (at both advanced and less advanced stages) new to ABARE’s list in the six months since October 2008. This compares with 31 projects added to the list in the six months to October 2008 and 58 in the six months to April 2008. Figure i provides a summary of the 11 newly listed projects by commodity category. Of these, two projects, the Coppabella to Ingsdon rail duplication and the Warrior gold project, are at an advanced stage.

i Projects added to list, six months to April 2009
total number = 11



Among the more significant less advanced projects new to the list are two coal projects, both located in New South Wales. Gujarat NRE Minerals is proposing to expand production and extend the life of mining operations at its NRE No. 1 Colliery mine near Wollongong. The \$250 million project will increase coal production to 3 million tonnes a year as well as upgrade existing surface infrastructure and construct new surface infrastructure. Also in New South Wales, near Mudgee, Felix Resources is progressing development plans for Stage 2 of its Moolarben mine. Stage 1 is currently under construction. The second stage will enable an additional production of 12 million tonnes a year of run of mine (ROM) coal from opencut mines and 4 million tonnes of ROM coal from two underground mines. The project has an estimated capital budget of \$120 million.

BHP Billiton is progressing plans to develop its Macedon gas field located offshore, 100 kilometres west of Exmouth in Western Australia. Gas from the Macedon field will be transported by pipeline to an onshore processing plant and then piped through the Dampier Bunbury pipeline for consumption in the Western Australian domestic gas market. The processing plant will be capable of processing 77 petajoules a year.

Also new to the list are four gold projects, which have a combined production capacity of 315 000 ounces a year. The most notable of these, in terms of new capacity, is Conquest Mining’s Mt Carlton (Silver Hill) mine located 45 kilometres north-west of Collinsville in central Queensland. When operating at full capacity, the project is expected to produce 135 000 ounces a year. A feasibility study is underway for the \$110 million project, with operations scheduled to commence in 2011.

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AusAid	European commission
Australian Fisheries Management Authority	Fisheries Research and Development Corporation
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Australian Government Department of the Environment, Water , Heritage and the Arts	Forest and Wood Products Australia
Australian Government Department of Infrastructure, Transport, Regional Development and Local Government.	Grains Research and Development Corporation
Australian Government Department of Resources, Energy and Tourism	Grape and Wine Research and Development Corporation
CRC Plant Biosecurity	Horticulture Australia
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Dairy Australia	Land and Water Australia
Department of Primary Industries, Victoria	Meat and Livestock Australia
DN Harris and Associates	National Australia Bank
	OECD
	Rural Industries Research and Development Corporation
	The Treasury