

## CENTRAL QUEENSLAND COAL DEVELOPMENT PROJECTS

Project	Company	Status	Expected Start-Up	Est. Cap Exp	New capacity
Middlemount open-cut	Macarthur Coal Ltd	New project, under construction	2010	\$140M	1.8 Mt ROM coking and PCI (Stage 1)
Isaac Plains open-cut	Aquila / Vale Australia	Expansion, EIS submitted	2010	\$118M	2.8 Mt coking, thermal and PCI
Clermont open-cut	Rio Tinto Ltd	New project, under construction	2010	US\$1300M	12 Mt thermal (replacing Blair Athol capacity)
Yarrabee open-cut	Felix Resources	Expansion in progress	2010	\$50Me	2.8 Mt PCI
Foxleigh open-cut	Anglo Coal Australia	Extension in progress	2010?	na	3.3 Mt PCI
Baralaba open-cut	Cockatoo Coal Ltd	Expansion, pre-FS underway	2010	na	0.5 Mt PCI & thermal
Daunia open-cut	BHP Billiton Mitsubishi Alliance	New project, EIS complete	2011	\$625M	4 Mt coking and PCI
Curragh open-cut	Wesfarmers Ltd	Creek Diversion, under construction	2011	\$130M	Extend mine life
Ellensfield underground	Vale Australia Ltd	New project, EIS in progress	2011	\$640M	4.7 Mt coking and thermal
Millennium open-cut	Peabody Energy Ltd	Expansion, EIS commenced	2011?	na	Up to 7Mt hard coking
Codrilla open-cut	Macarthur Coal Ltd	New project, FS underway	2011	\$150M	2.7 Mt PCI and thermal
Curragh open-cut	Wesfarmers Ltd	Expansion, committed	2012	\$286M	Up to 8.5 Mt coking
Ensham Central B&P underground	Ensham Resources	New project, EIS complete	2012	\$140M	1.7 Mt thermal
Cook underground	Caledon Resources	Expansion, On-hold	2012?	na	1.8 Mt coking and thermal
Middlemount open-cut	Macarthur Coal Ltd	Expansion, FS underway	2012?	na	3.2 Mt ROM coking and PCI (Stage 2)
Dawson South II open-cut	Anglo Coal Australia/Mitsui	Extension, EIS complete	2012?	\$80Me	3 Mt thermal
Eagle Downs underground	Aquila Resources / Vale Australia	New project, EIS in progress	2012	\$977M	4 Mt hard coking (Stage 1)
Monto open-cut	Macarthur Coal / Burnett Coal	New project, under review	2012	\$50M	1 Mt thermal (Stage 1)
Kestrel underground	Rio Tinto Ltd	Expansion, in progress	2012	US\$991M	7 Mt hard coking
Byerwen open-cut	QCoal Ltd	New project, pre-FS underway	2012?	\$500M+	10 Mt hard coking
Rolleston open-cut	Xstrata Coal Ltd	Expansion, pre-FS underway	2012	\$200Me	up to 14Mt thermal
Moorvale underground	Macarthur Coal Ltd	Expansion, pre-FS underway	2013	na	1 Mt coking and PCI
Dingo West open-cut	Bandanna Energy Ltd	New project, pre-FS underway	2013	\$200Me	1.9 Mt PCI and thermal

**Source: ABARE October 2009 and QME Rockhampton November 2009**

e= unofficial estimate, na= not available, ROM= run of mine, FS= Feasibility Study, B&P= Bord and Pillar

## CENTRAL QUEENSLAND COAL DEVELOPMENT PROJECTS continued

Project	Company	Status	Expected Start-Up	Est. Cap Exp	New capacity
Peak Downs open-cut	BHP Billiton Mitsubishi Alliance	Expansion, EIS commenced	2013	\$500M+	11 Mt hard coking
Caval Ridge open-cut	BHP Billiton Mitsubishi Alliance	New project, EIS in progress	2013	\$4000M	5.5 Mt hard coking
Olive Downs North open-cut	Macarthur Coal Ltd	New project, Mining Lease granted	2013	\$20M	1 Mt coking and PCI
Grosvenor underground	Anglo Coal Australia	New project, EIS in progress	2013?	US\$1000M	4.5 Mt hard coking
Hail Creek open-cut	Rio Tinto Ltd	Expansion, pre-FS underway	2013?	na	17 Mt coking and thermal
Wonbindi open-cut	Cockatoo Coal Ltd	New project, pre-FS underway	2013?	\$300Me	3.6 Mt PCI and thermal
Goonyella-Riverside open-cut & UG	BHP Billiton Mitsubishi Alliance	Expansion, EIS in progress	2013?	\$1000M +	Up to 25 Mt hard coking
Alpha open-cut	Hancock Prospecting	New project, EIS in progress	2013?	\$3000M	30 Mt thermal
Galilee open-cut and underground	Waratah Coal Ltd	New project, EIS in progress	2013?	\$3180M	40 Mt thermal
Washpool open-cut	Aquila Resources Ltd	New project, FS underway	2013	\$402M	1.6 Mt coking & PCI
Minyango underground	Caledon Resources	New project, FS underway	2013?	\$400M	3.4 Mt coking & thermal
Winchester South open-cut	Rio Tinto Ltd	New project, scoping study	2013?	na	4 Mt coking & thermal
Yamala underground	Northern Energy Corp.	New project, pre-FS underway	2013	\$350M?	2 Mt thermal & PCI
Sarum open-cut and UG	Xstrata Coal Ltd	New project, pre-FS underway	2013	\$700M	5 Mt coking and thermal
Eaglefield open-cut	Peabody Energy Ltd	Expansion, EIS commenced	2014	na	Up to 6 Mt hard coking
Moranbah South underground	Anglo Coal / Exxaro Australia	New project, pre-FS underway	2014?	US\$400M	2.5 Mt coking
Lake Vermont open-cut	Jellinbah Resources Ltd	Expansion, pre-FS underway	2014	\$100-200M	6 Mt coking
Kevin's Corner open-cut and underground	Hancock Prospecting	New project, EIS in progress	2014?	\$3000M	30 Mt thermal
Belvedere underground	Aquila Resources/Vale	New project, EIS in progress	2014	\$2000M	Up to 9 Mt hard coking
Red Hill underground	Aquila Resources Ltd	New project, scoping study	2014	na	2 Mt PCI & thermal
Oaky Creek (Aquila) underground	Xstrata Coal Ltd	Expansion, pre-FS underway	2015?	US\$25M	1 Mt coking
Saraji East underground	BHP Billiton Mitsubishi Alliance	New project, EIS process – terms of reference	2016	\$1000M	5 Mt hard coking

**Source: ABARE October 2009 and QME Rockhampton November 2009**

UG= underground, na= not available

## CENTRAL QUEENSLAND MINERAL DEVELOPMENT PROJECTS

Project	Company	Status	Expected Start-Up	Est. Cap Exp	New capacity
Sellheim Gold open-cut	Maximus Resources Ltd	New project, Trial mining underway	2009	\$1.5M	7,500 ozs pa gold
Parkhurst Magnesia refinery	QMAG Ltd	Expansion, under construction	2009	\$US39M	330,000 tpa CCM
Mount Morgan Gold Tailings Re-treatment	Norton Gold Fields Ltd	New project, Feasibility Study completed	2010	\$40M	35,000 ozs pa Stage 1
Yaamba Magnesite open-cut	QMAG Ltd	New project, Mining Lease application	2010	na	Up to 300,000 tpa magnesite ore
Boyne Island Aluminium smelter	Rio Tinto Ltd	Upgrade, under construction	2010	US\$617M	Extend life of smelter by 25 yrs
Mt Carlton Copper-Gold-Silver open-cut	Conquest Mining Ltd	New project, Feasibility Study underway	2011	\$118M	100,000 ozs gold 6000 tpa copper 2 Mozs pa silver
Moranbah Ammonium Nitrate plant	Incitec Pivot Ltd	New project, under construction	2011	\$935M	330,000 tpa
Yarwun Alumina refinery	Rio Tinto Ltd	Expansion, under construction	2012	US\$1800M	3.4 Mtpa
Mt Cannindah Copper-Gold open-cut	Planet Metals Ltd	New project, Pre-feasibility On-hold	2012?	\$80M	8200 tpa copper 5900 oz gold 275,000 oz silver
Wateranga Industrial minerals open-cut	Queensland Industrial Minerals Ltd	New project, EIS in progress	2012?	\$82M	225,000 tpa Ilmenite 765,000 tpa Feldspar 27,000 tpa Apatite
Marlborough Nickel-Cobalt Heap Leach	Gladstone Pacific Nickel Ltd / TCC	New project, Pre-feasibility underway	2013	na	up to 24,600 tpa Ni, 1700 tpa Co
Marlborough Nickel-Cobalt mine	Gladstone Pacific Nickel Ltd	New project, EIS completed	2013?	\$120M	2.7 Mtpa Nickel-Cobalt ore
Gladstone Nickel-Cobalt refinery	Gladstone Pacific Nickel Ltd	New project, On-hold	2013?	US\$3840M	60,000 tpa Ni 6000 tpa Co (Stage I)
Gladstone Steelmaking Plant	Boulder Steel Ltd	New project, EIS commenced	2013	US\$900M	2.1 Mtpa steel products (Stage 1)
Mount Krombit Copper-Zinc open-cut	Argonaut Resources	New project, Pre-FS underway	2013?	na	na
Fishermans Landing Cement Mill	Cement Australia Ltd	Expansion (additional kiln-K3), Feasibility Study On-hold	2013?	\$1000M	2.5 Mtpa cement
East End Limestone open-cut	Cement Australia Ltd	Expansion, EIS in progress	2014	na	na

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**Queensland Mines and Energy**

## CENTRAL QUEENSLAND ENERGY DEVELOPMENT PROJECTS

Project	Company	Status	Expected Start-Up	Est. Cap Exp	New capacity
Moranbah Gas operation	Arrow Energy / AGL	Expansion, in progress	2010	\$60M	65 PJpa
Stuart Shale Oil Paraho semi-works plant	Queensland Energy Resources Ltd	New project, Pre-feasibility underway	2011?	\$100M	450 barrels/day
Callide Oxyfuel Low Emissions	CS Energy Ltd	New project, under construction	2010	\$203M	Capture and store ~17,000 tpa CO2
Queensland Gas Pipeline	Jemena Ltd	Expansion, under construction	2010	\$112M	49 PJpa
Central Qld Gas pipeline	Arrow Energy / AGL	New project, Feasibility Study completed	2010	\$475M	Up to 50 PJpa
Moura CSG Power Station	Molopo Australia Ltd	New project, Feasibility Study underway	2011	\$65M	60 MW (Stage 2)
Blackwater CSG Power Station	Bow Energy Ltd	New project, Pre-feasibility Study underway	2011	\$50M	30 MW
Arrow LNG	Arrow Energy / LNG Ltd	New project, Feasibility Study underway, EIS completed	2012	US\$500M	1.5 Mtpa (Stage I)
Surat to Gladstone Gas pipeline	Arrow Energy Ltd	New project, EIS in progress	2012	\$500M	600mm diameter
Abbott Point LNG	Energy World Corporation	New project, Pre-feasibility Study underway	2012	US\$500M	2 Mtpa (Stage 1)
Sun LNG	Sojitz Corp.	New project, On-hold	2012?	\$450M	0.5 Mtpa
IsaLink power transmission line (Stanwell to Ernst Henry mine)	Cheung Kong Infrastructure Ltd & Hong Kong Electric Holdings Ltd.	New project, EIS process	2013?	\$900M	1100 km HVdc
Curtis LNG	BG Group / QGC	New project, Pre-feasibility Study underway	2013	\$8000M	7.4 Mtpa
Southern Cross LNG	LNG Impel Ltd	New project, Scoping Study	2013	\$400M	1.3 Mtpa (Stage 1)
Santos LNG	Santos Ltd	New project, Feasibility Study and EIS process	2014	\$7700M	3.5 Mtpa (Stage 1)
Galilee IGCC Power Station	Waratah Coal Ltd	New project, Pre-feasibility Study underway	2014?	\$1250M	450 MW (Stage 1)
Australia Pacific LNG	Origin Energy / ConocoPhillips	New project, Scoping Study and EIS underway	2014	\$8000M	7-8 Mtpa (Stage 1)
Shell LNG	Shell Australia Ltd	New project, Scoping Study and EIS underway	2015	na	4 Mtpa (Stage 1)
Zerogen Power plant IGCC & CCS	Stanwell Corp. Ltd	New project, Pre-feasibility Study underway	2015	\$4300M	530 MW

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