



Australian Government
Australian Trade Commission



**AUSTRALDE-CII MINING MISSION TO AUSTRALIA
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Market insights and opportunities: Mining in India

MINING IN INDIA

- 1st in mica blocks and splitting
- 2nd in chromite and barites
- 3rd in coal and lignite
- 4th in iron ore
- 5th in bauxite and crude steel
- 7th in manganese ore
- 8th in aluminium
- Several other minerals mined

THE INDIAN ECONOMY

- 6.7 % GDP growth in 2008-09 despite global recession
- 4th largest economy in the world on PPP basis



THE AUSTRALIA INDIA RESOURCES RELATIONSHIP

- Australia and India are two significant mining countries
- The resources relationship goes back a long way and now encompasses the following four main areas:
 - India is a large importer of Australian coal and other minerals
 - India uses several Australian mining equipments, technologies and services (METS)
 - Australian mining and METS companies are investing into India
 - Indian large corporates are investing in the resources sector in Australia



COAL

- Accounts for 55% of India's energy needs
- Likely to remain major source of energy for some time to come
- Production 492.95 million tonnes in 2008-09, of which 82% by Coal India Limited
- Imports estimated at 58.16 million tonnes in 2008-09, and 51.00 million tonnes in 2011-12 , including significant quantities from Australia



CAPTIVE COAL BLOCKS

- 196 captive coal blocks allocated to PSU's and private players till March, 2007, 98 nos to each group
- 80 % of these captive coal blocks allocated after 2003
- ***AUSTRALIAN CAPABILITIES & INTEREST EXAMPLES***
- Contract mining majors Leighton and Thiess have set up in India
- JV mining opportunities with Rio, BHP Billiton, India Resources



COMMERCIAL COAL MINING PROPOSAL

- The Government may carry forward further reforms in the coal sector to plug long term demand supply gap, crucial to India's energy security
- Allowing the private sector in commercial coal mining is the only remaining major reform initiative
- Merchant sale of coal from captive blocks could also be an interim measure
- Political consensus would have to be reached before a pending bill is sent to Parliament
- ***AUSTRALIAN CAPABILITIES & INTEREST EXAMPLES***
- Such a policy shift would interest companies like Rio Tinto and BHP Billiton to invest, along with other globals and Indian majors



UNDERGROUND COAL MINING

- Substantial increased focus on underground coal mining in view of depleted open cast opportunities, and environmental and land acquisition issues

- ***AUSTRALIAN CAPABILITIES & INTEREST EXAMPLES***

- Australian majors very experienced in high productive underground coal mining
- Australian mining equipment, technologies and services on offer



COAL BED METHANE

- Multiple rounds of bidding completed
- Total production potentiality in allotted blocks is equal to 10% of the existing Natural gas demand
- Scope for contract drainage model for underground coal mines, to harness the methane and generate power, fuel trucks

- ***AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES***

- Arrow Energy, Molopo for complete work or contract drainage
- Mitchell Drilling, Inflatable Packers for Directional drilling



UNDERGROUND COAL GASIFICATION

- Production of Syngas obtained through coal gasification notified in 2007 as an “ end use “ under the Captive Coal mining Policy
- Coal/Lignite blocks for UCG will be identified where conventional mining methods not economically viable

- ***AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES***

- Companies like Linc Energy, Carbon Energy, Cougar energy & Syngas Ltd are global pioneers in UCG
- Triassic Geological Services assists with UCG services



COAL TO LIQUIDS

- Coal blocks to be allocated for captive use for coal liquefaction (coal to liquids) projects
- These are blocks of low rank coal
- 3 such advertised in 2008
- ***AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES***
- Technologies for low rank coal upgradation from Ignite Energy, GTL Energy & White Energy
- Similar projects using processed brown coal in Victoria could serve as reference



NATIONAL MINERAL POLICY, 2008

- Policy for non-fuel and coal minerals
- Approved by Union Cabinet, to be introduced in Winter Session of Parliament
- Encourages reconnaissance and prospecting, with seamless transfer and large area prospecting
- Looking at much increased mining FDI
- ***AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES***
 - Survey Companies like Fugro actively working, more to follow
 - Mining majors such as Rio Tinto and BHP, and juniors like India Resources active in India
 - India Resources Limited is mining and processing copper at Surda for HCL and has three projects in the pipeline



NATIONAL MINERAL POLICY, 2008 CONTD...

- Stress on Environment & Safety – sustainable development
- Importance to beneficiation to bring lower grades/finer sizes to use
- **AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES**
- Consultants like GHD & Golders have set up in India
- SIMTARS has bagged major safety contracts in India, including a comprehensive programme for Coal india
- ProMet, Downer EDI , Ludowici & McLanahan are all present in India in the area of mineral processing and beneficiation



NATIONAL MINERAL POLICY, 2008 CONTD...

- Productivity of mining operations and automation
- Improved database for resources
- ***AUSTRALIAN CAPABILITIES & INTERESTS EXAMPLES***
 - Modular Mining, Leica Geo, Maptex & Micromine offer Mine Management Systems (Truck Despatch Systems)
 - Modular systems installed at NALCO and EMTA, to be installed at Hindustan Zinc
 - Gemcom and Micromine Mine Planning & Geological Software extensively used in India



INDIAN RESOURCE INVESTMENTS INTO AUSTRALIA

- Indian majors are a significant investor into Australian resources
- This trend is expected to increase, though in competition with China and other North Asian countries

- ***SIGNIFICANT INDIAN INVESTMENTS INTO AUSTRALIA***

- Aditya Birla Group : Copper
- Sterlite: Copper
- Oswal: Gas for ammonia plant
- Gujarat NRE: Coking Coal



CONCLUSIONS

- Australia India synergies and connection in resources can only grow
- The resource relation will remain as the most significant driver of bilateral trade relations between the two countries
- Shared traditions of a similar legal system and use of English as the commercial language would always help



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THANK YOU



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