



Chhattisgarh The New Steel Capital State of India

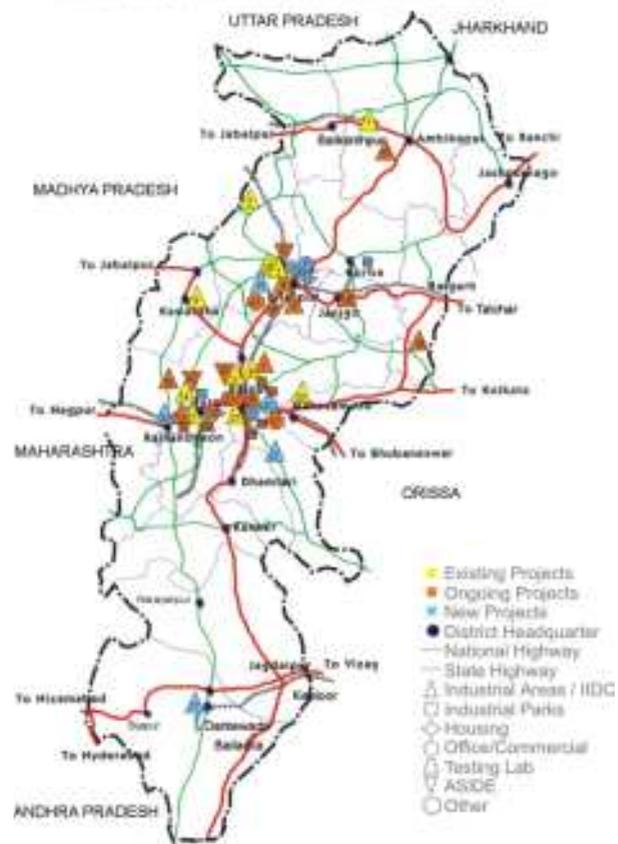
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Chhattisgarh is the richest state in terms of mineral wealth, with 28 varieties of major minerals, including diamonds.

Chhattisgarh, along with two other Indian states, possesses almost all the coal deposits in the country. Also all the tin ore reserves in India are found in Chhattisgarh. The state produces one fifth of iron ore in the country, and one of the best quality iron ore deposits in the world is found in the Bailadila mines in the southern part of Chhattisgarh, from where it is exported to Japan. Rich deposits of bauxite, limestone, dolomite and corundum are found in the state. The state is lucky to have large deposits of coal, iron ore and limestone in close proximity, making it the ideal location for the lowest cost of production.

There is great scope for private participation in the mining sector in Chhattisgarh. The state's Mineral Policy, 2001 has created a conducive business environment to attract private investment in the state, both domestic and international. Procedures have been simplified and there is complete transparency in decision-making. The added advantage is availability of large technically qualified human resources, having trained in tailor made programmes in geology, geophysics, geochemistry, mineral beneficiation, mining engineering and environmental science. The state is ensuring a minimum lease area with secured land rights so that investors can safely commit large resources to mining projects. For

Industrial Infrastructure in Chhattisgarh



surmounting the long-drawn out process of getting mineral-related leases, at the state level, quick processing of applications is given top priority. For major minerals under the Mines & Minerals (Development & Regulation) Act, where approvals are required from Government of India, the State Government would help in strong advocacy to get such approvals quickly.

COAL

In the state of Chhattisgarh, coal contributes about 80 percent of the government revenue. There are coal deposits worth 41,442 million tons in the state, which accounts for 16.36 percent of the total deposits in the country. The contribution of Chhattisgarh so far as production is concerned in the country is 18.08 percent, which is second in the country. In 2006-2007, the coal production in the state stood at 832.45 lakh tons worth Rs. 5017.74 crores. And in 2007-2008, the total coal production was 603.38 lakh tons. Most of the state's coal is used by cement and power companies.

IRON ORE

There are deposits of finest iron ore at Bailadilla mines and Rajhara mines. The state holds 2731 million tons of iron ore deposits, which is about 18.67 percent of national iron ore deposits. However, the state contributes 16.20 percent of total iron ore production. In the national level, the state ranks third. Iron ore is excavated from Rajnandgaon, Durg, Kanker and Dantewada. In the year 2006-07, the

production of iron ore was 288.11 lakh tons. However, for 2007-2008 production was 206.78 lakh tons. NMDC produces iron ore for PSU Steel Plants. The iron ore from Nandgaon and Kanker goes to private steel producing units.

BAUXITE

About 148 million tons of bauxite deposit is available in Chhattisgarh. It contributes 4.50 percent of total deposits of India. So far the production is concerned, Chhattisgarh's participation stood at 9.48 percent. In the year 2006-07, 15.93 lakh tons of Bauxite was excavated and in 2007-08 it was 14.13 lakh tons. Bauxite excavated in Chhattisgarh is used in BALCO and Hindalco. Bauxite minings are in Kabirdham and Surguja district.

LIME STONE

All sorts of limestone are found in Chhattisgarh and has reserves of approximately 9038 million tons, which is 5.15 percent of national deposit. The state's contribution from limestone production is 9.15 percent. In the year 2006-07, 150.11 lakh tons of limestone was unearthed, which is worth of Rs. 227.85 crore. In the year 2007-08, the production of limestone was 106.76 lakh tonnes. Availability of limestone paved way to establish cement producing plant. Most cement majors like Lafarge, Holcim Ambuja, Century, Grasim, Ultratech, ACC have their production unit in the state and many more are in pipeline.

DOLOMITE

In Chhattisgarh, the stock of dolomite is 847 million ton, which is 11.24 percent of national stock. The state is the second largest dolomite producer in the country. In 2006-07, the state produced 10.93 lakh ton of dolomite, which was valued RS 25 crore. For 2007, the production of dolomite was 8.20 lakh tons. Dolomite is used in steel plants. The dolomite dug up from Bilaspur is used in Bhilai Steel Plant. It is exported to other states also.

DIAMOND

This is the most talked about mineral which is found in the state. In Raipur district (under Mainpur block) the mother rock 6 Kimberlite pipes were invented at Behradih, Pailikhand, Jangda, Kodomali, Kosambuda and Behradih temple area. Diamond was found after experiments from the raw materials found at Behradih and Pailikhand. Private companies have found diamonds in other district too.

TIN ORE

Tin is useful for strategic importance. Of the total availability of tin ore in India, Chhattisgarh accounts for 37.69 percent. Tin ore deposit is found in Dantewada district of the state. CMDC excavates the Tin ore. In the year 2006-07 total production of Tin was 103338 kilogram worth Rs. 188.00 lakh. In the year 2007-08 (upto the month of Dec.07) the production of Tin ore was 35901 kilograms. The Tin ore is collected through cooperative societies or tribals.

Apart from this there are deposits of Corundum,

Alexandrite and garnets too. Garnet mineral is found in Gariaband tehsil of Raipur district. Corundum is found in Dantewada especially in Bhopalpatnam tehsil.

Fresh stocks of iron ore, coal and bauxite have been discovered by the Mining department of state of Chhattisgarh. Survey was conducted by Department of Geology and Mining. Approximately 40 million tons of coal reserves in Raigarh district was found while finest quality of iron ore reserves of 20 million was detected in Kawardha (Kabirdham district). 1212 square kilometre of land of the state was surveyed in the year 2007-08. It brought very good result with coal in northern part of state especially in Raigarh while iron ore was found in southern forested belt. iron ore deposits were found in Kamalur, Gondapal, Pendhwar and Masodi villages of Dantewada district which is nearest to Bailadila hills known for the finest and huge iron ore deposits.

In Kanker district iron ore reserves have been located in Taroki, Tumapal and Hartarai villages. Bauxite was found in Mainpat in Surguja. Sterlie group controlled BALCO mines at Mainpat is already in operation here.

The state is also encouraging establishment of a gems and jewellery park to attract new investment in the sector. Chhattisgarh has the right geological set up to host a number of economic mineral deposits. It comprises parts of the Bastar and Singhbhum cratons that are surrounded by the Middle Proterozoic circum mobile belts and major rifts.

The other intra-cratonic supra-crustal belts include rocks of the Middle to Upper Proterozoic, Carboniferous, Permian, Cretaceous and sub-Recent to Recent periods. The area has observed multiple major tectonic and thermal events of various episodes. The rock types of principal metallogenic and mineralogenic episodes are prevailing in the state, which confirms the high potential for the search of new mineral deposits. Simply put, such geological environment is conducive for the formation of various mineral deposits of excellence.

Placer diamonds in the state led to the discovery of proterozoic diamondiferous kimberlites in Mainpur, Raipur district, which invited global attention. Further kimberlite





discoveries in Tokapal, Bastar have added another potential diamond field. It seems that in the non-coal areas, Chhattisgarh is nestling atop the world's largest kimberlite area. Eight blocks have been demarcated for diamond exploration in the state, and are on offer. Eight international companies have already applied for reconnaissance permits for diamond, base metal and gold deposits. Chhattisgarh's potential diamond mines would emerge in the top bracket of the select group of 22 economical diamond mines in the world, once full production starts.

Apart from diamond, four blocks of gold exploration and five blocks of base metal investigation have been demarcated. Deposits of Alexandrite, one of the rarest gemstones, are found in Deobhog area of Raipur. Workable deposits of Corundum are widespread in South Chhattisgarh. Corundum includes semi-precious varieties of Ruby and Blue Sapphire, and possibilities of finding precious varieties exist as well. Other semi-precious minerals like Beryl, Garnet, Amethyst and Rock Crystal are found in other parts of the State.

The State's Chhattisgarh Mineral Development Corporation (CMDC), singly or in joint venture, undertakes scientific exploration, commercial exploitation and viable trading of minerals in the state. CMDC welcomes partnerships with national and international private sector mineral companies, so that the natural wealth of the state is translated more efficiently into prosperity for its people. For Chhattisgarh, preferred investors will be those that, *ceteris paribus*, come into the State with a plan to add value with downstream industries, and such investors would have priority in sanctioning of mining lease and prospecting lease. Those who set up export-oriented mineral based units in the State would be equally preferred investors. All such mining industries will benefit from the incentives offered to all other industries.

Chhattisgarh is poised to become the power hub of India.

The abundant availability of coal ensures constant supply of raw material for future thermal power projects. State's Energy Policy endeavours to provide electricity to all

villages by 2007 and all households by 2009 and to encourage private participation in power production.

Chhattisgarh Government actively assists private power producers to set up power projects in the state. State Government has created the Renewable Energy Development Authority (CREDA) for development of renewable sources of energy.

Chhattisgarh Biofuel Development Agency (CBDA) has been setup to take up an ambitious programme for development of Bio-Diesel in the state.

More than 36 MOUs signed for establishment of power plants to generate 24,650 MW power with proposed investment is Rs.1,08,060 crores.

Key Players in Chhattisgarh :

Bhilai Steel Plant (BSP)

Steel Authority of India is India's largest steel producer and it has a steel plant at Bhilai. BSP recorded its best ever saleable steel production of 4.428 million tons. It is India's sole producer of rails and heavy steel plates.

The modernisation and expansion of BSP has been approved "in-principal" by SAIL Board in April 07 at an indicative cost of Rs. 11,262 crores (Rs. 8328 cr. for modernization/expansion and Rs. 4137 cr. for sustenance), net of CENVAT based on 4th quarter. The modernisation and expansion of BSP has been planned to be completed by Dec. 2010.

National Thermal Power Corporation (NTPC), Korba

National Thermal Power Corporation is India's largest power utility and the sixth largest thermal power generator in the world. In 2003-04, the company had an installed capacity of 19.4 per cent in India and produced 27 per cent of total electricity generated in the country.

One of its largest plants, with an installed capacity of 2,100 MW is located at Korba in Chhattisgarh. NTPC is currently implementing India's largest coal based electricity plant at Sipat in Chhattisgarh. The plant will have an installed capacity of over 3,000 MW and is expected to cost over US\$ 1,800 million.

National Mineral Development Corp. (NMDC), Bailadila

National Mineral Development Corporation is India's single largest iron-ore producer and exporter. It currently produces 15.75 million tons of iron-ore from its three fully mechanised mines in Chhattisgarh.

A public sector enterprise, NDMC currently operates two mines in Bailadila in Chhattisgarh. iron-ore from this region is known to be super high grade having over 66 percent iron content, free from sulphur and other deleterious material and the best physical properties needed for steel making.

To meet the growing demand for iron-ore, the company is planning to open new mines in the Bailadila sector and a new iron-ore mine at Kirandul in Dantewada district. NDMC is the largest exporter of iron-ore in the country.

Coverstory

Bharat Aluminium Company Ltd. (BALCO), Korba

Bharat Aluminium Company is one of the largest producers of aluminium in India.

Balco has two working units - an integrated Aluminium complex situated at Korba in Chhattisgarh and the second in West Bengal at Bidhanbag.

Till 2001, the government divested 51 per cent of its equity and management control in favour of Sterlite Industries (I) Ltd at a cost of US\$ 123 million. Today, BALCO has an integrated aluminium plant with captive bauxite mines, a captive power plant, refineries and smelters.

BALCO's plant at Korba in Chhattisgarh produces 100,000 tons of aluminium every year. Its captive power plant has a capacity of 270 MW to meet its own requirement.

Currently, BALCO is executing a US\$ 863 million expansion plan to increase its aluminium production capacity from 100,000 ton per annum to 345,000 ton per annum. It is also setting up a 540 MW electricity generation plant for captive consumption. Balco has proved its mettle by developing and supplying special aluminium alloys to the nation's Intermediate range ballistic missiles Agni and surface missiles Prithvi.

Jindal Steel & Power Ltd. (JSPL), Raigarh

Jindal Steel and Power Ltd, part of the Jindal group, is among the largest coal-based sponge iron manufacturers in India. It has a 24 per cent market share in this product segment. JSPL also sells electricity to the Chhattisgarh State Electricity Board.

JSPL has the world's largest coal-based sponge iron plant at Raigarh in Chhattisgarh with an installed capacity of 6,50,000 MPTA. JSPL's growth plans include expanding the finished steel making capacity to 2.9 million ton per annum by March 2006. A US\$ 270 million project envisages setting up of a coke oven battery and a sinter plant as supporting facilities.

The company also plans to set up a 1000 MW power plant.

ACC Ltd, Jamul

Associated Cement Companies is one of India's largest cement manufacturing companies, with a cement production capacity of 16 million tons per annum.

Apart from cement, ACC is also India's largest refractory manufacturer and supplier, the largest research and consultancy organisation in the Indian cement sector, and a pioneer in the area of advanced materials. ACC has a cement plant with 1.58 million tons capacity at Jamul, at Korba district. ACC's gross revenues stood at INR 7977.12 crores (2007).

Lafarge India, Sonadih

Lafarge India is a part of the Lafarge Group, the world's leading cement and construction material company.

Lafarge India has a total cement manufacturing capacity of 5 million tons per annum.

In Chhattisgarh, Lafarge has two cement manufacturing

plants at Sonadih and Arasmeta with a capacity of 2 million tons per annum. Lafarge India plans to invest US\$ 70 million for setting 50 MW coal-based captive power plants for two of its units.

It also plans to set up a railway siding for its plant at Sonadih in Chhattisgarh, which will connect it with Bilaspur railway station.

Tata Steel

TATA plans to establish its steel plant of 5 million tons in Bastar District with an investment of Rs. 10,000 crores.

Essar Steel

ESSAR plans to establish a steel plant of 3.2 million tons in Dantewara District with an investment of Rs. 6,000 crores.

IFFCO

IFFCO is set to establish a 1000 MW Power Plant with an investment of Rs. 5,000 crores in Surguja District.

Chhattisgarh has a strong base of metal industries. A large number of iron & steel, power and cement plants already exists. A large number of MOUs have been signed recently. To cater to the ever increasing demand for downstream products a Metal Park is being setup near Raipur.

CONNECTIVITY

Rail

Railways have an important role in industrial development of Chhattisgarh as they help to transport large quantities of coal, iron ore and other minerals within and outside the state. Recognising the potential for mining and metal industry related traffic in the state, the Indian railways established a new Railway Zone named 'South-East Central Railway' with its headquarters at Bilaspur in Chhattisgarh.

The ongoing new projects will improve Chhattisgarh's integration with the national railway system and enhance the competitiveness of industries located in Chhattisgarh.

The length of rail network in the state is 1,108 kms, while a third track has been commissioned between Raipur and Raigarh. The state is well connected to all major cities of the state.

Air Connectivity

Raipur is linked by regular flights with New Delhi, Mumbai, Kolkata, Bhubneshwar, Nagpur, Indore, Ahmedabad. The state currently has one airport at Raipur with night landing facility and airstrips at Bhilai, Bilaspur, Korba, Raigarh, Jagdalpur, Ambikapur, Jashpur Nagar and Sarangarh. Development of air network within the state is on the cards.

