

The coal sector: fuelling economic growth and testing India's ability to reform

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 '... COAL WILL REMAIN THE DOMINANT FUEL TO 2040, WITH DEMAND DOUBLING OVER THE PERIOD.'

Coal is fuelling India's economic growth. In 2012, it accounted for 45 per cent of total primary energy demand and 72 per cent of generated electricity, making India the third-largest coal consumer in the world (*IEA Medium-Term Coal Market Report*, 2014). Energy demand in India is set to more than double from 2012 to 2040. Despite substantial investments in other energy sources, especially in renewables, coal will remain the dominant fuel to 2040, with demand doubling over the period.

This dominance is in large part due to India's vast proved coal reserves – the world's fifth largest (*BP Statistical Review*, 2014). Domestic production was 605 million tonnes (Mt) in fiscal year 2012/13 and is expected to increase to 736 Mt by 2019.

However, the actual economic viability of reserves and their suitability for high-tech applications, especially in the

power and steel sector, remain debated among experts. For example, untreated Indian coal has only limited suitability for super-critical power plants that are to become the norm for all coal-based generation starting from 2017. Consequently, the share of imported coal will increase sharply over the next decades. In FY 2012/13, India imported 135 Mt (22 per cent of total demand). Imports are expected to triple to 2040 and import dependency to rise to nearly 40 per cent (all data from *IEA World Energy Outlook*, 2014; *IEA Medium-Term Coal Market Report*, 2014). Given coal's crucial role, the sector faces some important challenges that have implications for India's economic development.

Status of India's coal sector

One such challenge is the structure of the Indian coal sector, which acts as a constraint on production. When India opened its economy in 1991, substantive reforms were undertaken in the energy sector, but these bypassed coal. Nationalized in 1973, the coal sector is today dominated by

three state-owned companies, one of which, Coal India Limited (CIL), accounts for over 80 per cent of domestic production. The vast majority of production is obtained through opencast mining and this has inherent environmental and social problems.

Observers are sceptical about whether domestic coal production can meet future demand, as CIL has repeatedly failed to meet its production targets. The company has limited access to state-of-the-art mining technologies, and production is highly labour intensive. Its productivity per employee, measured in tonnes per year mined, is less than one tenth that of its Chinese competitors. This is not entirely CIL's fault as the process of land acquisition and of inter-ministerial coordination for obtaining statutory clearances (such as environmental clearances) can take several years. However, the operational performance of CIL is also a reflection of the larger challenges preventing the Indian coal sector from reaching its potential.

Limited private mining for self-consumption is permitted, and accounts



for about 6 per cent of domestic production. Any surplus production from these so-called captive mines must be sold to CIL, as coal trading is not permitted. There is no sector regulator and CIL is in charge of substantial operational, regulatory, and commercial functions, including pricing. The IEA World Energy Investment Outlook 2014 projects that India will need to invest US\$53 billion from 2014 to 2035 in mining alone, and another US\$41 billion in transport links. This amount is unlikely to be raised by CIL alone, even if all revenues from the recent 10 per cent sale of the Government's stake in CIL were to be reinvested exclusively in the coal sector. (The sale brought in revenues of about US\$3.9 billion.) Strategic partnerships with foreign companies would not only facilitate investment but also the flow of technology, expertise, and management skills that is urgently needed.

The Government is preparing to restructure CIL and three options are under discussion. The first would be to separate CIL's subsidiaries into large independent regional companies. CIL would cease to be the holding company. The second option would favour a gradual transition towards the creation of several small independent entities. CIL would remain as the holding company during the transition process. The third option would favour internal organizational changes of CIL without any fundamental changes to the corporate structure. Whichever option is chosen, it will be critical to bring employees and labour unions on board and make them constructive partners in this important undertaking.

'Coal Gate': The CAG report and Supreme Court decision

Some of the most urgent challenges facing the coal sector result from decisions made long ago. In 1993 the Government amended the Coal Mine (Nationalization) Act, 1973 to allow

private mining for captive use by end-users in the power, iron and steel, and cement sectors, and for coal washing. This decision was driven by the urgent need to ramp up coal production in a constrained financial and regulatory environment to meet growing demand.

India's Comptroller and Auditor General (CAG) issued a report in 2012 that examined all the coal block allocation processes that had taken place since 1993, and the process of monitoring the operational performance of allocated blocks. The report noted that the process of allocating blocks was riddled with regulatory shortcomings. No transparent and objective allocation criteria had been developed; the procedure for allocation changed frequently and lacked transparency; and there was no comprehensive record keeping of the meetings in which mines were allocated.

The CAG also noted the almost complete absence of physical monitoring to ensure that promised investments were made in the timeframe agreed and to verify actual progress versus progress reported on paper. Consequently, out of a total of 218 allocated mines since 1993, only 42 are operational today and another 32 are sufficiently advanced to start operation soon. However, as in the case for CIL, a considerable number of delays are due to the time-consuming process of land acquisition and obtaining statutory clearances.

The CAG argued that the Government's actions had caused a financial loss to the country of over US\$30 billion (albeit on rather debatable assumptions). 'Coal Gate', as it became known, was one of the key factors for the defeat of the incumbent Government in general elections in 2014.

Based on public interest litigation following the CAG report and after a two-year long investigation, the Supreme Court of India issued a

verdict in September 2014 cancelling 204 blocks allocated since 1993. The verdict confirmed that the allocation of blocks was done arbitrarily, lacked transparency, and hence was both illegal and unconstitutional.

Coal block re-allocation

The Supreme Court decision has thrown a complex challenge at the Government, which has been given a six-month period to come up with an action plan, after which the coalfields and all related assets, including land, statutory clearances, and infrastructure, are to be transferred to the Government/CIL.

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Prolonged uncertainty about the future of the 204 mines will likely add to the existing shortage of coal (especially for fuelling the power and steel sector) with negative implications on overall economic activities. India is already facing power shortages; additional disruption in supply would further aggravate the situation. Impacts from the cancellation of the coal blocks will also trickle down to affect the construction schedule of power, steel, and iron projects that had been linked to the de-allocated blocks. Several project promoters have already expressed concern that financial institutions might either stop loan disbursements or become reluctant to provide additional loans. And the financial institutions might face an increase of non-performing assets in their portfolios.

At the downstream end, coal users might now look overseas, leading to a faster increase in imports than expected, inflating the import bill. Equally, the judgement could result in increased investment in overseas coal mining projects. Both would aggravate Indian infrastructure bottlenecks along the value chain, ranging from ports to railways and

related facilities. Also, investments in India that support economic and social development and, more importantly, create employment, could be lost.

Already NTPC, India's largest power producer, has announced plans to import an additional 7 Mt of coal during the ongoing fiscal year. Increased imports will also impact end-user prices and the question is who will carry the burden: producers or consumers? Equally, it is unclear how any increase in coal prices, resulting from imports or higher domestic production costs, might impact the viability of new projects in the iron and steel sector.

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The Government reacted quickly to the Supreme Court decision by issuing the Coal Mines (Special Provisions) Ordinance, 2014 last November; this aimed to introduce coal sector reforms and to ensure a smooth transition so that the mines can continue operations. This is also important from an employment perspective as the jobs of workers at de-allocated mines would otherwise be in jeopardy.

The Ordinance proposes auctioning off at least 74 blocks that are either already operational or ready to start operating in a first phase by mid-February 2015. Eligible bidders will need to be engaged in the production of one of a number of so called 'specific end use' industries: iron and steel, power (including captive power), and cement. The previous owners of the blocks are free to bid unless convicted of irregularities in the original allocation process, and after having paid a levy laid down by the Supreme Court on each tonne of coal produced. The Government has identified an additional 25 mines for the first phase. The target is to complete the first bidding round by March 2015,

to comply with the deadline set by the Supreme Court.

The ordinance also includes provisions to allow the private sector to mine and trade coal in India. Not unexpectedly this has provoked opposition from coal sector unions, who called for a five-day strike in early 2015. The coal minister himself intervened and agreed to set up a panel consisting of senior officials from the ministry and CIL, together with union representatives; this resulted in the strike being called off early. Open and transparent communication with all stakeholders will be important for the Government to succeed in taking the Coal Mines (Special Provisions) Bill, 2014 through both Houses of Parliament. The Bill has already been approved by the lower House of Parliament, where the Government holds an absolute majority.

Approval in the upper House of Parliament, where the Government does not have a majority, is far from certain. Opposition across parties appears to be resisting the proposed reforms, wanting to keep the coal sector firmly under government control.

It is critically important to win over the opposition as the consequences of non-approval of the Bill (prolonged uncertainty about the 204 mines and exclusion of private mining in the coal sector) could have repercussions on India's economy for decades to come.

What next?

The overall structural problems in the coal sector will not be easily redressed. However, several steps can be taken by the Government.

First, closer cooperation with the governments of those Indian states where mining is undertaken. This must include a more even sharing of benefits from coal mining, and also an increase in the responsibility of state governments for the timeliness of land acquisition and

other state-level statutory clearances, and for increased oversight of social and environmental impacts. Such an increased level of accountability for the states in the future could be considered as part of the restructuring of CIL.

Second, upgrading mining technologies to bring India up to international standards. This will not only result in operational improvements but should also improve both safety standards and working conditions of miners and better protect the local and (eventually) global environment. Coal currently accounts for 70 per cent of total Indian CO₂ emissions and for 94 per cent of CO₂ emissions in the power sector. Rapid deployment of more efficient coal-fired power plants will depend on the supply of coal having the required specification.

Third, re-introduction of the Coal Regulatory Authority Bill into Parliament. A Bill with the purpose of establishing an independent sector regulator had already been introduced but lapsed once parliament was dissolved in 2014, due to elections. The approval of such a Bill would send a strong signal that India is ready to further liberalize its coal sector. The Government has already announced that it is considering the re-introduction of such a Bill.

And finally, development of a much more conscientious approach to mitigating environmental degradation of mining areas. Whether India's largest natural resource will be exploited by the public or the private sector, for captive use or for trading purposes, a thorough modernization of the mining industry along the entire value chain is urgently needed. The same goes for a much stricter enforcement of environmental standards once the coal has been extracted. No company, whether public or private, should be allowed to leave behind an ecological wasteland. Rehabilitation of the affected



populations and the environment before, during, and after mining must be a priority. Other countries that have transformed their coal sectors successfully have shown what can be achieved and how coal mining can be made more environmentally and social acceptable. India can benefit from their experiences.

There is no doubt that India will continue depending on coal to propel its economic and social development over the next decades. Hence, there is urgency in addressing the challenges in a comprehensive manner, bringing all stakeholders on board. The Government has already taken important steps in the right direction and hopefully it will

be supported in this critical endeavour across the political divide.

The author works as South Asia Programme Manager at the International Energy Agency (IEA). The content of this article reflects the author's personal view and does not necessarily represent the views of the IEA Secretariat or the IEA Member countries.

