

## The Coal Saga: the Imminent and the Feasible

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It is no longer possible to have a coal sector that is not updated to the needs of the times. Can we make changes that through rules, and given the constraints, minimise the discretion of personalities and carry us towards a more respectable outcome? Here are some proposals.

If reviving growth is a top priority, then fixing the power sector, and thus as a corollary the mess we face in coal deserves an imminent primacy in the list of policy decisions that need to be fast tracked. "You may think that labour laws or even lacking basic infrastructure are responsible for stifling industry, but let me tell you that the single biggest reason is power. I run my plant on diesel, it is not scalable at all," a budding entrepreneur from Bihar told us. As we found out in our interactions, he is definitely not alone in the thirst for power<sup>[1]</sup>.

The political economy of coal is not a secret. Unfortunately, the dilemmas of design are largely absent from the regular discourse on coal. As India grows, her energy and coal needs will soar. It is no longer possible to have a coal sector that is not updated to the needs of the times. Can we make changes that through rules, and given the constraints, minimise the discretion of personalities and carry us towards a more respectable outcome? This is not so much a question of law, as much as a question of constitution and design.

Typically, we have met our coal needs through domestic production. Unable to keep pace with the rising demand, we have been forced to import coal. In the year 2013-14 against an expected requirement of around 770 million tonnes, the domestic production will hover in the neighbourhood of 605 million tonnes - giving a projected shortfall of 165 million tonnes<sup>[2]</sup>. Given business as usual, the gap is only expected to increase through the years.

### A Mine Full of Mess

Though the problem at hand is identifiable, there are myriad issues preventing a solution. First, there are many parties with not necessarily aligned incentives. These include Coal India Limited (CIL), the minority shareholders in Coal India, the coal ministry, the power ministry, the Central Electricity Authority, the iron and steel lobbies, private coal mine

owners, private power plant owners and local micro players. The much publicised spat between Coal India and the National Thermal Power Corporation (NTPC) is a case in point. Second, rights are not well specified. Coal India has signed fuel supply agreements with public and private sector plants, which it is not being able to honour with the current levels of domestic production<sup>[3]</sup>. Third, imported coal is considerably more expensive than domestic coal even after controlling for its higher calorific content. The dual price creates difficulties because it implicitly confers a subsidy on those who have a stronger claim to Coal India's domestically produced coal.

This further raises a number of issues. Should we have two prices or one? If a common price, should it be regulated or market driven? Fourth, the end users of most of the private coal mines are specified. Even if you mine coal as a private entity, who you can legally sell the bulk to is predetermined. In addition, any surplus coal has to be sold back to Coal India and that too at a set price, destroying incentives for legal sales. This makes the market artificially regimented. There is mounting anecdotal evidence that a black market has thus developed<sup>[4]</sup>. Fifth, the lack of a planned supply chain is a roadblock. The existing railway network is overburdened. It is difficult to have a nationwide spot market in the traditional sense because transportation is non-trivial both logistically and monetarily. Sixth, how should coal blocks be allocated? The issue is extremely crucial and has been a source of much controversy. Finally, what about Coal India? It is the chief miner, setter of domestic prices and organiser of e-auctions for surplus coal. Moreover, in order to ensure a steady supply of coal in India (legally), one has to mandatorily acquire a coal linkage, which is a monopoly under Coal India, rendering the organisation too big to operate.

## **Cleaning up and Jump-starting**

So, where does one start? Given the constraints of space, we cannot possibly list an all encompassing remedy. But, even a modest attempt deserves a breakup of issues into: i) pricing and entitlements, and ii) allocation. Both should be dealt with separately, but immediately.

Dual pricing is a recipe for distortions and inefficiency. The price of coal should be determined by the marginal source of supply, that is, if you were to go and buy an extra unit of coal in the market, where would you get it from and how much would you pay? For a variety of reasons, including Coal India's inability to ramp up production in line with demand, the marginal source of supply today, and for the foreseeable future, will be imports. Since imported coal is currently more expensive than equivalent domestic coal and the price of domestic coal is artificially set, there are three clear pricing options- price pooling between domestic and imported price; conducting localised auctions in different parts of the country; taking the import parity price as a single base price.

The problem with price pooling which has been floated by some parts of the government is that it will conceal the marginal cost of imported coal. It is based on a desire to split the

difference and may end up satisfying no one. Also, Coal India's ability to import large quantities of the mineral is questionable. Blanket centralisation is likely to be inefficient and cause delays.

Conducting localised auctions is the best possible mechanism. Since coal varies in quality, is available domestically and through imports, and available from mines across the country, a collection of regional spot markets or transactional platforms, as several experts call them, will be an ideal architecture towards aggregating all possible information and establishing fair and market driven prices.

Alas, we are not quite there yet. These transaction platforms are sophisticated market making mechanisms that we must endeavour towards. But according to our analysis, not imminently feasible; both because of the political economy of monopoly rights possessed by Coal India and the infrastructure it demands. Thus, the third option, a single import parity price for domestic coal is realistically the way to go. It fits the criterion of determining price through the marginal source of supply. It will allow a faster convergence towards market prices and make it easier to determine necessary subsidies.

Having a single price, pooled or import parity will generate a windfall for Coal India on the one hand, and on the other increase input costs for power plants. In a straightforward transfer, the latter should be compensated for the gains by the former. The windfall should be kept by the central government as dividends and distributed as a subsidy to entities with prior contracts with Coal India to soften the price transition. The composition of subsidies will depend on the promises Coal India has made. The old agreements for example will require greater subsidies than the new ones. A transparent metric should not be difficult to work out. Respecting property rights is of the first importance.

A valid criticism of the import parity price supported by subsidies can be that we are proposing to move from one centralised mechanism to another semi-centralised one. While the criticism admittedly has bite, it is only a second best methodology, for note, we are trying to solve the problem with immediacy under considerable constraints. Over time, the goal is to move towards a price discovered by regional auctions. A simple transaction platform with regulatory oversight and restructuring of Coal India (described below) will pave the way for auctions<sup>[5]</sup>.

Setting the price at import parity has another advantage, that of streamlining logistics. A coastal power plant will have no incentive to buy domestic coal. Similarly, a price close to being market driven will prompt inland plants to seek the closest supplier rather than the most favorable coal linkage. And, those coal buyers who are not happy with the quality and cleaning of the coal that Coal India supplies, can now choose to buy from abroad.

Next, the allocation of coal blocks is a humongous issue. Since coal is a mineral of utmost salience in India's growth story, and resource raj as we know now is the new form of elite capture that promises unprecedented gains, any proposed mechanism cannot be guaranteed

to be devoid of malpractice. However, we must try! The ideal methodology is auctioning of coal blocks.

What are the constraints that the auction mechanism must internalise? First, a significant proportion of coal mines lie under land that needs clearances- land acquisition, forest and environment, etc[6]. Second, an estimate value of the bed of the mineral needs to be constructed. Third, payment methodology post auction needs to be agreed upon- upfront or revenue/profit share. Finally, points two and three above are highly sensitive to volatile global energy and coal prices and the fact that the mechanism needs to be flexible enough to incorporate the length of the contract which is typically 20 to 30 years.

In an ideal world with unlimited state capacity, genuine clearances[7] would not be an issue and revenue sharing would ensure flexibility to any foreseeable contract incompleteness. Clearances are of course a major impediment. Given the modest monitoring ability of the government on the ground, revenue sharing is far from ideal. Moreover, no upfront payment means you can sit on the coal mine, wait for its value to appreciate and sell off the block, thus handicapping India's absolutely crucial coal needs. However, all upfront payment takes away flexibility, increases indebtedness and also reduces competition.

Briefly, we propose to rank the coal blocks in order of their readiness to be mined[8]. Payments will be a mix of upfront and revenue share. The upfront payment will be predetermined and the players will bid for the highest revenue share given a minimum reserve share percentage. The greater the readiness of the mine, the larger will be the upfront payment and lower the reserve revenue share percent. The idea is that for blocks with greater readiness and clearer values, most payments should be made upfront so that the private party has an incentive to start mining immediately, while ensuring some royalties through revenue sharing, which provide room to accommodate for global pricing uncertainties[9].

Finally, Coal India needs to be broken down into smaller subsidiaries. While privatisation may not be politically feasible immediately, breaking Coal India could be. Before the nationalisation of coal in 1973 and through the years, there are about seven smaller units that have merged to become Coal India. For efficiency, it could be split again[10].

Sometimes a few missing pieces can sort out a jigsaw of problems. If these identified missing pieces are implemented appropriately, it will provide a key impetus to the so far elusive turnaround of the growth story.

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[1] Bihar has one of the lowest per capita consumption of power in India at 117 kWh. Compare this to say 1663 in Punjab or 1558 in Gujarat. See Press Release by Ministry of Power on 18 May, 2012, <http://pib.nic.in/newsite/erelease.aspx?relid=84201>

[2] See <http://in.reuters.com/article/2013/04/22/india-coal-import-idINDEE93L0AG20130422>

[3] See <http://www.thehindubusinessline.com/economy/cil-can-assure-only-60-supply-to-power-plants/article3496369.ece>

[4] See <http://indiatoday.intoday.in/story/corruption-in-mining-reserves-and-growing-domestic-demand-of-coal/1/217325.html>

[5] The key is to reduce the number of bureaucratic players in the sector and their influence up to the role of sound regulation and increase competition to allow convergence to a market based mechanism.

[6] See for example, <http://indiaenergyforum.org/4th-coal-summit/index.php?page=presentations>

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[7] We use the word genuine carefully because there are several mineral beds under forests, mining those on a cost benefit balance may harm the environment. See, for example, [http://cseindia.org/userfiles/EIA%20forest\\_clearances\\_AAD.pdf](http://cseindia.org/userfiles/EIA%20forest_clearances_AAD.pdf)

[8] Readiness to be mined can be a function of how explored the mine is and how far it has gone in the process of securing necessary clearances.

[9] A more in-depth analysis of the mechanism with numerical examples is available from the authors upon request.

[10] The mechanism for doing this is a topic for another piece, which we will write as a follow-up article.