

Managing Decline of Coal Mining in India

Opportunities and challenges



Decline?

Point of Inflection

- Are tariffs comparable?
- Is affordable power for all feasible without contribution of coal?
- Quality of supply?
- Are we on the cusp of technological breakthrough in storage?

Coal Quantum Conundrum

How much is enough?

- Ministry of Coal has set a production target of 1.5 billion tonnes by 2020
- Industrial growth has slipped; Domestic consumers are not well served; Plant Load Factors have fallen below 60%
- Coal quality has improved; plant specific coal consumption has reduced

Private Sector in Coal Mining

Private Participation

- Private companies are allowed to own a coalmine only for captive consumption
- Private participation is in the form of contract mining – labour cost, equipment utilization and productivity arbitrage
- Turnkey development and O&M contracts are on the rise
- Labour intensity on the decline

Coal Mining Auctions for Power Sector

Reverse bidding yielded forward bids

- Block identified for power sector assessed for cost of coal mining – based on base price of CIL for available coal quality – fixed as ceiling
- Initial price offer – along with technical proposal
- Final price offer – as e-auction
- Reverse bidding - Lower the offer from ceiling, better the bid, till it breached zero.
- Forward bidding thereafter.

Assessing Forward Bids in Reverse Bidding

- Cost of mining ~ Reverse bids = Cost to be recovered through energy charge in electricity tariff
- Foregone costs
- Added premium
- Where will money come from?

Recoveries?

- Camouflage into fixed charge?
- Keep PLF ~ 100%, sell 15% power at merchant rates?
- Use additional reserves in another project?
- Usage of middling and washery reject?
- Depends on coal and power market dynamics!

Sustainability Threats

Financial Feasibilities

- Coal mines auctioned to private companies at aggressive premiums may not be financially feasible
- Deeper desposits, longer gestation periods for development, investments and construction of logistics infrastructure may make proposed mines marginal

Social Challenges

- New mines require large displacements
- Land acquisition and rehabilitation & resettlement have been controversial
- Rising social unrest

Employment and Safety

- Contract mining models have raised issues of exploitation
- Compromise on safety practices with focus on cost control
- Occupational health issues, security threats for non-local workers

Environmental Impact

- The compliance with environmental laws are low
- With a focus on new project development and expansion of existing mines norms are being relaxed
- Air pollution, ground water contamination, discharge of coal beneficiation process water, and such others are likely threats
- Mine closure norms are sketchy

Managing Decline

Right direction

- Within a short time of 3-4 years, coal story has turned from being indispensable to its inevitable decline
- Pace of decline is likely to be slow – PPA & FSA structures; large coal based capacity additions of the recent past
- Electricity tariffs do not differentiate time-of-day and hence, base load assumptions are applied universally for all sources of power

Key Steps

- To accept the inevitability of coal's decline – market driven, not policy driven
- Re-assess coal production targets and shelve projects that may not be needed
- Re-draw the investment plans for railway infrastructure
- Time to declare inviolable forests – prioritize ecology over coal production

Competition in the Market

- Coal sector in India is almost a monolith
- Lack of competitive consequences have led to focus on supplies than on meeting demand
- Is it a time to open up the market? – Perhaps an idea whose time has passed

Conclusion

Concluding remarks

- Coal mining has been at the centre of energy security policy in India
- Market forces have led to inevitability of transition – technological innovation leading to sharp decline in renewable energy costs
- Coal sector needs to review its targets and contain impacts
- Greater private sector participation would have helped avoid policy groupthink.

Sculpture by Issac Cordal in Berlin - “Politicians Discussing Global Warming”





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