AUCTION OF MINERAL RESOURCES

- an anatomy

JANUARY, 2021

FEDERATION OF INDIAN MINERAL INDUSTRIES
FIMI HOUSE, B-311, Okhla Industrial Area, Phase-1, New Delhi - 110 020 (India)
Tel.: +91-11-26814596; Fax: +91-11-26814593/26814594
E-mail : fimi@fedmin.com; Website: www.fedmin.com

AUCTION OF MINERAL RESOURCES

- an anatomy

JANUARY, 2021

PREFACE

India introduced auction for its coal resources in 2010 and for its non-coal resources in 2015 through amendments in the MMDR Act, 1957. Ever since, auction has been hailed as a panacea for all that were coming in the way of resource development. It was acclaimed to be a fair and transparent mechanism to allocate resources, which would encourage competition and generate huge revenues for the State Governments through resource development.

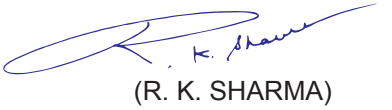
Since the auction regime started, not a single auctioned greenfield block has come into operation. Auction has even halted operations in previously working mines having valid environment and forest clearances. This has resulted in production and job losses, upsetting the socio-economic life of people of the areas where working mines were closed down. For few mines which could start, auction has become a *winner's curse.*

No doubt, the States got revenues (albeit at the cost of production and job losses and absence of socio-economic development), but the nation lost in terms of ever-increasing imports and massive foreign exchange outgo. Auction is an unnecessarily costly way of developing mineral resources. Unsustainably high cost of raw materials is leading to reduced competitiveness of not just mining sector, but all downstream industries, with serious repercussions for 'Make in India' initiative.

Auction has neither served public good nor led to fair allocation of resources. The sole focus to maximize revenues for the States has adversely affected long-term mineral development in the country and socio-economic benefits in mining areas. Auction regime has put the nation back by one generation with uncertain future for the growth of country's mineral resources and continued dependence on ever-increasing imports. Auction did not also prove to be as transparent or fair as was thought.

This has prompted FIMI to make an in-depth study on auctions in India and compare it with auction regime prevalent in other countries. The publication "***AUCTION OF MINERAL RESOURCES – an anatomy***" is the outcome of this study which highlights the severe repercussions of auction on the mineral sector and all its stakeholders. It is high time for India to deliberate whether auction is the right policy instrument for mineral development. Can auction lead to increased mineral production, with focus on deep-seated minerals to reduce import dependency, promote global competitiveness and generate employment opportunities across the mining value chain?

I am sure that this publication will immensely benefit the industry and Government to reorient policies in line with international best practices and adopt appropriate strategies for sustainable growth of Indian mining sector.



New Delhi
12th January, 2021

(R. K. SHARMA)
SECRETARY GENERAL

CONTENTS

I – GRANT OF MINERAL CONCESSIONS

A. Grant of concessions prior to auction regime

1.1. The Mines and Minerals (Development and Regulation) Act, 1957 governs the grant of reconnaissance permits (RP), prospecting licences (PL) and mining leases (ML) in India.

(i) MMDR ACT AS AMENDED IN DECEMBER, 1999

1.2. Following the recommendations made in the B. B. Tandon Committee's Report submitted in January 1998, the MMDR Act was amended in December 1999. Prior to 2015 amendment, the MMDR Act provided:

Reconnaissance Permit (RP)	Prospecting Licence (PL)	Mining Lease (ML)
For a period of 3 years	For a period of 3 years extendable by another 2 years if required.	For a maximum period of 30 years which may be renewed for another 20 years each time.
Maximum area of 10,000 sq.km. for a company in a State (single RP of maximum 5,000 sq.km.)	Maximum area of 25 sq.km. for a company in a State.	Maximum area of 10 sq.km. for a company in a State.

1.3. In February 2000, 100% FDI was allowed in mining sector. Upon successful exploration, an RP / PL holder had the right to mine as well as transfer the concession, at par with best global practices. Following this amendment, there was a spate of applications for RP / PL and almost all the global exploration and mining companies were present in India. This promised to unlock India's true mineral potential, discover world-class deposits, attract investment, technology and create new jobs.

1.4. To make mining more attractive and in tune with international practice, a High Powered Committee, popularly known as Hoda Committee, was set up. Following the recommendations of this Committee on 19th July 2006, National Mineral Policy (NMP) was revised in March 2008. The Policy gave private sector a primary role for exploration and emphasized that:

> *"In order to make the regulatory environment conducive to private investment the procedures for grant of mineral concessions of all types, such as Reconnaissance Permits, Prospecting Licenses and Mining Leases, shall be transparent and seamless and security of tenure shall be guaranteed to the concessionaires. The first-in-time principle in the case of sole applicants and the selection criteria in the case of multiple applicants will be appropriately elaborated. Prospecting and mining shall be recognized as independent activities with transferability of concessions playing a key role in mineral sector development."* ***(para 3.3 of NMP, 2008)***

1.5. This Policy remained only on paper and never saw the light of the day. Further, all the RP / PL applications got stalled and none could reach the next stage due to various reasons, including inaction and delays at State level, reservation of areas for PSUs (after grant of RP / PL to private players) and denial of environment or forest clearance.

1.6. Prior to auction regime in India, 66,477 applications were pending with both Central and State Governments, including 43,025 mining lease applications as on 05.05.2014.

Table – I

Pending applications as on 05-05-2014

Pending applications	State Government level	Central Government level	Total
Reconnaissance Permit	643	15	658
Prospecting Licence	19891	123	20014
Mining Leases	**42861**	**164**	**43025**
Letter of intents (LOIs)	265	-	265
Renewals	2515	-	2515
Total	**66175**	**302**	**66477**

Source: Ministry of Mines and Indian Bureau of Mines

1.7. The reason why such a large number of applications for RP, PL and ML were pending with the State Governments was simply their indifference. Further, though MCR, 1960 provided for a timeframe to dispose of RP, PL and ML applications, the State Governments did not pass any order within stipulated timeframe. Since no order was passed, no cause for action arose with the applicant to file revision application before the Central Government. Consequently, applications remained pending for years. All these pending applications (other than those saved under Section 10A(2)(b) and 10A(2)(c)) lapsed with passing of MMDR Amendment Act, 2015 w.e.f. 12.01.2015.

B. Auction regime in Indian Mining Sector

(i) GENESIS: CAG REPORT AND INTERVENTION OF HON'BLE SUPREME COURT OF INDIA

1.8. While auction for natural resources has been popularly linked to the Hon'ble Supreme Court's judgment dated 2nd February, 2012 in the 2G spectrum case, the origin of auction in case of mineral resources in India can be traced to the Report of the Comptroller and Auditor General of India (CAG) dated 17th August 2012, wherein the CAG observed that inefficient allocation of coal blocks (through means other than open competitive bidding) during 2004-2009 has resulted in a loss of Rs. 1.86 lakh crores to the exchequer.

1.9. The CAG report alleged that the said allocation process was based on Government dispensation and that despite having the opportunity to bring in transparency, the Government did not introduce the process of competitive bidding. It observed that revenue secured from the allottees for allocation was much less than what could have been realized if there was competitive bidding – a presumptive loss to the exchequer.

1.10. Subsequent to a Public Interest Litigation (PIL) filed in 2012, the Hon'ble Supreme Court of India in its judgment dated 25th August, 2014 and order dated 24th September, 2014 declared the allocation of 218 coal blocks made through Government Dispensation route during 1993-2011 as arbitrary and illegal and cancelled the allocation of 204 coal blocks, except for 14 blocks (one of NTPC, one of SAIL and twelve of ultra-mega power projects). The Hon'ble Court held that there was no fair and transparent procedure, resulting in unfair distribution of the national wealth.

(ii) AUCTION OF COAL BLOCKS

1.11. The MMDR Act, 1957 did not envisage allocation of mineral blocks through competitive bidding until September, 2010, when the Act was amended to introduce competitive bidding for allocation of coal and lignite blocks only. On 2nd February 2012, the Government notified the Auction by Competitive Bidding of Coal Mines Rules, 2012 under provisions of the MMDR Act, 1957. Thus the concept of auction of mineral resources was introduced for the first time in Indian mineral legislation.

1.12. For management and reallocation of 204 coal blocks cancelled pursuant to Hon'ble Supreme Court's judgment in 2014, the Government on 21st October 2014 promulgated Coal Mines (Special Provisions) Ordinance, 2014 and subsequently on 30th March, 2015 enacted the Coal Mines (Special Provisions) Act, 2015 under which enabling provisions were made for allocation of coal mines by way of auction. Under this Act, Coal Mines (Special Provisions) Rules, 2014 were notified which provide guidelines for reallocation of cancelled blocks, eligibility and compensation for prior allottees. Further, Coal Blocks Allocation Rules, 2017 repealed the Auction by Competitive Bidding of Coal Mines Rules, 2012 for allocation of coal blocks.

1.13. As per Section 11A(1) of the MMDR Act, 1957, RP, PL-cum-ML or ML for coal may be granted through auction to private companies besides PSUs and Government companies for own consumption, sale or otherwise. Further proviso of Section 11A(3) stipulates grant of RP, PL-cum-ML or ML through allotment to Government companies or PSUs and the companies who have been awarded power projects on the basis of competitive bids.

(iii) INTRODUCTION OF AUCTION PROCESS IN NON-COAL MINERALS

1.14. For non-coal minerals, Section 10B and 11 of the amended MMDR Act in January, 2015 introduced auction as the sole method of grant of non-coal concessions (ML and PL-cum-ML). Subsequent to the amendment of MMDR Act, 1957 in 2015, the Ministry of Mines notified the Mineral Auction Rules, 2015 on 20th May, 2015 and the Mineral (Auction) Amendment Rules, 2017 on 30th November, 2017 besides other rules framed under subordinate legislation.

1.15. The Act was again amended in May 2016 for definition of lease area and to allow the transfer of captive leases not acquired through auction.

1.16. The Mineral Laws (Amendment) Act, 2020 amended MMDR Act, 1957 to allow transfer of statutory clearances / approvals to the successful bidders of expiring mines for a period of 2 years.

———

II – AUCTION OF COAL BLOCKS – AN ANALYSIS

A. Auction in action

2.1. In 2014, the Hon'ble Supreme Court of India cancelled the allocation of coal blocks made between 1993 and 2011, declaring them arbitrary and illegal and cancelled allocation of 204 out of 218 coal blocks. Blocks exempted were Tasra coal block allocated to Steel Authority of India Ltd, Pakri Barwadih coal block allocated to National Thermal Power Corporation and 12 coal blocks allocated for Ultra Mega Power Projects.

2.2. With a view to ensure continuity in coal production in the country, the Parliament passed the Coal Mines (Special Provisions) Act, 2015 (CMSPA) in March 2015. This enabled the Government to allocate 65 coal blocks by October 2015 through auctions and allotments.

2.3. Based on CMSPA, the Ministry of Coal started the process of re-allocation of the 204 coal blocks containing about 43 billion tonnes of coal reserves[1], whose allocations had been cancelled by the Hon'ble Supreme Court. Under CMSPA, the Central Government has to decide which blocks are to be auctioned or allotted in each tranche.

2.4. CMSPA classified the mines whose allocations were cancelled into three Schedules:

- **Schedule I** was the master schedule, containing list of all the 204 cancelled mines / blocks.
- **Schedule II** had 42 coal mines / blocks, which were producing / ready to produce.
- **Schedule III** consisted of 76 blocks. The Government could add blocks to Schedule III from Schedule I through a notification. (Schedule III blocks were at advanced stage of their statutory clearances).

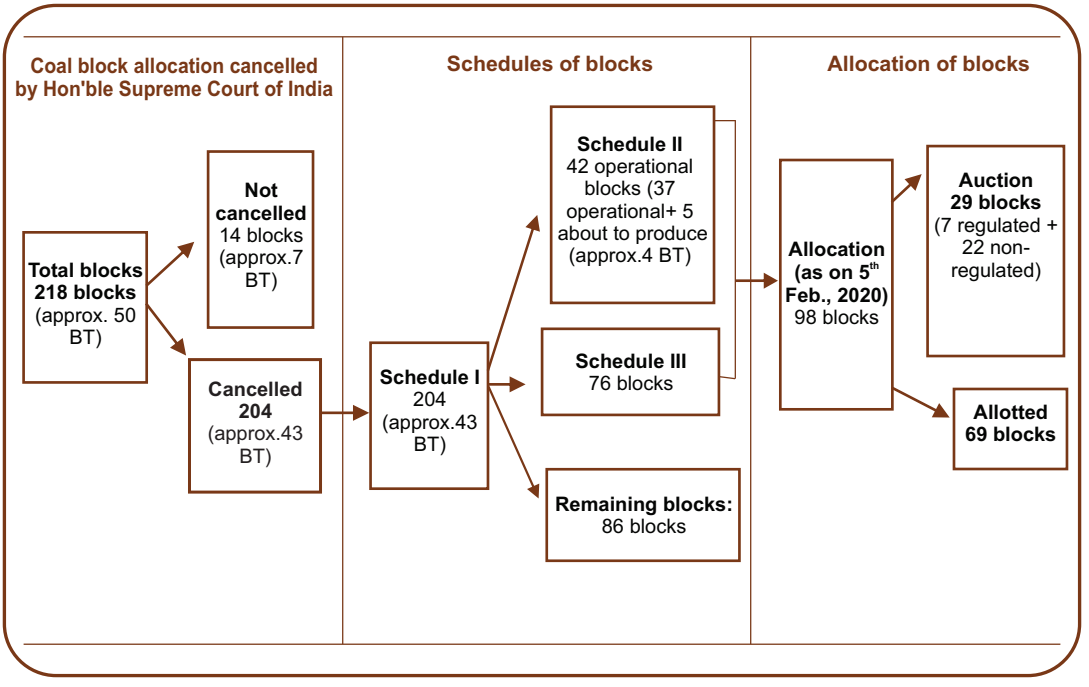
[1] In total, blocks with around 50 billion tonnes (BT) of coal reserves were allocated between 1993 to 2011, out of which allocations of 14 blocks with about 7 BT geological reserves were not cancelled by the Hon'ble Supreme Court.

2.5. The Government claimed that the process of allocations would achieve objectives such as[2]:

- ❖ Providing a rich revenue stream to coal-bearing States through the new allocation process[3];
- ❖ Reducing electricity tariffs through adoption of a reverse bidding methodology for the power sector[3];
- ❖ Enhancing competition in the sector through an open bidding process; and
- ❖ Providing a transparent mechanism for coal block allocations.

Chart – I

Status of coal block allocation cancelled by Hon'ble Supreme Court of India



Source: Compiled from Hon'ble Supreme Court of India judgments and MSTC website
Note: Schedule I blocks are divided into Schedule II and III; blocks not in Schedule II or III have been labelled 'Remaining blocks' in the above figure.
Note: **Regulated:** Power; **Non-regulated:** Steel, cement, aluminium and captive power plants, etc.

[2] https://www.prayaspune.org/peg/publications/item/339-captive-coal-blocked.html
[3] PIB (Ministry of Coal): 16th December, 2015

2.6. For the auctions, the coal blocks were divided into two categories: regulated and non-regulated. Power projects fall in the regulated category. 7 (seven) blocks have been auctioned in this category through reverse bidding. Reverse bidding methodology was adopted in the auction of coal mines earmarked for power sector under the provisions of Coal Mines (Special Provisions) Act, 2015 and the rules framed thereunder in order to ensure that there is no rise in power tariffs.

2.7. Under the reverse bidding methodology, bidders have to submit bids below the Coal India Limited's notified price for corresponding grade of coal which is the ceiling price. The lowest bid submitted is taken as the fuel cost in determination of power tariff. In case, bid price reaches Rs. zero in reverse bidding, the bidding changes to a forward one where bidders have to quote additional premium payable to the State Government where the mine is located, over and above the fixed reserve price of Rs. 100/- per tonne[4].

2.8. Steel, cement, aluminium and captive power plants fall in the non-regulated category where blocks were auctioned through forward bidding. Here, whoever is willing to pay the most gets the block. 22 (twenty-two) blocks were auctioned in this category.

(i) STATUS OF CANCELLED COAL BLOCKS AUCTIONED / ALLOTTED

2.9. The table below depicts the current status of coal blocks auction:

Table – I
Status of auctioned / allotted coal blocks
(as on 5th February, 2020)

Cancelled by Hon'ble Supreme Court	**204**	**-**
Net auctioned and allotted	98	29 blocks auctioned effectively (while 37 blocks were auctioned, later the allocation of 8 auctioned blocks was cancelled) Balance 69 allotted to Public Sector undertakings.
Coal producing mines (2018-19)	20 (12 private + 8 public)	16 mines from 42 Schedule II mines which were already operational / under development prior to cancellation of coal blocks and where EC, FC and other statutory licence were transferable as per CMSPA 2015. Balance 4 mines were from the Schedule III mines where some advancement was made for development prior to their cancellation.

Source: Lok Sabha Unstarred Question No. 527 dated 5th February, 2020; Coal Controller Organization (CCO) and FIMI analysis; **Note:** EC: Environment Clearance; FC: Forest Clearance

[4] PIB (Ministry of Coal) on Reverse Bidding for Power Plants, 30th April, 2015

2.10. Prior to cancellation, 37 mines were already producing coal. However, post cancellation, only 20 mines have come into operation:

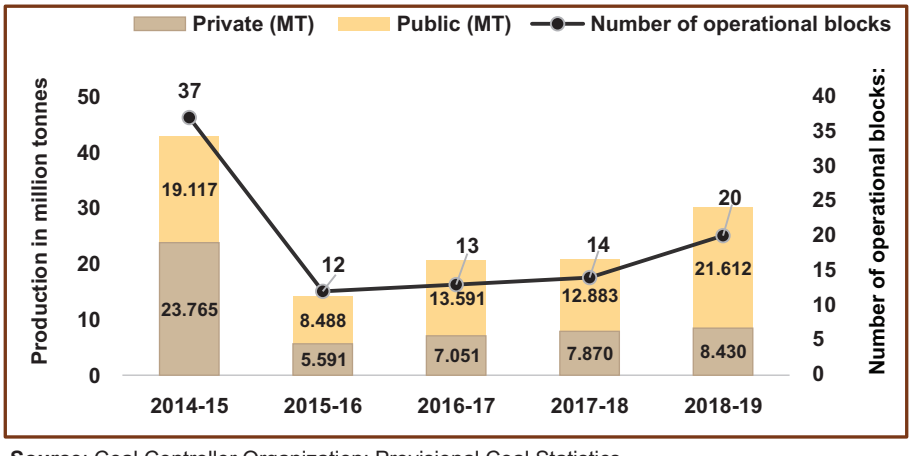
Table – II
Status of operative cancelled coal blocks:
Before and after auction/allotment

Sector	2014-15 (Pre-cancellation)		2018-19 (Post-auction/allotment)	
	Number of operational blocks	Production (million tonnes)	Number of operational blocks	Production (million tonnes)
Public Sector	18	19.117	08	21.612*
Private Sector	19	23.765	12 (3 regulated + 9 non-regulated)	8.43 (regulated + non-regulated)
Grand Total	**37**	**42.882**	**20**	**30.042**

Source: Provisional Coal Statistics, Coal Controller Organization
Note: * Only one mine in Chhattisgarh itself accounted for 15 million tonnes

2.11. Prior to cancellation of coal blocks by the Hon'ble Supreme Court, the total coal output from these blocks was around 42.882 million tonnes in 2014-15; post-cancellation and reallocation, coal output from the same set of blocks even after 4 years of auction / reallocation, barely reached about 30.042 million tonnes in 2018-19, a fall of 30%. This shows that auction has made even operational mines unviable / difficult to commence operation. Auction has further significantly reduced the country's coal production from the same blocks.

Chart – II
Yearly production from Schedule II blocks:
pre vs. post auction/allotment



Source: Coal Controller Organization: Provisional Coal Statistics

2.12. Clearly, auction has failed to bring mines into operations and create much needed dominoes effect in the economy. Most adversely, auction has resulted in negative net present value (NPV) for many potentially viable coal blocks and has put these out of the list of prospects. Since many of these blocks will not be developed, it means lower production and hence lower revenues to States.

2.13. The main objective of the Government for auctioning of coal mines was to augment the coal production, reduce the imports of coal, create employment, generate revenue and improve our current account deficit. The Hon'ble Coal Minister stated in Parliament that if the producing coal blocks were to close down:

> *"thousands of workers would lose their jobs and become homeless. This country already has a shortage of coal. This will make it worse. We will have to increase import and adversely affect our current account deficit. It will increase prices of cement, steel, etc."*[5]

2.14. The experience of coal mines acquired through auction was just the opposite: most of the coal mines could not go into production and the country's imports of coal went on increasing year after year and stood at 248.54 million tonnes (coking coal: 51.83 million tonnes and non-coking coal: 196.71 million tonnes) in 2019-20 (provisional).

(ii) COST ANALYSIS

2.15. The following table illustrates how auction will impact the per tonne mine-head cost of coal, under various bid scenarios. This table is only illustrative in relation to mine head cost, while the actual cost will vary from mine to mine.

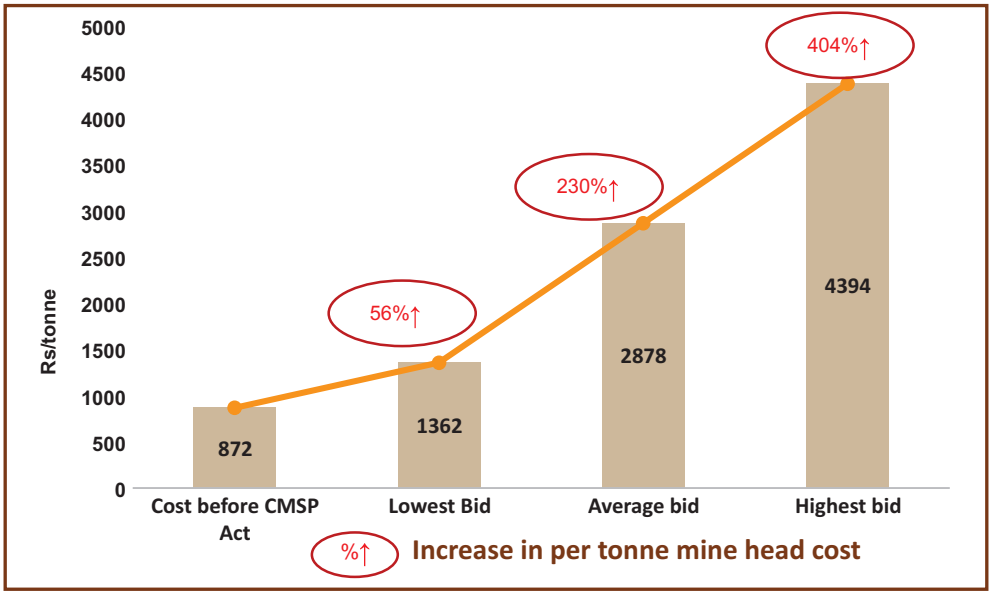
[5] https://www.prayaspune.org/peg/publications/item/339-captive-coal-blocked.html

Table – III
Pre vs. post auction cost analysis of coal blocks

Per tonne Mine-head cost (in Rs.) (for non-coking coal mine, average Grade G-10)		Mine granted prior to auction (2014-15)	Auctioned coal blocks (2018-19)		
		Cost before CMSP Act	Lowest Bid	Average bid	Highest bid
(A) Bid	Auction premium (Rs./tonne)	NA	470	1986	3502
(B) Mining taxes / levies	Royalty @14% of CIL notified price @ Rs. 1228/tonne during 2018-19	172	172	172	172
	DMF @10% of royalty	0	17	17	17
	NMET @ 2% of royalty	0	3	3	3
(C)Mining cost	Mining cost (considering open cast mining) (Rs./tonne)	700	700	700	700
(D)= (A) + (B) + (C) Mine-head cost per tonne	**Cost per tonne (Rs./t)**	872	1362	2878	4394
% Increase in cost (post auction)		NA	56%↑	230%↑	404%↑

Source: Coal India Limited; Ministry of Coal
Note: Taking average auction premium: Rs.1986/tonne; For comparison taking CIL notified price same for the year 2014-15 and 2018-19

Chart – III
Pre vs. post auction mine head cost (Rs./tonne)
(for non-coking coal mine, average Grade G-10)



Source: Table III

Post-auction cost structures

2.16. The table (III) and chart (III) depict that prior to introduction of auction, the mine head cost per tonne of coal was Rs. 872. This is a tentative cost, which includes only royalty and mining cost. However, after the introduction of auction:

- **Lowest bid**: the per tonne mine head cost of coal becomes Rs. 1362 which is 56% higher than the cost before auction.
- **Average bid**: the per tonne mine head cost of coal becomes Rs. 2878 which is 230% higher than the cost before auction.
- **Highest bid**: the per tonne mine head cost of coal becomes Rs. 4394 which is 404% higher than the cost before auction.

2.17. Further, it has been observed that the average auction premium is 2.84 times the mining cost (considering open cast mining cost Rs. 700/tonne whereas auction premium is Rs. 1986/tonne for an average auctioned coal mine).

2.18. Owing to auction, the cost of coal production has increased and it is not economically viable for the domestic producers to produce coal domestically, leading to increase in coal imports. The power plants located in coastal areas find it more economical to import non-coking coal, especially shipments from Indonesia.

2.19. During the last 6 years, imports of non-coking coal has been increasing. Following table shows the demand, production and imports of non-coking coal in India:

Table – IV

Non-Coking Coal : Demand, Production and Import

(million tonnes)

Year	Demand	Production	Import
2014-15	731.57	551.73	**174.06**
2015-16	779.90	578.34	**159.38**
2016-17	783.82	596.20	**149.30**
2017-18	839.83	635.25	**161.26**
2018-19	899.80	687.58	**183.40**
2019-20 (prov.)	893.94	676.24	**196.71**

Source: Ministry of Coal and Coal Controller Organization

2.20. It is thus evident that, despite having one of the world's largest reserves of coal (5th rank in world)[6], India's coal imports are increasing over time as production is not taking place mainly due to auction. High cost per tonne of coal due to aggressive bidding for coal blocks made by bidders have turned into losses.

2.21. India imports a very large quantity of non-coking coal from Indonesia which are mainly middle grade thermal coal (GCV between 3100 and 5500 Kcal/kg) required for power generation which falls in the range of Grade G-7 to Grade G-14 as per Indian Non-coking coal grades. We have taken average CIL notified price of the Grade G-10 (exceeding 4300 but not exceeding 4600 Kcal/Kg) for all the coal blocks while working out the revenue to the State Governments in next section.

2.22. Following data reflects the individual transactions of steam coal imports during the period December 2015 to November 2016:

Table – V
Transactions of steam coal imports
during the period December 2015 to November 2016

Non-coking coal grade category	%age by volume		
	Indonesia	Australia	South Africa
Low (GCV < 3100 Kcal/Kg)	0%	0%	0%
Middle (GCV between 3100 and 5500 Kcal/Kg)	76%	0%	1%
High (GCV > 5500 Kcal/Kg)	24%	100%	99%

Source: Ministry of Coal's operational methodology for computation of National Coal Index (NCI) dated 17th June, 2020

[6] Indian Bureau of Mines (Indian Minerals Year Book 2019)

(iii) REVENUE ANALYSIS

2.23. Generating more revenues for the exchequer has been one of the prime objectives for auction of coal blocks. It is therefore important to analyse the extent to which auction has helped in realizing more revenues.

2.24. In order to understand the revenue generated from these coal blocks, we have taken the following assumptions for revenue analysis:

- CIL notified pit head ROM (run of mine) price for non-coking coal G10.
- All the public blocks have been assumed to be used for power sector and every private block has been assumed to be used for non-power sector.
- ROM price for all public blocks (power sector) has been taken same, i.e.,
  - Rs. 860/tonne for 2014-15 and 2015-16,
  - Rs. 980/tonne for 2016-17 and 2017-18,
  - Rs. 1024/tonne for 2018-19.
- ROM price for all private blocks (non-power sector) has been taken same i.e.,
  - Rs. 1160/tonne for 2014-15 and 2015-16,
  - Rs. 1180/tonne for 2016-17 and 2017-18,
  - Rs. 1228/tonne for 2018-19.
- Royalty rate @14% of CIL notified price.
- DMF @ 10% of royalty for new allotted/auctioned mines; DMF @ 30% of royalty for already existing mines (2014-15), if there had been no auction/allotment.
- NMET @ 2% of royalty (goes to Central Government).

Source: Coal Controller Organization for ROM prices

2.25. The following tables (VI and VII) represent the total revenue to the State Governments before and after auction / allotment:

Table – VI

Pre-auction revenue to State Governments (2014-15)

Year	Quantity (million tonnes)		Revenue (in Rs. Crores)		Total Revenue before auction
	Public	Private	Public	Private	
Pre-auction till 2014-15	19.117	23.765	230.17	385.94	**Rs. 616.11 crores**

Source: FIMI analysis based on Provisional Coal Statistics; Coal directory for CIL notified price (Grade G-10)
Note: Revenue = Royalty (14%) x CIL notified price (2014-15) x Quantity produced
CIL notified price: Rs. 860/tonne for public blocks and Rs. 1160/tonne for private blocks (for Grade G-10)

Table – VII

Post-auction / allotment revenue to State Governments (2015-16 to 2018-19)

Amount, in Rs. Crores

Year	Quantity (million tonnes)		Royalty (A) = 14% of CIL notified price		DMF (B) = 10% of Royalty		NMET (C) = 2% of Royalty		Fixed reserve price by PSUs (D) = Rs. 100/tonne	Auction premium by private mines (regulated+ non-regulated) (E)	Total Revenue after auction (A+B+C+D +E)
	PSU	Private	PSU	Private	PSU	Private	PSU	Private	PSU	Private	
2015-16	8.488	5.591	102.22	90.78	10.22	9.08	2.04	1.82	84.88	400.81	**701.85**
2016-17	13.591	7.051	186.45	116.47	18.65	11.65	3.73	2.33	135.91	1024.02	**1499.21**
2017-18	12.883	7.870	176.71	130.01	17.67	13.00	3.53	2.60	128.83	1117.05	**1589.40**
2018-19	21.612	8.430	309.80	144.93	30.98	14.49	6.20	2.90	216.12	1300.19	**2025.61**

Source: FIMI analysis based on MSTC, Coal Directory for CIL notified price (Grade G-10)
Note: NMET goes to Central Government

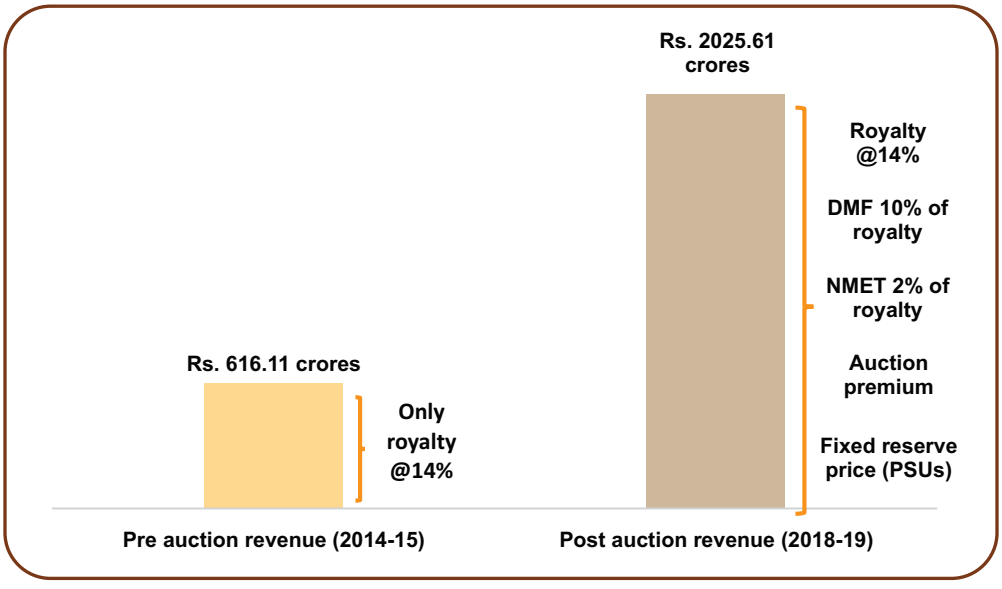
PSU – Public Sector Units
CIL notified price:

- Rs. 860/tonne for public blocks; Rs. 1160/tonne for private blocks. (2015-16)
- Rs. 980/tonne for public blocks; Rs. 1180/tonne for private blocks (2016-18)
- Rs. 1024/tonne for public blocks; Rs. 1228/tonne for private blocks (2018-19)

Auction Premium = [Final Bid Amount X Quantity produced by each block].

In case of regulated blocks, all the blocks had witnessed forward bidding. Hence, the auction premium as quoted in forward bidding has been considered.

Chart – IV
Pre vs. Post auction/allotment revenue to State Governments



Source: Table VI and VII
Note: NMET goes to Central Government

2.26. Above chart shows the revenue to the State Governments before and after auction/allotment of the coal blocks. It is clear that post-auction/allotment revenue (Rs. 2025.61 crores) is much higher than pre-auction revenue (Rs. 616.11 crores). Before auction, revenue generated was mainly through royalty (14% on the CIL notified price). After auction, revenue is generated through royalty (14% on the CIL notified price), DMF (10% of royalty), NMET (2% of royalty), fixed reserved price (public sector) and auction premium (private players). The increase in the revenue generated is mainly due to the additional revenue that is coming from the auction premium of the private coal blocks.

2.27. However, it is interesting to note that, even if there is an increase in the revenue after auction, total production in all the working blocks is very low (especially private blocks) as compared to production before auction / allotment, which has resulted in increased imports to meet the domestic demand. There is thus loss of production and jobs. It is therefore necessary to analyse the total revenue to the State Governments had there been no auction/allotment.

2.28. Following table shows the revenue that could have been generated by the State Governments if there had been no auction/allotment, assuming that all the 37 working mines which were producing before cancellation were still producing the same quantity and no new block had begun production. Hence, DMF @ 30% and NMET @ 2% of royalty (NMET goes to Central Government) is charged for subsequent years.

Table – VIII

Total revenue to the State Governments had there been no auction / allotment

Amount in Rs. crores

Year	Quantity (million tonnes)		Royalty @ 14% of CIL notified price		DMF @ 30% of royalty		NMET @ 2% of royalty		Total Revenue
	Public	Private	Public	Private	Public	Private	Public	Private	
2015-16	19.117	23.765	230.17	385.94	69.05	115.78	4.60	7.72	**813.26**
2016-17	19.117	23.765	262.29	392.60	78.69	117.78	5.25	7.85	**864.46**
2017-18	19.117	23.765	262.29	392.60	78.69	117.78	5.25	7.85	**864.46**
2018-19	19.117	23.765	274.06	408.57	82.22	122.57	5.48	8.17	**901.07**

Source: FIMI analysis based on Ministry of Coal, Coal Provisional Statistics data
Note: NMET goes to Central Government
Assumptions: **(i)** All the 37 mines which were operational during 2014-15 are still operational and producing the same quantity as 2014-15 for all the years.
(ii) CIL notified price – taken same for the corresponding years as mentioned in para 2.24.

2.29. Following table shows the loss of production and subsequent imports.

Table – IX

Production loss and import cost

Years	2014-15 production (million tonnes)	Actual Production (2015-19) (million tonnes)	Production loss (million tonnes)	Indonesia per tonne import price (US $/tonne)	Dollar Price (Rs.)	Per tonne import price (Rs.)	Total import cost to the extent of production loss (Rs. Crores)
	(A)	(B)	(C) = (B) -(A)	(D)	(E)	(F) = (D) X (E)	(G) = (C) X (F)
2015-16	42.882	14.079	-28.803	50.18	65.00	3261.70	-9394.67
2016-17	42.882	20.642	-22.240	52.17	65.00	3391.05	-7541.70
2017-18	42.882	20.753	-22.129	64.90	65.00	4218.50	-9335.12
2018-19	42.882	30.042	-12.840	63.74	65.00	4143.10	-5319.74

Source: FIMI analysis for Indonesia per tonne import price: Coal Manual: The Tex Report Ltd., Japan

2.30. Based on the tables (VIII) and (IX) the revenue comparison between the coal blocks with and without auction/allotment and net loss to the nation due to production loss and subsequent imports is shown in (Table X):

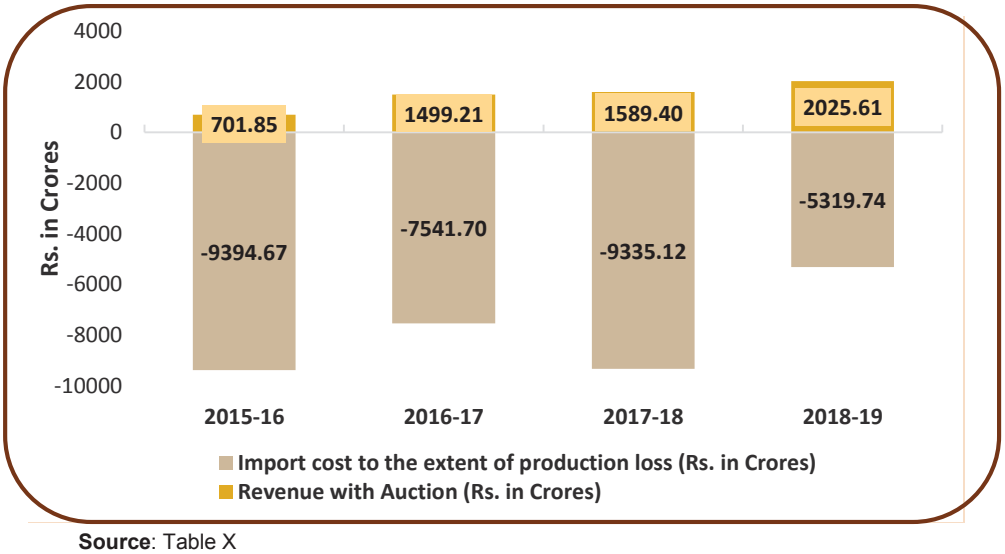
Table – X
Net loss to the nation after auction / allotment

Year	2014-15 base for production quantity (public + private) (million tonnes)	Actual production (public + private) (2015-19) (million tonnes)	Production loss (million tonnes)	Revenue without Auction (Rs. in Crores) (from table VIII)	Revenue with Auction (Rs. in Crores) (from table VII)	Earning /loss to Govt. (Rs. in Crores)	Import cost to the extent of production loss (Rs. in Crores) (from Table IX)	Net loss to nation due to auction (Rs. in Crores)
	(A)	(B)	(C)= (B – A)	(D)	(E)	(F) = (E – D)	(G)	(H) = (F+G)
2015-16	42.882	14.079	-28.80	**813.26**	**701.85**	-111.41	-9394.67	**-9506.08**
2016-17	42.882	20.642	-22.24	**864.46**	**1499.21**	634.75	-7541.70	**-6906.95**
2017-18	42.882	20.753	-22.13	**864.46**	**1589.40**	724.94	-9335.12	**-8610.18**
2018-19	42.882	30.042	-12.84	**901.07**	**2025.61**	1124.54	-5319.74	**-4195.20**

Source: FIMI analysis based on Table VII, VIII and IX; **Note**: Negative value indicates loss to the nation

Imports for the Production Loss = [Per tonne import price (Rs.)] x [production loss during 2015-2019]
- Taken Indonesia's Per tonne Import Price of thermal coal for each year. (**Source**: Coal Manual: The Tex Report Ltd.)
- Assumed $US price Rs. 65

Chart – V
Revenue realized vs. Import cost



Source: Table X

2.31. After auction / allotment, State Governments were able to gain more revenues, i.e. Rs. 2025.61 crores in 2018-19. However, auction / allotment resulted in production loss to the tune of 12.84 million tonnes in 2018-19 which had to be compensated through imports worth Rs. 5319.74 crores. Thus, the nation's expenditure on imports was 2.63 times (=5319.74 / 2025.61) than the revenue generated through coal auction.

2.32. The State Governments could have generated revenue of Rs. 901.07 crores in 2018-19 even if there had been no auction, considering that all the 37 working mines which were producing before cancellation were still producing the same quantity and no new block had begun production. However, on account of coal auction and subsequent production loss and imports, the net loss to the nation was Rs. 4195.20 crores in 2018-19 (Table X).

2.33. It is essential to mention that, in actual business as usual scenario, the production could have increased year after year and there could be some new blocks developed which could have given additional quantity of production over time. If we consider conservatively even 10% increase in production, the production level could have reached to a very significant level. Hence, the loss of production and subsequent revenue loss thereof in auction could be much higher than the derived loss to the nation i.e. Rs. 4195.20 crores in 2018-19.

(iv) REVENUE CLAIMED VS. ACTUAL REVENUE GENERATED BY GOVERNMENT

2.34. The Government claimed that around Rs. 3,44,973 crores of revenue (annually Rs. 11,499 crores) would accrue to coal-bearing States over the life of the coal blocks (30 years) from the proceeds of allocations (31 auctioned and 42 blocks allotted)[7] made until December 2015. The revenue which would accrue to the coal-bearing State Governments concerned comprised auction proceeds and royalty on per tonne of coal production. The estimated revenue which would accrue to coal bearing States during the life of mine / lease period from the auction of 31 coal mines was Rs. 1,96,698 crores (annually Rs. 6556.6 crores). In addition, an estimated amount of Rs. 1,48,275 crores (annually Rs. 4942.5 crores) would accrue to coal bearing States from allotment of 42 coal mines to Central and State PSUs.

[7] PIB release dated 16th December, 2015, Ministry of Coal

2.35. During 2018-19, the State Governments have earned a total revenue of Rs. 2025.61 crores (including royalty, DMF and NMET (NMET goes to Central Government)) (Table VII) from auctioned / allotted blocks which was below the expectation of the Government (i.e. Rs. 11,499 crores annually). If we consider the loss on account of production losses in post auction of the coal blocks, the net loss to the nation was around Rs. 4195.20 crores (Table X) in 2018-19.

2.36. It is thus evident that in auction process even if the State Government was able to generate some revenue (though below the expectation) in 2018-19, the nation was suffering from huge losses on account of imports. It can be observed that the Government's objective of causing minimal disruption in production from the producing auctioned/allotted coal blocks has not been met even 6 years after their allocation. Naturally, the revenue to States has also been lower than expected but there was huge loss to the nation on account of imports. One can also perhaps surmise from this that the other aim of preventing the loss of '*thousands of jobs'*, was also not achieved.

(v) LACK OF COMPETITION AND DWINDLING INTEREST

2.37. Allocation of coal blocks through auctions and allotments was intended to deepen the coal market, promote competition, discover the 'true value' of coal and pave the way for the gradual opening up of the sector. However, developments in the sector over the last 6 years suggest reduced competition and dwindling interest. A total of 10 tranches of auction was conducted in which various coal blocks were auctioned as per details given below:

Table – XI
Tranche wise details

Tranche	Blocks put up for auction	No. of bids Received	Blocks auctioned	Date of Tender
1st and 2nd	46	306	29	27-12-2014 and 05-1-2015
3rd	10	31	2	08-6-2015
4th	8	Cancelled	-	19-11-2015
5th	6	Cancelled	-	07-6-2017
6th	13	Cancelled	-	25-10-2018
7th	6	Cancelled	-	25-10-2018
8th	20	32	5	03-8-2019
9th	6	6	-	03-8-2019
10th	1	7	1	03-8-2019
Total	-	-	37 (8 blocks cancelled by the Government due to different reasons) i.e. actually auctioned 29 blocks	-

Source: PIB release and MSTC website

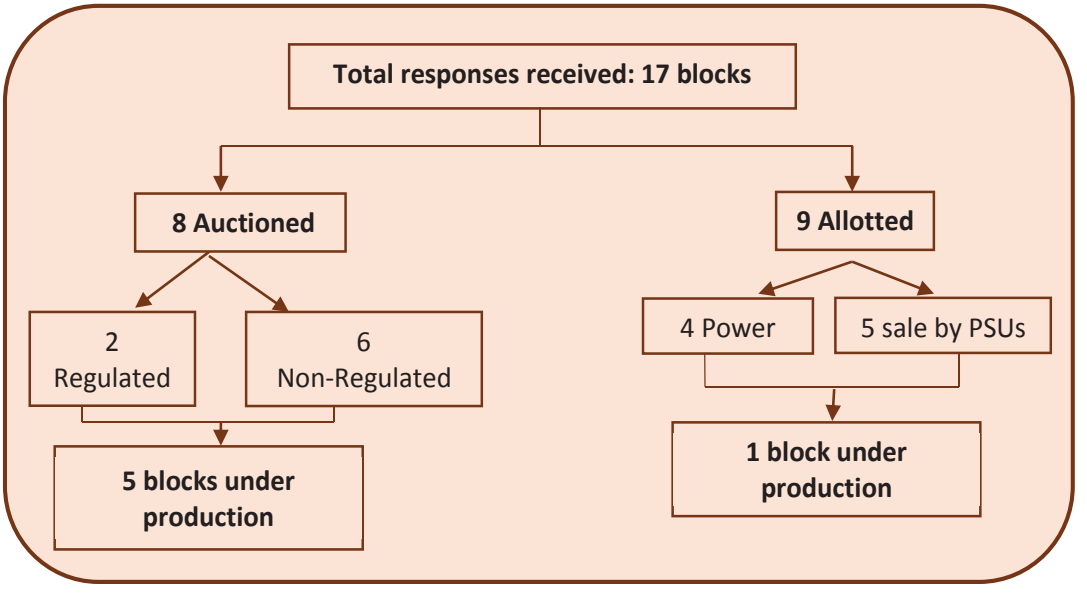
2.38. Initial two (1st and 2nd) tranches of auction were successful as it attracted many private players and miners who showed interest and participated with a mind-set of securing coal supplies for their end use plants. However, response started dwindling drastically during the subsequent tranches of auction because of high price quoted by previous successful bidders who were unable to recover the cost and realized that it was unviable to bid in the next tranches of auction. It can be observed from (Table XI) that out of 10 tranches, auction of coal blocks of 5 tranches had to be cancelled / annulled owing to non-receipt of required minimum number of bids. The steady decline of bids and lukewarm response across rounds is the indicator of reduced interest and competition.

(vi) FIMI's SURVEY AND REASONS FOR LOW PRODUCTION

2.39. A survey was conducted by FIMI to understand the problems faced by the miners regarding delay or underutilization of the auctioned / allocated coal blocks. A structured questionnaire was prepared and sent to the companies, both private and public sectors, to elicit the reasons leading to the delay or underutilization even after being allotted or auctioned.

2.40. A total of 17 responses were received from the miners and investors which included responses from both private coal blocks (8) and public coal blocks (9).

Chart – VI
FIMI's survey



Note: **Regulated**: Power sector; **Non-regulated**: Non power sectors like steel, cement etc.

2.41. Out of 17 blocks, only 6 blocks (5 from auctioned blocks and 1 from allotted blocks) have started production and the rest 11 blocks have not been able to start production till date.

2.42. The reasons for not being able to start production or produce as per their peak rated capacity (PRC) are:

- High cost of coal production from auctioned mines;
- Imports being competitive against domestic production;
- Land acquisition: encroachment after lease execution, unjustified demand from land owners, unavailability of proper documents with land owners, possession of land, etc.;
- Entire land transfer to companies through Vesting Order not complete;
- Existence of forest land in lease; and
- Jungle jhadi plots cropping up after lease execution.

(vii) SUM-UP

2.43. The Government had claimed that:

> "*the auction of coal mines has been universally hailed to be a success, which has not only ensured that there is no disruption in the economy in the wake of the order of the Supreme Court, but have also set new benchmark for efficiency and transparency*"[8].

Six years since the process of block auctions / allocations began, these claims appear questionable to say the least.

2.44. Production from blocks that were producing at the time of auction / allocation was disrupted, with production levels still much below what they were producing six years ago despite the fact that the statutory clearances were seamlessly transferable for such blocks to new mine allottes.

2.45. As production decreased drastically, imports rose during the last 5-6 years which eventually converted the revenues (generated by State Governments) into loss to the nation.

2.46. After the initial euphoria which inspired aggressive bidding to acquire blocks, interest in coal blocks fell dramatically, with as many as five round of auctions having to be cancelled / annulled for lack of sufficient interest.

2.47. Based on this evidence, it is perhaps fair to conclude that the allocation of coal blocks cannot be "*universally hailed to be a success*". This, together with likely reduced demand for coal, should give the Government a pause to consider the rationale of auction as a mode to grant concessions before forging ahead with new initiatives for the coal sector[9].

[8] PIB release dated 16th December, 2015, Ministry of Coal

[9] https://www.prayaspune.org/peg/publications/item/339-captive-coal-blocked.html

B. Recent developments

(i) MINERAL LAWS (AMENDMENT) ACT, 2020

2.48. On 13th March, 2020, the Government of India opened up commercial coal mining for the private sector by approving the methodology for auction of coal blocks for commercial sale.

Salient features:

- Amendment to provide for allocation of coal blocks for Prospecting Licence-cum-Mining Lease ("PL-cum-ML") to help in increasing the available inventory of coal/ lignite blocks for auction.
- Provisions for any company selected through auction/ allotment to carry on coal mining operation for own consumption, sale without possessing any prior coal mining experience in India.
- FDI Policy in Coal Sector allowing 100% FDI through automatic route for sale of coal, coal mining activities including associated processing infrastructure.
- Provisions to remove the requirement of previous approval in cases where the allocation or reservation of coal/ lignite block is made by the Central Government.
- Entitlement to an allottee to utilize mined coal in any of its plants or plants of its subsidiary or holding company.
- To implement it, corresponding Coal Mines Special Provision (CMSP) Rules and Coal Blocks Allocation (CBA) Rules were also amended.

(ii) COAL AUCTION 2.0

2.49. As part of the initiative to open up the coal sector and introduce commercial coal mining in the country, the Ministry of Coal launched the auction process for 41 coal mines on June 18, 2020, for commercial mining under 11th Tranche of Auction under CM(SP) Act, 2015 and 1st Tranche of Auction under MMDR Act, 1957. This is expected to make India self-reliant in energy and reduce coal imports.

Hon'ble Prime Minister Shri Narendra Modi stated that:

> *"We are not just launching the auction for commercial coal-mining, but bringing the coal sector out of decades of lockdown."*[10]

[10] https://www.dnaindia.com/india/report-bringing-coal-sector-out-of-decades-of-lockdown-pm-modi-announces-big-step-for-self-reliant-india-2828544

Hon'ble Home Minister Shri Amit Shah said that:

> "*This decision of Modi government will create more than 2.8 lakh jobs, attract capital investment worth 33,000 crore and generate annual revenue of 20,000 crore for the state governments.*"[11]

2.50. The winners will have the right to mine and sell coal, a change from an earlier regime where only Indian companies in the steel, cement and power sector were allowed to mine coal for use in their own units. For the first time, even foreign-owned companies were allowed to bid for coal mining rights in India.

Subsequent to the launch of commercial coal mining for 41 blocks, following revisions were made in the list of coal mines offered for auction in the above mentioned process:

- Addition of Dolesara, Jarekela and Jharpalam-Tangarghat Coal Mines to the 1st Tranche of Auction under the MMDR Act, 1957.

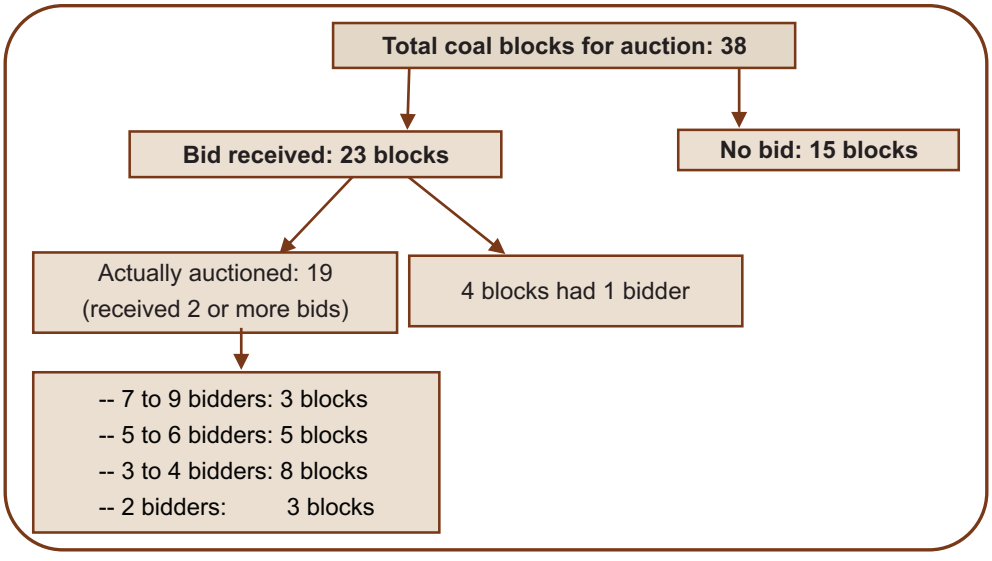
- Withdrawal of Morga South Coal Mine from the 1st Tranche of Auction under the MMDR Act, 1957.

- Withdrawal of Fatehpur East, Madanpur (North), Morga-II and Sayang Coal Mines from the 11th Tranche of Auction under the CM(SP) Act, 2015.

2.51. Finally, 38 coal mines were offered for auction for commercial mining, the result of which is shown in (chart – VII):

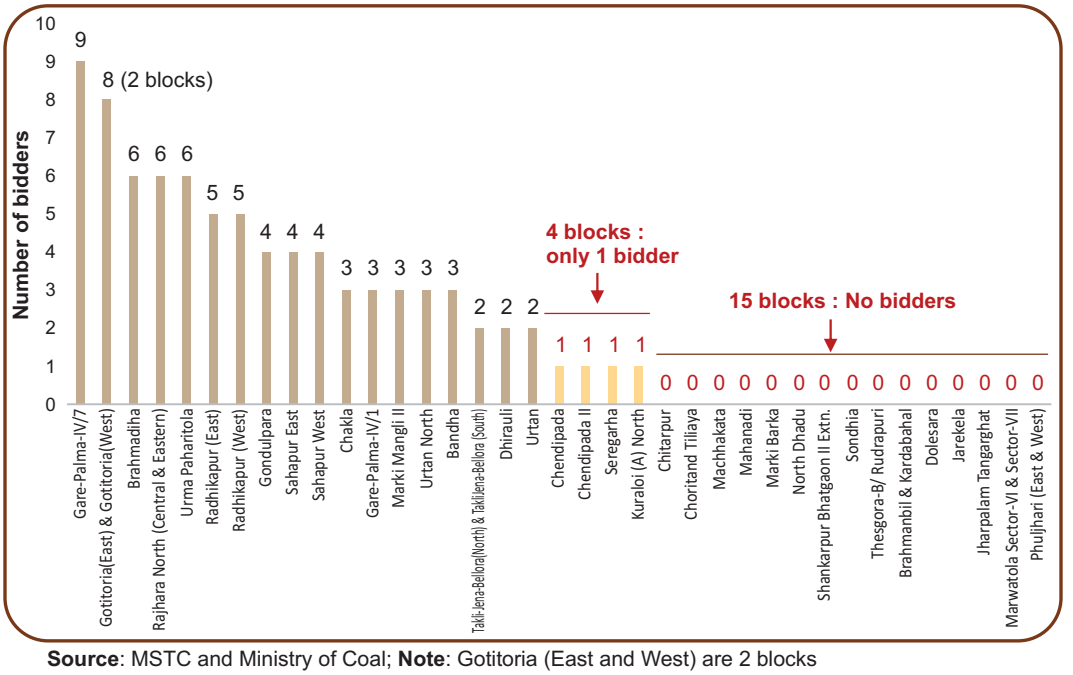
[11] http://cssm.etimg.com/industry/indl-goods/svs/metals-mining/coal-block-auctioning-tocreate-2-8-lakh-jobs-to-attract-investment-of-rs-33000crore/articleshow/76445518.cms

Chart – VII
Result of commercial coal mining auction



Source: FIMI analysis based on MSTC data

Chart – VIII
Block-wise total number of bidders in commercial coal mining auction



Source: MSTC and Ministry of Coal; **Note**: Gotitoria (East and West) are 2 blocks

Key features

2.52. Commercial coal mining auctions have brought out the following noteworthy features:

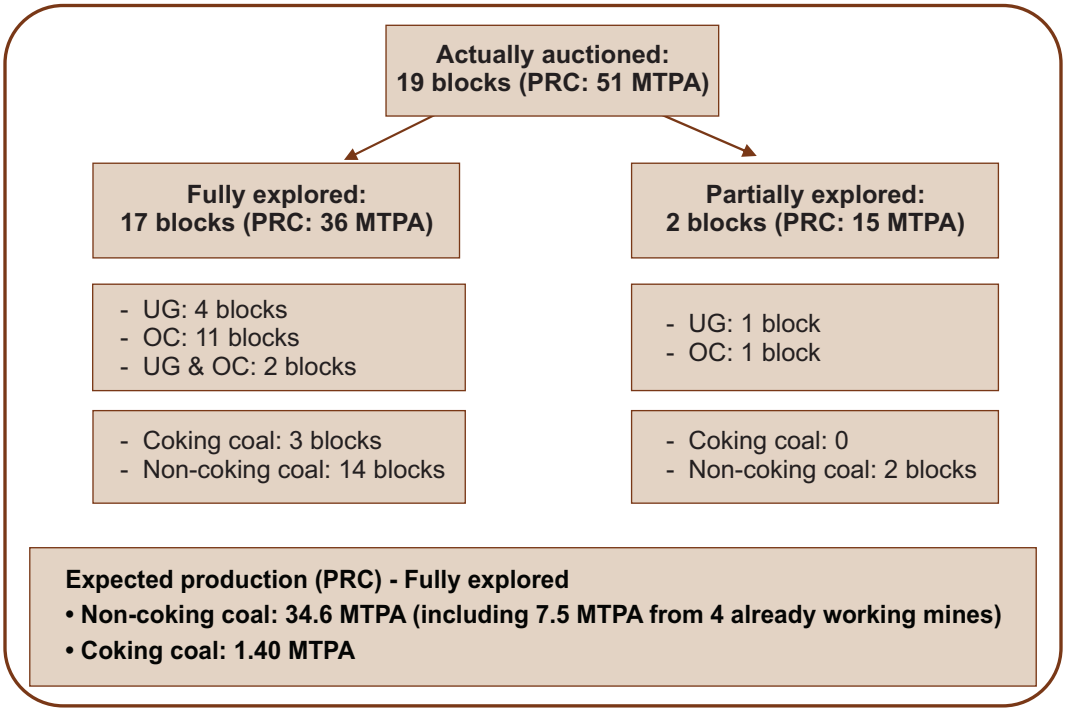
- The auctions did not garner the level of interest that the Centre had expected while announcing the first set of 38 coal blocks for commercial mining. Only 23 of the blocks received bids, with only 19 of which received two or more bids.
- The highest premium was at 66.75%, the average premium was at 27.30% and the lowest premium was at 9.50%.
- 42 companies participated in the bidding for 19 blocks, out of which 40 were private players and 2 were PSUs. No foreign owned company participated.
- 65% bidders were from the 'non-end user' category.
- In total 42 bidders had participated for 13 open cast (OC) coal blocks and 6 underground (UG) coal blocks.
- There are 3 coking coal blocks (i.e. Steel Grade-I (one coal block), Washery Grade–III (one coal block) and Washery Grade–IV (one coal block)).
- In total, 17 coal blocks were fully explored while 2 blocks were partially explored.
- 11 coal blocks out of 19 (around 58%) were having mine production capacity less than 1.50 million tonnes per annum (with 0.15 MTPA lowest and 10 MTPA the highest).

Table – XII
State wise auction summary

State	No. of Mines	Production capacity (million tonnes per annum)	Average premium (%)	Annual revenue (Rs. in crores)
Madhya Pradesh	8	11	25.00%	1724
Jharkhand	5	20	25.25%	2690
Chhattisgarh	2	7	45.88%	863
Maharashtra	2	2	30.75%	321
Odisha	2	11	18.88%	1059
Grand Total	**19**	**51**	**27.30%**	**6657**

Source: MSTC

Chart – IX
Status of actually auctioned blocks



Source: FIMI; **Note**: PRC: Peak rated capacity; MTPA: million tonne per annum; UG: underground; OC: open cast

– The above chart-IX depicts that, out of 19 coal blocks auctioned under commercial coal mining, 17 blocks are fully explored (4 previously operational / under advanced stage of operation) and 2 blocks are partially explored. These 19 auctioned blocks with their peak rated capacity are expected to produce cumulatively around 51 million tonnes per annum.

– 2 blocks which are partially explored have peak rated capacity of 15 MTPA and 17 blocks which are fully explored, have peak rated capacity of 36 MTPA. Out of 17 blocks, 4 blocks were already producing 7.50 MTPA. Further, there are 3 coking coal mines which have very low grade and low PRC of 1.40 million tonnes per annum.

(iii) KEY ISSUES

2.53. Some of the key issues which should be kept in mind after the current auction:

- There would be no substantial increase in total coal production immediately because of the fact that the start-up of new mines would require anywhere around 4-5 years for obtaining various clearances, approvals and completing land acquisition process.

- Only the already operative mines (4 blocks) will come in to production in next 6-12 months but to reach peak rated capacity may take 2 years. The fully explored blocks will take around 2-4 years to start production and may reach their peak rated capacity after 5-6 years.

- However, the 2 partially explored blocks will take around 7-8 years to start production and will take additional time to reach their peak rated capacity of 15 MTPA.

- Steel companies did not show interest in bidding for the coking coal blocks as the quality of the ore from these mines is not very good and capital expenditure is high. Availability of capex (capital expenditure) funds is also limited during the COVID-19 pandemic. Therefore import seems to be a viable option[12].

- There was no interest from international players as they are moving towards exiting their coal business.

- It has been observed that revenue share offered by bidders was lower than expected. The premiums have been very low and the benefit to the exchequer will accordingly be less. This is because, people took lessons from the old coal blocks auction where there was a tendency for the winning bid to exceed the true worth of the product, called "*winner's curse*".

- As per news article published in Times of India (TOI) on 18th November, 2020, the three successful bidders have dubious financial strength with two of them having negative net worth and one of the company incorporated just a month after the announcement of coal auction by the Government.

  Auction of coal blocks was announced under the Atmanirbhar Bharat plan in June 2020. The tender conditions, however, did not have any specific criteria of financial net worth and prior experience, which allowed any company to bid for the blocks.

  The question is whether due diligence of these companies was carried out before allowing them to participate in auctions. It is doubtful if such companies will be able to take up mining on a sustainable basis.

[12] https://www.financialexpress.com/industry/commercial-mining-steel-companies-stay-away-from-bidding-in-coking-coal-blockks/2096755/

(iv) SUM UP

2.54. As observed from the auctions in earlier tranches (1 to 10) auction has already failed once due to huge loss incurred by the miners / investors due to high auction premium and inability to commence production even after 5-6 years of getting those blocks. Looking at the past experience, it would have been prudent to explore the rationality of auctioning coal blocks again with non-conducive terms and conditions, especially in such challenging times as of COVID-19 as well as transition across the world towards renewable energy.

2.55. The question arises how far the auction at this juncture will be viable and sustainable for economy? The auctioned blocks will come in to operation after 5-8 years which may not be viable at that time as other nations are planning to switch / exit to a better option for power generation than a fossil fuel like coal.

C. Transition towards renewables

2.56. The impact of COVID-19 has been so severe that country faced the worst contraction of GDP during first quarter of financial year 2020-21. While country's overall GDP shrunk by 22.6% at current prices, manufacturing sector declined by 39.3% and mining sector faced the brunt of 41.3% in its GVA. Further many of the rating agencies and economists have forecasted contraction to the tune of 10% in country's GDP during the year 2020-21. The mining sector which was already passing through a difficult phase, the impact of COVID-19 has now further given a major jolt to the mining activities. As per the information laid down in Rajya Sabha on 19th September, 2020, out of 844 mining companies registered with Registrar of Companies (ROC), 527 companies are currently running in loss.

2.57. Further, renewables are likely to capture two-thirds of global investment in power plants by 2040, as they become the least-cost source of power generation for many countries.[13] Rapid deployment of solar photovoltaics (PV), led by China and India, will help solar become the largest source of low-carbon energy by 2040, occupying more than 30% share in total power generation. By 2040, renewables are likely to contribute 70% of the total power generation.

[13] https://www.iea.org/reports/world-energy-outlook-2017

a) Paris Agreement

2.58. The Paris Agreement is a landmark environmental accord that was adopted by nearly every nation in 2015 to address climate change and its negative impacts. It aims to substantially reduce global greenhouse gas emissions in an effort to limit the global temperature increase in this century to 2 degrees Celsius above pre-industrial levels, while pursuing means to limit the increase to 1.5 degrees. At present 197 countries including India have signed the Paris Agreement in order to reduce their emissions.

2.59. India has committed to cut its greenhouse gas (GHG) emissions by 33% to 35% below 2005 levels, and to achieve 40% of its electricity generation from non-fossil sources by 2030.

b) Countries committed to exit coal power

2.60. Many countries have planned to exit the coal-fired power generation in the coming decade:

– **Austria**: planned to exit coal by 2020.
– **Belgium**: exited the coal power generation in 2016.
– **Canada**: to remove coal from its energy mix by 2030.
– **Denmark**: to phase out by 2030.
– **France**: to phase out by 2025.
– **Germany**: to phase out by 2038.
– **United Kingdom**: to phase out by 2024.
– **Poland**: to phase out by 2050.
– **Ireland, Italy, Portugal, Spain, Sweden**: planned to exit coal by 2025.

Sources: **For:** Austria, https://www.euractiv.com/section/electricity/news/austria-becomes-second-eu-country-to-exit-coal; **From:** Belgium to UK https://www.nsenergybusiness.com/features/coal-phase-out/; **For**: Poland http://www.digitaljournal.com/news/world/polandeyes-hard-split-with-coal/article/582939; **From:** Ireland to Sweden https://www.climatechangenews.com/2020/07/15/portugal-ends-coal-burning-two-years-ahead-schedule/

c) Companies / investors exiting the coal mining

2.61. Not only countries but also major mining companies and investors involved in the coal mining are thinking or have already exited the coal sector.

– **BHP** has put its last Australian thermal coal mine up for sale as miners are facing increasing pressure to reduce their exposure to fossil fuels.

– **Rio Tinto** sold its last coal mine in 2018, having progressively exiting coal sector since 2014, reflective of the inconsistency of coal mining with the Paris Climate Agreement.

- **Peabody Energy** is in the financial distress, having lost 90 % of its shareholder wealth in the last two years alone. The company is struggling to downsize its US and Australian coal mining business. The company's capacity to undertake high risk greenfield developments in coal is therefore zero.

- **Anglo American** will divest from its South African and Colombian thermal coal operations by mid-2023.

d) Switching towards the cheapest mode of power generation

2.62. India has emerged as the lowest cost producer of renewable energy in the Asia pacific region as per a report by UK-based market intelligence firm Wood Mackenzie. According to the data compiled by Wood Mackenzie, levelised cost of electricity generation (LCOE) from fossil fuel in India is around $ 44.5 per MWh (Rs. 3.05 per unit), whereas the LCOE from solar power in India is estimated at around $ 38.2 MWh (Rs. 2.62 per unit).

2.63. It has been recently reported that India's auction tariffs for both wind and solar are among the lowest in the world. The best-in-class wind farms and solar plants can generate power at $27-29 / megawatt hour (~Rs 2,000) as compared to $41 / MWh (~Rs 3,000) for thermal power from best-in-class new coal-fired power stations.

2.64. Further, as per the news article in Business Standard on 24th November 2020, in response to the bids invited by the Solar Energy Corporation of India Limited (SECI) (fully owned subsidiary of the Ministry of New and Renewable Energy) for renewable projects in the country, the lowest bid received by the SECI is Rs. 2/unit from Saudi Arabia based Al Jomaih Energy and Water. As per media report, in the recent auction by the Gujarat Urja Vikas Nigam Limited for 500 MW witnessed a bidder quoting Rs. 1.99/kWh.

Earlier lowest tariff reported in India was in June 2020 when Spanish Renewable Solar Corporation bid Rs. 2.36/unit for constructing a 300 MW solar power project in a tender floated by SECI.

It is therefore evident that the solar tariff in India is continuously falling and is less than Rs. 2.00/unit at present.

2.65. Auctioning of coal blocks for commercial mining at this juncture was not a viable or attractive proposition, when every nation is planning to switch / exit to a better option for power generation than a fossil fuel like coal.

———

III – AUCTION OF NON-COAL BLOCKS – AN ANALYSIS

A. Amendment of MMDR Act, 1957 – auction regime

3.1. The MMDR Amendment Act 2015 changed the very nature of non-coal mining regime in the country:

- Mining leases to be granted through Auction.
- Tenure of leases to be for 50 years, without renewal.
- Validity of existing leases upto 31.03.2020 for non-captive; upto 31.03.2030 for captive, with right of first refusal; and extendable upto 20 years at a time for Government companies.
- District Mineral Foundation (DMF) for development of mining-affected areas: contribution by existing mines @ 30% of royalty and by new mines @ 10% of royalty.
- National Mineral Exploration Trust (NMET) for regional and detailed exploration: contribution by industry @ 2% of royalty.

(i) AUCTION OF MINING LEASE

(a) Process for Grant of Mining Lease

3.2. Mining Lease (ML) is to be granted by the State Government through an auction process where the successful bidder can undertake mining operations after obtaining requisite clearances. Steps involved in grant of ML through auction process are:

For blocks explored up to G2 level, State Government publishes Notice Inviting Tender (NIT) and sells Tender Document that includes Geological Report and Resource Estimation.

↓

Eligible bidders participate in a 2-stage ascending forward e-auction and bidder submitting highest quote is chosen as Preferred Bidder.

↓

Preferred Bidder will pay first instalment (10%) of Upfront payment (0.5% of the value of estimated resources) and receives a Letter of Intent from the State Government.

↓

Preferred Bidder submits Performance Security (0.5% of the value of estimated resources), Mine Plan and second installment (10%) of Upfront Payment to the State Government to become Successful Bidder.

↓

Successful Bidder will sign Mine Development and Production Agreement (MDPA) with the State Government after obtaining necessary approvals / clearances.

↓

State Government will execute Mining Lease deed with the Successful Bidder on receiving third installment (80%) of Upfront Payment.

↓

Concessionaire can commence mining operations.

(b) Eligibility Criteria

3.3. For participating in the auction of ML, an applicant has to possess minimum net worth which is set according to the value of estimated mineral resources, as mentioned below:

Value of Estimate Resources	Minimum Net Worth for ML
≤ Rs. 100 Crore	0.5% of value of estimated resources
>Rs. 100 Crore and < Rs. 1,000 Crore	1.0% of value of estimated resources
≥Rs. 1,000 Crore	2.0% of value of estimated resources

(ii) AUCTION OF COMPOSITE LICENCE (PL-CUM-ML)

(a) Process for Grant of Composite Licence

3.4. Composite Licence / Prospecting Licence-cum-Mining Lease (PL-cum-ML) can be granted by State Government through an auction process where the successful bidder is required to undertake prospecting work to upgrade the exploration in the mineral block within a prescribed time, and on establishing the commercially exploitable mineral content, the PL-cum-ML holder can apply for transition to mining lease. Steps involved in grant of PL-cum-ML through auction process are described below:

For blocks explored up to G3 level, State Government publishes Notice Inviting Tender and sells Tender Document that includes Geological Report and Resource Estimation.

↓

Eligible bidders participate in a 2-stage ascending forward e-auction and bidder submitting highest quote is chosen as Preferred Bidder.

↓

Preferred Bidder will pay Performance Security (0.25% of the value of estimated resources) and Prospecting Scheme to the State Government and receives Letter of Intent to become Successful Bidder.

↓

Successful Bidder obtains necessary clearances and approvals and the State Government grants a Composite Licence.

↓

Concessionaire completes G2 level of exploration in prescribed time to establish mineral content and becomes eligible for Mining Lease after surrender of area in excess of permitted area for ML.

↓

The remaining process is same as that of grant of ML except enhanced Performance Security (0.5% of the value of estimated resources as applicable to ML) which has to be paid to State Government.

(b) Eligibility Criteria

3.5. For participating in the auction of PL-cum-ML, an applicant has to possess minimum net worth which is set according to the value of estimated mineral resources, as mentioned below:

Value of Estimate Resources	Minimum Net Worth for PL-cum-ML
≤ Rs. 100 Crore	0.5% of value of estimated resources
> Rs. 100 Crore	1.0% of value of estimated resources

(iii) MINERAL (AUCTION) AMENDMENT RULES, 2017

3.6. Following the MMDR Amendment Act in 2015, Mineral (Auction) Rules, 2015 were notified, wherein Rule 6(4) provides:

> *"Where the State Government reserves a mine or mines for any particular specified end use, the minerals extracted under the mining lease shall -*
>
> - *be utilised solely for the specified end use; and*
> - *not be sold or transferred or otherwise disposed of, either directly or indirectly"*.

3.7. However, on 30th November, 2017 a proviso was added to the Rule which would be applicable to those auctions which were to take place on or after this date:

> "*Provided that quantity of mineral equivalent to twenty five per cent. of total mineral excavated in the previous financial year, for which end use was specified can be sold in the current financial year*."

3.8. There is now a proposal to increase this limit for sale of minerals by auctioned captive mines to 50%. The proviso thus goes counter to the very concept of captive mines. If this is allowed, it will lead to distortion of market.

(iv) RECENT DEVELOPMENTS

(a) The Mineral Laws (Amendment) Act, 2020

3.9. On 13th March, 2020 the Government of India passed the Mineral Laws (Amendment) Act, 2020 which amended the MMDR Act, 1957.

Salient features for non-coal minerals:

- Successful bidder of expiring mines shall be deemed to have acquired all valid clearances, licences etc. for 2 years from grant of new lease, so as to continue mining operations during this period.
- Advance auction of leases can be done before expiry of lease period.
- In case of deep-seated minerals, a NERP holder may apply for PL-cum-ML or ML and the Central Government shall prescribe bidding procedure for selection of such holders.

(b) Minerals (Other than Atomic and Hydro Carbons Energy Minerals) Concession (Amendment) Rules, 2020

3.10. MCR, 2016 was amended on 20th March, 2020 to include conditions for the issuance of vesting orders and deemed transfer of statutory clearances / approvals to the new lessees, keeping in line with the amendments to the MMDR Act, 1957. The amended Concession Rules provide that the State Governments must endeavour to complete the auction process at least six months before the impending expiry of a mining lease so that there is a smooth transition from one lessee to the other.

(c) Mineral Auction (Amendment) Rules, 2020

3.11. The Mineral (Auction) Rules 2015 were amended on 20th March, 2020 to reflect the changes in the MMDR Act and Concession Rules and to introduce strict timelines for the execution of new mining leases following the auction of new leases and the expiry of existing leases.

B. Auction of non-coal blocks

3.12. With more than half-a-decade past the introduction of auction regime for non-coal minerals, it is now necessary to analyse critically the impact of auction as a policy instrument for mineral development in India.

(i) STATUS OF NON-COAL BLOCKS

3.13. Since the introduction of auction in January 2015, only 154 blocks could be offered for auction for a country of India's size and geological prospectivity.

Table – I

Status of auctioned Non-Coal Mineral Blocks
(as on 11th September, 2020)

Total mineral blocks (ML and PL-cum-ML) offered for auction	**154**	–
Actually auctioned	103	09 — Prospecting Licence-cum-Mining Lease (PL-cum-ML) 94 — Mining Lease (ML) • 52 Greenfield (including 5 deep seated) • 14 'C' Category iron ore mines in Karnataka • 28 leases expired in March 2020 (24 in Odisha and 4 in Karnataka)
Composite licence (PL-cum-ML) granted	1	Out of 9 PL-cum-ML (including 5 deep seated)
Execution of MLs (Greenfield blocks) / commencement of operation	NIL	Out of 52 Greenfield auctioned mineral blocks, no ML has been executed/commenced operation.
Execution of ML for "C" category iron ore mines of Karnataka	7	These are from 14 "C" category mines auctioned in Karnataka which were already operational earlier and where the Hon'ble Supreme Court had ruled that FC and EC granted to earlier operational leases will automatically be transferred to successful bidders.
Execution of ML for operational mines which expired on 31st March, 2020 and subsequently auctioned	21	Out of 28 leases (24 in Odisha and 4 in Karnataka) – **Odisha**: 17 MLs have been executed out of 24 MLs expired on 31st March, 2020 – **Karnataka**: 4 MLs expired on 31st March, 2020 have been executed. These 21 (17 in Odisha and 4 in Karnataka) mines were already operational earlier and validity of existing FC, EC and mining plan have been extended by 2 years.

Source: FIMI analysis based on Ministry of Mines data

(ii) REVENUE ANALYSIS

3.14. As of September, 2020, the Ministry of Mines has uploaded the data of 103 auctioned mineral blocks, with an estimated value of resource worth Rs. 804,098.65 crores.

Table – II
Auction overview (103 blocks): Revenue to State Government

Particulars	Total (in Rs. crores)	% of resource value
(A) Estimated value of the resources	804,098.65	100%
(B) Contribution through Auction	693,371.58	86.23
(C) Royalty	119,439.16	14.85
(D) DMF	11,943.91	1.49
(E) NMET	2,388.79	0.30
(F) = (C)+(D)+ (E) Statutory payments	133,771.86	16.64
(G) = (B)+(F) Total Revenue to State Government	827,143.44	102.87
(H)= (A) - (G) Remaining with mining companies	-23,044.79	-2.87

Source: FIMI analysis based on Ministry of Mines data
Note: NMET goes to Central Government

3.15. The above table shows that 102.87% of the estimated value of resources (A) auctioned will go to the State Government as revenue while nothing will remain with the mining companies. The average winning bid (ratio of total contribution from auctions to the value of resources) comes to 86.23%, and 16.64% (royalty = 14.85%, DMF = 1.49% and NMET = 0.30%) of the value of the resource, on average, will need to be paid as statutory payments.

3.16. Beyond 100% of the value of the estimated resource being auctioned will go back to the State Government exchequer, leaving nothing with the mining companies. Furthermore, mining companies will also have to incur mining cost, pay various other taxes and cesses for mining operations, including performance security, corporate tax and contributions for the preservation of the environment and forestry, CSR, land acquisition etc.

3.17. Here, mining companies' return on investment is negative. No mining entrepreneur will be interested to invest where the investment return is negative. Moreover, no foreign investor will be interested to invest in India. In fact, present auction regime not only forced domestic and foreign mining companies to leave India, but also pushed India out of the league of mining destinations in the world.

(iii) COST ANALYSIS

Case studies: Odisha and Karnataka

3.18. Ensuring low cost of production is crucial for any business or sector, including mining, as it helps the units to remain profitable as well as competitive. This competitiveness also assists in country's growth through cheaper raw material supply to its domestic industries and export of the surplus at competitive rates to enhance the balance of trade.

3.19. Owing to high taxation, logistics, fuel and other input costs etc., the Indian mineral sector has been facing high production cost. After the advent of auction, the production cost has risen steeply for the auctioned mines. As more and more mines are granted through auction, the cost may reach a point, where mines are no longer viable to operate. This will affect all downstream industries and employment opportunities.

3.20. Since auction has predominantly been done for iron ore mines in Odisha and Karnataka, in the case studies we have considered only iron ore and iron and manganese ore mines in Odisha and iron ore mines in Karnataka.

3.21. The impact of auction on mine-head cost for iron ore mines in Odisha and Karnataka has been worked out in detail. The mine-head cost is illustrative only. The actual cost will vary from mine to mine depending upon the type of deposit, terrain, infrastructure, physical and chemical properties of mineral, etc. Changes in macro-economic scenario also significantly alter the mine-head cost.

(a) ODISHA: Post-auction cost structures

3.22. In Odisha, a total of 30 MLs and 1 PL-cum-ML have been auctioned, out of which 24 working MLs were auctioned after their expiry on 31st March, 2020. Details of mineral blocks auctioned in Odisha is shown below:

Table – III
ODISHA: Mineral blocks auctioned

Total mineral blocks (ML and PL-cum-ML) auctioned	31	30 — Mining Lease (ML) 24 — Working MLs expired on 31st March, 2020: – 13 Iron ore – 6 Iron and Manganese ore – 3 Chromite – 2 Manganese ore 6 — Greenfield blocks: – 3 Iron ore – 2 Limestone – 1 Graphite 1 — Prospecting Licence-cum- Mining Lease (PL-cum-ML) for Manganese ore
Execution of MLs of expired mines Execution of greenfield ML	17 Nil	17 MLs have been executed out of 24 MLs auctioned mines expired on 31st March, 2020 (these mines were already operational). The validity of existing FC, EC and mining plans of these mines were extended by 2 years.

Source: FIMI analysis based on Ministry of Mines data

(i) ODISHA: Greenfield blocks auctioned (iron ore)

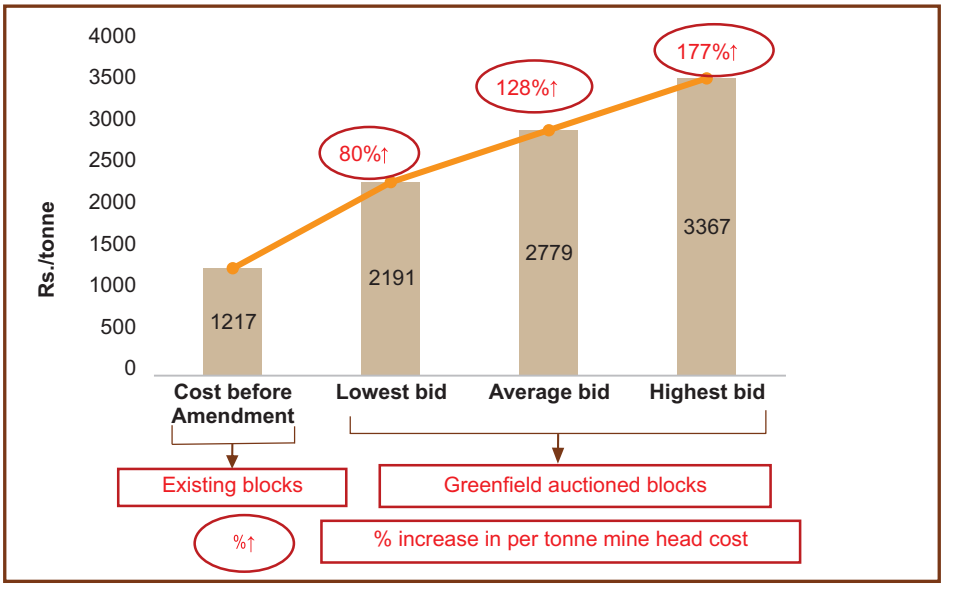
3.23. The following table illustrates the per tonne mine-head cost for 3 iron ore greenfield blocks auctioned in Odisha.

Table – IV
ODISHA: Auction of Greenfield blocks (iron ore)

Per tonne Mine-head cost (in Rs.)(for iron ore mines in Odisha, average 62% Fe fines)		Mine granted prior to auction	Auctioned Mines		
		Cost before Amendment	Lowest Bid	Average bid	Highest bid
(A) Bid percentage	Bid premium (in %)	NA	44.35%	72.20%	100.05%
(B) Sale value	Average sale price by IBM @ Rs. 2,111 /tonne for 62%Fe fines (March, 2020)	2111	2111	2111	2111
(C) Mining taxes / Levies	Auction Premium paid to State	0	936	1524	2112
	Royalty @15% of Average Sale Price	317	317	317	317
	DMF @10% for auctioned mines	0	32	32	32
	NMET @ 2% of royalty	0	6	6	6
(D)Mining cost	Mining cost (assumed)	900	900	900	900
(E)= (C)+ (D) Mine-head cost per tonne	**Cost per tonne (Rs./t)**	**1217**	**2191**	**2779**	**3367**
%Increase in cost (post auction)		**NA**	**80%↑**	**128%↑**	**177%↑**

Source: FIMI analysis based on IBM, Ministry of Mines data; **Note:** This excludes major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc.

Chart – I
Greenfield auctioned blocks mine-head cost per tonne
(for iron ore mines in Odisha, average 62% Fe fines)



Source: Table IV

3.24. From the above table and chart, it can be observed that, prior to introduction of auction in 2015, in Odisha for greenfield mines, the mine head cost per tonne was Rs. 1217. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of greenfield auctioned blocks in Odisha:

- **Lowest bid**: the per tonne mine head cost becomes Rs. 2191 which is 80 % higher than the cost before amendment.
- **Average bid**: the per tonne mine head cost becomes Rs. 2779 which is 128% higher than the cost before amendment.
- **Highest bid**: the per tonne mine head cost becomes Rs. 3367 which is 177 % higher than the cost before amendment.

(ii) ODISHA: Auction of working leases expired on 31st March, 2020 (iron ore and iron and manganese ore)

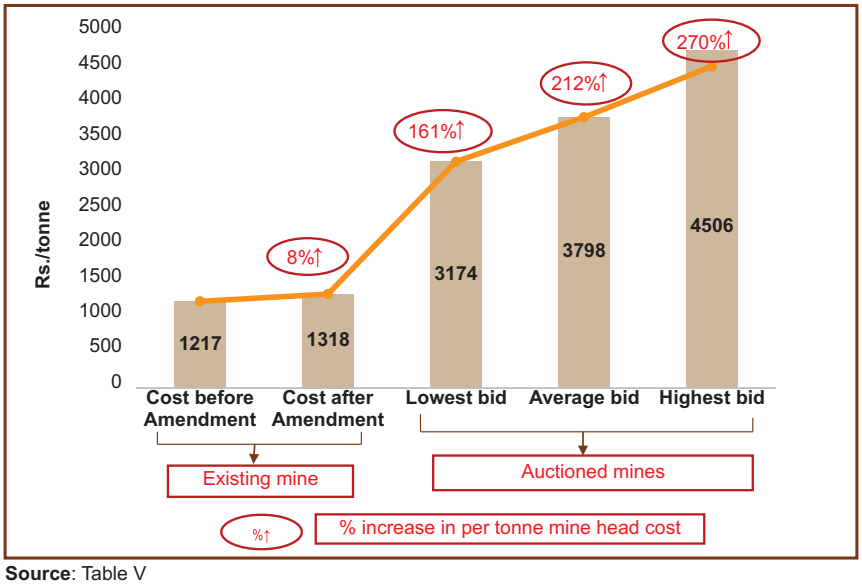
3.25. The following table illustrates the per tonne mine-head cost for 13 iron ore and 6 iron and manganese ore MLs in Odisha which expired on 31st March, 2020.

Table – V
ODISHA: Non-captive iron ore and iron and manganese ore MLs expired on 31st March, 2020
Cost of production at mine-head: Pre vs. post auction

Per tonne Mine-head cost (in Rs.) (for iron ore and iron and manganese ore mines in Odisha, average 62% Fe fines)		Mine granted prior to auction		Auctioned Mines		
		Cost before Amendment (Mine A)	Cost after Amendment (Mine B)	Lowest bid	Average bid	Highest bid
(A) Bid percentage	Bid premium (in %)	NA	NA	90.90%	120.45%	154.00%
(B) Sale value	Average sale price by IBM @ Rs. 2,111 /tonne for 62% Fe fines (March, 2020)	2111	2111	2111	2111	2111
(C) Mining taxes / levies	Auction Premium paid to State	0	0	1919	2543	3251
	Royalty @15% of Average Sale Price	317	317	317	317	317
	DMF @30% of royalty for existing mines and @10% for auctioned mines	0	95	32	32	32
	NMET @ 2% of royalty	0	6	6	6	6
(D)Mining cost	Mining cost (assumed)	900	900	900	900	900
(E)= (C)+ (D) Mine-head cost per tonne	**Cost per tonne (Rs./t)**	**1217**	**1318**	**3174**	**3798**	**4506**
%Increase in cost (post auction)		**NA**	**8%↑**	**161%↑**	**212%↑**	**270%↑**

Source: FIMI analysis based on IBM, Ministry of Mines data; **Note**: This excludes major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc.

Chart – II
Mine-head cost per tonne: Pre vs. post auction
(for iron ore and iron and manganese ore mines in Odisha, average 62% Fe fines)



Source: Table V

3.26. In Odisha prior to introduction of auction in 2015, for expired mines, the mine head cost per tonne was Rs. 1217. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of expired auctioned mines in Odisha:

- **Lowest bid**: the per tonne mine head cost becomes Rs. 3174 which is 161% higher than the cost before amendment.
- **Average bid**: the per tonne mine head cost becomes Rs. 3798 which is 212% higher than the cost before amendment.
- **Highest bid**: the per tonne mine head cost becomes Rs. 4506 which is 270% higher than the cost before amendment.

(b) KARNATAKA: Post-auction cost structures

3.27. In Karnataka, a total of 18 MLs have been auctioned, out of which 4 working MLs were auctioned after their expiry on 31st March, 2020. Details of mineral blocks auction in Karnataka is shown below:

Table – VI

KARNATAKA: Mineral blocks auctioned (iron ore)

Total mineral blocks (ML and PL-cum-ML) auctioned	18	18 — Mining Lease (ML) • 4 Working iron ore MLs expired on 31st March, 2020 • 14 "C" category iron ore MLs
Execution of MLs	11	• 4 MLs which expired on 31st march, 2020 have been executed (these mines were already operational). The validity of existing FC, EC and mining plans of these mines were extended by 2 years. • 7 MLs executed out of 14 "C" category mines auctioned in Karnataka which were already operational earlier and where the Hon'ble Supreme Court had ruled that FC and EC granted to earlier operational leases will automatically be transferred to successful bidders.

Source: FIMI analysis based on Ministry of Mines data

(i) KARNATAKA: "C" category iron ore mines

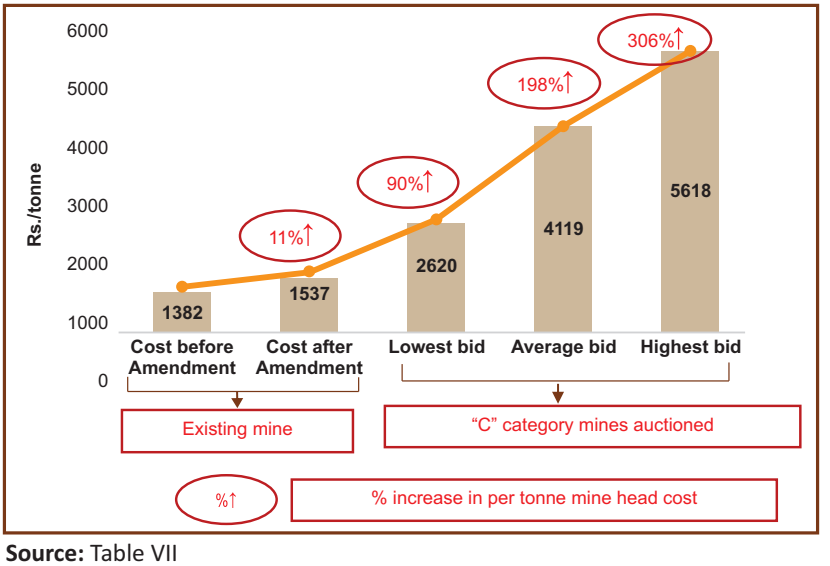
3.28. The following table illustrates the per tonne mine-head cost for "C" category iron ore mines in Karnataka.

Table – VII
KARNATAKA: "C" category iron ore mines
Cost of production at mine-head: Pre vs. post auction

Per tonne Mine-head cost (in Rs.) (for iron ore mines in Karnataka, average 62% Fe, fines)		Mine granted prior to auction		Auctioned Mines		
		Cost before Amendment (Mine A)	Cost after Amendment (Mine B)	Lowest bid	Average bid	Highest bid
(A) Bid percentage	Bid premium (in %)	0	0	36.70%	83.30%	129.9%
(B) Sale value	Average sale price by IBM @ Rs. 3,216 /tonne for 62% Fe fines (March 2020)	3216	3216	3216	3216	3216
(C) Mining taxes / levies	Auction Premium paid to State	0	0	1180	2679	4178
	Royalty @15% of Average Sale Price	482	482	482	482	482
	DMF @30% of royalty for existing mines and @10% for auctioned mines	0	145	48	48	48
	NMET @ 2% of royalty	0	10	10	10	10
(D)Mining cost	Mining cost (assumed)	900	900	900	900	900
(E)= (C)+ (D) Mine-head cost per tonne	**Cost per tonne (Rs./t)**	**1382**	**1537**	**2620**	**4119**	**5618**
%Increase in cost (post auction)		**NA**	**11%↑**	**90%↑**	**198%↑**	**306%↑**

Source: FIMI analysis based on IBM, Ministry of Mines data; **Note**: This excludes major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc.

Chart – III
"C" category iron ore mine-head Cost per tonne: Pre vs. post auction
(for iron ore mines in Karnataka, average 62% Fe, fines)



Source: Table VII

3.29. In Karnataka prior to introduction of auction in 2015, for "C" category mines, the mine head cost per tonne was Rs. 1382. This is a tentative cost, which does not include other major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc. However, after the introduction of auction, in case of "C" category auctioned mines in Karnataka:

- **Lowest bid**: the per tonne mine head cost becomes Rs. 2620 which is 90 % higher than the cost before amendment.
- **Average bid**: the per tonne mine head cost becomes Rs. 4119 which is 198% higher than the cost before amendment.
- **Highest bid**: the per tonne mine head cost becomes Rs. 5618 which is 306 % higher than the cost before amendment.

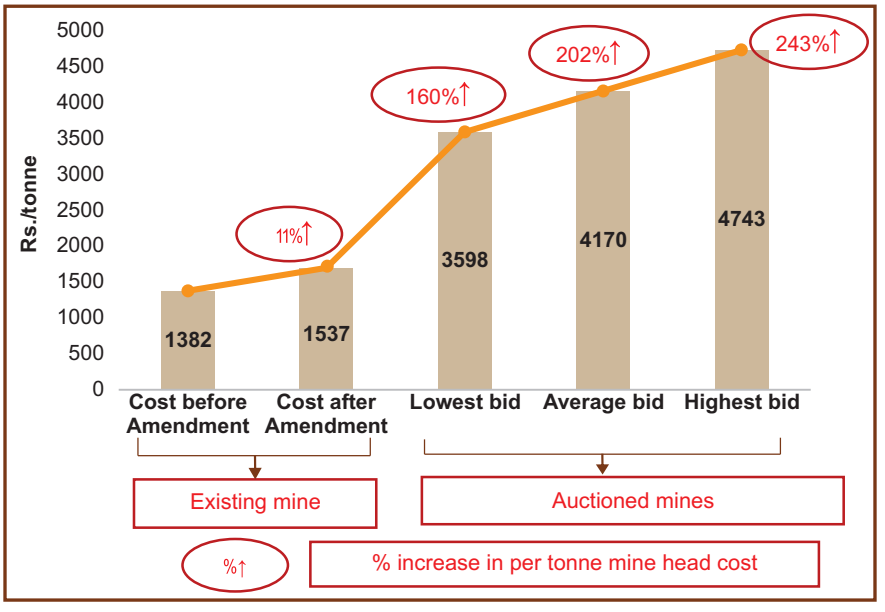
(ii) KARNATAKA: Auction of working leases expired on 31st March, 2020 (iron ore)

Table – VIII
KARNATAKA: Non-captive iron ore MLs expired on 31st March, 2020
Cost of production at mine-head: Pre vs. post auction

Per tonne Mine-head cost (in Rs.) (for iron ore mines in Karnataka, average 62% Fe, fines)		Mine granted prior to auction		Auctioned Mines		
		Cost before Amendment (Mine A)	Cost after Amendment (Mine B)	Lowest bid	Average bid	Highest bid
(A) Bid percentage	Bid premium (in %)	0	0	67.10%	84.90%	102.7%
(B) Sale value	Average sale price by IBM @ Rs. 3,216 /tonne for 62% Fe fines (March 2020)	3216	3216	3216	3216	3216
(C) Mining taxes / levies	Auction Premium paid to State	0	0	2158	2730	3303
	Royalty @15% of Average Sale Price	482	482	482	482	482
	DMF @30% of royalty for existing mines and @10% for auctioned mines	0	145	48	48	48
	NMET @ 2% of royalty	0	10	10	10	10
(D)Mining cost	Mining cost (assumed)	900	900	900	900	900
(E)= (C)+ (D) Mine-head cost per tonne	**Cost per tonne (Rs./t)**	**1382**	**1537**	**3598**	**4170**	**4743**
%Increase in cost (post auction)		**NA**	**11%↑**	**160%↑**	**202%↑**	**243%↑**

Source: FIMI analysis based on IBM, Ministry of Mines data; **Note**: This excludes major cost components like land acquisition, stamp duty, corporate income tax, CSR, performance security, GST, NPV and compensatory afforestation charges, other levies, etc.

Chart – IV
Mine-head Cost per tonne: Pre vs. post auction
(for iron ore mines in Karnataka, average 62% Fe, fines)



Source: Table VIII

3.30. In case of Karnataka for non-captive iron ore MLs expired mines, per tonne cost before auction was Rs. 1382, which has increased in case of

- **Lowest bid**: to Rs. 3598 which is 160% higher than the cost before amendment.
- **Average bid**: to Rs. 4170 which is 202% higher than the cost before amendment.
- **Highest bid**: to Rs. 4743 which is 243% higher than the cost before amendment.

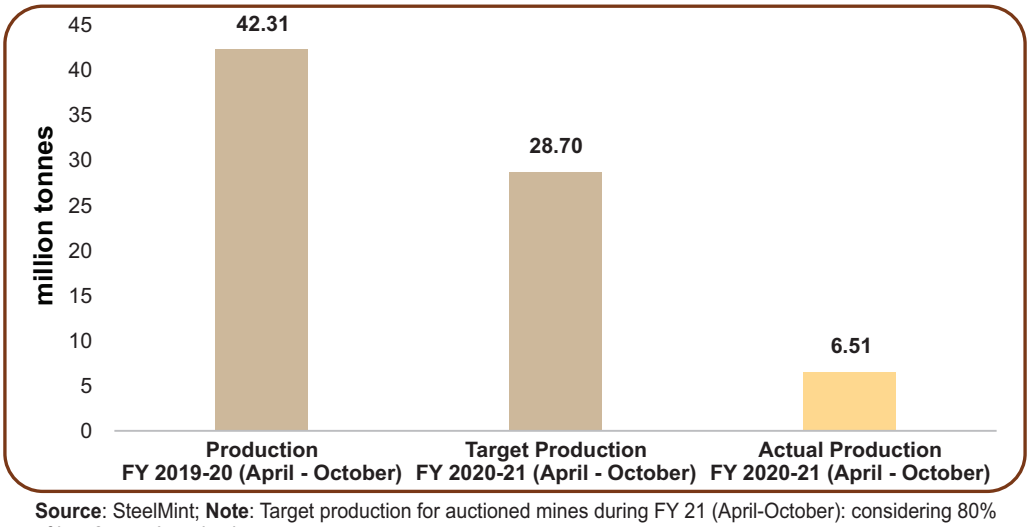
(c) ODISHA: Key features of auctioned non-captive mines expired on 31st March, 2020

3.31. Odisha auctions have brought out the following noteworthy features:

- The auction outcome has been quite perplexing, with successful bids for 19 iron ore (including 6 iron and manganese) mines ranging from lowest 90.9% to 154% highest bid. This clearly shows that for every Rs 100 a bidder earns from sale of mineral, he has to pay auction premium starting from Rs 90.9 to as high as Rs 154.

- In addition to auction premium, the new lessees have to make other payments as per MMDR Act such as royalty, DMF and NMET of about 16.8%, which takes the revenue share range in Odisha due to these four mineral-related payments from 107.7% to 170.8% for the highest bidder, which defies any economic rationale. This revenue share %age will further go up when other statutory payments (corporate tax, GST, 2% CSR, NPV, CA, etc.), cost of mining, salary and other operating expenses are added up.
- Auctions were held for total estimated iron ore resources of about 1,916.34 million tonnes, out of which 515.83 million tonnes was reserved for captive miners and balance 1,400.51 million tonnes was earmarked for open category for which both captive and non-captive miners could bid. However, the outcome of auction in Odisha reveals that of 1,400.51 million tonnes reserves meant for both captive and non-captive miners, the captive miners captured 1,055.18 million tonnes, in addition to the 515.83 million tonnes reserved for them. As a result, reserves of 1,571.01 million tonnes (1055.18 + 515.83) now under the control of end-users, i.e., around 82% of reserves have been captured by end-users. Out of this one single major steel company itself has garnered major chunk of the iron ore reserves of about 1132 million tonnes i.e. 59% of the total resources auctioned. This will lead to severe distortion and manipulation of mineral market, as these players have strong say over both demand and supply of ore.
- Auctioned mines were mandated to produce and dispatch atleast 80% of the previous 2 years' average output on pro–rata basis.

Chart – V
ODISHA: Iron ore production scenario after mines' auction, 2020



Source: SteelMint; **Note**: Target production for auctioned mines during FY 21 (April-October): considering 80% of last 2 years' production

However, as can be seen from the (chart – V), while the target production for (April–October) 2020-21 was 28.70 million tonnes, the actual production was 6.51 million tonnes.

- Auctions in Odisha also showcase that standalone miners cannot compete with captive miners, who can bid high to secure raw materials even at a loss, which will be absorbed in the cost of downstream metal-making.

C. Key lessons from auction

3.32. The key lessons from auctions are:

- **Unsustainably high bids**:

  Auctions have created artificial scarcity to the extent that companies are placing unsustainably high bids beyond 100% of the sale value of resources. Any mine at a premium in excess of 100% would inevitably run at a loss. A lessee in auction is paying out more to State Government theoretically than what he / she earns. Mining, like any economic activity, cannot be operated at a loss. There are press reports that three successful bidders in Odisha have surrendered iron ore and iron ore-cum-manganese mines citing unsustainability of the leases, by letting their security deposits forfeited.

- **Winner's curse and prohibitive cost of production**:

  Auction has led to the phenomenon called '*winner's curse*', where the winner of auction, who participated over-enthusiastically has to keep the mine running at a loss. Although the winner is jubilant due to his initial success in being granted the mineral block, the prohibitive high cost of production and statutory payments will lead him to pay more than the true worth of the mineral. In reality, the return from winning mineral in auction is negative for an investor.

- **Loss of production**:

  In Odisha, 7 out of 24 previously working mines have not yet started production even after 9 months of being auctioned**.** The

17 mines which could resume production post-auction have been incurring heavy losses from the start itself and are struggling to start production. Moreover, these lessees are trying various means to somehow reduce the cost of production and statutory payments to the Government. There are rumours that although higher grades are being removed from the mines, the grades declared are low. State Government has now constituted a Committee to go into it.

- **Loss of State's revenues**:

  It was expected that State Government will realize substantially higher revenues from auction. With the objective to avoid disruption in mineral supply and secure the State's revenue, the new lessees were mandated to dispatch atleast 80% of the previous 2 years' average output.

  However, not a single auctioned lease in Odisha has been able to fulfill this commitment and the State has lost huge amount of revenue. As per media reports, the loss to Government of Odisha from only 4 auctioned mines during the 6 months period from April–September 2020 was Rs. 1,155 crores and the State has served notice on these mines for loss of its revenues.

- **Supply constraints**:

  It may be that due to high production costs, many of the auctioned mines may produce less or ultimately default / surrender the leases. Consequently, the Government may not be able to get the estimated revenues. There may also be supply constraints which may affect the domestic steel and other downstream industries.

- **Adverse impact on mining ecosystem**:

  Auction is leading to mines being taken over by large companies having end-use plants creating monopolistic conditions. It was expected that MNCs and large companies having technology and financial strength will bring in advanced technology, skilled manpower into mining sector which unfortunately did not happen.

- **Engagement of Mine Developer and Operators (MDOs)**:

  Surprisingly, even the large companies have engaged contractors (MDOs) to do the mining instead of doing it in-house, despite their

financial strength. The engagement of MDOs seems to be in conflict with Contract Labour (Regulation and Abolition) Act, 1970. Thus auction is leading to more and more contract mining in the country, which has serious adverse effect on employees, livelihood, health & safety and sustainable mining.

- **Promotes captive mining and oligopoly**:

  The present auction policy discriminates against the standalone miners by incentivizing the end-users as they have the ability to absorb and accommodate the high cost of revenue-share and other associated cost in their value-added activities and ultimately in the price of the final product.

- **No multiplier benefits**:

  The policy of captive mines to steel plants will affect exploration adversely and lead to selective mining of high grades and affect the growth of a viable mining industry. It has brought no benefit to the down-stream users of steel as inter-sectoral subsidy from mining sector to steel sector is not passed on to them and hence there are no multiplier benefits.

D. Auction scorecard

3.33. The fact that auction system has not delivered is evident if one compares the grant of mining leases before auction and after the introduction of auction in 2015.

Table – IX
Licences granted before and after auction regime

	Before auction regime		After auction regime (2015 - 2020) (As on 15th December, 2020)
	(2006-2010)	(2010-2014)	
RP granted	74	49	Nil
PL granted	192	496	1 (PL-cum ML)
Execution of ML	2754 (Mostly Greenfield)	494 (Mostly Greenfield)	28 (all Brownfield, already having valid EC & FC)

Source: FIMI analysis based on Indian Bureau of Mines (IBM) data

3.34. **Execution of ML**: While 2754 mining leases were executed during 2006-10 and 494 during 2010-14, most of which greenfield, in the post-2015 auction regime, only 28 brownfield mining leases have been executed, having pre-existing EC and FC. In the auction regime, not a single greenfield mining lease has been executed.

3.35. **Execution of RP and PL**: The experience in case of exploration (RP, PL) under auction regime has been very discouraging: only 1 composite licence (PL-cum-ML) has been granted in last 5 years. On the contrary, 123 RPs and 688 PLs were granted prior to the auction regime during 2006-14.

3.36. It can be concluded that, before auction, there were opportunities to produce more, create new jobs and generate more revenues to State Governments, but since the auction regime started in India w.e.f. 12th January 2015, the mining sector has been crippled: no exploration and no greenfield mines and hence no new job opportunities in mining.

E. Exploration stopped

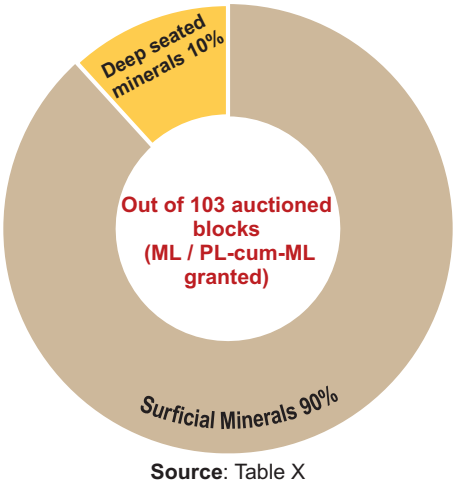
3.37. Most of the auctions so far have been for surficial deposits which are available in abundance. Although both categories are vital for India, but India is heavily dependent on imports for deep seated minerals (diamond, gold, base metals etc.) which require detailed exploration. However, in auction regime so far, out of 103 successful auctioned blocks, only 10% ML / PL-cum-ML are for deep seated minerals and rest 90% ML / PL-cum-ML are for surficial minerals. In auction, focus has been primarily on development of surficial minerals. The status of minerals wise auction is represented in the following table and chart:

Table – X
Surficial vs. Deep seated minerals through auction:
an analysis of 103 auctioned blocks (September, 2020)

Surficial	ML	% of total	PL-cum-ML	% of total
Iron ore, iron and manganese ore	43	42	0	0
Limestone	28	27	2	2
Bauxite	7	7	0	0
Graphite	4	4	1	1
Manganese ore	4	4	1	1
Chromite	3	3	0	0
Total surficial	**89**	**86%**	**4**	**4%**
Deep seated	ML	% of total	PL-cum-ML	% of total
Gold	4	4	2	2
Diamond	1	1	1	1
Copper	0	0	2	2
Total deep seated	**5**	**5%**	**5**	**5%**

Source: Ministry of Mines

Chart – VI
Deep seated vs. surficial minerals



Source: Table X

3.38. Auction comes in the way of much-needed exploration in the country, as it only allows for exploration through Non-Exclusive Reconnaissance Permit (NERP) route. Non-Exclusive Reconnaissance Permits (NERP) may be granted for any notified or non-notified minerals but the holder of NERP shall not be entitled to make any claim for PL-cum-ML.

3.39. As if this is not enough, NERP Rules 2015 state that:

> "*The grant of a non- exclusive reconnaissance permit over any area shall not prohibit the State Government from notifying all or any part of such area for grant of a mining lease or a prospecting licence-cum-mining lease and upon such notification the validity of all non-exclusive reconnaissance permits over such notified area will stand automatically terminated*." ***(Rule 3(11))***

3.40. In such a scenario, no private sector exploration companies, which have the expertise and latest technologies will be encouraged to apply for non-exclusive reconnaissance permit and the country will always be dependent on imports for minerals / metals such as gold, diamond, base metals, platinum group of metals, etc.

———

IV – AUCTION REGIME IN OTHER COUNTRIES vis-à-vis INDIA

4.1. Most of the resource-rich countries have followed the principle of first-come-first-served (FCFS) to develop their mineral resources. The system is non-discretionary and transparent. However, some of the countries which predominantly follow FCFS for exploration and mining have also adopted auction in a limited manner. The table below summarises the ground situation:

Table – I

Auction regime in other countries

Grant method	Type of blocks	Countries
Auction and FCFS (Hybrid system)	Mostly, unexplored blocks are granted under FCFS. Auction is done for: ➢ Mined-out / exhausted areas ➢ Already explored areas ➢ Rock and non-metallic minerals	**1.** China **2.** Indonesia **3.** Mozambique **4.** Queensland (Australia) **5.** Russia
FCFS mainly (Auction in a limited manner)	All concessions are granted under FCFS, except the following which are auctioned: ➢ Cancelled / expired licences ➢ Overlapping areas ➢ Reserved areas ➢ Areas explored by Government	**6.** Brazil **7.** Mexico **8.** Mongolia **9.** Peru **10.** USA

Source: FIMI analysis
Note : The information given in this chapter is based on what is available on the website

4.2. In the following paragraphs, a brief overview has been given about the auction regime in countries where there is a hybrid system and where FCFS mainly but auction in a limited manner is being followed:

A – COUNTRIES WITH FCFS AND AUCTION REGIME (HYBRID SYSTEM)

1. China

a. **Salient features of mineral concession**: In China, mining rights over on area is granted through both FCFS and auction. The applicant applies to the competent authority or participates in the public bidding for mining rights. The prospecting right holder gets the exclusive right to secure an extraction permit if mineral resources are discovered.

The catalogue for prospecting and extraction of mineral resources can be divided into three categories: in Category I resources, prospecting rights are granted by FCFS; in Category II and III, prospecting and mineral rights are granted by public bidding. Apart from this, mining rights can also be granted by written agreement between applicants and competent authorities under limited circumstances. In China, auctions are held under the following cases:

- Where no entity has obtained valid exploration rights for viable deposit.
- Prospecting and mineral rights for resources category II and III as per Ministry of Land and Resources notice.

b. **Auction blocks/minerals**: Auction is conducted for particular resource category.

c. **Bidding Process**: Bidding is handled by local mining rights trading platform.

d. **Eligibility**: No particular criteria, any person who wishes to explore or mine the mineral resources.

Source: Practical Law

2. Indonesia

a. **Salient features of mineral concession**: In consultation with Parliament and regional Governments, the Indonesian Government designates areas of land as mining business areas (WIUP) (Article 17, 2009 Law) for which mining business licenses (IUPs) may be issued by way of public tender. The issuance of licenses over metallic minerals and coal WIUP is subject to a bidding process, while licenses over non-metallic and rock WIUP are granted by application (Article 57, 2009

Law). In granting an IUPK, a State-owned entity is given priority to obtain the rights to mine, and tender only occurs if more than one State-owned or regional Government-owned entity is interested. If none are interested, private business entities may take part in the tender process.

b. Auction blocks/minerals: No specific minerals.

c. Bidding Process: The tender process entails a pre-qualification round, after which the qualified tenderers are expected to submit their respective bids. The determination of the winner of the tender process shall be made within five (5) working days after receiving the report of the relevant tender committee.

d. Eligibility: For WIUP mining areas smaller than 500 hectares, local regional State owned companies, local national enterprises, cooperatives and individuals (including firms and partnerships) can participate in the auction. For WIUP mining areas bigger than 500 hectares, national State owned companies, national enterprises, foreign held entities (PMA, a corporation incorporated under Indonesian law) and cooperatives can participate in the auction.

Source: Indonesia Mineral Law 2009

3. Mozambique

a. Salient features of mineral concession: All land in Mozambique is the property of the State. The Government organizes public tender for mining operations for: (i) geologically studied areas; (ii) areas with mineral resources potential; (iii) areas subjected to previous mining activity; (iv) areas declared reserved for mining activity; and (v) areas of partial or total protection.

b. Auction blocks / minerals: Auction is conducted through public tender for particular areas.

c. Bidding Process: Not available.

d. Eligibility: The Mining Law of Mozambique grants reconnaissance, exploration and mining rights to any persons and legal provisions incorporated and registered.

Source: Article 10, Mining No 20/2019

4. Queensland (Australia)

a. Salient features of mineral concession: In Queensland, Australia, there is discretionary bidding for exploration permits for minerals other

than coal. There may be competitive tender if the Minister considers it in the best interests of the State for an exploration permit to be granted by a competitive tender (Section 136A, 1989 Act).

There is also mandatory bidding for coal exploration permits (Section 136C, 1989 Act). However, there is no bidding for mineral development licenses. Applications for the grant of mineral development licenses made in respect of or including the same land shall be given priority by the Minister and at its discretion (Section 185, 1989 Act).

b. **Auction blocks/minerals**: For coal and non-coal resources

c. **Bidding Process**: The Minister publishes a gazette notice inviting tenders for an exploration permit for coal and non-coal minerals.

d. **Eligibility**: **for mining lease applicant must**:

- Be at least 18 years of age.
- Hold a Prospecting permit, Exploration permit or Mineral development licence.
- If a company, comply with the meaning under Corporations Law.

e. **Bidding Fee:** Appoints preferred tenderer involving cash bid component.

Source: Mineral Resources Act 1989 (Current as on 1 July 2019)

5. Russia

a. **Salient features of mineral concession**: Federal Agency for Subsoil Use ("Rosnedra") awards the production and combined licenses either by tender or auction.

The holder of an exploration licence can obtain a production licence under a simplified procedure (that is without any tender or auction) upon discovery of deposits.

b. **Auction blocks/minerals**: Subsoil resources.

c. **Bidding Process**: In case of auction, the winner is the participant who offers the highest amount of one-time payment for the right to develop subsoil resources.

In case of tender, the winner is the participant who submits the most technically competent, financially attractive and environmentally sound proposal.

Source: Practical Law

B – COUNTRIES WITH FCFS MAINLY BUT AUCTION IN LIMITED MANNER

6. Brazil

a. **Salient features of mineral concession**: Brazilian Government provides two types of mining rights, exploration licenses and mining concession. Exploration license is granted on a FCFS basis, which provides the right to access the properties and execute exploration activities. According to Brazil's new mining code, there is reference of auction regime for particular mining areas.

b. **Auction blocks / minerals**: Mining concessions are granted to companies or individuals in relation to specific types of mineral deposits in the concession area.

c. **Bidding Process**: Brazil's new mining code provides that any mining areas reverting to the Brazilian Government will be offered to new investors through an electronic bid procedure using objective criteria established by the Brazilian National Mining Agency (ANM).

d. **Eligibility**: Individuals or companies holding exploration licences must comply with the following conditions, among others, in order to obtain the mining concessions:

- successfully conclude the exploration programme of the mineral reserves;
- provide proof of economic feasibility to exploit the explored reserves;
- provide proof of its financial capability in order to execute such exploitation; and
- provide the required environmental licences for the project.

Source: 1. https://www.mondaq.com/brazil/mining/719904/brazil39s-mining-reforms-target-environmental-impact-public-safety-royalty-payments
2. Brazil - The Mining Law Review - Edition 7

7. Mexico

a. **Salient features of mineral concession**: Mexican Mining Concessions for exploration and mining allotments are granted upon free land to the first petitioner in time of a mining claim. Article 13 of the Mexican Mining Law, 2006 mentions about bidding procedure in case of the allotments are cancelled and falls under mineral reserve zone.

b. **Auction blocks/minerals**: No specific type of mineral.

c. **Bidding Process**: The following processes are involved while granting concessions:

- The Mexican Ministry publishes the invitation to bid in Mexico's Official Newspaper.
- The bidder has to submit (a) description of the lands or zones, details of studies conducted, as well as their location, geological and sampling maps; and (b) evidence of their legal, technical and economic capacity.
- When the land is located in an area inhabited or occupied by an indigenous people or community and said indigenous people or community participates in the tender, they will have the right to match the best economic proposal that is presented by another bidder, and in case they do, they shall have preferential right to mine.

d. **Eligibility**: The following companies are deemed as legally qualified to hold mining concessions under Mexican Law:

- Whose corporate purpose involves the exploration or exploitation of the minerals or substances subject to the application of this Law.
- Companies having their legal address in the Mexican Republic.
- Where any foreign investment participation is involved it has to adjust to the provisions of the applicable Law.

Source: Mexican Mining Law 2006

8. Mongolia

a. **Salient features of mineral concession**: Exploration license is granted to the first applicant who meets all the requirements as per Mongolian Law. Only the exploration license holder is entitled to apply for a mining license in the exploration-licensed area. If the exploration license holder fails to submit an application for mining license, the mining license for the area is granted through tender. Auction through tender is considered in the following circumstances:

- In case mining license has not been applied by exploration license holder.
- In case the exploration license has expired.
- In case an exploration license has been revoked.

b. **Auction blocks / minerals**: No specific type of mineral.

c. **Bidding Process**:

- Announcement is published in daily newspaper.
- License is granted considering the skills of the applicant's professional staff and with highest rating.
- If 2 or more applicants have same rating, the license shall be granted to the first applicant.

d. **Eligibility**: In Mongolia, only exploration license holder is eligible for mining license.

Source: 1. Law of Mongolia 2006
2. Mongolia Mineral Law Amendments 2014

9. Peru

a. **Salient features of mineral concession**: In Peru, mining concessions are usually granted on a FCFS basis. As per article 128 of the General Mining Law, auction shall be conducted over the grant of mineral rights where the filed applications are found to overlap over a given area.

b. **Auction blocks/minerals**: No specific type of mineral.

c. **Bidding Process**:

- Only in case the applications with same coordinates are filed at the same time, the area shall be auctioned off between the applicants.
- In the presence of the interested parties in attendance, the Head of the Mining Concessions Office opens the auction at the scheduled time and receives bids for at least one hour.
- Once the competitive bidding has concluded, the area shall be awarded to whoever submits the highest bid.
- The successful bidder deposits the amount of its bid in the Public Mining Registry Account under a penalty clause that if he/she abandons the declared auction, the area will be awarded to the bidder with the next highest bid.

d. **Eligibility**: Any person (including individual and entities) is entitled to request INGEMMET (Government body) to grant mining concession right. All holders of mining concessions are required to pay standing fees, called validity fees. These fees are calculated based on the concession area and paid on an annual basis to Government. Reduced fees apply for small miners. Failure to pay validity fees for 2 years will result in the cancellation of mining concession.

e. Bidding Fee:

- The base price of the auction is 3% of the Tax Unit for concessions of upto 100 hectares.
- In larger areas, the base price shall increase by 0.2% of the Tax Unit for every additional 100 hectares or fraction thereof.
- It is compulsory to deposit 10% of the base price in cash or cashier's cheque in the Public Mining Registry no less than 24 hours in advance.

Source: 1. Peru Mining Law 2006
2. Getting The Deal Through

10. United States of America

a. Salient features of mineral concession:

In USA, mines are regulated at federal, State and local levels. Which level of Government has jurisdiction over mining activities largely depends on the surface and mineral ownership.

In Government land:

- For already explored blocks of coal, the Secretary awards coal leases by competitive bidding or by any such other methods as per general regulation. Maximum area for any single coal lease is 2,560 acres. For deposits of phosphates, sodium, sulphur etc., the lease is granted to any qualified applicant by advertisement, competitive bidding or other methods.

- For metallic minerals (gold, silver, lead, copper, zinc, nickel etc.) as well as non-metallic minerals (limestone, fluorspar, mica, gypsum, tantalum, heavy minerals in placer form and gemstones), leases are granted through staking a claim on FCFS basis, which gets converted into mining lease once the mineral is established.

- Private parties are allowed to freely access public lands for prospecting. For prospecting of coal, the Secretary issues prospecting permits for a term of 2 years not exceeding 2560 acres to applicants who are qualified under the Leasing Act, 1920 as amended; and if within the said period of 2 years, the permittee establishes that the land contains coal in commercial quantities, the permittee shall be entitled to a lease for all or part of the land in his permit.

In private land:

For minerals in private land, right to mining may be obtained through an arrangement between land-owner and miner, either through purchase, lease or contract.

b. Auction blocks / minerals: Competitive bidding for coal, phosphates and sodium. No bidding for prospecting and exploratory work; staking a claim for metallic and non-metallic minerals.

c. Bidding Process: As per the Federal Coal Leasing Amendments Act, 1976, all federal coal leases are offered through competitive bidding / auction. There are two procedures followed for auction of coal blocks:

- regional leasing, where the Secretary of the Interior identifies blocks for auction based on expected demand for coal resources, potential economic impacts, etc.; or

- lease-by-application, where a company identifies an area and requests the Government to auction it.

The process for obtaining a permit or lease involves filing an application with the Federal Agency office with jurisdiction over block. Bids have to placed above the fair market value of coal block, as estimated by the Agency. The minimum bid for coal leases has been set at $100 per acre.

Bidders of coal blocks in USA have to pay:

- ❖ Auction premium (bonus bid) as a flat fee per tonne of coal produced
- ❖ Royalty on ad-valorem basis @8% of sale price for underground mines and atleast 12.5% for surface mines
- ❖ Lease fee per acre of land @ $3/acre per annum
- ❖ Performance security to ensure fulfilment of lease conditions, including reclamation costs

In USA, during 1990-2012, around 90% (96 out of 107) coal blocks auctioned had a single bidder and almost all auctions were for extension of existing surface mines. Auction premium (bonus bids) in various States of USA:

State	Auction premium (bonus bid) range ($ per tonne of coal)
Colorado	$0.02 - $0.55 per tonne
North Dakota	All successful bids were placed at the minimum bid that Government can accept, i.e., $100 per acre
Ohio	$0.04 - $1.37 per tonne

In 2017, the State of Ohio auctioned 56 million tonnes of coal for $ 0.41/ tonne (Rs. 29.21 / tonne), roughly 1% of the market price of coal. Auction premium also allows deduction for transportation costs etc. The emphasis in USA seems to be on realization of more revenue and more jobs through high volume of production rather than high auction premium leading to less production. More coal production will reduce power costs which has a far-reaching positive impact in the economy. Despite such facilitations, 26 coal companies in USA have filed bankruptcy since 2008.

d. Eligibility: One has to be US citizen or company incorporated within USA.

Source: 1. Practical Law; 2. Getting The Deal Through; 3. Reconsidering Coal's Fair Market value

C – AUCTION REGIME IN INDIA

4.3. India is an under-explored country and imports base metals, precious-metals, diamond, platinum group of metals (PGMs) etc. Since these are deep-seated, it is very important to incentivize exploration. A person / entity who does the exploration with his own funds at high risk must be assured of the right to mine if he finds the minerals, and that is only possible through first-come-first-served system and not with an auction system. With introduction of the auction system even for exploration, there is no incentive left for the private sector to make huge investments in high-risk exploration activity.

4.4. Further, auction in India is far from being fair, as it has created various irrational divisions within the mining industry. While all mines should be governed by the same set of rules with regard to grant and tenure, auction system has artificially differentiated between:

(a) **Government companies' leases** can be extended for 20 years at a time;

(b) **private sector non-captive leases** which expired on 31st March, 2020 and were auctioned, had no provision of extension; and

(c) **private sector captive leases**, which will expire on 31st March, 2030 and will be auctioned, have no provision for extension but have a right-to-first-refusal.

4.5. Unfairness in auction regime is self-evident from the fact that there is no auction for mining leases of Government companies and the same may be extended for periods of 20 years at a time, as long as the State Government agrees. On the contrary, there is no scope for renewal of a mining lease granted to a private sector lease beyond 50 years. Even for auctioned mines, the lessee has to again participate in auction after 50 years. Further, within the private sector itself, there are different rules for expiry of non-captive and captive leases, as well as right of first refusal. The MMDR Act, 1957, as amended in 2015, does not give reasons why such a distinction is made between Government, private captive and non-captive mines.

4.6. Further it would be interesting to compare the auction system as followed in the countries listed above and what India follows. In the countries covered above, there is simple system for auction with monetary offers as against India, where a successful bidder has to commit to pay:

- Premium on reserve price.
- Royalty payment towards DMF and NMET.
- Upfront payment @0.50% of the value of the estimated resources (Rules 11(1) of Mineral (Auction) Rules, 2015).
- Performance security @0.50% (Rule 12(1) of Mineral (Auction) Rules, 2015).
- Successful bidder to sign Mine Development and Production Agreement with the State Government (Rule 10(4) of Mineral (Auction) Rules, 2015).
- GST @ 18% of royalty w.e.f. 1st July, 2017.
- Purchase of land and other payments / cesses / taxes that have to be paid as per Indian laws.
- Mergers and acquisition (M&A) is a normal part of business to derive the economy of scale. As per MMDR (Amendment) Act 2016, for the transfer of captive leases (granted other than auction) the acquiring company has to pay 80% more royalty on the mineral mined from the transferred lease.

4.7. The Government seems to believe that private mining industry has deep pockets and can afford any fiscal levy put on them. This has led to the failure of auction regime in the country. All these stipulations are enough to make mining unviable. This is borne out by the fact that initial euphoria in coal waned after sometime and in the case of non-coal, out of 154 blocks of various minerals offered, auction of only 103 could be achieved.

———

V – ANATOMY: WHETHER AUCTIONS HAVE DELIVERED?

5.1. After more than half-a-decade of auction regime, it is essential to analyse whether auction as a policy instrument is leading towards development of resources in the country. Have auctions helped in the development of mineral resources and led to:

(A) Transparent and fair allocation

(B) Increase in production

(C) Focus on exploration of deep seated minerals to reduce import dependency

(D) Competitiveness at international level

(E) Timely resource development

(F) Employment generation

(A) TRANSPARENT AND FAIR ALLOCATION

5.2. It was thought that "auction" system will bring transparency and lead to resource development. As the study so far has brought out, the "auction" has neither brought transparency nor expected revenues to the States. Rather the system has brought scare among the consumers / industries about the availability of raw materials which led to high and unsustainable bids, costly raw materials, making the industries unviable, leading to their imports, and foreign exchange out-go. Not only this, not a single greenfield mining project – coal or non-coal – has come into operation. The country continues to import more and more coal and other metals.

5.3. The difficulty with an auction system is the need for transparency, in a manner that ensures fair procedure and takes into account the financial viability of the resource being auctioned. The biggest drawback in transparency of auction system is the information asymmetry among the bidders about the geological worth of the block, which is the most important factor to place a bid / quote. Since information in the auction document will always be limited, bidders may be privy to different sources of information, which poses serious question mark on the transparency in auction.

5.4. The auction system is also far from being fair in allocation of mineral resources. Unfairness in auction regime is highlighted from the fact that there is no auction for mining leases of Government companies and there is a provision for extension for a period of 20 years at a time. As against this, the leases of private sector expire after 50 years and put up for auction thereafter. Further, within the private sector itself, there are different rules for non-captive and captive lease, as well as right of first refusal. Thus, auction in India is neither fair nor a transparent mechanism for allocation of mineral resources.

(B) INCREASE IN PRODUCTION

(i) Coal

5.5. In case of coal, while before auction, 37 coal mines were operational, after auction only 20 coal mines have come into operation. Auction has not only made the operational mines unviable / difficult to operate, but also reduced the total coal production from these mines from 42.88 million tonnes in 2014-15 to 30.04 million tonnes in 2018-19. Auction has thus reduced the country's coal production from the same blocks. Diminished coal production from already producing mines is being met through coal imports, which is increasing and resulting in outgo of foreign exchange.

5.6. Out of 98 auctioned / allotted coal mines, only 20 are operational.

Table – I
Status of auction / allotted coal mines
(as on 5th February, 2020)

Cancelled by Hon'ble Supreme Court	204
Net auctioned and allotted	98
Mine opening permission granted	29
Coal producing mines (2018-19)*	20 (including 12 private sector mines)

Source: Lok Sabha Unstarred Question No. 527 dated 5th February, 2020
Note: * Coal Controller Organization (CCO)

5.7. The aggressive bidding for coal blocks due to restricted coal availability and fears of supply security has waned away now and in many cases the huge investments made by bidders have turned into losses. A survey conducted by FIMI has suggested that with availability of much-cheaper domestic as well as imported coal, lessees of many coal blocks which were auctioned initially, are finding it economic to buy coal for

their power plants rather than mine their own coal, paying the auction-premium to Government, washing and transporting the coal to captive power plants. There is a huge pressure on cost recovery and many of the auctioned coal mines are operating at a loss / much below their Peak Rated Capacity (PRC).

(ii) Non-coal

5.8. In case of non-coal minerals, even after 5 years of auction, all the greenfield projects are far from being operational. Even in case of the 14 auctioned 'C' category mines in Karnataka, despite being previously operational and possessing valid EC and FC, only 7 mines have been able to come into operation and remaining 7 mines are yet to receive all permissions / approvals to start mining.

5.9 Auction has made many mineral deposits unviable to mine and it may be that these resources will remain untapped. Out of 94 non-coal mining leases auctioned, only 28 are operating. Three successful bidders in Odisha are reported to have surrendered their mines citing unsustainability.

5.10. The main objective behind MMDR Amendment Act, 2015 was to ensure that the State Governments get maximum revenue right from the start (cradle) to the closure (grave) of the mining operations. The entire auction process has been designed to maximize revenue receipts of the State Governments, without any regard to competitiveness which has adversely affected long-term mineral development and socio-economic benefits in mining areas.

(iii) Cyclical nature of industry

5.11. Further, all the blocks – coal (37) or non-coal (28) – which were auctioned / allotted were operating mines. None of the 52 greenfield non-coal mining projects could see the light of the day so far. Every industry has to adjust production as per demand, but in the case of auctioned mines in India, a lessee has to maintain peak rated capacity and enter into Mine Development and Production Agreement to maintain same level of production. In an industry where booms and depressions alternate, this is not possible.

(C) FOCUS ON EXPLORATION OF DEEP-SEATED MINERALS TO REDUCE IMPORT DEPENDENCY

5.12. Since it is difficult to explore the deep-seated minerals with the technology available in the country, India continues to focus on surficial minerals. The opportunity loss to India in commodities like gold, diamond, copper, nickel, cobalt, platinum group metals, tungsten etc. as a consequence of lack of exploration is enormous.

5.13. Since exploration is the lifeline of mining, it is necessary to analyse country's policy in this regard. Under the second proviso of Section 4(1) of MMDR Amendment Act 2015, the Central Government notified most of the Central and States PSUs as the exploration agencies apart from GSI and MECL. Many of the State PSUs have no expertise and adequate infrastructure to undertake exploration upto G2 / G3 level. The funds for their exploration activities are to be met through National Mineral Exploration Trust set up under MMDR Amendment Act, 2015. The exploration regime thus stands nationalised. There is no doubt in such a situation, India will continue to be one of the least explored countries in the world.

5.14. Realising that Government agencies / public sector alone would not be able to deliver, the Government of India brought out a new National Mineral Exploration Policy, 2016. It invited private sector expertise for deep-seated minerals and provided for :

- Availability and free accessibility of comprehensive, baseline geoscience data;
- Incentives that provide an appropriate risk-return scenario; and
- Ease of doing business and earning attractive returns from the investment.

Such a policy would only encourage contractual drilling in the name of exploration.

5.15. India's exploration expenditure for the years 2015-16, 2016-17 and 2017-18 was US$ 0.13, 0.15 and 0.17 billion respectively mostly on surficial minerals. This comprises expenditure incurred by GSI and MECL under NMET only. In addition, CMPDIL, Department of Atomic Energy and State DMGs also incur expenditure on exploration.

5.16. If one analyses the trend in world exploration, it will be evident that most of the exploration expenditure goes into the minerals / metals for which India is dependent on imports:

Table – II
World: Commodity-wise expenditure on exploration

(US$ billion)

Year	Gold	Base Metals (copper, nickel, lead / zinc)	Diamond	PGM (platinum group of metals)	Other Minerals	Total
2012	9.65 (47%)	6.57 (32%)	0.62 (3%)	0.31 (1.5%)	3.39 (16.5%)	**20.54 (100%)**
2013	6.64 (46%)	4.76 (33%)	0.58 (4%)	0.14 (1%)	2.31 (16%)	**14.43 (100%)**
2014	4.62 (43%)	3.76 (35%)	0.54 (5%)	0.21 (2%)	1.61 (15%)	**10.74 (100%)**
2015	4.14 (45%)	3.13 (34%)	0.46 (5%)	0.14 (1.5%)	1.33 (14.5%)	**9.20 (100%)**
2016	3.48 (50%)	2.16 (31%)	0.28 (4%)	0.070 (1%)	0.98 (14%)	**6.97 (100%)**
2017	4.05 (51%)	2.38 (30%)	0.25 (3%)	0.080 (1%)	1.19 (15%)	**7.95 (100%)**
2018	4.85 (51%)	3.04 (31%)	0.30 (3%)	1.00 (10%)	0.43 (4.46%)	**9.62 (100%)**
2019	4.29 (50%)	3.23 (31.37%)	1.78 Collectively (18.63%)			**9.30 (100%)**

Source: S&P Global Market Intelligence;
Note: The above figures do not include bulk commodities; Figures in parenthesis indicate the percentage expenditure for a mineral in a particular year.

5.17. In auction regime, out of 103 auctioned non-coal blocks, only 10% are for deep seated minerals and rest 90% for surficial minerals. As a result, the much needed focus on exploration of deep-seated minerals, for which India depends heavily on imports, is missing.

5.18. Auction has adversely affected exploration. As the study has pointed out that auction of surficial minerals where it has been mostly held, has neither brought revenues to the extent States had anticipated, nor has it led to the growth of production. Rather it has resulted in inflating the cost of production, affecting adversely economic growth and in the case of coal, ever-increasing imports which are more economical than mining from the auctioned blocks. The country continues to depend on imports of not only coal, which is abundantly available in the country, but the minerals / metals which are vital for the economic growth of the country.

5.19. Even in the countries where auction system is prevalent alongwith first-come-first-served (FCFS), the system is simple and not complicated and fleecy as in India where an entrepreneur cannot make any money. The accent in India is on State's revenue and not on area development where minerals occur. Investment in these areas can bring about economic and

socio-economic development and create jobs. It has to be realised that maximisation of revenue of the States need not be compatible with the public good.

(D) COMPETITIVENESS AT INTERNATIONAL LEVEL

5.20. In case of 103 auctioned non-coal blocks, 102.87% of the estimated value of resources auctioned will go to the Government as revenue, indicating that the investor in auction has negative return on his/her investment. As it is, the Indian mining industry is the highest taxed in the world. Auction premium further increases the tax burden. In addition, there are costs for extraction, input materials, fuel, salaries and various other taxes / cesses, including performance security, corporate tax, land acquisition and contributions for the preservation of the environment and forestry, CSR etc. Auction has increased the cost of production manifold, which has affected the competitiveness of Indian mining sector and has halted production and job creation.

5.21. In a competitive world, it is necessary that what we produce should be economically viable. The repercussions of mineral auction have all the ingredients to make raw materials costly and diminish its competitiveness. In present day uncertain commodity market around the world, a time may come when imports of minerals would be cheaper than buying them in the domestic market.

(E) TIMELY RESOURCE DEVELOPMENT

5.22. It is a strange situation that even all the earlier working mines could not be auctioned and whatever were auctioned could not come into operation despite a large number of mines having EC and FC clearances. This resulted in production and job losses and increased the dependence on imports. However, the revenues of the States went up. While the States gained, the nation suffered in terms of ever-increasing imports and massive foreign exchange outgo.

5.23. Auction does not help in timely development of resources, as is evident from a comparison of grant of mining leases before and after auction. While 2754 mining leases for non-coal minerals were executed during 2006-10 and 494 mining leases during 2010-14, most of which were greenfield, after introduction of auction regime, post-2015 only 28 brownfield mining leases have been executed, having pre-existing EC and FC. In the auction regime, not even a single greenfield mining project has seen the light of the day.

5.24. The experience in case of exploration (RP, PL) under auction regime has been very discouraging: only 1 composite licence (PL- cum- ML) has been granted so far under the auction regime in last 5 years compared to 123 RPs and 688 PLs granted prior to the auction regime during 2006-14.

5.25. In coal, as many as 17 coal mines are yet to commence production post auction, out of the 37 previously operating mines.

(F) EMPLOYMENT GENERATION

5.26. It has to be realised that in this country, the mines are mostly in tribal and forest areas with nil / negligible infrastructure facilities. Development of a mine with the attendant infrastructure directly improves the socio-economic milieu of the people living in those areas. If acquiring a mine and its continuous operations become unviable due to auction, no entrepreneur will be encouraged to acquire a mine and the area will remain backward with no new job opportunities. State will also not get any revenue.

5.27. Instead of earning more revenue from auction and other means, which may never be utilised in these backward and tribal areas, the State should attract more investment in mines in these areas which will provide jobs and lead to socio-economic development, besides revenue to the State Government.

5.28. Auction has also left investors with negative return on investment. With no surplus / profits to be ploughed back into R&D, upskilling of workforce, improving health and safety, the employment conditions of present workforce has been adversely affected.

5.29. It was thought that auction will lead to transparency and growth of mining sector. However, auction has throttled the mining sector, instead of strengthening it. Auction system has completely failed for resource development, both in coal and non-coal sector.

5.30. It therefore needs serious rethinking on the part of the Government whether auction is a correct policy instrument for the development of mineral resources in India.

———

VI – CONCLUSION

6.1. The auction system requires substantial upfront costs on the part of the bidders. If there is an element of administrative or political uncertainty, or a lack of transparency, it may fail to attract investors. In some countries of the former Soviet Union, the auction process had proved to be time consuming and expensive for investors.

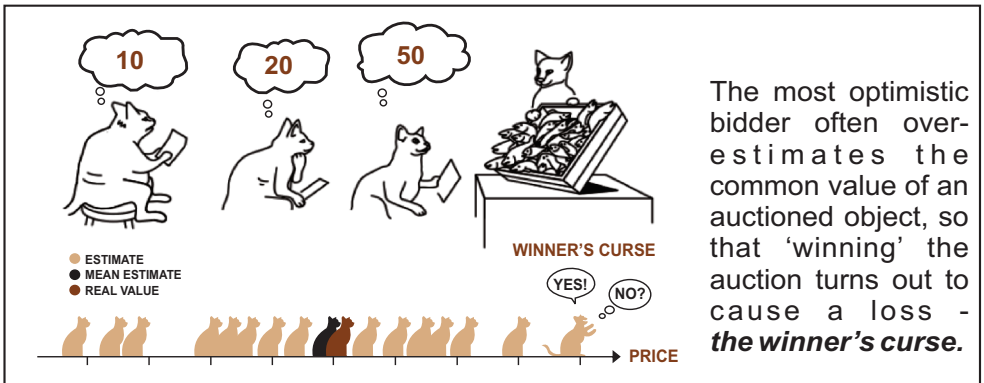
6.2. There are inherent geological risks and socio-political risks which is often not factored in auction document and therefore auction often results in the *winner's curse*. It is much more difficult to attract investment in greenfield areas where there is little information and the geological risk is high, as in the case of deep-seated and concealed deposits.

6.3. Richard Thaler, the 2017 Nobel Prize winner in Economics, in his book "*Misbehaving: The Making of Behavioural Economics*" highlighted that:

> *"When many bidders compete for the same object, the winner of the auction is often the bidder who most overvalues the object being sold."*

6.4. Even 2020 Nobel Prize winners Paul Milgrom and Robert Wilson in their seminal work on auction theory have examined the "*winner's curse*" which is the tendency for the winning bid to exceed the true worth of the item. The winner's curse can also lead cautious bidders to undervalue an item –

Illustration of Winner's Curse in Auction



The most optimistic bidder often over-estimates the common value of an auctioned object, so that 'winning' the auction turns out to cause a loss - ***the winner's curse.***

Source: The Royal Swedish Academy of Sciences

to avoid the curse – and it becomes especially problematic when bidders have different private information about an item's true value.

6.5. It is interesting to note that the link between exploration and mining seems to have been well understood by the Hon'ble Supreme Court. The Hon'ble Supreme Court in its Judgment dated 27th September, 2012, on *Special Reference No. 1 of 2012* by the President of India, has stated that auction is not the only way of discharging a public trust while alienating natural resources:

> *"Auctions may be the best way of maximizing revenue but revenue maximization may not always be the best way to sub serve public good. "Common good" is the sole guiding factor under Article 39(b) for distribution of natural resources."* ***(para 116)***

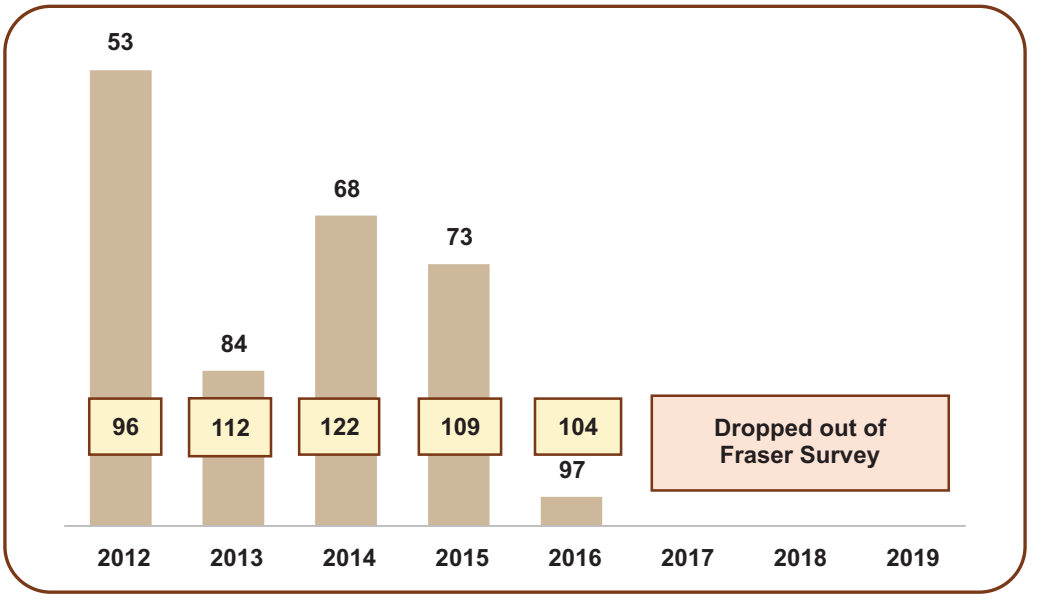
6.6. Auction regime has put the whole process of mineral development into the realm of astrology which cannot be predicted in the minerals and metals trade where booms and depressions alternate. Unless the approach of Centre and States changes, Indian mining will continue to have uncertain future. Country will continue to depend on imports for most of the vital raw materials and metals. Even the Hon'ble Supreme Court of India in its Judgment on *Special Reference No. 1 of 2012* dated 27th September, 2012 has observed that:

> *"A fortiori, besides legal logic, mandatory auction may be contrary to economic logic as well. Different resources may require different treatment. Very often, exploration and exploitation contracts are bundled together due to the requirement of heavy capital in the discovery of natural resources. A concern would risk undertaking such exploration and incur heavy costs only if it was assured utilization of the resource discovered; a prudent business venture, would not like to incur the high costs involved in exploration activities and then compete for that resource in an open auction."* ***(para 130)***

AUCTION REGIME HAS PUT INDIA BACK BY ONE GENERATION

6.7. The instability of mining legislation which changes every now and then, and any change hailed as 'reform', has put international investors away from India. The net result is that India no longer finds place among attractive destinations for investment opportunity in Fraser Institute's Annual Survey of Mining Companies for the last three years.

Chart – I
India's Rank in Fraser Survey



Source: Fraser Institute's Annual Survey of Mining Companies
Note: **Number of countries participated in the survey.**

6.8. It was expected that auction of the mineral resources would be a panacea for all that were coming in the way of resource development. Auction would provide transparency, lead to resource development which would lead to local area development, provide jobs and most important of all States will get massive revenues. Unfortunately, as the study has brought out, none of the objectives could be achieved. Auction did not prove to be as transparent as was thought. No green-field mine project was opened up and not even all the working mines, many of them having EC / FC transferred in favour of new lessees, which were auctioned could come into operation. This resulted in massive reduction in production and job losses, upsetting the socio-economic life of people of the areas where working mines were closed down. States did get enhanced revenues but not of the scale anticipated. Auction regime has put the nation back by one generation with uncertain future for the growth of country's mineral resources and continued dependence on ever-increasing imports.

6.9. Auction was considered to be a transparent and fair mode of granting concessions by people who had no idea of mining industry and its characteristics. Before one starts mining operations, one has to explore, select appropriate technology, analyse the nature and type of deposit – whether surficial or deep-seated and then only develop the mine. As the auctions progressed, it became obvious that all that was offered could not be auctioned. Most of the auctioned blocks were working mines.

6.10. What the country has achieved in auction regime are costly raw materials and ever-increasing imports of the minerals / metals that are supposed to be deep-seated and require start-of-the-art technologies to explore and extract. The success rate for deep-seated minerals is supposed to be 1:100 while for precious metals / minerals like diamond and platinum, it is 1:1500 to 1:1000 and gold 1:800 to 1:400.

6.11. Auction in India first in coal and subsequently in non-coal was introduced with lot of preconceived notions that mining industry has lot of margins and deep-pockets. The States might have got additional revenues though not of the size the Government worked out. Mining areas suffered, as not all the working blocks offered for sale came into operation. Consequently, the working mines closed down, resulting in massive job loss. It may be worth remembering that maximum revenues to the States may not be compatible with public good. So while the States got revenues (albeit at the cost of production and job losses and absence of socio-economic development), the nation lost in terms of ever increasing imports not only of the minerals that we produce (such as coal) but also precious and base metals, diamond, etc. which we require for country's development.

———

Notes

Notes

Notes