



## Revised coal price mechanism: Sponge Iron, Cement units expected to be significantly affected; impact on power sector likely to be mixed

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Coal India Limited (CIL) has migrated to a new system for pricing its non-coking (NC) coal on the basis of Gross Calorific Value (GCV) w.e.f. from January 01, 2012. Till December 2011, the company used to follow the Useful Heat Value (UHV) based method to price its NC coal. The revised mechanism is more in line with the international system as against the previous mechanism, which was an old method and depended on moisture and ash content through the application of an empirical formula. ICRA's analysis shows that prices of certain grades of NC coal may rise significantly under the new price regime, while for certain other grades, prices may actually decline (refer Table 1). Prices of coking coal would not change under the new mechanism.

The revised pricing system has divided the entire spectrum of GCVs into 17 bands, from 2200 kilo calorie per Kg (KCal/Kg) to 7000 KCal/Kg and above, in intervals of 300 KCal/Kg, as against 7 grades (A to G, from 3200 KCal/Kg to 6400 KCal/Kg and above) that had existed under the previous UHV based pricing system. Additionally, CIL has brought in a uniformity in the pricing of NC coal produced at different mines of different subsidiaries, as against the earlier practice of subsidiary-wise and mine-wise differential prices. Only coal produced from ECL would command a 6% higher price over the prescribed notified rates.

For notifying the revised price bands, CIL has continued with its broad classification of consumers; viz. power/fertiliser/defence (core sector) and the rest of the industries (non-core sector). However, the price difference between the core and non-core sectors has now been revised upwards. Under the UHV based system, D, E and F grade coal for the non-core sector had a price premium of a flat rate of 30% over the same for the core sector, which now varies between 33% to 60% under the new GCV based pricing system.

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**Table 1: Mapping of existing coal grades with GCV bands**

Sl. No.	GCV Band* (kcal/ kg)	Coal Grade	Core Sector (Power/ Fertilizer/ Defence)					Non-Core Sector				
			New (GCV Based) Rs/ tonne^	Previous (UHV Based) Rs/ tonne^	% Change			New (GCV Based) Rs/ tonne^	Previous (UHV Based) Rs/ tonne^	% Change		
					From lowest price	From middle price**	From highest price			From lowest price	From middle price**	From highest price
1	>7000	A	4900	3690 to 4100	33%	26%	20%	4900	3690 to 4100	33%	26%	20%
2	6701-7000		4690	3690 to 4100	27%	20%	14%	4690	3690 to 4100	27%	20%	14%
3	6401-6700		4460	3690 to 4100	21%	15%	9%	4460	3690 to 4100	21%	15%	9%
4	6101-6400	B	4130	3590 to 3990	15%	9%	4%	4130	3590 to 3990	15%	9%	4%
5	5801-6100		3990	3590 to 3990	11%	5%	0%	3990	3590 to 3990	11%	5%	0%
6	5501-5800	C	2940	1050 to 1860	180%	102%	58%	3430	1370 to 2420	150%	81%	42%
7a	5401-5500		2060	1050 to 1860	96%	42%	11%	2750	1370 to 2420	101%	45%	14%
7b	5201-5400	D	2060	880 to 1610	134%	65%	28%	2750	1140 to 2090	141%	70%	32%
8	4901-5200		1890	880 to 1610	115%	52%	17%	2520	1140 to 2090	121%	56%	21%
9a	4801-4900		1680	880 to 1610	91%	35%	4%	2230	1140 to 2090	96%	38%	7%
9b	4601-4800	E	1680	730 to 1090	130%	85%	54%	2230	950 to 1420	135%	88%	57%
10	4301-4600		970	730 to 1090	33%	7%	-11%	1460	950 to 1420	54%	23%	3%
11a	4201-4300		880	730 to 1090	21%	-3%	-19%	1320	950 to 1420	39%	11%	-7%
11b	4001-4200	F	880	570 to 870	54%	22%	1%	1320	740 to 1130	78%	41%	17%
12	3701-4000		630	570 to 870	11%	-13%	-28%	1010	740 to 1130	36%	8%	-11%
13a	3601-3700		630	570 to 870	11%	-13%	-28%	1000	740 to 1130	35%	7%	-12%
13b	3401-3600	G	630	430 to 700	47%	12%	-10%	1000	560 to 910	79%	36%	10%
14a	3201-3400		620	430 to 700	44%	10%	-11%	990	560 to 910	77%	35%	9%
14b	3101-3200		-	Non-Graded	-	-	-	990	Non-Graded	-	-	-
15	2801-3100	-	620		-	-	-	870		-	-	-
16	2501-2800	-	550		-	-	-	780		-	-	-
17	2201-2500	-	480		-	-	-	680		-	-	-

Source: CIL Price Chart dt. 26.02.2011 and 31.12.2011

^indicates mine-head prices, excluding various duties and other charges

\*at 5% moisture level; \*\*average of the highest and lowest price

Note: In cases where a particular band maps to 2 different grades, the band has been subdivided by ICRA in 2 sub-bands of (a) and (b)

## Impact Analysis

Since CIL has a near monopoly position in the domestic coal market, with a market share of around 80%, the new prices would be applicable to almost all NC coal consumers in the country. ICRA notes that the migration to the GCV based system would lead to different price increases for different grades of coal (refer Table 1), and therefore the impact on various companies' coal costs would also be different. In the absence of adequate data at this stage on CIL's product mix across the new GCV bands, it is difficult to arrive at the exact impact on various coal consumers. However, a study of the revised price bands enables one to make a few critical inferences as listed below. For the analysis, ICRA has considered the extent of price increase from the lowest and highest price levels prevailing in each of the earlier grades, and has also calculated the same from the middle level.

- Price of erstwhile A, C and D grades of coal are likely to be impacted significantly. Cumulatively, these grades contributed around 19%-23% of the total NC coal dispatch volumes between 2006-07 and 2009-10 (refer Annexure – II). Additionally, within each of the grades between A and D, the price would increase the most in the highest GCV band for that particular grade, and would decrease progressively along lower GCV bands within that particular grade. Prices of the medium grades (C and D) are likely to increase quite steeply. A significant proportion of this coal is used by non-core industries including sponge iron and cement. As per quick calculations, coal costs account for around 25% of the total operating costs of a sponge iron manufacturer having 100% coal linkage from CIL (this would however vary, depending upon factors like the distance of the plant from the coal mine). Similarly, the share of coal costs in the total operating cost of a cement player would be around 30% (cost of power could be another 15% or so from a coal based captive power plant, if the cement plant has any). Consequently, a sharp increase likely for these two grades would impact the cost structure of sponge iron and cement players significantly, more so since prices are higher for the non-core sectors. Nevertheless, ICRA notes that given the coal shortage scenario that has been prevailing in the country in recent years, many non-core players were dependent anyway on costlier coal procured from e-auction and/or imports, and the overall impact of the revised coal price on their cost of operations would be limited to that extent.
- The power sector is the largest consumer of NC coal, accounting for around 73% of CIL's volumes in 2010-11 (refer Annexure – II). The impact on the power sector, which is the primary consumer of E and F grade coal, is expected to be mixed. The price rise could be quite sharp for the highest GCV bands within the E and F grades. However, moving towards lower GCV bands within E and F grades, the effect would be mixed across various collieries (refer Annexure – I). Consumers which were procuring E grade from Western Coalfields Limited (WCL) and F grade from Eastern Coalfields Limited (ECL) at higher prices earlier would now stand to benefit if they get to procure coal from the lower GCV band within the respective grades. For other consumers, the impact would be adverse. However, many power producers buy higher grade coal for blending with the inferior E and F grades, and the overall impact on their fuel costs would be impacted because of the rise in the prices of coal in the grades A to D.
- Captive power plants would not be eligible for being classified under the core sector. Consequently, power costs of companies in energy intensive industries including primary aluminium, cement and steel, many of which have coal based captive power plants, primarily using E and F grade coal, would witness some pressure on their production costs going forward, especially considering the fact that the premium for the non-core sector consumers have been increased under the revised system. For instance, power cost would typically account for around one third of the total smelting cost of a primary aluminium producer, and an increase in coal costs would exert pressures on its profitability of operations.
- Core sector consumers of Mahanadi Coalfields Limited (MCL), South Eastern Coalfields Limited (SECL) and Northern Coalfields Limited procuring C, D and E grade coal would be impacted to a greater extent, since in the previous regime, prices of coal for the above grades charged by these three mining companies were lower than the same charged by the other four subsidiaries of CIL. The revised pricing mechanism being uniform across coal mining companies, the extent of price increase for these consumers would be relatively higher.

CIL is currently in the process of ascertaining the GCVs of its coal produced from different collieries, and ICRA expects the revised prices to be implemented once this process is concluded. Despite the possibilities of substantial price hikes for various coal consumers as explained above, ICRA notes that the possibility of grade slippages remains following the completion of the GCV estimation process, in which case the extent of price rise for a particular coal mine would be moderated to an extent. A clearer picture would only emerge once CIL comes out with the results of the calibration exercise. ICRA would continue to monitor further developments in this regard and evaluate its impact on the profitability of consuming industries.

**Annexure I: Subsidiary-wise change in price for non-long flame thermal coal for the core sector**

Subsidiary	Coal Grades Coalfields	A			B			C			D			E			F		
		Old Price	New Price		Old Price	New Price		Old Price	New Price		Old Price	New Price		Old Price	New Price		Old Price	New Price	
			Low	High		Low	High		Low	High		Low	High		Low	High		Low	High
SECL	Korba				3590	3990 (11%)	4130 (15%)	1050	2060 (96%)	2940 (180%)				730	880 (21%)	1680 (130%)	570	630 (11%)	880 (54%)
	Central India Coalfields	3690	4460 (21%)	4900 (33%)	3590	3990 (11%)	4130 (15%)	1050	2060 (96%)	2940 (180%)	880	1680 (91%)	2060 (134%)				570	630 (11%)	880 (54%)
NCL	Singrauli						1100	2060 (87%)	2940 (167%)	920	1680 (83%)	2060 (124%)	740	880 (19%)	1680 (127%)				
MCL	Talcher				3590	3990 (11%)	4130 (15%)	1050	2060 (96%)	2940 (180%)				730	880 (21%)	1680 (130%)	570	630 (11%)	880 (54%)
	IB Valley							1050	2060 (96%)	2940 (180%)	880	1680 (91%)	2060 (134%)	730	880 (21%)	1680 (130%)	570	630 (11%)	880 (54%)
WCL	Wardha Valley				3990	3990 (0%)	4130 (4%)	1410	2060 (46%)	2940 (109%)	1330	1680 (26%)	2060 (55%)	1090	880 (-19%)	1680 (54%)			
	Kamptee				3990	3990 (0%)	4130 (4%)	1410	2060 (46%)	2940 (109%)	1330	1680 (26%)	2060 (55%)	1090	880 (-19%)	1680 (54%)			
	Umrer Nand Bander							1410	2060 (46%)	2940 (109%)	1330	1680 (26%)	2060 (55%)						
	Pench-Kanhan				3990	3990 (0%)	4130 (4%)	1410	2060 (46%)	2940 (109%)	1330	1680 (26%)	2060 (55%)	1090	880 (-19%)	1680 (54%)			
	Pathakhera										1330	1680 (26%)	2060 (55%)	1090	880 (-19%)	1680 (54%)			
BCCL	Jharia				3590	3990 (11%)	4130 (15%)	1250	2060 (65%)	2940 (135%)	1040	1680 (62%)	2060 (98%)						
CCL	North Karanpura				3590	3990 (11%)	4130 (15%)							790	880 (11%)	1680 (113%)	570	630 (11%)	880 (54%)
	East Bokaro													790	880 (11%)	1680 (113%)	570	630 (11%)	880 (54%)
	West Bokaro							1220	2060 (69%)	2940 (141%)				790	880 (11%)	1680 (113%)			
	South Karanpura				3590	3990 (11%)	4130 (15%)	1220	2060 (69%)	2940 (141%)	1000	1680 (68%)	2060 (106%)	790	880 (11%)	1680 (113%)			
	Giridih													790	880 (11%)	1680 (113%)			
ECL	Ranigunj	4100	4728 (15%)	5194 (27%)	3990	4229 (6%)	4378 (10%)	1820	2184 (20%)	3116 (71%)	1560	1781 (14%)	2184 (40%)						
	Rajmahal/ Deogarh																870	668 (-23%)	933 (7%)

Production from the above coalfields accounted for around 92.3% of CIL's production in FY10; Grey areas indicate no production

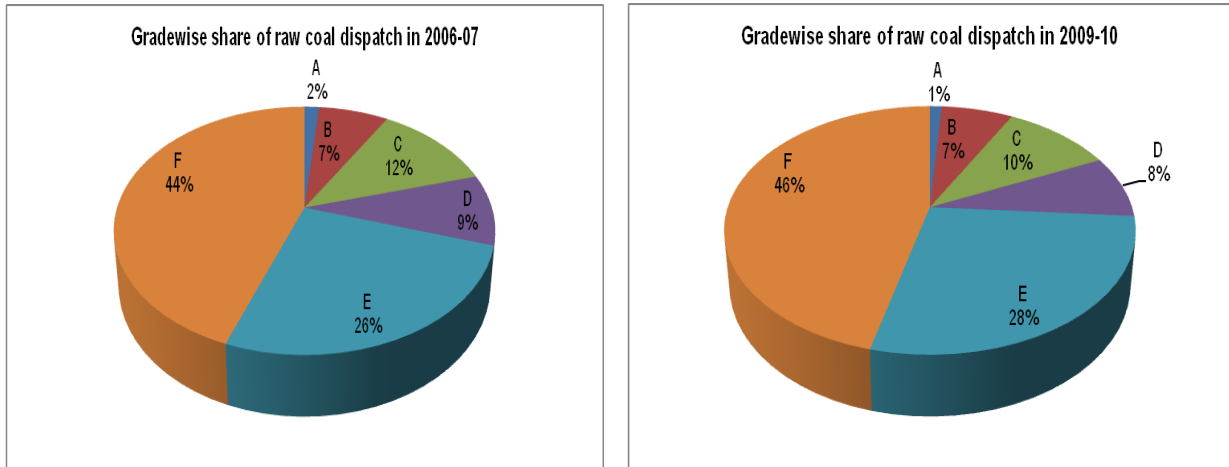
Figures in brackets indicate percentage change from the previous UHV based price

All prices are in Rs/ tonne and indicate mine-head prices, excluding various duties and other charges

ECL has a pricing premium of 6% under the GCV based system; Low/ High: Lowest/ Highest price pertaining to a particular coal grade

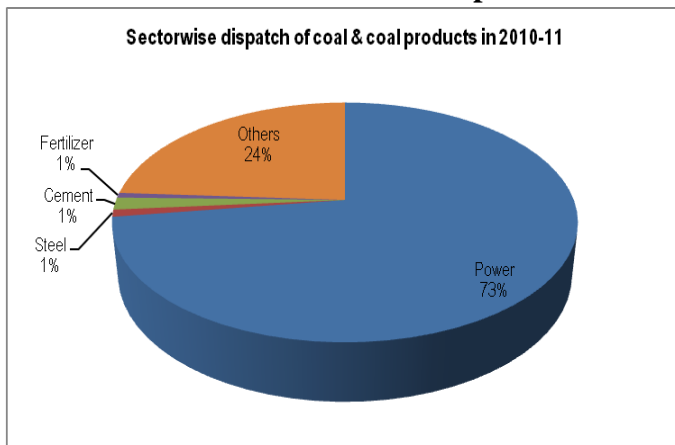
**Annexure II**

**Grade-wise dispatch of raw coal in 2006-07 and 2009-10**



Source : ICRA research

**Share of industries in coal consumption**



Source: ICRA research



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