



Environment Clearance of Coal Mines in India

2014 to 2018

INTRODUCTION

India is the world's third largest energy consumer, and its energy use is projected to grow at a rapid pace supported by economic development, urbanization, improved electricity access and an expanding manufacturing base (Penny and Cronshaw 2015).

In India's energy sector, coal accounts for the majority of primary commercial energy supply. Having the fourth largest coal reserves in the world and with economy poised to grow at the rate of 7-10% per annum, energy requirements will also rise at a reasonable level (Kumar, et al. 2017). Coal has been a dominant commercial fuel for past four decades and given our dependence it will essentially be a dominant fuel despite our increasing renewable energy program, development of natural gas supplies, increased hydropower generation and nuclear energy programme.

With characteristics such as high ash content (~25 – 45 %) (Coal 2018) and low sulphur content and location and mining difficulty it becomes very crucial to balance a limited polluting natural resource with the everyday increasing demand and requirements (Chandra and Chandra 2004).

THE PROCESS

Coal mines require prior Environmental Clearance (EC or Permit) from the Ministry of Environment, Forest and Climate Change under the provisions of the Environment Impact Assessment Notification, 2006 (EIA Notification) issued under the provisions of the Environment (Protection) Act, 1986. Environmental Clearance is required for both new projects as well as expansion of any existing projects.

In addition to approval under the EIA Notification, 2006, the projects also require Consent under the Air (Prevention and Control of Pollution) Act, 1981 and the Water (Prevention and Control of Pollution) Act, 1974. For projects which are in forest lands, prior approval under the Forest (Conservation) Act, 1980 is also mandatory. For purpose of estimating the number and capacity of coal mines, the Environmental Clearance process is a better area to focus on since the other permissions are dependent on the grant or rejection of environmental clearance. This trend analysis report describes whether number of clearances granted vis-à-vis mining capacities of coal mines have increased, decreased, or stayed the same over time. The report provides this analysis for the total coal mines granted environment clearance, mining capacities, fresh area diverted and diversion of forest land in past 5 years from 2014 to 2018.

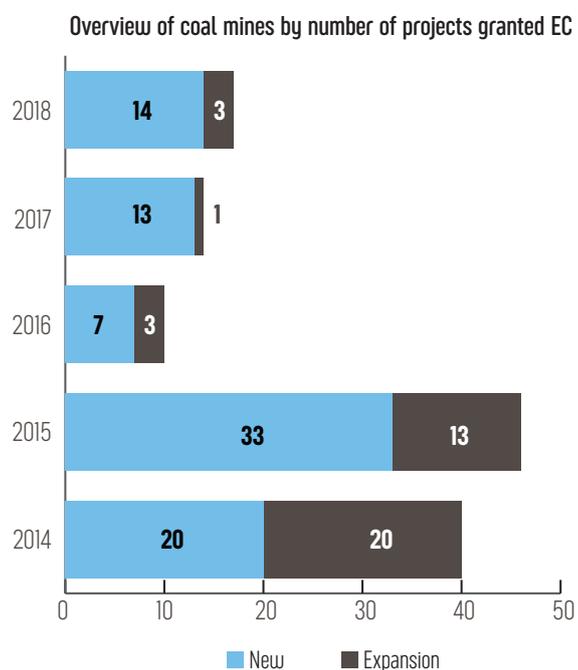
Overview in terms of EC granted in a year

From 2014 to 2018 a total of 127 Environment Clearances have been granted to coal mines with mining lease area more than 150 hectares. The distribution of EC granted is as follows:

Year	No. of EC granted
2014	40
2015	46
2016	10
2017	14
2018	17

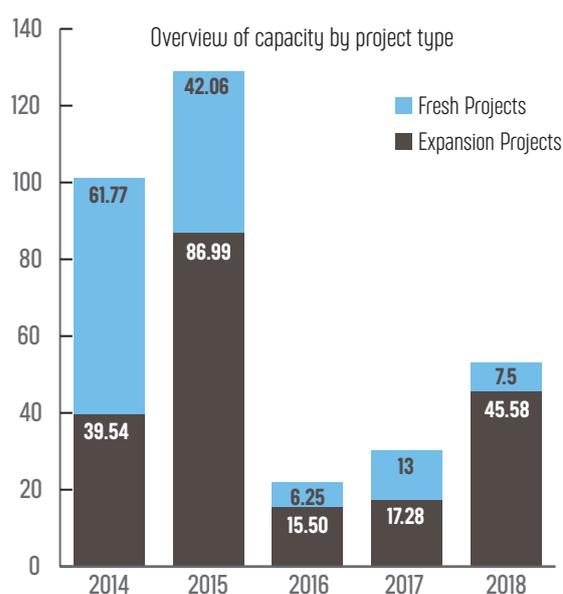
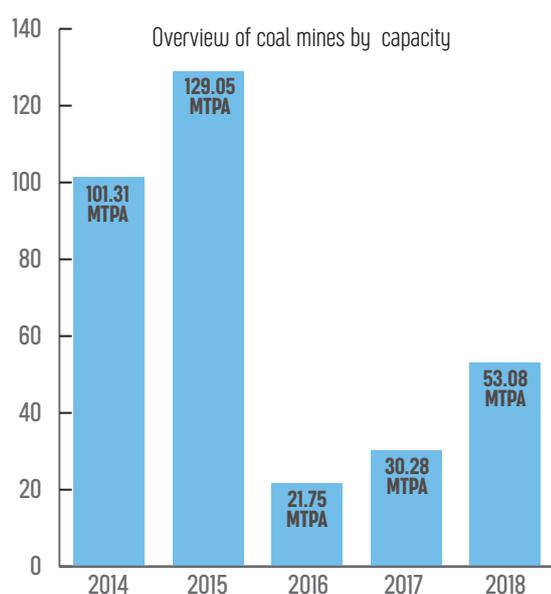
In the distribution a steep drop in the number of projects can be seen in year 2016 which shows a fall of about 78% from 46 projects to 10 projects which later shows a gradual increase from 10 to 14 and then to 17 projects.

Also, it has been observed that over the last few years the dynamics of fresh versus expansion project has changed and now more projects related to expansion has been granted EC. It could be the result of Office Memorandums (OMs) issued for the One Time Capacity Expansion (OTCE)¹ and others to accelerate the coal production in the country. The distribution of expansion and fresh projects in last 5 years is given on the right side:



Overview in terms of capacity

When the gross capacity granted EC in a year was analysed it was observed that the capacity was following an increasing trend from 2014 to 2015 with capacity granted permission ranging in hundred. Year 2016 saw a major drop in capacity granted permission from 129.046 MTPA in 2015 to just 21.75 MTPA in 2016 which comes to the decline of about 83%. Post 2016 the capacity again showed an increasing trend from 21 to 30 to 51 MTPA in 2017 and 2018 respectively. The trend can be



¹ The Hon'ble National Green Tribunal in S.P. Muthuraman versus Union of India & Others, 2015 held that the notification (Environment Clearance Notification, 2006) mandates the requirement of 'prior environmental clearance' without exception. But the entire mandate of prior environmental clearance (EC) has not only been diluted but completely rendered infructuous or ineffective by issuance of these impugned office memorandums. The office memorandums stated to be 'guidelines' are potentially destructive of the 2006 notification.

explained by the following graph:

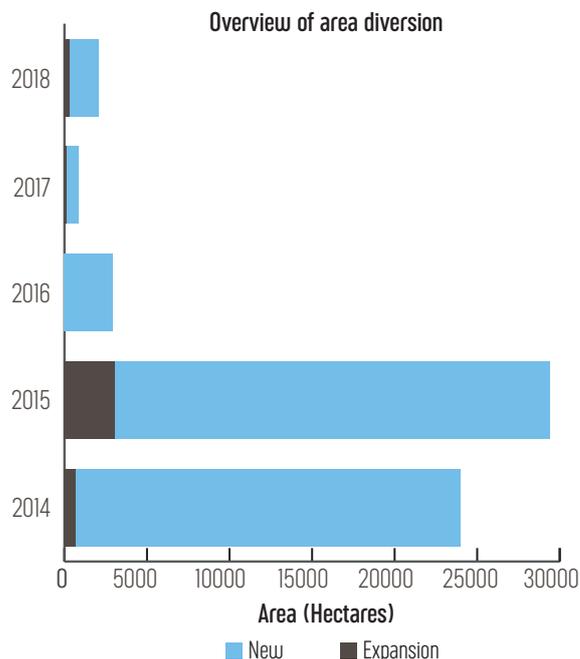
When the projects type was analysed and studied it was observed that ratio between fresh projects and expansion projects is continuously decreasing except for the year 2017 where a single fresh coal mining project of 13 MTPA Garjanbahal Opencast mine in Odisha got Environmental Clearance.

Overview in terms of Area

The area diverted for coal mining in the past 5 years is as follows:

Year	Total area diverted	Area diverted in fresh projects	Area diverted in expansion projects
2014	18245.85	17465.13	780.72
2015	31756.32	28523.08	3233.24
2016	3724.23	3724.23	nil
2017	998.22	795.38	202.84
2018	1543.42	1263.11	280.30
Total	56268.03	51770.93	4497.10

(Measurement unit: hectares)



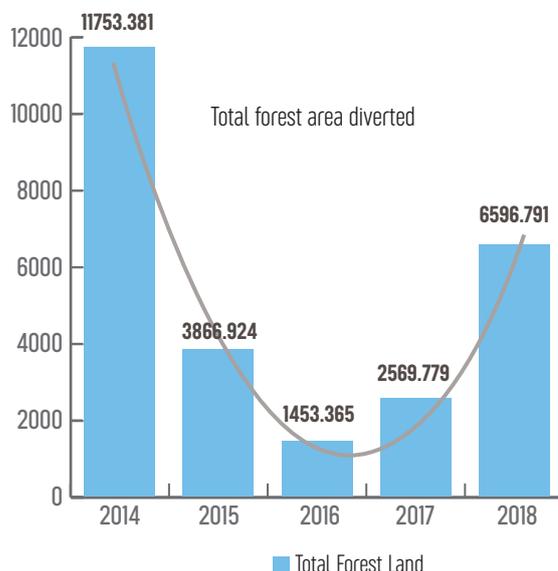
Out of the total 51770.93 ha fresh land area diverted for coal mining projects in the past 5 years, the forest area accounts for 4302.75 ha the details of whose diversion per year is given below:

Year	Area diverted in fresh projects (ha)	Forest area diverted (ha)
2014	17465.13	3418.66
2015	28523.08	259.69
2016	3724.23	92.25
2017	795.38	88.90
2018	1263.12	443.26
Total	51770.93	4302.75

The trend of total forest area diverted from 2014 to 2018 in all fresh and area expansion projects is as follows:

From the trend it can be seen that the forest area diversion showed a decreasing trend till 2016 which is increasing exponentially since then. When compared to forest land diverted in 2016, it was found that in 2018 the increase in forest land diversion jumped to 354% to that of 2016 while the increase is capacity in 2018 is merely 139% to that of 2016.

Furthermore, so far in 2018, 4 Terms of Reference (ToR) letters have been issues to 4 coal mining projects of aggregate capacity 28.05 MTPA. This includes two fresh projects: Suliyari OC (AMPDC) of 5 MTPA capacity in 1298 ha mining lease area in Odisha and Tubed coal mine (DVC) of capacity 6 MTPA in 460 ha area in Jharkhand.



Together they require diversion of 421.629 ha of forest land which comes to near about one forth (24%) of the total mining lease area required for mining (1758 ha = 1298+460). Overall in the ToR letters issued in 2018, 704.234 ha of forest land diversion has been requested for EC and applied for forest clearance.

CONCLUSION

In the study undertaken to analyse the trends on the aggregate of factors relating to environment clearances granted to coal mining projects having lease area of more 150 hectares for the time period of 5 years (2014-2018) an initial increase in capacity was observed which could be the result of the measures taken by the ministry to promote coal production by easing of processes and diluting the restrictions for coal mining projects under the paradigm of EIA notification, 2006. For instance, the provisions of public hearing have been significantly relaxed and more and more coal mining expansion projects have been exempted from the requirement of public hearing.

Public hearings” are mandated under the Environment Impact Assessment (EIA) Notification of 2006 in order to give the community an opportunity to express their concerns and opinion about a proposed development activity. However, it has been observed that during 2014 -2015 the provision has been diluted systematically. The MoEF&CC issued three notifications referring to such exemptions which are (i) OM dated May 30th 2014 for coal mines with production capacity over eight MTPA and up to 16 MTPA, seeking one-time capacity expansion with production enhancement up to 4 MTPA (MoEF&CC, Circulars 2014), (ii) OM dated July 28th 2014 for coal mines with production capacity more than 16 MTPA, seeking one time capacity expansion with production enhancement up to 5 MTPA (MoEF&CC, Circulars 2014) and (iii) OM dated September 2nd 2014 for Coal mines with production capacity more than 20 MTPA, seeking one time capacity expansion with production enhancement up to 6 MTPA (MoEF&CC, Circulars 2014).

Moreover, coal mining projects have also been allowed in critically-polluted coalfields, keeping in abeyance the moratorium on projects in these areas that was re-instated in September 2013 (MoEF&CC, Circulars 2014).

A sharp fall in number of clearances granted and permitted coal mining capacity is observed in 2016. The set of reasons responsible for the fall could be international market fluctuations and depreciation in the rupee has been a further source of concern as it raised the cost of imported coal. Moreover, the need to keep import of energy / fuels to the minimum was clearly recognized in the 12th Five Year Plan document in the introductory paragraph of the chapter on ‘Energy’. To quote, “High reliance on imported energy is costly given the prevailing energy prices which are not likely to soften; it also impinges adversely on energy security. Meeting the energy needs of achieving 8 per cent - 9 per cent economic growth while also meeting energy requirements of the population at affordable prices therefore presents a major challenge. It calls for sustained efforts at increasing energy efficiency to contain the growth in demand for energy while increasing domestic production much as possible to keep import dependence at a reasonable level” (Planning Commission 2013)

But since then (2016) there has been an increase in number of projects granted EC, capacity of coal mines and forest area diverted for coal mining which brings us back to square one. In the present time when the Coal India Limited (CIL) has stated that there is no need to auction or allocate new coal mines beyond the ones that are in current pipeline because of low demand why the new projects are being proposed and appraised in EAC. According to Coal Vision 2030 prepared by Coal India Limited (CIL), it is acquiesced by the CIL that no new coal mines need to be allocated/ auctioned beyond the current pipeline (Coal India Limited 2018). In view of the likely demand (base case scenario), there is limited requirement of starting new coal mines except the ones already auctioned/ allocated and majority of the mines currently auctioned / allocated (including CIL, SCCL) are scheduled to be completed by FY20.

Similarly, the draft National Electricity Plan 2016 as released by the Central Electricity Authority (CEA) mentioned in major highlights that “adequate coal is expected to be available for the coal based power plants during 2021-22 and 2026-27”². It also says that at present coal based capacity of 47,855 MW is in different stages of construction and is expected to be available during 2017-22 (Central Electricity Authority 2018).

Furthermore, as a party to the United Nations Framework Convention on Climate Change’s Paris Agreement, India has submitted a public declaration of its plan to mitigate the effects of climate change and in its Nationally Determined Contributions (NDC) to the Paris Agreement, India vowed to “achieve about 40 percent cumulative electric power installed

capacity from non-fossil fuel based energy resources by 2030.” Given these facts and the on-going slow in coal based thermal energy sector it is difficult to comprehend the increasing growth in number of Environment Clearance and capacity granted especially when the activity diverts the much needed forest land to the ratio of one fourth of the total as in case of the fresh projects granted ToR in 2018. To sum it up it can be said that the sector needs evaluation as to the need/demand of the coal in respect of elements like forest, environmental factors like air, water and soil at stake. Since coal is an environment damaging activity the lessons from the past need to be borne in mind while devising an appropriate regulatory framework for the coal sector.

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