

# Coal transport: Railways, the preferred mode

Coal is the main source of our power plants and it is likely to continue as the mainstay of India's energy supply. Coal caters 54 per cent of the country's energy demand. The development of this source of energy has made possible progress in the infrastructure front, especially transport sector like rail, port with shipping and intermodal means of transport as well as handling infrastructure at loading and terminal ends. RoselinKiro with views from veterans in the coal logistics industry contemplates on how creating a thriving coal market would go a long way in reaching the targeted growth of the country and how logistics can play an important role in the development of coal market in India

Coal along with fuels & technologies forms an important role in India's increasing energy demand. Guaranteed supply of coal with better quality is the primary requirement of the country to provide energy security. It is expected that coal will contribute 41 per cent of the total preliminary energy demand till 2032 and about 40 per cent of the total installed capacity in power in the country even under the least coal dependence scenario. Coal is an input in the manufacturing process of steel, cement, fertilizer and other industries. Ministry of Coal has planned to increase the coal production by an average of 36 million tons per annum in the 12th five year plan. Talking about the requirement of coal to meet the energy demand of the country, V K Arora, President, Karam Chand Thapar & Bros. (Coal Sales) Ltd said, "The present energy demand is met by the following sources: Oil 32 per cent, Natural Gas 8 per cent, Coal 54 per cent, Nuclear 1 per cent, Hydro 5 per cent. Coal remains and shall remain for many years to come a major source of energy for

taking care of the energy requirements of the country. Hence, the health of the coal industry affects each one of us till an alternative to coal could be found. However, off late, coal has been in the news for all the wrong reasons. The two major monopoly suppliers of coal i.e. Coal India Ltd and SCCL (Singareni) have failed to increase their production in line with the escalating demand. Additionally, it is said that as monopoly suppliers, they are not fair to the consumers. With the coal production remaining static for the last 2-3 years, railways capacity was not really tested and they were predominantly able to meet the requirement. The new government has decided to take the bull by its horn and has acted swiftly to take solid steps to increase the production.”

### Evaluating transport strategies for increasing production

Coal India Limited (CIL) is working to increase the production in the shortest possible time. It is expected that CIL's production would rise by 100 MMT and captive coal blocks which were earlier producing about 35/40 MMT would also go up by 100 MMT. All in all, country is expected to produce 1 billion tonnes by 2016-17. AP Mishra, Managing Director, Kutch Railway Company stated, “Coal requirement will increase as coal is the main source of our power plants. Coal India says that in next five years they will double their production, and if it happens and they get to the target, and then may be the import will reduce. But right now the situation is that, since imported coal is of better calorific value so import is likely to continue.”

These ambitious targets are perhaps acceptable, but to transport such additional quantities over long distances to make them available to the customer at the doorstep is not going to be easy and requires strengthening of the railways infra-structure and exploring alternative means of transportation like rail-cum-sea-cum-rail through coastal movement, and inland waterways. Creating transport infrastructures and managing logistics to transport coal from point of origin to consumption centers are major challenges for sustainable development of



“The railway infrastructure for the growth of coal logistics has to be funded by giants like World Bank, the Japanese government and particularly by those countries which has acquired the knowhow for providing the technology. There is also enough scope for the private sector participation in these ventures.”

V K Arora, President, Karam Chand Thapar & Bros. (Coal Sales) Ltd



coal market.

As described elaborately by Arora, the available resources for transportation and the plans for enhancing the capacity are as follows:-

### Role of FDI

Foreign Direct Investment will definitely be a game changer in terms of production, transportation and in sorting out the connectivity problems. Talking about how railways which is considered as the best means to transport coal and how FDI can help in solving the rail connectivity problems Mishra said, “Coal is a major challenge, and is found in areas which are not so much connected to railway lines. Coal can only be moved in bulk by railways. One train has 58 wagons and each wagon carries about 60 tons of coal so about 3000-3500 tons of coal is carried by one train and if converted to number of trucks, it will come up to 350-400 trucks. On the other hand, railway is five to six times more environment friendly and also sufficiently fare friendly compared to roadways. So, coal has to be transported by railway. A lot of connectivity projects are required in the areas where coal is produced, but all this things has slowed down due to the coal scam. Now that things are again brought to the right track and new auctions are taking place, new lines will be

required. In this case, FDI will help a lot, and those lines will be highly profitable.”

### Alternative ways for coal transport

Inland water transport is another promising alternative means of transportation, which can be integrated with coastal movement. Inland waterway proposed to be set by July 2015, would connect Paradip and Haldia Ports. It will facilitate movement of 3 Mtpa of imported coal to NTPC Farakka and Kahalgaon through Ganges. For smooth transfer of goods from one mode of transport to another, integration points have to be provided having facilities for permanent berths, storage sheds, stacking yards etc.

### Additional railways lines especially for the additional capacities:-

In order to evacuate/transport coal from pithead three critical railway lines have been identified in the three potential coalfields as mentioned below:-

1. Tori-Shivpur-Kathautia Railway Line (90.7 kms) in North Karanpura in Jharkhand,
2. Jharsuguda-Barpalli-Sardega Railway Line (53 kms) in Ib Valley, Odisha,
3. B h u p d e v p u r - K o r i c h a p a r - Dharamjaigarh (180 kms) in Mand-Raigarh Coalfield, Chhattisgarh.

As per the Ministry of Railways the envisaged date of commissioning of these three railway lines are December, 2016, June 2016 and September, 2016 respectively. PMO has constituted an Inter-Ministerial Committee (IMC) under the Chairmanship of Chairman, Railway Board with Secretaries of Coal, Power & MoEF for monitoring / implementation of the above three critical rail projects. Completion of these three rail lines would help increasing production to the extent of 200 MT from these coalfields.

### Funding additional railway infrastructure

Railway is the best way for the movement of coal in bulk and also the economical means of transportation as compared to road. Care needs to be taken to develop railway route and rail transportation and railway infrastructure for development of coal logistics. The funding for the railway



“Coal is a major challenge and is found in areas which are not so much connected to railway lines and coal can only be moved in bulk by railways”

A P Mishra, Managing Director, Kutch Railway Company



infrastructure has to be provided by the multilateral funding agencies. Arora avowed, “Obviously the railway infrastructure has to be funded by giants like World Bank, the Japanese government and particularly by those countries which has acquired the knowhow for providing the technology. There could be enough scope for the private sector participation in all these ventures. The success or otherwise would predominantly depend on the ability of the government to procure land quickly for such large projects. It is expected that the determination of the new government would be handy for finding innovative ways to fund as well as push these projects. Only then we can see a boost in the coal market of the country.”

### The way out

The use of energy is scheduled to go up exponentially in the country. Coal will remain the mainstay of the energy mix and with it the tables will be set for increased transportation of coal to feed the new emerging coal markets. Satisfaction of the adequate demand of coal can be possible only with the amplification of infrastructure in a holistic manner. The colliery projects need to add up sidings and associated equipments, plants/machineries to handle and deliver the coal in ever increasing volumes. It is expected that in the long run coal transport logistics would emerge as a specialised business in the country's emerging coal market. For such expected growth it calls for independence of traditional transporting enterprises like railways, port authorities or roadways, connecting the producers and consumers for the transportation of coal. 