

Use Inland Water Transport (IWT) for movement of coal to Thermal Power Plants

- Sunil Kumar

Several parts of the country continue to reel under severe power cuts. Reports appearing in the Economic Times indicate that the current stock of coal in several Thermal Power Stations of NTPC is 'supercritical'. Monthly coal statements of Thermal Power Stations (TPS) reveal that hardly five out of seventy nine TPS in the country have stocks to meet their requirement of twenty days or more. Eleven of sixteen TPS in Bihar and West Bengal have less than ten days coal stock and in Uttar Pradesh none of the ten TPS have more than six days of coal stock. ***Kahalgaon and Farakka often have zero days of coal stock!*** This clearly implies that there are serious production and transport bottle necks.

Presently several power plants cannot operate at full plant load factor on account of shortage or poor quality of domestic coal. Eastern Coal Fields is unable to supply more than 10.5 million tonnes of coal to Farakka & Kahalgaon Super TPS against their requirement of about 16 million tonnes per annum. Development of new coal fields has been slow. This shortfall is being met by imported coal. The Power Ministry has reportedly decided that all TPS of NTPC must mix at least 5% of imported coal with domestic coal to improve their quality.

At present there are ten thermal power plants which are located adjacent to or on the banks of National Waterway 1(Ganges) in West Bengal and Bihar. Several more new power plants, apart from capacity additions in existing power plants, are expected to come up by 2017 which include, interalia, Kahalgaon II, Barh I &II and Farakka III of NTPC.

It is estimated that thermal power plants consume about 10,000 tonnes of Indian coal (6,000 tonnes of imported coal with lower ash content) per day for every 500 MW. A 60 wagon coal train can carry about 1500 tonnes of coal, which means about 7 trains per day for every 500 MW. Hence, for Barh Super TPS alone (3300 MW) nearly 25 trains per day will be required. Keeping in view the existing traffic load on the Main Line passing through Bihar, it is almost impossible for Railways to meet this demand. Hence, there is urgent need to develop an efficient '***multi-modal transport system***' and inland water transport has to be an integral part of multi-modal logistics solution.

A 1620 km stretch of Ganga between Allahabad and Haldia was declared National Waterway 1 by Government of India in 1986. Least Available Depth (LAD) of 2.5 m is being maintained between Haldia and Farakka (560 km) and 1.8 m to 2 m between Farakka and Patna (460 kms) by Inland Waterways Authority of India (IWAI) for about 330 days. IWAI expects to soon provide 2 m LAD upto Varanasi for at least 300 days.

IWAI also issues fortnightly 'river notices' for the entire stretch of NW 1. 24 hour Night navigation facilities are in place upto Farakka and this is to be extended upto Varanasi by December 2009. A new DGPS station is being commissioned at Bhagalpur by August 2009.

As per a NCAER study report prepared in 2006, one barge can carry cargo equivalent to 15 rail wagons or 60 trucks and on an international standard, the operating cost of IWT per tonne per mile is 1 cent by barge, 2.5 cent by rail and 5.3 cent by truck. IWT also provides higher fuel efficiency as compared to either rail or road as 3.8 litres of fuel can transport one tonne of freight through 827 km by barge while it is only 325 km by rail and 95 km by truck. Fuel savings to the tune of Rs.1100 crore for every 10 btkm (3 lakh kilo litre) has also been calculated for modal shift from road to IWT at diesel price of Rs.36 per litre.

IWT compares favorably with rail and road costs and if the economic costs of less carbon dioxide emission and noise pollution are factored in, then IWT will score over rail and road transport.

In September 2008, IWAI had signed a **Memorandum of Understanding (MoU)** with NTPC for supply of 2-3 million tonnes of imported coal per annum for its Farakka, Kahalgaon and Barh Super thermal Power Stations from Haldia. Feasibility study undertaken show that IWT provides an economically viable option for supply of imported coal from Haldia to Farakka and the costs are comparable to those of rail as far as NTPC is concerned. For Kahalgaon and Barh Thermal Power Units also the feasibility study is being done. If this project is quickly and successfully operationalized, it will open the gates for movement of coal between 5 – 10 million tonnes on NW1. Fly ash can be taken by the barges on their return journey and exported to Bangladesh.

To promote movement of coal through IWT, Government may consider providing a subsidy of Rs.0.50 per tonne per km on movement of coal cargo through IWT for Power Plants. In the European Union a subsidy of two Euro per 500 tonne km is provided for modal shift from road to IWT under the Marco Polo Programme. Promotion of IWT can also help India meet its emission reduction commitments.

India can ill-afford a situation where power generation is constrained due to shortage of coal supply. Power Utilities, IWAI and private IWT operators need to jointly seize this opportunity in national interest. But this needs policy push at the highest level just like what was given to the Highways & Rural roads building programme in the late nineties through the launching of Golden Quadrilateral and PMGSY respectively.

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