Transmission Sector in India grappling with private investment

Power Grid Corporation of India Limited is the only major transmission company, which owns inter-state transmission system in India. Just to give a glimpse of its size, it has transmission network of about 67,000 circuit kms. of Extra High Voltage transmission lines with 116 Nos. of EHVAC & HVDC sub-stations having power transformation capacity of more than 73,000 MVA. Currently, the transmission network handles inter-regional power transfer of about 18,700 MW.

Power Grid Corporation of India Limited was created by transfer of transmission assets of NTPC and NHPC including human resource in year 1989. The objective of forming a separate transmission entity has been fulfilled to a great extent, as Power Grid has been instrumental in the growth of transmission system in India.

During XIth Plan, Power Grid is targeting to double its network by adding about 60,000 circuit kms. of transmission lines. This would mean a capital investment of over Rs. 55,000 crore by year 2012. This transmission network will support additional generation capacity of 78,000 MW during XIth Plan. This would double the inter-regional transmission capacity to 37,700 MW.

Power Grid has reported the annual capital investment of Rs. 6615 crore during the FY 2007-08. If capital expenditure of about Rs. 55,000 crore for the XIth plan is to be achieved; Power Grid would require capital investment to the tune of Rs. 12,000 crore every year.

The efforts of Power Grid in creating robust transmission network would need to be supplemented by involvement of Private Sector. Therefore, the Government of India took certain initiatives to facilitate private sector participation in transmission by bringing about certain enabling changes in the legal framework. Thereafter, Power Grid Corporation of India Limited, which was notified as a Central Transmission Utility (CTU) spearheaded implementation of a few transmission projects through Public Private Partnership (PPP) model i.e. Joint Venture (JV) route as well as Independent Private Transmission Company (IPTC) route. The Tala Transmission Project - implemented by Powerlinks Transmission Limited is the first projects through PPP initiative that has been successfully operating since Sept 2006. Subsequent transmission project for evacuation of power from Parbati -II and Koldam Hydro Electric Projects commenced construction after going through initial hiccups. However, another transmission project i.e. Bina - Nagda - Dehgam transmission project which was to be implemented through IPTC route was ultimately implemented by Power Grid for lack of investors enthusiasm. Thus, we observe private participation in transmission sector taking a back step despite initial good start.

Meanwhile, The Electricity Act, 2003 was enacted and it opened the doors for private sector participation in the Power Sector through tariff based competitive bidding as the Act provided for appropriate Regulatory Commissions to encourage competition, efficiency, economical use of resources, good performance and optimum investments.

Even with the enabling policy framework in place, the private investment in Power Sector in general and transmission in particular has been far from expectations.

Further, as per the direction of Central Electricity Regulatory Commission (CERC), Power Grid initiated the bidding process for implementation of Western Region Strengthening Scheme through IPTC route in year 2005. The award of project to lowest bidder was delayed due to various reasons, prominent being approval from Public Private Partnership Appraisal Committee and a change in the bidding conditions with respect to buy-out obligation. The projects were further delayed due to delay in signing of agreements between IPTC & beneficiaries. Recently, CERC has awarded necessary transmission license and also granted time extension for completion of the projects.

About two years back, the Empowered Committee identified about 12 transmission projects for implementation through the private sector. Due to delay in initiating the bidding process, some of the transmission projects were handed over to Power Grid so as to ensure development of the transmission system ahead of generating station.

While experimentation is good but adoption and continuation of a successful model is also essential. There is every reason why one needs to be cheerful about the tariff that emerged through competitive bidding, however, one also needs to cautiously watch as to how many Companies would be able to deliver the projects as per agreed schedule.

With the above backdrop, it is amply clear that the private sector participation in Transmission is inevitable and therefore, it is also essential to try out tested models such as PPP (i.e. JVs) for development of some more projects. This would certainly help private companies to gain some confidence in implementation of transmission projects by holding hands with state / central transmission companies. Unlike generation projects, which are confined to four boundaries, the transmission lines run cross-country traversing entire geography of India and therefore, it faces a typical Right of Way (ROW) related challenges for laying of transmission lines. Though, the Electricity Act provides for Licensee to exercise powers under Telegraphic Act 1885, if left to private company, it would be difficult to circumvent obstructions from owners of private properties as well as the custodians of public property. PPPs would be benefited by the participation of CTU/ State Transmission Utilities (STU) as the case may be, to obtain necessary ROW expeditiously for laying transmission lines, which otherwise would be difficult and might delay the projects inordinately.

Secondly, there would be lot of inter-phasing required between transmission lines and sub-stations. The sub-stations are largely owned, operated & maintained either by CTU or STUs. And therefore, PPPs with CTU / STUs would certainly help in alleviating inter-phasing issues to a great extent.

Thirdly, stability of network would be of utmost importance and cutting corners for sake of having competitive edge might jeopardize safety / security of the transmission system.

Fourthly, the regulatory mechanism in India has matured enough to ascertain that the projects are completed in optimum cost and in a given time schedule. Moreover, fairly reliable benchmark costs are available today for comparison purposes.

Lastly, CTU/ STU being stakeholders in the PPPs would certainly guide the private company towards efficient and optimized operation of the transmission system.

Existing PPPs, which have proven track record, needs to be considered for development of additional projects. The Govt. of India may consider amending existing framework to facilitate such initiatives.

The need of the hour is the development of transmission system with a reasonable tariff either through tariff based competitive bidding or PPP route. The project cost based competitive bidding process could be adopted for selection of joint venture partner for implementation of projects through PPP route. The transmission sector needs urgent attention from the policy makers and concerned authorities as the country does not have time to experiment on the model to be followed for implementing transmission projects and also cannot loose track of developing the transmission sector which provides one of the most important link in the power sector.

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