New Paradigm of Electric Power Procurement

Although Indian Railway (IR) is a bulk consumer, it pays extremely high charges for traction power. Accordingly, Hon’ble MR in Budget Speech of 2015 announced: “It is proposed to procure power through the bidding process at economical tariff from generating companies, power exchanges, and bilateral arrangements. This initiative is likely to result in substantial savings of at least ₹3,000 crore in next few years”.

The Electricity Act, 2003 provided deemed distribution licensee status to Railways, leading to it being treated at par with Discoms. Thus, IR can directly buy content (energy) from generators. Realizing potential of saving in traction power bill through open access, as per directions of Hon’ble Minister of Railways, Sh. Suresh Prabhu, a challenge was taken up for operationalization of deemed distribution licensee status for Railways.

To realize Railway’s power procurement as deemed licensee, an application was made to Central Electricity Regulatory Commission (CERC) seeking for necessary directions on Railways status in this regard. In Nov.’15, CERC, in its judgment clarified that Railways are authorized entity under the Railway Act to undertake transmission and distribution, in connection with its working, independent of its status under the Electricity Act and Railway is a deemed Licensee under Electricity Act. It directed all Regional Load Dispatch Centre’s (RLDC), State Transmission Utilities (STU) and State Load Dispatch Centre’s (SLDC) to facilitate Railway’s medium and long term access from generating unit and other sources to Railway network.

Indian Railways simultaneously contracted for about 500 MW power from Ratnagiri Gas Power Private limited (RGPPL) for consuming it in states of Maharashtra, Gujarat, M.P. & Jharkhand at about ₹ 4.70 per unit. Operationalization of this gas based plant was a win-win situation for all, as while for Railway’s cost of power would come down substantially, nation got benefitted by operationalizing its long unused asset. With prolonged efforts at all levels and support of Ministry of Power and Government of Maharashtra, 200 MW power at 47 Traction Sub Station (TSS) started flowing in Maharashtra from 26th Nov.’15. This initiative broke ice and took Railways into a new era with fulfilling its long dream to avail power as Deemed Licensee using State transmission network. After success in Maharashtra, with active support of Ministry of Power and Government of M.P., Government of Gujarat and Government of Jharkhand, about 350 MW also started flowing in M.P., Gujarat and Jharkhand from 22nd Jan.’16.

In addition to above, Railways, through its company namely Railway Energy Management Company Limited (REMCL) contracted 50 MW power through open tendering system using Ministry of Power’s ‘case one’ bidding document @ ₹ 3.69 per unit in its Central Transmission Utility (CTU) connected network from Dadri to Kanpur in U.P. This 50 MW
power started flowing from 1st Dec.’15. This probably was the first time that any organization contracted power through ‘case one’ bidding document of Ministry of power.

With this, an important Rail Budget 2015-’16 commitment, to reduce input cost to railways by ₹ 3,000 cr. through procuring power at economical tariff was realized. In this respect, actions completed and ongoing to achieve saving of ₹ 3000 cr. per year are brought out as under:

- ₹ 1300 cr./year savings already been achieved with 730 MW power from RGPPL (550 MW), Adani (50 MW contracted through open tender), Tata power (80 MW), NTPC (50 MW). The average rate reduced from ₹ 7.07 to ₹ 4.61/unit i.e., a saving of ₹ 2.46/unit. [Covered 100% power in four states (Maharashtra, Gujarat, Madhya Pradesh and Jharkhand - 630 MW at 114 TSS')] and at CTUs connected network in UP (100 MW at 14 TSS').

- Saving of ₹ 1100 cr./year will be achieved by additional about 500 MW Power already tied up with Jindal India Thermal Power (JITP) through open tender. Average rate will reduce from ₹ 6.5 to ₹ 3.7/unit i.e., saving of ₹ 2.8/unit.

- Further, a tender for procuring about 400 MW for southern states has been finalized by REMCL. This will save ₹ 400 cr./year. The average rate will reduce from ₹ 6.5 to ₹ 4.9/unit i.e., a saving of ₹ 1.6 per unit. This will cover 87 TSS' in states of Tamil Nadu, Telangana and Andhra Pradesh.

- Nabinagar captive power plant of Railway is now ready and its first unit is now scheduled to supply power from Sept.’16. It will save ₹ 200 cr./year. The first unit of 250 MW was commissioned on 23.03.16, and firm power expected from Sept.’16. The average rate will reduce from ₹ 7.3 to ₹ 4.4/unit i.e., saving of ₹ 2.90/unit. (The first unit will cover 26 TSS' in West Bengal)

Operationalisation of deemed licensee status has given unprecedented opportunity to Railways to reduce its high rate of traction power cost, which is a key variable cost. Its reduction has wide implications on financial viability of Railways. After successfully taking traction power through open access mechanism in states of Maharashtra, Gujarat, M.P., Jharkhand and in U.P., it has been established that there is potential of substantial savings through this route.

Challenges faced:

For IR, to get connected as Deemed Distribution Licensee, it was a real challenge as process of getting No-Objection Certificates (NOC) was not easy. However, due to collective efforts of Ministry of Power and Ministry of Railways, Government of Maharashtra, M.P., Gujarat and
Jharkhand, progress could be made. Some of the challenges faced in obtaining NOC for drawing power as Distribution Licensee were:

i. Provisioning of ABT meters (Availability based meters)
ii. Ensuring metering CT/PT (Current transformer/ Potential transformer) of correct class.
iii. Obtaining clearances from DISCOMs
iv. Working out with SLDC deviation settlement mechanism (DSM)
v. Sorting out issues related to provision of backup power
vi. Developing a reasonable accurate day ahead load forecasting mechanism looking at variable demand of Railways.
vii. Convincing state government that in long term it is a win-win situation.

However, this is a classic example of co-operation between Central and State agencies where they have worked shoulder to shoulder. This move will also benefit states in due course of time as it will lead to shift of traffic from road to rail thereby reducing pressure State Road Network.

**Implications of New Traction Power Procurement Strategy:**

To improve Indian Railways financial viability, reversing fuel bill trend was an important goal, as it constituted about 30% of ordinary working expenses. In this regard, realizing potential under deemed licensee status, available to Railways was the first land mark achievement of Railways which reversed increasing trend of electric traction bill of Indian Railways. In 2015-’16, with these initiatives annualized savings of ₹ 1,300 cr. was achieved and it is expected that taking forward further actions in this area will take annualized saving of about ₹ 3,000 cr. in year 2016-’17.

The impact of procuring power as Licensee will bring in saving of more than ₹ 4,000 cr. per annum against Business as Usual (BAU) approach. Its effect on Railway finances over next 10 years will be more than ₹ 35,000 cr. and will add to making Railways a more viable mode of transport.

As a snowball effect, Diesel procurement system is also being revamped and by procuring crude oil directly it will generate a saving of about ₹ 1,500 cr. per annum in coming years. All these actions will make it possible for Railways to become a modern high speed passenger friendly mode of transport.