

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 **RGPPPL (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**.