

## BSES Rajdhani Power Limited



### Project Details

Name of the Project	Substation Upgradation through Fibre integrated 66kV power cable
Equity held	100%
Project details	12 Kms of 66 kV 3Cx300 sqmm Fibre Integrated Power Cable installation
Project Authority	BSES Rajdhani Power Ltd
Project Architect, Design & Engineering	Sterlite Power Transmission Limited

BSES Rajdhani Power limited or BRPL is mainly responsible for the distribution of power in an area spanning as many as 19 districts in and around Delhi.

BRPL was looking for solution to upgrade its two substations-Andheria Bagh & Vasant Kunj B Block. Solution was required to upgrade 33 kV level to 66 kV level and connecting these substation with underground cables considering increasing load from the area.

### Customer’s Challenge

BRPL distributes power to an area spread over 750 sq. km with a customer density of ~3100 per sq km. It's over ~2.4 million customers are spread in 19 districts across South and West areas  
It was looking for solution to

BRPL wanted to connect its Andheria Bagh & Vasant Kunj B Block substations with circuit reliability & low maintenance solution along with higher service life of the circuit.

Solution was also required to minimize maintenance of the circuits specially at cross bonding chambers. Also the cable laying terrain was challenging with 30-40% of the route was of rocky and digging of cable trench was crucial task.

### Pain Points

Heavy Congestion area
Regular failure of Circuit
Frequent maintenance of Sheath Voltage Limiter/Link Boxes
Digging of cable trench in rocky terrain
Maintenance and modification of cross bonded circuits
Theft of Earthing Cables



**Our Solution**

With installation of Sterlite’s 3-Core 66 kV Cable BSES will be able to upgrade its two important substations of Andheria Bagh & Vasant Kunj B Block. The solution of 66 kV 3Core cable was appropriate as it could be laid in the congested urban areas.

Moreover this cable is low on maintenance with fewer faults. It has small voltage drop and are non-susceptible to shaking and shorting due to vibrations, wind, accidents, etc.

Around 50% of the load requirement of the circuit can be carried by one run of 3 Core Cables, if other runs fails.

These cables are not easy to steal, make illegal connections or sabotage.

The fibre Cable can be used for communication and SCADA for getting real time data of temperature rise in the cable system by connecting the Fibre with DTS.

With this installation; the transmission line has been upgraded enabling more power transfer.

**Project Impact**

Easy facilitation to design changes
No routine sheath current monitoring
No conditioning monitoring of any component
Higher service life of the circuit
Extremely low energy losses
Cable used for Communication and SCADA