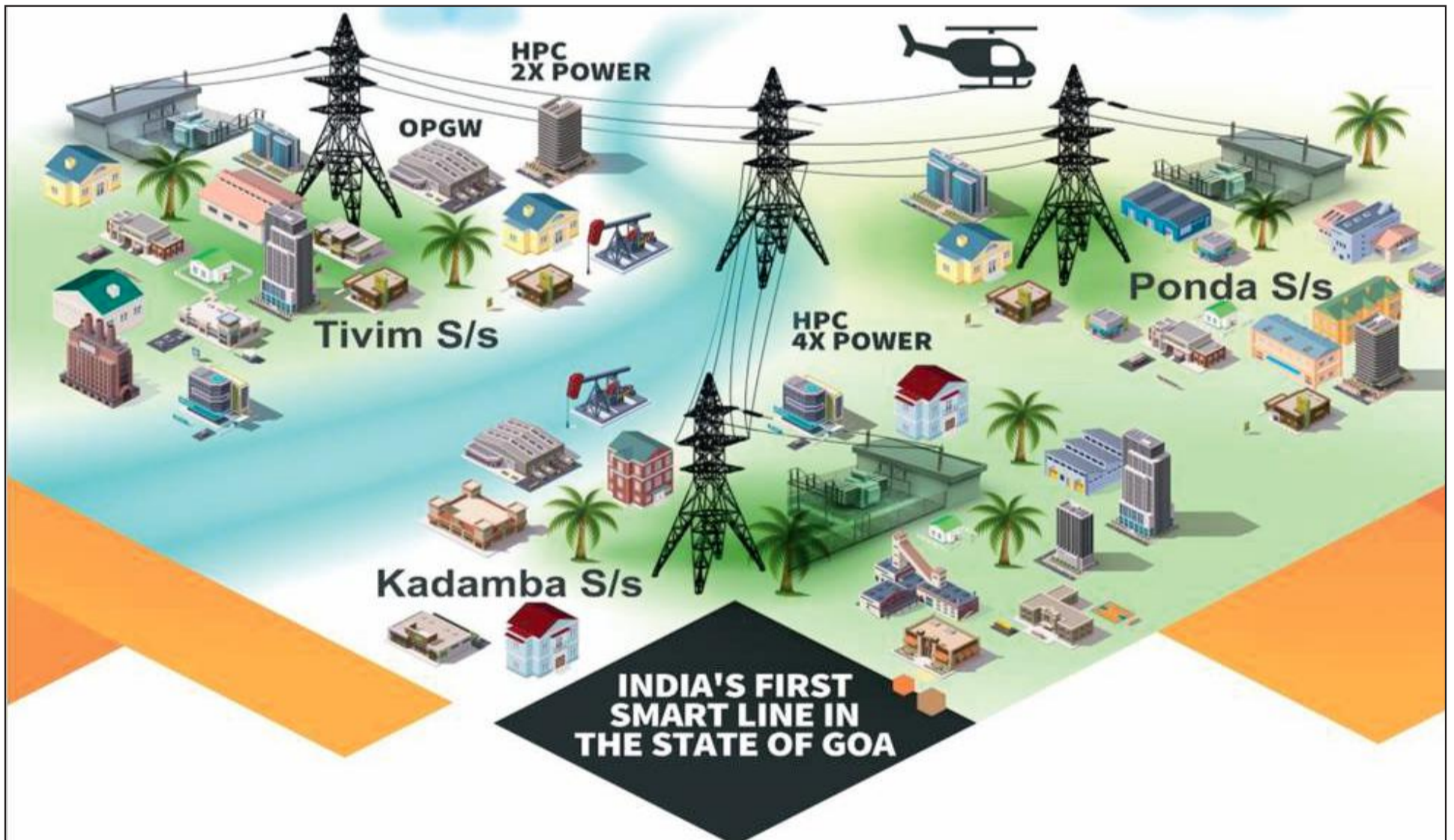




CASE STUDY

**Goa Smart line 110kV D/C Tivim - Mapusa
& Tivim - Saligaon Transmission Line**

Goa Smart line 110kV D/C Tivim - Mapusa & Tivim - Saligaon Transmission Line



CUSTOMER'S CHALLENGE

The Goa Electricity department was struggling with regular power cuts and breakdowns due to dilapidated & weak infrastructure (almost two decade old electricity conductor running across Palsarem in to Kadamba & Tiswadi) supplying electricity.

Goa Electricity department was seeking a solution for the rising power demand from residential colonies, it being the tourist hub and also has establishment of Industries in the region.

Solution was required for enhancement of the power transfer capacity on the same tower structures with high ampacity, however lower in weight so that the existing towers could be retained.

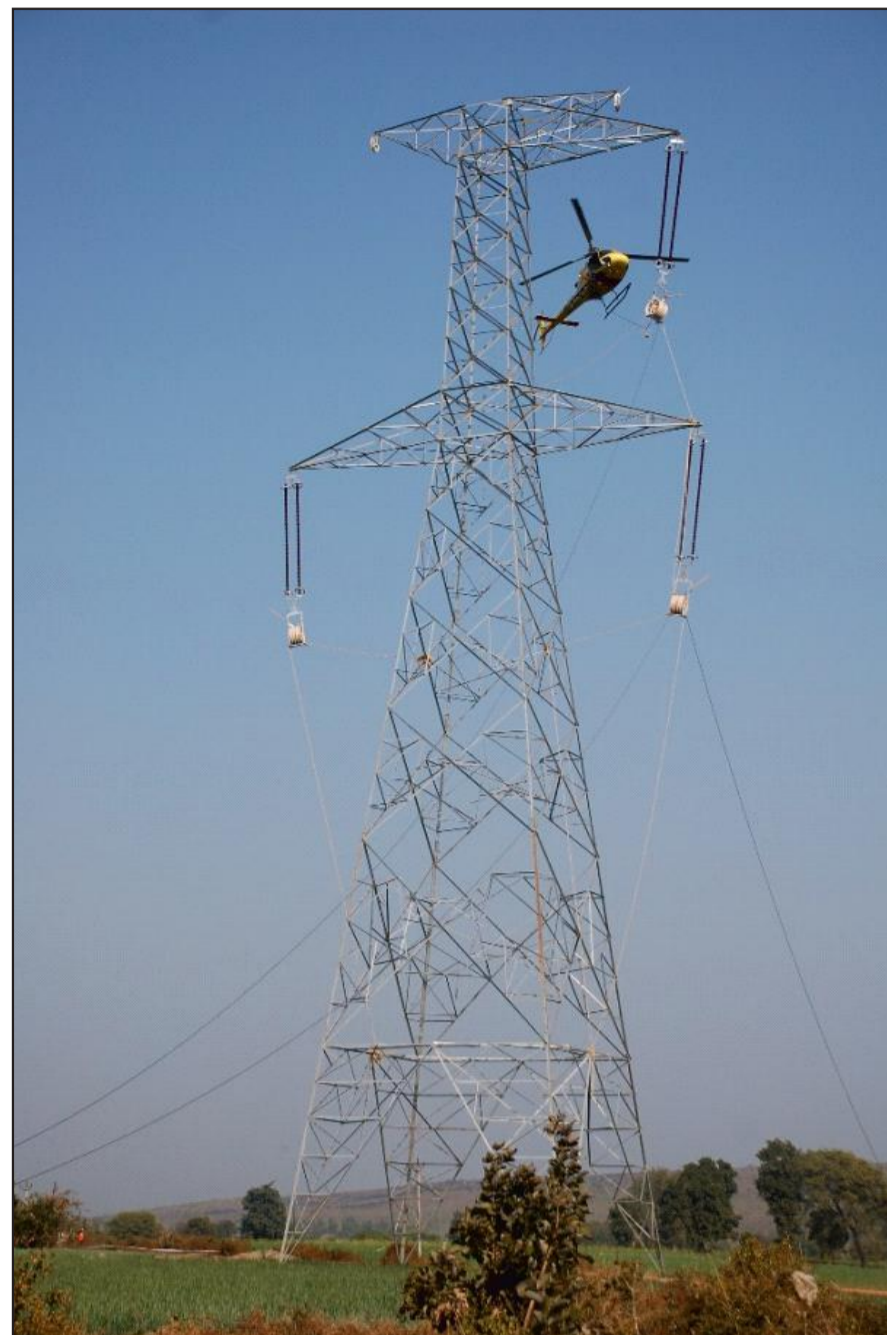
Due to the congested corridor, it was essential that the required sag of the conductor, should be less than that of the existing AAAC conductor.

Project Details	
Name of the Project	Goa Smart line 110kV D/C Tivim - Mapusa & Tivim - Saligaon Transmission Line
Equity held	100%
Date of Project Completion	April 2016
Project Authority	Goa Electricity Department
Project Architect, Design & Engineering	Sterlite Power Transmission Limited

Pain Points
Regular Power Cuts
Increasing Load
Breakdowns due to Dilapidated & Weak Infrastructure
Two decade old electricity conductor unable to meet the growing load/demand for power

OUR SOLUTION

With installation of Sterlite’s new generation conductor technology i.e. Composite Core Conductor technology which facilitated higher ampacity to accommodate peak load demand with reduction in line losses at normal loading conditions; Low sag resulted in better ground profile & increased clearances. Moreover, the composite core solution could be deployed on the existing infrastructure of 110kV line saving the electricity department’s time, RoW challenges as well as cost for erection of new towers.



IMPACT

The installation of Composite Core Conductor technology has led to a total augmentation of the capacity of the line from approx. **48 MW** to **129 MW**, reducing the losses by over **25% (approx.)** with ground clearance improved by **1 meter**. **In this project, technology and agility came together to create a solution for well being of people of the area without compromising environmental harmony.**

This has resulted in future proofing with reliable power to the residential area.

- 4X more power on 110 kV D/C Palseram- Kadamba Line
- 2X more power on 110 kV D/C Tivam to Ponda Line.
- Delivering quality power with enhanced Line reliability
- Created capabilities ahead of demand: Innovative New Generation Solution

Particulars	Pre Deployment	Post Deployment
Power Carrying Capacity	48 MW	129 MW
Life of the Line (Complying to N-1 criteria)	Till 2017	Till 2036
Protection & Communication	Basic breaker with PLCC (Power line Carrier Communication)	Comprehensive Teleprotection & Communication Equipment enabled with SCADA using fibre optic network