

World’s Largest Solar Rooftop Installation on a Cricket Stadium, at Brabourne, Mumbai by Tata Power Solar



Site Name		Stadium Roof of the Brabourne Stadium
Location		Cricket Club of India Ltd, Churchgate, Mumbai
AC Capacity		700 kW
DC Capacity		820.8 kW
Net metering		Yes. With Discom: Brihanmumbai Suburban Electric Supply (BSES)
Construction time		4 Months
O&M details		2 Years O&M with generation guarantee
Date of Commissioning		15 th August 2018
Installation type		Roof top
Equipment suppliers	Module make and specifications	Make: JA Solar, Rating: 360 Wp Mono crystalline
	No. of modules	2280

	Inverter make and specifications	Delta RPI-M50A 50kW X 14 nos.
Plant Performance	Annual generation capacity	1.12 million units per annum
	Plant CUF	16%
	Plant Performance ratio	84.4%
	Project Type	Capex
Benefit to Customer	Cost Savings in last year	25% saving on annual power costs
	CO2 offset	Offset 840 tonnes of carbon annually
Project Cost		Module: Rs20 m, Inverter: Rs2.5 m

Project Unique Proposition

The environmental impact of large-scale sporting events is a serious concern and organizations across the world have taken concrete steps towards mitigating such harms through sustainability initiatives such as using renewable energy. The solar rooftop project at Brabourne stadium generates over 1.12 million units of electricity per year, cutting its power consumption costs by 25%. The customer, Cricket Club of India (CCI), now avoids the emission of over 840 tonnes of carbon dioxide annually. This landmark project was completed within a record period of 100 days.

Challenges and Solutions

Cable Laying

A total 3.6 km of AC cable was laid, routing from the AC distribution panel box to the low-tension (LT) room (8 run x 400 Sqmm): This job was conducted with extreme safety precautions because there was minimum space available on the site.

Module Lifting

Due to insufficient space available for lifting the equipment at site, all solar modules were moved manually to the installation area.

Cable Crossing Between Two Ends of the Stadium

Cable crossing was a concern. A cross-over bridge was constructed with proper design with approval from the client.

Termination of Evacuation Cable to Customer LT Panel

Shutting down the main LT panel was not possible in daytime due to the CCI Club’s routine activities. To ensure minimum disruption for CCI Club, all cable-related work was done after midnight.