



## BALOTRA

**Capacity:** 5.181MWp

**Location:** Vituza village, near Balotra town, Dist Barmer, Rajasthan

**Module:** Crystalline Silicon modules of Canadain Solar (CS6X 275P)

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### **Technology:**

Sunny Tripower 17000 TL inverters from SMA were considered. String inverters were used for the first time since the plant is in a remote area. Higher levels of efficiency were achieved and plant redundancy is higher. Also string inverters are easy to replace in case of any faults hence reducing the plant downtime. 628 MPPT's were used to overcome the shadow losses and string failure, resulting in higher plant generation. High quality, standardized tested products were used. For SCADA system a combination of Meteocontrol and SMA were considered.

### **Site Conditions:**

There were huge sand dunes at the site before construction began. Approx. 2,51,000 cu. Mtr of sand had been moved and land was leveled. Soil and murrum was arranged from outside to cover sand to prevent soil erosion. Stone Pitching work of 8000 sq mtr, height 17m (max.) for entire perimeter (i.e E, N & W sides), along the plant's boundary was carried out to support the raised platform. Pile Foundation was used for supporting structure. The piling was done by auguring. The solar PV plant looks as if built on a fortress.

### **Project Completion:**

Site leveling began in June end and the project was commissioned on 14 Oct 2011. Refex is engaged with the O&M of this site.