

INDIA'S FIRST MEGAWATT CAPACITY CAPTIVE SOLAR POWER PLANT

Capitol Complex, Naya Raipur



CHHATTISGARH STATE RENEWABLE ENERGY DEVELOPMENT AGENCY (CREDA)

(Dept. of Energy, Govt. of Chhattisgarh)



BRIEF DESCRIPTION OF SOLAR POWER PLANT OF 1.1 MWp CAPACITY INSTALLED AT CAPITOL COMPLEX NAYA RAIPUR BY CREDA

Description	Details
Project Location	Capitol Complex, NRDA, Naya Raipur(C.G.) INDIA
Capacity of Solar Power Plant	1.0 MW
Scope of Work	<ul style="list-style-type: none"> • Design • Supply • Installation & Commissioning • Operation & Maintenance
Capacity of each Solar Panel	265Wp
Total quantity of Solar Panels	4180 Nos
Capacity of each String Inverter	19.01 KVA
No. of Panels in Series	19
No. of Arrays per Inverter	4
No. of Module Mounting Structures	55
No. of String Inverter	55
No. of Array Junction Boxes	55
No. of AC Sub Junction Boxes	55
No. of AC Combiner Boxes	4
No. of Earth Junction Boxes	55
No of Earth Pits	44
No of Lightning Arresters	5
Capacity of of AC Combiner Boxes	400 kW

Configuration of AC Combiner Boxes & Connectivity of Power to Naya Mantralaya

AC Combiner Box No.	Capacity	Connected to.
AC Combiner Box - 1	260 kW	LT Panel - 1
AC Combiner Box - 2	260 kW	LT Panel - 2
AC Combiner Box - 3	240 kW	LT Panel - 3
AC Combiner Box - 4	340 kW	LT Panel - 4

Note: Each AC combiner box is connected to a designated LT panel (4 Nos.) in control room of Naya Mantralaya.

AC Output Voltage from each Combiner Box	415 VAC
Grid Standards	Indian
Date of Start of Installation	September 2012
Date of Start of Commissioning	29 Oct 2012
Estimated Annual Power Generation	16,00,000 Units
Total Power Generated (Upto 30.06.2019)	7958208.83 kwh
Reduced CO2 Emissions	6764.47 Tons
Make of Solar PV Modules	Websol, Kolkata
Make of String Inverter	Advance Energy (Refu Sol), Germany
Make of AC Combiner Box	Novus Green
Engineering, Procurement, Installation, Commissioning and O & M	Novus Green Energy Systems Pvt. Ltd. Hyderabad
Conventional Energy saved in terms of Rupees till 31.05.2018	₹ 4,77,49,252.98 @ ₹ 6.00 per kWh)



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V.I.P. (Airport) Road , Near Energy Education Park, P.O. Deopuri, RAIPUR - 492 015 (C.G.)
Tel.No.: 8370009915, 837009923 • E-mail: contact.creda@gov.in • Website: www.creda.co.in