

## Kusum Solar Projects - EPC Credentials

BHADLA MINIGRID SOLAR 2 PRIVATE LIMITED is developing solar projects with a cumulative capacity of 9.52 MWac/ 13.33 MWdc in Village Arjunpura and Village Dholiya, District Phalodi, Rajasthan, under Component C of the PM Kusum Scheme (Feeder Level Solarisation). The details of the projects are given in the table below:

S No.	33/ 11kV Substation	Project Capacity (MWac)	Project Capacity (MWdc)	Tariff (INR/ kWh)
1	Arjunpura	2.52	3.53	2.970
2	Arjunpura	4.00	5.60	2.970
3	Dholiya	3.00	4.20	2.970
	<b>Total</b>	<b>9.52</b>	<b>13.13</b>	

For the execution of these projects, it has awarded three contracts to Avengers Rays Solar Private Limited as per the following details:

S No.	Type of Contract	Contract Value (INR Crores) (Inclusive of GST)
1	Module Supply Contract	26.42
2	Balance of Plant EPC Contract	21.30
3	O&M Contract	0.67 Crores per annum for 25 years (with 3% escalation per annum)

This document details the experience and execution of the EPC Contractor for the Solar Projects, i.e. Avengers Rays Solar Private Limited.

# Project Execution Experience

## 175 MWdc Solar Project

Avengers Rays Solar Private Limited has extensive experience of executing large utility scale projects.

In 2016-17, as a strategic co-investor along with like-minded national and FDI investors, Avengers conceptualized, co-funded, executed and operated a 175 MWdc solar project in the Bhadla Solar Park in Rajasthan. The project, one of the largest utility scale solar projects at that time, had a power purchase agreement with NTPC.

During the execution of the project, Avengers ensured the use of the highest quality equipment while maintaining impeccable quality standards. Its Quality Management System and Occupations Health and Safety Management System were ISO 9001:2015 certified and OHSAS 18001:2007 certified respectively.

Avengers carried out the operation and maintenance for the project for 3 years till 2020, and deployed multiple innovations such as tractor-based cleaning machines for the efficient cleaning of solar modules. At the time, the project was one of the best performing solar assets in the country with high CUF.

The project was subsequently monetised to a Malaysia-based fund to deploy capital in more productive and new opportunities.



***Spread across 740 acres of land, the project was one of the largest utility scale solar projects in India at the time.***



***High standard of substation equipment ensures efficient pooling & transmission of power with minimal losses.***



***In-house designed Trac-Robots for washing modules resulting in high efficiency***



## 400 MWac Bikaner Solar Park

Avengers has recently finished the development of an ISTS connected 400 MWac/ 550 MWdc Solar Park in Bikaner Rajasthan, in collaboration with Brookfield Renewable. Avengers constructed the requisite Solar Park infrastructure required to ensure a seamless plug n play model for the setting up of solar projects. This included the construction of a ~28 km boundary wall, a 220kV/ 33kV pooling substation, and a 11 km 220 kV transmission line with HTLS conductor. Avengers' execution prowess ensured that the Park was timely commissioned in February 2024, and one of the first to do so at the Bikaner-II ISTS substation.



*The Solar Park is spread across 1760 acres of land with a 28 km boundary wall*

The group is currently developing two more 400 MWac/ 550 MWdc solar parks connected to the Bhadla-III ISTS substation in District Phalodi, Rajasthan. One of the solar parks, located at Village Nokh, is being developed in collaboration with Brookfield Renewable, and is slated to be commissioned in August 2025. The other solar park, being developed in Village Netawaton ki Dhani is slated to be commissioned in 2027-28.



***Power evacuated through a 220 kV Switchyard and 11 km 220kV transmission line with HTLS conductor***



***The Solar Park evacuation infrastructure was implemented within a record time of 10 months***

## **Experienced Team**

The senior management of Avengers comprises experienced professionals who have decades of work experience in the power sector at leading public sector undertakings such as POWERGRID and NTPC.

They are supported by highly qualified personnel who have extensive experience of project development and execution. The details of the team have been attached as Annexure A.

## **Expertise**

Avengers has followed and enhanced its systems and processes to match those of international Private Equity firms and PSUs, including those for health & safety and financial conduct.

It has on ground teams in Districts Bikaner and Phalodi, Rajasthan. Further, it has a long-term association with experienced and reliable partners for execution and O&M services in the region. Avengers has strong relationships with best-in-class vendors who supply modern equipment/ services.

## **Reduced Execution Risk**

Avengers' experience, know-how and local team strength is attested by its track record of acquiring land and RoW which is amongst the fastest in the industry. This significantly reduces the risk of project stalling, project delays, project cost escalations and local issues affecting execution.

## **Empanelment**

Avengers has, over the years, been empanelled with various public sector undertakings such as Coal India Limited, NTPC and SJVNL for the development of large-scale utility solar projects.

## **Annexure A - Avengers team**

### **Mr. Karan Tanwar**

*Promoter and Head of Execution*

Mr. Karan led the execution of the 175 MWdc solar project built by the Group in partnership with a listed firm based out of Singapore. Furthermore, he also led setting up the agtech farms and agri-warehousing facilities.

He is an engineering graduate from Purdue University.

### **Mr. Tanmaya Misra**

Mr. Tanmaya has over 28 years of working experience with leading Indian and Global financial institutions. His expertise is in investment management, project debt, corporate finance and strategy.

Prior to joining the Group, he worked as Managing Director and India Head for the US\$1.4bn Asian Infrastructure Fund managed by JP Morgan.

He is an alumnus of Xavier Institute of Management, Bhubaneswar.

### **Mr. R P Sasmal**

*President*

Mr. Rajendra Prasad Sasmal has over 42 years of work experience in power and manages overall project implementation for the Solar Parks at Aright.

Prior to Aright, Mr. Rajendra was the Director (Operations) at PGCIL. He brings in immense skill and expertise relating to project execution, O&M, cost optimisation & human resources. He has extensive experience of establishment, testing and maintenance of 220/400/765 kV AC and HVDC substations for bulk power transmission projects. He led the concept to commissioning of the first 800 kV HVDC multi-terminal project in India.

Mr. Rajendra is regarded as an expert in construction and management of greenfield and brownfield projects.

**Mr. Jitendra Singh**

*Vice President (Co-ordination)*

Mr. Jitendra Singh has over 40 years of experience in logistics and is in charge of coordination for the development of Solar Parks at Avengers.

A career officer of the Indian Railway Traffic Service, he has expertise in the field of logistics with specialisation in railway operations, planning and management. He was in the initial teams which were closely associated in the modernisation and optimisation of railway stations and operations.

**Mr. Ajay Atrea**

*Vice President (Civil)*

Mr. Ajay Atrea has over 40 years of experience in power and civil structures and manages the civil design and construction of Solar Parks at Avengers.

He was formerly the Executive Director of National Thermal Power Corporation and was also posted as ED-Solar Projects at Phalodi, Rajasthan. He led the execution of 500 MW PV Solar Projects, 1491 MW hydro projects and 2840 MW thermal projects. With the group, Mr. Ajay headed the designing, execution, commissioning and operations of its 175 MW Solar Project in Bhadla, RJ.

**Mr. Sudhir Agarwal**

*Vice President (Technical)*

Mr. Sudhir Agarwal has over 36 years of work experience in power and evacuation systems and manages Technical Design and Implementation of the Solar Parks at Avengers.

He was previously the Chief General Manager (Technology Development) at PGCIL and is highly experienced in the detailed engineering, implementation and execution of transmission systems and substation projects. He has led and ensured the successful and timely completion of 765kV transmission lines, 765kV/ 400kV/ 220kV GIS substations and 800kV HVDC projects.

Mr. Sudhir has rich expertise in designing the evacuation systems and switchyards of all capacities at various voltage levels and will lead our engineering team.



**Mr. Shouvik Bhattacharya**

*Vice President (Technical - Engineering and Design)*

Shouvik Bhattacharya has over 3 decades of experience of working with leading public sector undertakings like NTPC and POWERGRID.

He was previously a Chief General Manager at POWERGRID, where he led the construction, commissioning and O&M of Extra High Voltage (EHV) substations, including Air Insulated Substations, (AIS), Gas Insulated Substations (GIS) and HVDC substations.

Mr. Shouvik has a degree in electrical engineering from Jalpaiguri Engineering College.

**Mr. R S Punia**

*Vice President (Security & Vigilance)*

Mr. R S Punia has 37 years of experience in the Central Bureau Investigation (CBI). In 2001, he was awarded Police Medal for meritorious service and was also awarded President's Police Medal in 2008.

He looks after HR, Vigilance, Security and Surveillance of the Company's projects and human resources.

**Mr Shringar Mascarenhas**

Mr. Shringar has over 20 years of experience, including 15 years as a principal investor for infrastructure across India, South-East Asia and the Middle East.

He has previously worked in Private Equity with JP Morgan, Deutsche Bank, Daestrum Capital, Eastspring Investments and ASMA Capital Partners.

He holds a Bachelor's degree in Chemical Engineering from the National Institute of Technology, Tiruchirappalli and an MBA from IIM, Kozhikode.

**Mr. Sandeep Jain**

*CFO*

Mr Sandeep is a certified Chartered Accountant and MBA in Finance, having 18 years of experience in corporate finance, M&A, investment banking, credit rating, project execution and strategic planning.

He has direct experience in project management and exposure to various industries, including education, healthcare, real estate, oil and gas, agri-warehousing, renewable energy and agriculture.

**Mr. KC Narula**

*Consultant (Technical)*

He has formerly worked with NTPC as DGM for 37 years and has spearheaded numerous power projects across the country. He has also guided multiple private solar project developers in commissioning of utility scale projects

**Mr. Nitten Srivastava**

*General Manager (Finance & Accounts)*

Mr Nitten is a graduate in commerce and a chartered accountant heading the accounts team. He possesses 10+ year of practical experience in the field of accounts. He specialises in accounts, fund planning, revenue assurance and banking management.

**Mr. Nitin Singh**

*Director*

Mr. Nitin is an experienced Professional in Solar energy with wide range of experience right from design development, to sourcing/procurement for all solar equipment, execution of project as EPC, O&M and trac-robo module cleaning system for ground mounting Solar parks.

**Mr. Susanta Kumar Palai**

*Deputy General Manager – Projects*

Mr. Susanta Kumar Palai is an accomplished professional with over 13 years of extensive experience, including 4 years of international experience outside of India, in overseeing diverse utility scale solar projects at Sterling & Wilson, Waaree etc.

**Mr. Ajay Peri**

*AGM (Engineering)*

Mr. Ajay is an engineering graduate. He has been associated with the group's Solar Park endeavours from the beginning, and is responsible for engineering, monitoring and project co-ordination with CTU, CEA and other agencies.

Ajay has a degree in Engineering Physics from Delhi Technological University.

**Mr Mayank Mangla**

*AGM (Business Development)*

Mr Mayank is a M.Sc. in Marketing graduate from the University of Edinburgh (Scotland, UK). He has an experience of working with global brands as a Marketer and Business Developer. Having core understanding of sustainable businesses and brands, Mayank is motivated and continuously thriving for new experiences and challenges. He is looking after marketing and proposals in the organisation.

**Mr. Balveer Singh**

*Manager (Civil)*

A civil engineer with 6 years experience, Balveer is in charge of executing the civil works for solar parks.

**Mr. Kanhaiya Lal**

*Manager (Project Execution)*

An electrical engineer with experience of more than 8 years, Kanhaiya is currently overseeing land aggregation at Aright.

**Mr. Natwar Singh Maderna**

*Asst. Manager (Site)*

Mr. Natwar is working with Aright for more than 10 years, and currently looks after all activities related to land aggregation.

**Mr. Dillip Kumar Nayak**

*Manager (EHS)*

Proficient in Industrial safety management with an experience of more than 10 years in construction, Mr Dillip is in charge of environment, health and safety at the project sites.

**Mr. Sunny Chauhan**

*Senior Engineer (Design)*

Mr Sunny is a CAD Engineer having 10+ years' experience in the field. He is well experienced in Solar PV layout designing.

**Mr. Arun Singh**

*Electrical Engineer (Project)*

An electrical engineer with 5 years' experience, Mr. Arun is currently working on the transmission line and switchyard projects at site.

**Mr. Harendra Prajapati**

*Incharge - (EHS)*

An electrical engineer with experience of 5 years, he looks after the environment, health and safety at the project sites.

**Mr. Pratapa Ram**

*Civil Supervisor (Project)*

With more than 2 years of experience in electrical and civil works of solar projects, Mr. Pratapa is supervising the civil works taking place at site.

**Mr. Azad Singh**

*Jr. Engineer (Civil)*

Mr. Azad Singh has three years of experience as an Electrical and Civil supervisor. He is currently monitoring the transmission line works at site.

**Mr. Dinesh Kumar**

*Jr. Engineer*

Mr. Dinesh has a diploma and is in charge of ensuring material quality of civil works.