

# INTERVIEW WITH Mr. BRIJESH GUPTA

CEO, Renewable Energy Business  
ATHA GROUP



**EQ:** What are your plans for the foray in Renewable Energy Sector in India and other countries?

**BG:** Our group has a vision of 1 GW capacity from Renewable source in India. Our current focus is on PV solar, and we are expanding in rooftop business and third party PPAs. We are focused both on organic and inorganic growth. The group target for acquisition is around 500 MW and the team is aggressively pursuing various acquisition opportunities.

**EQ:** Whats your view on the Government of India target of 100GW Solar and 75GW Wind Power by 2022. Can we achieve that and what would be the challenges?

**BG:** The targets are achievable. Major hindrance has been land, which the solar parks concept is trying to address. State level solar pipeline has to increase to achieve the targets. Hybrid concept of wind-solar and solar-hydro would have to be promoted.

**EQ:** India has 750 GW of Solar Potential....By when should we able to achieve that?

**BG:** That could be a very ambitious target. Energy storage has to be economical to achieve even 20% of the above potential.

**EQ:** Kindly enlighten on "Energy Storage as Game Changer"....Technology&

**Cost Trends, Incentives and Government Support needed.**

**BG:** As renewable energy is now available in abundance, energy storage will be the next big thing to flatten the generation curve and also make available during non-generating periods. These days the evolution cycles have shortened and one could see efficient storage technologies in next 3 to 5 years. Initially government will have to support by way of VGF based tariffs.

**EQ:** What pipeline of projects do you currently own, kindly specify the size of the project, its location, tariff, scheme, timeline of completion, its viability.

**BG:** The group currently has 65 MW solar plants and 15 MW of wind power operational. Three plants, one each in Maharashtra (50 MW), Karnataka (20 MW) and MP (10 MW) are under construction.

**EQ:** Technology as a Game Changer in Solar PV Modules with emergence of 1500V, BiFacial Cells, PERC/PERT, 5-6 BusBars, Glass to Glass etc....Please comment on the technology roadmap, its cost trends, adaptability, your preference.

**BG:** Considering the price discovery in recent bidding and impact on future bids, disruptive technology will play a major role. Cost drivers will now be efficiency in design, such as 5 Bus Bar and 340 / 350 wp cells, lower weight of MMS, higher DC loadings with 1500 V system. Glass to glass modules will find its place so that land can be utilized for farming.

**EQ:** As a Developer do you have plans for backward integration with manufacturing of Modules/ Cells/Wafers etc....Currently would you buy from Indian or Asian or other manufacturer?

**BG:** We have plans to go for our own EPC. Module procurement is based on economics and dynamic in nature. Life cycle costing will play an important role.

**EQ:** Inverter Technology : Please comment of Central vs String, Container vs Civil Structure for Inverter, System Design and Architecture

**BG:** String inverters, though expensive are better over central inverters, in terms of overall saving of space, lower cost of cables, and avoidance of AMC or extended warranty. It eliminates large inverter rooms, reducing shadow resulting in better land utilizations. The monitoring is also better. Having said that, use of string inverters instead of central inverters for big power plants is driven more by cost economics. With outdoor inverters having larger capacity the larger PV plants preference will rest with central inverters.

**EQ:** Mounting &Tracking : What kind of mounting would you adapt....fixed or tilt of seasonal tilt etc....In Tracking...what are your view on the technology available , its cost-benefit analysis, O&M

**BG:** By virtue of having moving machinery and requiring a less-dense configuration than fixed-tilt systems, trackers virtually always come at an added cost relative to fixed systems. In order for a tracker to make economic sense, the increased energy harvest must exceed the added cost of installing and maintaining trackers over the lifetime of the system. An additional factor to be considered in the decision to use trackers or fixed systems is land use; tracking systems tend to use additional land because they must be spaced out in order to avoid shading one another as they track the sun. This means that panels must be spaced farther apart, thus increasing land use and land costs for the developer. The other problem about trackers is the operations and maintenance (O&M) cost, which tends to be higher for this category of systems relative to fixed-tilt systems. Given the system's expected operating life of at least twenty years, O&M costs can add up to a meaningful share of total system costs.

**EQ:** Challenges: Comment on Various challenges such as Aggressive bidding, Land , Finance, Grid Connection, PPA, Forex Fluctuation, Pricing & Tech Trends, Payments risks

**BG:** The two biggest challenges are land and payment risk. Dual use of land could be one way to engage the son of the soil. Solar parks will mitigate the land risk. Investments in smart grids, and not only smart metering will be needed. There is a need to create a single window clearance for various permissions to have accelerated investments.

**EQ:** Financing: Enlighten our readers with the Financial Engineering needed in an aggressive price bid scenario...Source & Cost of Debt,Debt Equity Ratio, Project & Equity IRR, Interest Rates & their trends.

**BG:** Finance is the key and with cost bottoming out, this becomes a differentiator. Combination of bonds, debt, roll over will be required to achieve lower financing cost. Solar industry will now see dominance from finance professionals to make bids economical.

**EQ:** Modern sources of finance such as Green / Climate Bonds, International Finance, Yieldcos, etc....Please enlighten with the latest and future financing trends& their trends.

**BG:** Various mix of bonds, suppliers credit and InvITS (Infrastructure mutual funds) will be explored by developers. Refinancing will be another tool to extend the tenure of debt.

**EQ:** Please enlighten on the Government policies and regulations such as the CERC Benchmark costs, Open Access, Wheeling, Banking, InterState&IntraState Transmission, RPO & its enforcement.

**BG:** The government should push for RPO and get the REC market functional again.

