The bounty of the sun

Tata BP Solar has established itself as a provider of clean energy by extending its business line into building integrated photovoltaics, captive power units and remote electrification systems

For close to twenty years, Tata BP Solar has been lighting up the lives of people around the world, with pure, clean energy from the sun. The solar energy products of the company touch millions of lives in different geographies in India and abroad by providing basic energy needs; improving quality of lives, education standards and awareness; and facilitating connectivity, access to water for drinking and irrigation purposes, et all. And in each case, it succeeds in illuminating the lives of people without polluting our land, water or air.

Tata BP Solar's mission is clear — to harness the power of nature without disturbing the environment, while meeting the energy needs of individuals and institutions, companies and communities.

The company was set up as a joint venture between Tata Sons and BP Solar in 1989, long before fossil fuel prices skyrocketed and climate change became a buzzword. K Subramanya, chief executive officer, Tata BP Solar attributes this vision to Tata Sons Chairman Ratan Tata and the company's Chairman Syamal Gupta.

That the vision was a great business proposition is evident — the company's solar photovoltaic and thermal solutions products business has been profitable from the very beginning. It is the market leader in India with 30 per cent market share. From a turnover of Rs16 million in 1991-92, the company has grown to Rs9,100 million in 2007-08 (nearly 40 per cent growth over the last financial year). The target for the future is even higher. "Our vision is to become a billion dollar, 300mw plus solar power producing company touching a billion lives in the medium term," states Mr Subramanya.

In its endeavour to achieve this target, the company has already invested over Rs350 crore in the last 12 months for manufacturing an additional 128mw of solar cells and 80mw of solar modules. "The solar energy market is growing 45 per cent year-on-year and the opportunities in the emerging markets are enormous," says Mr Subramanya. The business model of the company covers the whole ambit of rural, urban, household and enterprise clientele.

Energy to business

A significant part of the company's business comes from the urban sector. In spite of competition from power grids, Tata BP Solar finds plenty of clientele interested in reliable, clean power. In India, where power deficits

Solar power system for ONGC's offshore platform

Solar water heating systems at Tirumala, Tirupati temple

range between from 14 per cent during peak hours to 9 per cent during non-peak hours, solar power is increasingly being seen as a practical and viable option.

Several commercial organisations — struggling with power cuts up to 40 hours a week — have found a secure alternative for power in solutions from Tata BP Solar. The company acts as a one-stop shop providing project management expertise and complete solutions — from consultancy to installation (a key differentiator from competitors).

There are several corporate organisations which rely on Tata BP Solar for their energy needs. Oil and Natural Gas Corporation oil platforms in the Arabian Sea use Tata BP Solar's power system for gas detection and telemetry. Hindustan Petroleum Corporation has 38 outlets powered by solar energy. The Samudra Institute of Maritime Studies at Lonavala in western India is located in a valley surrounded by a mountain range; it has its façade fitted with Tata BP Solar's building integrated photovoltaic (BIPV) system — one of the large BIPV installations in India.

Tirupati temple in southern India saves 2,500kw per day with the water heating system installed by the company. For the trust that runs the temple, there is the satisfaction of providing hot water round the clock to over 2,500 pilgrims every day, and yet saving enormously on power bills. Earlier, the trust followed a conscious policy of switching on electric geysers for a limited period of time only.

A new area of business is telecommunication where solar powered telecommunication networks have been found to be far more cost-effective and hassle free than diesel-powered ones. "We provide solar power for telecommunications in thousands of villages in the country and work with all leading companies — Airtel, Alcatel, Nokia, Reliance, Tata Teleservices, Vodafone," says Mr Subramanya. The company's products also provide power to Nepal Telecom Corporation and Bhutan Telecom.

Railways is another key area where solar energy plays a crucial role. Indian Railways has the largest network across urban as well as remote areas. Tata BP Solar partners with Indian Railways to power signal controls and signal lighting thereby averting potential accidents.

New power paradigms

At present, the company is expanding the concept of decentralised distributed generation — in other words, generation and service of power at the point of consumption, instead of routing electricity through a network. In this form of power generation, customers can install a mini solar power station on the premises to feed power to the building; any surplus is redirected into the grid and sold. Mr Subramanya elaborates, "You and me have got used to paying electricity bills once a month. We have to move to selling power. All it entails is installing the equipment and selling the excess power."

Apart from the reliability and non-polluting aspects of solar power, there are financial incentives as well. Currently, the cost of generating solar power is Rs20/unit (approximately). The government has announced a feed-in-tariff of Rs15/unit. Tata BP Solar has installed and commissioned a 100kwp (kilowatt-peak) grid-connect for Vikas Soudha, Bangalore in southern India (This was a few years back when there was no tariff policy for solar power). It has also commissioned grid-connect systems for L&T and Tata Housing. Each of these supplement grid electricity and help meet peak load requirements.

A cleaner, greener earth

- Bank of India uses solar energy to power 140 rural branches.
- Ginger hotels adds a warm touch to its hospitality with solar water heaters from Tata BP Solar in Agartala, Bangalore, Bhubaneshwar, Delhi IRCTC, Durgapur, Haridwar, Mysore, Nashik, Pune and Thiruvananthpuram. The multi-location installations will save carbon emissions up to 1.5L tonnes/year.
- Infosys uses solar water heating systems at its campuses in Bangalore, Mysore, Chandigarh, Pune and Bhubaneshwar.
- Larsen & Toubro's electrical business group at Navi Mumbai in western India has a 49.5kwp solar grid connect power plant that generates 56,000kwhr electricity annually and meets internal lighting needs.

With reliability a key product factor, it is little wonder that Tata BP Solar pays immense importance to quality standards. At its four plants in Bangalore, each and every product is tested and graded accordingly. Innovation is big in the company. "We are taking people through training and bringing in best practices exposure. We already have an innovation cell within the company and very soon we will set up an innovation lab," says Mr Subramanya.

The quality standards extend to employee care and safety as well. "Our philosophy is safety first and that gives you permit to work," explains Mr Subramanya. Tata BP Solar has a staircase safety code prominently displayed (Hold the rails, Don't talk on mobile phones while climbing stairs). Employees and contract workers wear safety gear at all times. Even electricians or plumbers who come for repair work are given a safety drill before they can begin.

With such a strong focus on quality standards, it's not surprising that Tata BP Solar can boast of satisfied customers. "We have established credibility for ourselves," says Mr Subramanya. A large number of the customers are located on foreign shores. The company has successfully executed projects in Afghanistan, Bangladesh, Bhutan, Maldives, Nepal and Sri Lanka. More than 60 per cent of sales come from exports to markets in Europe and the US. Through BP Solar, it is the preferred vendor in Germany.

Access to energy

Within India, Tata BP Solar focuses strongly on the rural sector, in a bid to provide the population with some access to electricity. The programme addresses the basic need of lighting up the nights by providing solar lanterns and solar home lighting systems. This programme has been very successful in many rural and interior parts of India where there are no power grids. For folks here, life no longer ends with sunset. Women can cook, kids can study and the family can even watch television. More important, it gives the girl child an opportunity to go to school as school time otherwise would be spent in cutting wood or standing in queues for kerosene. The general health of families has improved as they no longer have to inhale fumes generated by kerosene or paraffin lamps.

Solar powered pump sets for farmers in the Punjab

The company has gone all out to ensure affordable lighting for the low-income daily wage sections of society. In 2007, it got Tata Elxsi to design a low-cost solar lantern. Called the Star, the lantern has a three watt solar panel and is priced 25 per cent cheaper than previous models at Rs1,945. It weighs just 800gm, is innovatively designed to either stand or hang inverted, and comes with the option of FM radio and mobile charger — a definite value add for the rural and semi-urban population. The lantern is being marketed innovatively. As a pilot project, the company has tied up with the Karnataka post office system to sell the Star solar lantern. The decision is based on a survey which indicates that village folk visit the post office once in 10 days.

Another popular home lighting system is Jugnu, a product with two CFL lights. At first glance, the Rs15,000 price tag seems high but works out much cheaper than buying an equivalent amount of kerosene for lighting normal lamps. To help ease the initial financial burden, the company has collaborated with the Aryavart Grameen Bank in the state of Uttar Pradesh in northern India to provide easy finance for the purchase — a down payment of Rs2,000 and equal monthly installments of Rs250 for five years. In the past five months, 12,000 households have been lit up with solar products.

To widen its reach, Tata BP Solar has tied up with Tata Agrico's pan-India network of retailers for distribution of solar lanterns, solar streetlights and water heating systems in the rural and semi-urban areas. The partnership is already active in Bihar and Orissa (eastern India), and parts of Maharashtra (western India) and Karnataka (southern India).

For Tata BP Solar, the last few years have been very good; but Mr Subramanya is not complacent. The company's agenda is extensive. New marketing plans are always being conceived and executed — such as a retail strategy to open solar shops where customers can walk in to buy solar products and solutions. The existing 200-odd dealer network (each with 4-5 sub dealers) is not enough for a company which has set its sight on lighting a billion lives in four years.

With above average economic growth rate, ever-increasing demands for energy, a growing concern for climate change and a bountiful supply of sunlight, Tata BP Solar has a sunny future ahead. ●

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