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In today's highly competitive market, cost cutting at various stages of production becomes the need of the hour for every business whether it is small or big. With the skyrocketing prices of fossil fuels and an ever-increasing demand for electricity, along with a rising consciousness about cleaner sources of energy alternative renewable sources has become a popular choice for every business entity especially SMEs who want to keep their cost down. Solar among them is a much sought-after option for various reasons, chief among them being, a clean and renewable source and cheaper in the long run. Moreover, it is profitable for companies both in terms of cost cutting and as a corporate social responsibility to invest into it.

How adoption of Solar can help SMEs? Is it feasible?

-Saket Yadav

The demand for electricity has been rising at 6% per annum and is expected to further rise because of factors such as new industries, increasing population, more urbanization, smart cities, rural electrification and as more Indians move into the middle class – increased use of power intensive appliances increases the per capita consumption of power. On the other hand, the addition of new capacity to meet this demand has lagged in the past and India is expected to have only 50% of its requirement by 2030. However, with the Government's intent of pushing renewable energy, especially Solar, we are seeing an uptick in the addition of new capacity and the government has targeted 100GW of solar of which 40% is through distributed or rooftop solar.

The small and medium enterprises (SMEs) are turning to solar as a viable alternative because it offers cost effectiveness (it is cheaper than the grid tariff and offers protection from rising costs), energy security (no need to rely on erratic power supply and aging grid infrastructure) and helps meet their sustainability commitments. Following are some of the criteria to evaluate while considering solar.

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Feasible Option

Relative to other sources of alternate energies, solar is the most feasible option both commercially and in terms of ease of deployment. For as little as INR 45-50 lakhs and 10,000 square feet of shadow free area, one can install a 100kWp solar power plant which can churn almost 1.45 lakh units of electricity per year. The savings in energy bills could range from 50% - 60% with a payback period (a function of the cost of a solar power plant, the current utility tariff and the generation from the solar power plant in that location) of anywhere between 3 - 5 years.

In a bid to encourage businesses to adopt solar, the government has rolled out various incentives. Businesses can claim 40% accelerated depreciation (AD) on the cost of the setting up a solar plant. Given this, distributed solar is today cheaper than tariffs charged by utilities across India.

The government has also introduced net metering, whereby any power generated in excess of that consumed immediately can be supplied to the grid and balanced against units consumed from the grid when supply from solar

not available. In some states, the government even offers to pay a nominal price per unit in cases where one has exported more units to the grid than that consumed from it. The process of applying for net-meter involves seeking CEG clearance after the plant is installed and filing an application for net-meter whereby the existing unidirectional energy meter is replaced with a bi-directional meter which records for export & import of the energy. At Fourth Partner Energy, we have a dedicated team assisting our clients with CEG approvals and Net Metering for our projects across India.

The Models

On the financing end, clients have 2 models under which they can set up the solar plant. Under the CAPEX model, the client bears the capital cost of the plant and enjoys the power generated from the power plant for free. Additionally, as mentioned above, the client is also entitled to claim AD benefit, further increasing savings. Today, banks offer long term preferential debt specifically for solar assets which makes going solar affordable and financially attractive. Alternately, the clients can opt for BOOT / OPEX model whereby they

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enter into a long-term power purchase agreement for a tenure usually ranging from 20-25 years. Under this model, the clients only pay for the power generated from their plant and these tariffs are typically 50-60% cheaper than their current grid tariff. Fourth Partner Energy offers financing solutions under both models where it assists its clients in sourcing bank funding as well as evaluates projects on medium & long term PPA basis.

Solar offers freedom from vagaries of rising electricity tariffs and interim power cuts. Further, high solar insolation coupled with the fact that on an average we receive 300+ sunny days, makes solar an ideal energy source for India. A myth about solar is that it does not generate any electricity during cloudy and rainy days.

However, this is not true. Solar is based on concept of light and irradiation and since there is some amount of light even during the rainy and cloudy days, one can expect the solar unit to generate electricity. Fourth Partner Energy has developed a plant monitoring app through which its clients can monitor the generation data.

Minimum Maintenance

Another factor that needs to be considered while installing a solar rooftop plant is the roof type. Two factors that should be always considered while evaluating the roofs are the acceptable load bearing capacity and shadow making objects. On in-shed the acceptable load bearing

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capacity is above 20 kgs/m² while that on RCC is above 60 kgs/m². Shadow making objects can be avoided by using raised structures which will slightly increase the plant cost but ensure optimum plant generation.

An added advantage of adopting solar energy system is that it requires minimum maintenance. O&M costs per year are typically around 1% of the plant value, yet can be an absolute game changer. Simple cleaning of panels in a timely manner will ensure that the plant runs efficiently. Since there are no moving parts, there is no wear and tear. Moreover, most reliable solar panel manufacturers give 20-25 years' warranty. The inverter is usually the only part that needs to be changed after 10-13 years. Fourth Partner Energy has a dedicated team of 20 service professionals who constantly monitor all of our plants and ensure maximum plant up-time and the generation.

About Fourth Partner Energy

Fourth Partner Energy was founded by three partners in 2010. Fourth Partner Energy believes that – the customer, supplier, employee, financier or any other stakeholder is the FOURTH PARTNER and therefore a focus of all its business activities. They aim to build, develop and manage a large operating portfolio of de-centralized solar power assets in India and is positioned as a leading Renewable Energy Services Company (RESCO). They strive to be a Partner for sustainable change. They endeavor to do so by providing innovative

products and services that harness the renewable resources available on our planet, and provide their customers with superior quality at lower costs. They are an MNRE empaneled Channel Partner and an ISO 9001:2008 certified company. They are also registered as a partner with state bodies such as BREC (Rajasthan), TNBREC (Tamil Nadu) and NREDCAP (Andhra Pradesh). Fourth Partner Energy is a leading RESCO with support in every part of the solar project: Financing, Engineering, Project Installation, Post-installation support.

In the past couple of years, adoption of solar sinks high on India's agenda and in a bid to become power independent. We are witnessing more and more corporates, large and small adopting solar and it is little surprise that we at Fourth Partner Energy, have been more than doubling our installed base year on year.

-Saket Yadav is Assistant Manager, Business Development, Fourth Partner Energy. ■
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