





SCALING THE JNNSM- FIT THE RIGHT WAY?
NOVEMBER 20, 2014
SOLAR QUARTER

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India has ambitious plans of using renewable energy to bridge the power deficit that the country is currently facing and solar energy is slated to play a key role in achieving the same. This is a good stance as India needs to embrace solar energy in a more structured and holistic manner. The present government has an ambitious target of generating 20GW within the next 5 years and providing 24x7 access to power across the country.

Theoretically, India has the capacity to produce 2,000GW of solar energy by only using desert and barren land. This is more than the total current capacity of the USA and China combined. From a geographical point of view, India is perfectly suited to tap solar energy, with one of the best radiations and has 58% of its area representing solar hotspots. Therefore, solar energy is not only a compelling option but a practical solution for our country. This is feasible only if the government creates the right ecosystem and thereby makes solar energy a profitable proposition for investors.

The biggest bottleneck in adopting solar energy is the fact that the ecosystem needed for supporting a healthy solar industry is still developing. Of this, finance is a key aspect as 100% of investment needed to set up, which is upfront. Further, there is also a constant pressure on the solar industry to supply power at lower prices as solar still costs significantly higher than coal based power. This is despite the significant decrease in cost of production of solar energy in the recent times. Thus the process of setting up a solar, whether large plants or household rooftop projects, has a lot of impediments that need significant support from the government until the industry comes of age and can fend for itself. Thankfully the present government is showing significant focus on developing solar energy.

One of the areas of contention has been the route used to select developers. The current model used is that of reverse bidding, where the developer with the lower unit price is awarded the project.

While this model has its merits in reducing the unit price of solar, it comes with some fundamental issues that need to be addressed.

1. Primary of which is the fact that solar energy, from a technology point of view, hasn't reached grid parity. This means, usually the pricing is reduced artificially in an attempt to bag a project and not based on sound financial logic. Since 100% of investment in a solar power project is upfront, this process makes the project unviable. A significant industry impact of such practice is drying up of finances and making the projects unprofitable for investors.

2. Reverse bidding might make sense for industries that are mature and where all the cost components are within the control of the players. However, for still growing sectors like solar, reverse bidding increasingly results either in sub-standard plants or discontinued projects. We have seen several such cases where the projects fail to be completed as the bid tariff becomes unviable.

A viable alternative to reverse bidding is Feed-In-Tariff (FIT), which has been successfully used in several countries to proliferate solar energy in a sustainable way. The Ministry of New and Renewable Energy (MNRE) too has been toying with an idea of FIT as opposed to existing competitive bidding or auction processes, as a means to accelerate investment in the solar energy space. One of the key reasons countries like India, Brazil and South Africa did not opt for FIT model was to have a better control on the scale of solar power installed and

the amount of subsidy payments incurred.

However, this notion is beginning to change. Infact the government has openly talked about the need to emulate the German and Spanish models of Feed-In Tariffs at the central level. Since Feed- In-Tariffs offer better predictability for investors without taking the pricing control away from the government, it has the capacity to create a WINWIN proposition.

Taking the example of Feed-In-Tariff success stories from Germany, Italy and Gujarat in India, as well as the wind energy sector, where this model not only helped in bringing more investment but also scale the business. FIT has several advantages, which might help India transform very quickly into a solar economy:

1. A key argument against FIT is it being skewed towards developers. This can be easily managed through transparency and yearly reduction of tariff. This will not only ensure drop of price in a systematic manner, but will also provide predictability to developers to plan their business from a long term point of view. The government also needs to ensure there is no room for pre-allocation or scams.

2. FIT will remove restrictions on who can invest, and bring in much needed clarity on return on investment among lenders as well as generators.

3. A key advantage of FIT is it shifts focus from price only to quality of the project. With tariff being fixed, the process of selection will therefore be on quality. This will help build efficiencies and industry standards in the long run.

4. FIT will also help in make financing of projects more viable. Currently access to finance is a key issue for the industry. With rational tariff and better predictability of the sector, projects will find it much easier get finance.

One critical roadblock faced, lies with the government in deciding the appropriate Feed-In-Tariff. Within India's solar scene, we have seen states like Andhra Pradesh dealing with problems of offering low tariffs which failed to attract the required investors. According to JNNSM, the ideal tariff should be around Rs. 5-5.5 per unit, along with ensured renewable purchase obligation and renewable energy certificates by the government, without which tariffs would be go upto Rs. 7-7.20 per unit.

FIT will also help India's solar rooftop market by providing the much needed clarity on the various electricity charges. Currently, the rooftop market is plagued with ambiguity on electricity charges that differ from state to state. Ideally, third party electricity sale of rooftop consumption should be on par with captive consumption and no additional taxes. The government needs to look at a nationwide FIT, which coupled with net-metering policies, will incentivize households and small businesses to look at rooftop solar as a viable option. Feed-In-Tariffs will allow businesses to reduce energy costs and rapid scaling of the commercial rooftop market.

The government needs to implement a model where allocation is based on the date of connectivity to the grid and where there is no limit to the amount connected for the first two years. Excessive capacity can be dealt with by the government by limiting the same in subsequent years. To scale this efficiently without going the bidding route, the right approach would be to provide FIT, which is insulation based and valid for a period of 12 months with reduction on y-on-y cost involved.

Solar power With-Power-Producers is unique from other forms of energy renewable or non-renewable because it not only is a viable alternative to coalbased power that we rely on currently, but also in its ability to address economic as well social problems that our country is facing immensely. Solar energy has, therefore, the undeniable potential to solve India's energy problem and Feed-In-Tariffs as a model is definitely a step in the right direction. With solar energy and the right approach to leverage this energy form, the government will be able reach regions and population not connected by grid and take the advantages of power to all sections of society.