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PV Project Development Summit India 2012

30-31 July 2012 - New Delhi, India

Conference

Organized by



Get the inside track of the PV industry in 2012 from leading Indian and international PV developers

At **PV Project Development Summit India 2012** (30-31 July, New Delhi), **Mahindra Partners, Mahindra Solar One, Reliance Power, SolaireDirect Energy India, Sunborne India and Resolve Energy Consultants**, will be some of the 40+ senior level experts discussing the roadmap to increase PV competitiveness while seizing the best new opportunities in the Indian market...thereby providing more lucrative business horizons for the industry!

We spoke to these leading developers about the biggest challenge in the PV industry in India at the moment: **Project Financing**; as they are at the front line of growing PV MW capacity locally and internationally.

As part of the promotion of PV Project Development Summit India 2012, PV Insider has compiled their interviews in an exclusive Q&A session that will allow you to take advantage of their experiences to thrive your business, acquiring the financial backing for your PV project.

You will be able to meet and interact with these PV experts and many more at **PV Project Development Summit India 2012, find out more by downloading the brochure on the right hand side**. Below is an exclusive preview of what you can expect to learn at the event...

Q1: A strong experience and track record is essential for a developer to obtain the financial backing for their PV project in India. How can new players overcome this situation, achieving the funding required for a PV project despite the lack of track record in PV?

A1:
Vish Palekar, Business Head - Cleantech Ventures, Mahindra Partners:
"New players need to bring assurance in cash flows for projects. For this, they would need to demonstrate a robust PPA, bankable technology choices and quality approach. In some cases, additional level of securitization would be required"

Chandan Guha, Chief Executive Office, Mahindra Solar One:
"There are many ways of achieving this, including partnerships with large corporates. Probably the simplest way might be to start with small PV projects (1 or 2 MW), doing balance sheet funding of the same size and scaling up gradually. Once there is a portfolio built, enough lenders will come in with debt and equity"

Amit Mehta, Head of PV Projects, Reliance Power:
"While lenders value the track record, a lot also depends on the technical know-how, the knowledge of the development process (obtaining clearances) and the project management capabilities of such developer. Responding to lenders queries in a clear and time bound manner and providing risk mitigation propositions is very important"

Gaurav Sood, Managing Director, SolaireDirect Energy India:

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Find out how the industry challenges in PV must be tackled, and what project opportunities are still up for grabs!

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"For a project to get financed, what is very important in addition to the profile of the developer is the track record and experience of the EPC player along with a robust/bankable EPC and O&M contracts; which give comfort to both lenders and prospective investors in the project. So, developers should be looking at experienced EPC players offering bankable solutions in the Indian market"

Shailendra Bebortha, Head of Project Financing, Sunborne India:

"For new PV players it's a challenge. The quality of the investors, management and team can help to a large extent to overcome the situation"

Madhavan Nampoothiri, Founder and Director, RESolve Energy Consultants:

"A new player can gain the confidence of a bank if they are able to demonstrate:

- a. Use of proven technology - The more a technology has been performing in the field, the confidence of the lender goes higher.
- b. Selection of EPC - A good EPC with strong PV plan design skills, ability to mobilize resources (manpower and working capital) and known for good quality construction and execution capabilities.
- c. Usage of Bankable equipment from bankable companies - This applies to modules and inverters from companies that have the best chance of honouring warranties.
- d. Good Operation and Maintenance Strategy to keep the plant performance very high. This will increase the chances of higher energy generation, thereby increasing the revenues and the cash flow to repay the debt"

Download the brochure by filling in your details on the right and you will learn more about this issue and who else will be speaking at the project financing sessions of PV Project Development Summit India 2012

Q2: Risk management: Is there any financial model to calculate the risk of a PV project? How can a developer reduce the risk of a PV project?

A2:

Vish Palekar, Business Head - Cleantech Ventures, Mahindra Partners:

"Banks evaluate financial, technological and off-taker risk. Each piece has to be looked individually and would need to have appropriate mitigants for them"

Chandan Guha, Chief Executive Office, Mahindra Solar One:

"There are always risks and there are always risk mitigation plans. For a PV project, there are regulatory risks, payment risks, execution risks and financing risks (including foreign exchange). Each of them needs a comprehensive understanding of their nature and to have a mitigation plan in hand.

For example, off-taker risk is significant when it comes to selling power to the DISCOMs. However, if there is a trader in between (NVTN, PTC, etc.) who trades extensively with the DISCOMs on conventional power as well, the risk reduces. Again, a revolving LC, a default escrow mechanism, a sovereign corpus are additional mitigants for the developer.

Such risk identification can be quantified in a financial model and sensitivities can be created across each risk"

Amit Mehta, Head of PV Projects, Reliance Power:

"The developer should run the sensitivities on the GHI and cost overrun in order to understand the probabilities of risk and still meet the DSCR requirement"

Gaurav Sood, Managing Director, SolaireDirect Energy India:

"There are various risks which a developer needs to manage:

- a) Land – Proper due-diligence to be done
- b) Grid connection – Grid availability, grid connection approval, getting line construction in time
- c) Time overrun – work on fixed time Contracts
- d) Cost overrun - work on fixed price EPC Contracts
- e) Warrantees and Guarantees – Get all equipment warrantees and guarantees and overall system Performance Ratio Guarantee and Technical Availability Guarantee
- f) Operations of the plant – O&M contract over the life of the project with O&M operator having an incentive to over perform"

Shailendra Bebortha, Head of Project Financing, Sunborne India:

"Yes, there are financial models available to calculate risk. The developers can reduce risk by way of proper assessment of solar data (preferably onsite data), selection of quality partners (product manufacturer & EPC) and sound financing structures. The standard insurance products available would cover most of the force majeure risks"

Madhavan Nampoothiri, Founder and Director, RESolve Energy Consultants:

"Risk management is inbuilt in any financial model. Some of the high level controllable risks and how they are can managed are:

- a. Resource availability - If the actual solar irradiation at the project location is lower than estimated, the returns will be lower. This can be managed by doing a scenario analysis and using conservative yield estimates to calculate returns

This can be managed by doing a scenario analysis and using conservative yield estimates to calculate returns.

b. Project execution - Many projects end up with time delays and cost escalation due to poor project planning and execution.

Some of the delays happen due to

b.1) Delays due to taking full control of the land and physically defining the boundaries of the site, without any land disputes with owners of adjacent plots

b.2) There is a tendency to keep negotiating with multiple vendors till a rock bottom price is realised from vendor. This could end up in delays in finalising of the equipment and due to the lead times required by vendors, the project can get severely delayed.

b.3) In India, monsoon takes place between June and August in various parts of the country. If not planned properly, monsoons can significantly delay the work.

b.4) Delays at ports - Many of the sea ports in India can be congested, leading to delays in customs/excise clearance. This can be avoided by proper planning.

c. Suboptimal energy generation due to

c.1) Poor quality equipment - can be avoided by proper due diligence

c.2) Poor Operation and Maintenance - developers typically underestimate the importance of operation and maintenance and do not allocate enough funds for this. This could lead to poor performance of plants with frequent breakdowns and huge plant downtimes. It is very critical to install a very good plant monitoring system and a strong O&M team"

Find out who you will meet and the networking opportunities available that will put you in front of decision makers key to your business growth - just download the brochure on the right

Q3: What would be an optimum interest rate (cost of capital) that can be achieved with current prevailing conditions in the Indian solar industry?

A3:

Vish Palekar, Business Head - Cleantech Ventures, Mahindra Partners:

"The current prevailing interest rates are around 12-14%. There is also an option to have international finance with lower interest rates"

Chandan Guha, Chief Executive Office, Mahindra Solar One:

"There are no fixed rules in these and multiple options. For example:

- International capital from Exim banks is available for certain technology choices.
- OPIC provides capital for companies with an US connection.
- Euler Hermes from Germany lends corporate loans for German companies selling products.

Each one of them has different interest rates. While some of them mandate different percentages of hedging, if the borrower is a "Net Exporter", he may be able to offset some of those hedging requirements on an overall basis and thereby get cheaper capital"

Gaurav Sood, Managing Director, SolaireDirect Energy India:

"The optimum cost of debt would be about 12% from Indian banks for a loan of about 11years tenure and in case one goes for ECB's it could vary between 8% to 12%, depending upon the duration of loan and the number of years of hedging considered"

Shailendra Bebortha, Head of Project Financing, Sunborne India:

"Optimum interest rate is a moving target and dependent on the project quality. In the prevailing condition the interest rate would be in the range of "10.50 – 13.50%" in INR funding terms"

Q4: How can a running PV project, with PPA already signed and generating units get refinanced?

A4:

Chandan Guha, Chief Executive Office, Mahindra Solar One:

"Once the construction risk of the project is eliminated and it starts generating healthy cash flows, there are many more suitors willing to invest. Refinancing is thus a definite option, either at "reset" dates of existing loans or by pre-payment of existing loans.

Also, refinancing becomes a cheaper option in this scenario, since hypothecation of revenue is a far less risky security for the new lender"

Amit Mehta, Head of PV Projects, Reliance Power:

"If the plant is already generating, a significant portion of the construction risk is already mitigated. Assuming that all the clearances are in place such as a clear title of land, grid connectivity permission, consent to operate, PPA etc.; the lenders would probably look at actual generation from the plant against the estimated/budgeted plus the payment track record from the procurer. These being on the positive side for a reasonable period of time, the project can get refinanced"

Gaurav Sood, Managing Director, SolaireDirect Energy India:

“When a project is financed initially, the WACC is on the higher side on account of various risks. Once a PV project has been commissioned and has been running as committed by the EPC player i.e. PR has been proven at end of 1 year of operation and guaranteed technical availability is also met, the risk profile of the project is reduced significantly and hence the refinancing will happen. Sources of refinancing could vary and depending upon their return expectation, your refinancing cost would work out”

To find out more about the plenary agenda and how to build the strategy that will portray India as a PV world leader, download the brochure by filling in your details on the right!

Q5: What is stopping lending institutions from extending non-recourse finance for solar power projects?

A5:

Vish Palekar, Business Head - Cleantech Ventures, Mahindra Partners:

“Off-taker risk, technology risk, financial risk and execution risk needs to be addressed to have non-recourse financing for solar projects”

Amit Mehta, Head of PV Projects, Reliance Power:

“-No certainty on generation (most developers do not have ground GHI data and rely on satellite data)

- Lack of understanding of the technology
- Lot of new (in experienced) unknown players are setting up Solar Plants with no prior background on power plant development. The lenders dont feel comfortable with this
- The poor financial health of the distribution companies. The higher tariffs of Solar power mean that in case the Procurer does not pay the asset would be a stranded asset (not possible to sell solar power on the exchange or without the support of the preferential tariffs)
- Most PPA have a drop-dead date beyond which the tariff reduces significantly , over and above the schedule liquidated damages. This risk of tariff reduction can sway the complete viability of the project into negative”

Gaurav Sood, Managing Director, SolaireDirect Energy India:

“The lending institutions have not been funding primarily on account of 3 reasons:

- a) The developer’s profile
- b) The EPC player’s profile in terms of track-record, capability, bankable EPC contracts etc.
- c) Last but very importantly, the bankability of the PPA on account of: The risk of that PPA may not be honoured when it is signed at very high tariff which has been the case so far”

Shailendra Bebortha, Head of Project Financing, Sunborne India:

“In Indian context fully non-recourse finance is very rare. I see two reasons. Lack of knowledge capital and cumbersome/slow loan recovery mechanism is restricting lending institutions to extend project finance”

Q6: If there are no inverter suppliers or manufacturer guarantees, how can a PV project deliver and achieve financial closure?

A6:

Gaurav Sood, Managing Director, SolaireDirect Energy India:

“All inverter manufacturers provide equipment warrantee for a period of 1 year which can be extended by paying fee towards the same. Also, an O&M operator and his contract gives guarantee of technical availability once the deign aspect has been proven through the EPC contract”

Q7: Regarding technology selection, which PV technology is more likely to achieve financial backing in India?

A7:

Amit Mehta, Head of PV Projects, Reliance Power:

“More than the technology choice, what matters the most are: past experience, installed base, the supplier's reputation and stature in the market”

Gaurav Sood, Managing Director, SolaireDirect Energy India:

“Globally crystalline is the prevalent and more bankable technology and same will be the case in India”

Madhavan Nampoothiri, Founder and Director, RESolve Energy Consultants:

“Crystalline silicon is a safer bet, because that is a proven technology world over. Indian banks are likely to be more comfortable with c-Si”

Q8: How do you see the future of the PV market in India compared to other sources of renewable energies such as: CSP, wind power and biomass?

A8:

Amit Mehta, Head of PV Projects, Reliance Power:

“PV projects can be constructed in a very short time frame and are easily scalable to utility grade plants. At the same time, PV

lends itself for distributed generation which a large number of unreachable areas through transmission line. The recent cost reduction has facilitated in being close to grid parity. At Rs 8-9 per unit compared to Rs 6/ unit at least parity with other cheaper sources of renewable energy is not very far.

CSP has not witnessed the same kind of cost reduction as PV the tariffs are still around Rs 12/unit. Wind suffers from long gestation period and biomass is always a supply chain management challenge. The future of PV is very bright in India and Solar PV offers to be a long term sustainable alternative for large scale power for India”

Gaurav Sood, Managing Director, SolaireDirect Energy India:

“The PV market has a very bright future in comparison to all other renewable energies. Only wind power would have a higher installation for few years as the wind market is a mature market. But over few years PV will become the dominant technology on account of its stable production during the day/peak time, reduction in cost and high potential in major parts of the country”

Madhavan Nampoothiri, Founder and Director, RESolve Energy Consultants:

“I see that PV has the highest future amongst all the competing technologies, due to the following reasons:

- a. Solar PV: Very modular, can start at a few KW to hundreds of MW. Also has huge potential in grid-tied rooftops, off-grid rural applications, etc. Most importantly, it is predictable and solar resource availability is high in India.
- b. CSP - This is not very modular and requires a minimum size, typically 50 MW. Also requires more land and even though it has the possibility of energy storage, CSP will be taken up only by a handful of big developers.
- c. Wind - Already a mature market with land and resource availability a constraint.
- d. Biomass - Availability of feedstock is a big challenge”

This was just a taster of the wealth of information and level of attendees you will meet at PV Project Development Summit India 2012, that are key to developing and strengthening your PV business so you are in prime position in the industry's race!

There will only be a few winners, so make sure you don't miss out by downloading the brochure to get discounted ticket prices!

See you in New Delhi!!!



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