<u>Gist of speech on "Solar Market in India 2012" at the Conference held on 29th August 2012 at Hotel Hyatt Regency, New Delhi organized by IBK Media</u>

Topic: <u>Financing of Solar Power Projects by Dr E S Rao IIFCL</u>

Respected Chief Guest Sri Deepak Gupta and other panelists on the dais and ladies & gentlemen. I am happy to share my views on financing the Solar Projects in the following sections:

A) Policy & Regulation Background
B) Power Generation & Costs
C) Financing & Issues
D) Funding Resources
E) IIFCL's Role in Financing of Infrastructure Projects
F) Conclusion

Here I would like to mention that financing comes next to policies and regulations and they have an impact on the projects viability and sustainability. So good policies and regulation are a must for project finance growth.

A) <u>Policy & Regulation Background</u>

- 11th Five Year - \$ 500 Bn - 36% Private Participation was seen in the mid-term appraisal.
- 12th Five Year - \$ 1000 BN (1 Trillion) – 50% Private Participation expected.
- Nearly 30% investments are expected in Power Sector in the total infrastructure investment space. Next are Transport and Telecom.
- In the recent past emphasis is very widely given to Renewable Energy and particular to **Solar** by Ministry of Power, MNRE and supported by CERC and various State Governments.

B) <u>Power Generation & Costs</u>

- Today in India around 1,90,000 MW of power generation installed capacity is there and still a peak deficit of around 9% and energy deficit of around 8% . Till date more generation is done in Thermal and Hydro Power and less in renewable. However, in renewable wind energy was added significantly and around 17,000 MW is installed till date.

- Here I would like to mention that the time difference between India and Western World had been used effectively by Indian IT industry to do $70 Bn export business and similarly the airwaves were used effectively and had high tele-density of 82% in the mobile telephony. So similarly Sun shine (Solar) of 300 days in India can be effectively used and produce 5000 Trillion Kwhr of energy as going forward Wind sites are becoming scarcity for wind generation.
- Till date based on the MNRE (JNNSM) and State Government's policy initiatives around 1000 MW Solar generation is added to the GRID by end of FY 11-12.
- If Renewable Purchase Obligation is done effectively across the country by all States easily the 20,000 MW Solar mission can be achieved.
- The funds required for this 20,000 MW mission is about Rs. 2,00,000/- Cr.. If Rs. 10 Cr./MW Capex is taken a Debt of Rs. 1,40,000 Cr. and Rs. 60,000 Cr. Equity is required till 2020.
- For long term sustainability of projects the Capex /MW has to come down from the present Rs. 12 Cr. / MW and be comparable level with fossil fuel generation projects. So Rs. 6 to 8 Cr. / MW is to be targeted for cost/MW to make solar projects VIABLE in the coming years.
- Like Semi-Conductor Memory cost /G Bit has come down so PC's are cheap. Similarly, Solar PV cell cost /W has to come down from present $1 / Watt to less than $1/watt to develop viable solar projects .
- Similarly, the technological innovation is required to enhance the present 19% PLF to higher level so that more power is generated per PV cell or module and occupy less Land Space to bring the project cost down as well the EPC cost. Similarly, developer has to bring down the Financing Cost by proper capital structuring.

C) Financing & Issues

- Long term Debt is available if proper security of asset and cash flow is structured.
- Equity is available if proper capital structure and RoE is delivered.
- For project sustainability effective project and capital structuring is to be done with proper EPC, O & M and PPA's and well cross linked with each other to **De-RISK the project** during development, construction and operations.
- Proper evacuation and off-take arrangements to be in place if not will affect the project commercialization.
- Proper legal documentation and **Payment Mechanisms** is to be in place to give confidence to Lenders and Investors. So a good project appraisal required.

D) Funding Resources:

- Long term debt available from banks, FIs and from MLA's.
- Equity Funds available but projects have to be structured to create appetite o PE's.
- Structured financial products are also available if credit worthiness of sponsors and well structured project is in place.
- New initiatives like IDF's, Take-out Finance, Credit Enhancement are also coming in the market and IIFCL is launching these products.

E) IIFCL's Role in Financing of Infrastructure Projects

I am glad to share that IIFCL in a short span of 6 years had grown to Rs. 30,000 Cr. Balance sheet and a net worth of Rs. 3900 Cr., and I would like to bring to the kind notice of the Project Developers that IIFCL has a World Bank Line of Credit of USD 1.2 billion, ADB $ 1.2 Bn & KfW $ 50 Mn. and is providing long tenor debt at competitive rates. Since solar projects are likely to have minimal environment and social issues, the Project is likely to meet the compliance requirements of Multilateral Funding and can have access to cheaper funds thereby making the Project competitive in the bidding process.

- IIFCL has sanctioned 6 solar projects so far:
    - All sanctioned in current FY 2012-13.
    - Total Net Sanction : Rs. 353 Crore
    - Total Capacity: 189 MW
    - 1 Project fully disbursed: Rs. 46.51 Crore
- Two projects in pipeline for a sanction amount of Rs. 42 Crore for total capacity of 20 MW.

F) <u>Conclusion:</u>

So enough of opportunities are there in the solar projects development in the next 5 years in India and funds are available for the well structured "Solar Projects".

Thank you,

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