



Workshop on Renewable Energy — Opportunities & Challenges for Solar PV Industry

As envisaged in the Jawaharlal Nehru National Solar Mission (JNNSM) scheme, given the pace of development of solar photovoltaic (PV) industry in India, there is a need to put in place the ecosystem for sustainable growth of solar projects in India. The JNNS Mission has set the ambitious target of deploying 20,000 MW of grid connected solar power by 2022.

To provide an impetus to the solar photovoltaic manufacturing sector by identifying concerns and structuring possible solutions, a Workshop on *Advocating and Harnessing Renewable Energy – Opportunities & Challenges for Solar PV Industry* was held on 9 February 2013 at the India International Centre in New Delhi. The Workshop was organized by Central Electronics Limited, a Public Sector Enterprise under the Department of Scientific

& Industrial Research (DSIR), Government of India.

The Chief Guest at the Workshop was Prof. Samir K. Brahmachari, Secretary-DSIR & DG-CSIR. The workshop was attended by several eminent experts from the Planning Commission, PV Industries, etc.

After a welcome address by Dr K. Jayakumar, Joint Secretary, DSIR/CSIR, the forum began with an overview of the strategy for promotion of the solar PV industry by Mr. Anand Kumar, Manager, Deloitte Touche Tohmastu. He talked about the dynamics of the solar PV industry, emphasizing the need for quality and capacity addition in solar power. He asked policymakers whether India had the potential to locally harness the huge capacity projected to come up in the next 12 years. He felt that, there is a definite case for reviewing the effectiveness

of domestic content in promoting indigenous manufacturing and that there is a need for separately viewing the solar PV generation and solar PV manufacturing industries. He emphasised that subsidies needed to be structured to make solar power more sustainable and more active in the manufacturing space.

Prof. Brahmachari in his address envisioned a road map for ensuring optimal tapping of this immense potential, stating: "Leadership needs Vision; Implementation needs Capital & Technology. Develop Passion for Implementation; Develop Business Model for Expansion." He maintained that designing new strategies with the help of political commitment will help bypass the state wherein we have capability without capacity and ensure that carbon footprint doesn't come to India.

Dr Samir K. Brahmachari, Secretary DSIR and DG-CSIR, chairing the interactive session with expert panelists. Also seen in the picture on right, Shri Gaurav Dave, Chief (Joint Secretary), National Manufacturing Competitiveness Council (NMCC)



Dr. Jayakumar, Joint Secretary, DSIR/CSIR (left) and Dr V K Kaul, GM, Central Electronics Limited (CEL)





From top: View of the participants; DG, CSIR releasing "Reference Handbook for Solar Energy Systems"; Sh. Tarun Kapoor, Joint Secretary, Ministry of New and Renewable Energy (MNRE) and Sh. I. A. Khan, Adviser (Energy), Planning Commission, were expert panelists.

Mr. S.K. Lalwani, Director, Central Electronics Ltd. also presented before the forum the initiative taken along with BEL and BHEL extending equity and management partnership in planning to set up The National Silicon Wafer Manufacturing Facility which aims at entering into the wafer manufacturing stream to create much needed capacity building for future. The project is based considering a five-year horizon. An aggregate project of 1000 MW is proposed in three phases – Stage I-250 MW, Stage II-500 MW (addition of 250 MW in stage II) & Stage III-1000 MW (addition of 500MW in stage III). Product mix shall comprise of 60% multi-crystalline ingots and the balance 40% shall comprise of mono-crystalline ingots. The proposed project has been found to be feasible with government support. With increasing adoption of solar PV in the domestic market, the economics of the project would improve in the medium to long terms.

There was an interactive session with expert panelists, which was chaired by Prof. Samir K. Brahmachari, Secretary-DSIR. The speakers in the session included

Mr. I.A. Khan, Adviser (Energy), Planning Commission; Mr. Gaurav Dave, Chief (Joint Secretary), NMCC; Dr. D.N. Singh, Chief Technology Officer, IndoSolar and Mr. Tarun Kapoor, Joint Secretary, MNRE. The session was very fruitful as several strategic bottlenecks were discussed to bring out solutions to the existing problems of the Solar PV Industry.

Among the key issues that were discussed, an important issue was understanding why increasing domestic market, which aims to install 20000 MW by 2020, has not translated into measureable gains to the domestic manufacturers. Another concern related to the viability of grid-connected energy in India just like Germany. It was mentioned that solar power is largely affected by cost of debt and cost of power. Hence, affordability of solar power for every rural household needs attention. Impact of the cascading effect from Chinese pressure on India was also discussed. Cheaper imports have made domestic manufacturing unviable leading to complete or partial closure of plants. Hence, domestic manufacturing needs to be strictly introduced as a policy measure.

The expert panelists came up with recommendations to address this grave

concern of domestic manufacturing capacity which has largely remained underutilized despite increasing market demand. The key recommendations were:

1. Unequivocal domestic content manufacturing centric policy needs to be structured so as to ensure that the Chinese, Taiwanese etc. do not capture the Indian PV market on account of their free imports.
2. Action should be taken to reduce costs; there is a need to provide cheap power.
3. Soft loans for purchase of domestic content needs to be introduced.
4. Formulating budget with 20% allocation towards capacity building and 80% towards Directed Research.
5. Explore strategy to link solar with something whose substantial cost is electricity that generates revenue.
6. Explore strategy to switch the kerosene subsidy to solar lantern manufacturing thereby capturing the demand that exists.
7. Open access to be implemented to ensure balance in the value chain.

A book, "Reference Handbook for Solar Energy Systems" was also released by Prof. Samir K. Brahmachari on the occasion. The book would be useful for students, manufacturers, users and anyone interested in solar energy and the solar PV industry.

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Mr Anand Kumar, Manager, Deloitte Tohmatsu Pvt Ltd. (left) and Mr S K Lalwani of Consultancy Development Center giving their views during the workshop



Policymakers were asked, whether India had the potential to locally harness the huge capacity projected to come up in the next 12 years.