

Accelerating Clean Energy Innovation in India

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Ministry of Science and Technology, Government of India on 14th September 2016 hosted webinar on “accelerating clean energy innovation in India” in partnership with Mission Innovation.

The discussion began with a short overview of the Mission Innovation initiative, which aims to achieve clean energy technology performance breakthroughs and cost reductions. There are 21 governments participating in mission innovation worldwide and each participating government has pledged to seek to double its clean energy innovation budget over the next 5 years.

The panelists of the interactive session were Mr Prakash Hirani, Dr. Sanjay Bajpai, Dr. Renu Swarup and Mrs Varsha Joshia.

Dr. Renu Swarup is Senior Adviser to the Department of Biotechnology (DBT) and her presentation consisted of a brief overview on mission innovation and agenda of the webinar discussion session. She also gave the introduction of the panellists present in the session. She remembered that mission innovation was initiated on 30th November 2015 consisted of representatives and leaders of 20 different countries on one stage. Representatives of each country present on the event supported doubling of Governmental clean energy R & D investment in next five years. Global scope of mission innovation and clean energy is quite large. She said that mission innovation represent 60% world population. She drew attention of the audience on India’s participation on the mission. India is formally a member of Steering Committee and following two subgroups: Business and Investor Engagement Subgroup (Private sector) and Joint Research and Capacity Building. The ministries of Indian Government involved in mission innovation are Ministry of Science & Technology - Department of Biotechnology -Department of Science & Technology -Council of Scientific & Industrial Research, Ministry of Power, Ministry of New and Renewable Energy, Ministry of Environment, Forests & Climate Change, Ministry of Defence (DRDO), Ministry of Earth Sciences, Ministry of Petroleum and Natural Gas and Ministry of External Affairs. She also highlighted Indian action plan of 2020 is to Create a Biotechnology enterprise equipped with viable green and clean energy. Final summary of her presentation is as follows:

- Bio-energy shall be a major contributor to energy pool
- Partnered Centers and Public Private Partnership is the key to meet the challenge
- International collaboration both bilateral and multi-lateral are encouraged

- In addition to public funding, Private Sector Investment can play an important role to boost the sector
- Time bound, coordinated efforts will be essential to exploit this potential optimally.

Presentation of Mr Prqakash Hirani illustrated as to how the Ministry of Power is primarily responsible for the development of electrical energy in India. He highlighted that majority of research on clean coal technologies and clean energy National Thermal Power Corporation (NTPC) and (NTPC Energy Technology Research Alliance) NETRA are doing research work. The corporation is taking major steps for scientific capture and utilization of carbon dioxide. Actions are also taken for bulk ash utilization, conservation of environment and conservation of precious natural resource. NTPC has also undertaken clean coal technologies project. The objective of the project is to enable Indian industries to design, manufacture and commission higher efficiency coal fired power plants with indigenously developed technology and manufacturing process. NTPC is studying fog, storm on generation forecasting accuracy to improve understanding of local weather impact on solar resources. The have also undertaken dry cleaning of solar panel through the utilization of robotic technique so that wastage of water can be curtailed. The collaborators of NTPC on clean energy work are Germany, USA and Australia.

Dr Sanjay Bajpai, Adviser and senior scientist at DST presentation displayed the increasing budget of DST over the years on clean energy and mission innovation. He also mentioned that DST is investing on Missions on Clean Energy (175 projects at Rs 2000 million) and Water Research (300 projects at Rs1500 M). He ended his presentation by highlighting DST's plans, priorities and investment opportunities on Mission Innovation. He said DST scaled up funding to academics, Research institutions, R&D units in industry, TBIs and Start-ups. The department of S & T is taking on national, bilateral and multi lateral capacity building programmes. DST is also working on Joint Research & Capacity Building Sub-Group.