

**GOVERNMENT OF INDIA
POWER
LOK SABHA**

UNSTARRED QUESTION NO:225

ANSWERED ON:22.11.2012

RESEARCH AND DEVELOPMENT IN POWER SECTOR

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Will the Minister of POWER be pleased to state:

(a) whether the progress of Research and Development (R&D) and innovation work in the power sector during the Eleventh Five Year Plan and the Twelfth Five Year Plan so far is very slow;

(b) if so, the details thereof along with the reasons therefor;

(c) whether the Government proposes to encourage R&D through Research Scheme on Power and National Perspective Plan for R&D in the country;

(d) if so, the details thereof along with the assistance provided for adoption and absorption of new technologies under these schemes during each of the last three years and the current year;

(e) whether the Central Electricity Authority and Central Power Research Institute had organized R&D Conclave 2012 in the recent past; and

(f) if so, the details thereof and the outcome of said conclave along with the extent to which power sector has been benefited by the said conclave?

Answer

THE MINISTER OF STATE (INDEPENDENT CHARGE) OF THE MINISTRY OF POWER (SHRI JYOTIRADITYA M. SCINDIA)

(a) : The progress of Research Projects under RSOP and NPP has been satisfactory during the 11th Five Year Plan. A very good response has been received for the Press advertisement inviting R&D proposals under 12th Plan. Preliminary screening of proposals is under way.

(b) : Of RSOP sanctioned projects in the Eleventh Plan, 28 projects have been completed and twenty eight are in progress. The projects under RSOP are being carried out by faculty members of the Academia and are well supported by senior faculties from Indian Institute of Technology-Mumbai, Chennai, Kanpur, Guwahati etc. Senior scientists and faculty members of Indian Institute of Science, Bangalore and from National Institute of Technology have shown keen interest in working with CPRI under RSOP scheme. The scheme has also benefited many Engineering Colleges in India. From the utilities side, there is participation from Tamil Nadu Electricity Board (TNEB), Punjab State Electricity Board (PSEB), Karnataka Power Transmission Corporation Limited (KPTCL), Kerala Electricity Board (KEB) and others. In addition, the RSOP scheme has helped an innovator from UP to get his innovative product being evaluated by IIT Delhi. The technical report from IITD has made an in-depth study of the device and suggested means for improving the efficiency for producing electricity. Similarly, TNEB has put in significant efforts in the area of Distribution and some of the concepts in Distribution Transformers were studied for feasibility. They have carried out pioneering work in on-line condition monitoring, study of transformer oil and studies on Substation batteries. The scheme has also supported many new projects in the area of Renewable Energy and NIT Suratkal; Karnataka carried out significant work in solar/wind integration into the local grid.

Eleven projects were initiated under the R&D NPP. Of the 11 projects, 4 projects have been successfully completed. Two projects on Static Compensation (STATCOM), one at Bhilai Steel plant and IT Park Thiruvananthapuram are undergoing field trials. Project on High Temperature Super-conductivity (HTS) based Transformer was for the first time taken up and based on indigenous design, development and demonstration was successfully completed. Field trials are being planned.

Thus three indigenous technologies have been developed and they have benefited the Indian Industry.

(c) & (d) : There is a definite need to encourage R&D in Power Sector through the most popular RSOP and NPP schemes. The SFC proposals for continuing have been prepared. Details of assistance given to NPP projects are placed in Annex-I. Details of completed RSOP and on-going R&D projects are listed in Annex-II and Annex-III respectively. The tables give the details of funding provided to these Institutions/Organizations.

(e) & (f) : R&D Conclave 2012 was organized on 19th and 20th of October to showcase the R&D efforts of MoP under RSOP and NPP schemes. It was very well attended by experts, Officials from PSU's, Manufacturers, utilities and the academia. Many issues including R&D funding, manpower requirements, training, networking and collaboration for successful R&D were discussed. General awareness was achieved and message about the opportunities and challenges in R&D of Indian Power Sector was communicated.

The need for solid Industry-Utility-academia-Research Institute collaboration was highlighted by many experts. A broad overview of R&D required for each area of Power Sector R&D namely - Generation, Transmission, Distribution, Distributed Generation, Environment and End use was presented and discussed. It is planned to hold individual 'Seminars' to brainstorm and draw Roadmap independently for achieving good R&D outputs and for encouraging innovation in these major thrust areas.