GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.2071
TO BE ANSWERED ON 10.03.2016

FOSSIL FUEL RESERVES

2071. SHRI M. CHANDRAKASI:

Will the Minister of POWER
be pleased to state:

(a)   the present level of fossil fuel reserves in the country and expected period/year by which the same will be exhausted;

(b)   the details of new alternate energy sources which have been identified for exploration and use in future especially after exhausting fossil fuel reserves; and

(c)   the details of R&D works undertaken in the country and the world over to meet future energy needs after exhausting fossil fuels?

A N S W E R

THE MINISTER OF STATE (INDEPENDENT CHARGE) FOR POWER,
COAL AND NEW & RENEWABLE ENERGY

(SHRI PIYUSH GOYAL)

(a) :   As per the information available with Central Electricity Authority (CEA), the present level of coal reserves are 301.5 billion tonnes and may last for around 100 years. There are 47 trillion cubic ft. of natural gas reserves and 800 Million Metric Tonnes (MMT) of oil reserves. These reserves are expected to last for 30-40 years. Further, lignite reserves of 44,114.24 Million Tonnes (MT) are available in the country. However, based on the present techno commercial viability of lignite mining, the mineable reserve in the country is estimated at 4326 MT. The lignite reserves is expected to last for around 85 years.

(b) :   Renewable Energy Sources (RES) like Solar, Wind (including off-shore wind), Bio-mass, Tidal, Geo-Thermal & small hydro etc. have been identified for development, which would replace fossil fuels.

(c) :   The details of R&D Projects on RES, undertaken under the R&D Schemes of the Ministry of Power, are given in the *Annex.*

The world over, R&D efforts are directed towards improving RES and allied energy storage and addressing issues related to grid integration of RES.

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ANNEX REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 2071 TO BE ANSWERED IN THE LOK SABHA ON 10.03.2016.

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DETAILS OF R & D PROJECTS RELATED TO "RENEWABLE ENERGY SOURCES"

COMPLETED PROJECTS

Sl. No.	Title	Institute/ Organization
1	A Study on Stability & Reliability of the power system with large penetration of Wind Power	CPRI (Power System Division)

ON-GOING PROJECTS

Sl. No.	Title	Institute/ Organization
1	Application of intelligent control to hybrid wind diesel-solar power system	NIT, Hazratbal, Srinagar
2	FPGA Based Development of Different MPPT Algorithms for a Stand-Alone Photo Voltaic System using Artificial Intelligence	National Institute of Technology Karnataka (NITK), Surathkal, Mangalore, Karnataka
3	Hydrogen Fuel Generation by Splitting of Water using Nano sized Metal Doped Layered Titanates for Fuel Cell Applications	Alagappa College of Technology(A.C. Tech) Campus, Anna University

PROJECTS APPROVED

Sl No.	Title	Institute/ Organization
1	Effect of harmonic due to large scale penetration of Rooftop SPV Power Plant	DSD, CPRI
2	Development of Control Strategies for Grid Connected PV System utilizing the MPPT and Reactive Power Capability	Indian Institute of Technology Kanpur
3	Investigation on the operation and control of multiple distributed generation sources in micro grid (Phase-II)	National Institute of Technology Karnataka (NITK) Surathkal
4	Day Ahead Solar Power Forecasting for Indian Climatic Zone	Central Power Research Institute, Bangalore
5	Design, development and deployment of grid interfaced power conversion unit for solar -wind power generation system	Arunai Engineering College, Tiruvannamalai
6	Development of Smart Grid, Controllers for Hybrid Renewable Distributed Generator for a Stand - alone and Grid-connected Operation Addressing Reliability and Power Quality Issues	National Institute of Technology Puducherry
7	Development of solid state transformer as a wind power interfacing device	National Institute of Technology Calicut
8	Development and demonstration of 1 k W soluble lead redox flow battery system for solar energy and retrieval	EATD, CPRI

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