

**GOVERNMENT OF INDIA  
MINISTRY OF POWER**

**LOK SABHA  
UNSTARRED QUESTION NO.364  
TO BE ANSWERED ON 17.11.2016**

**ENERGY THROUGH CLEAN ELECTROCHEMICAL PROCESS**

**364. SHRI CH. MALLA REDDY:**

**Will the Minister of POWER  
be pleased to state:**

- (a) whether an Indian firm, Bloom energy, by tweaking the technology has created electricity in an easy and non-polluting manner, if so, the details thereof;**
- (b) whether the Solid Oxide Fuel Cell that converts fuel into electricity through a clean electrochemical process produces clean power for over 100 of the Fortune 500 companies, if so, the details thereof;**
- (c) whether the country can shift from the existing infrastructure that is capital intensive, inflexible and requires long planning horizons to Bloom Energy Servers that are highly flexible, modular, upgradeable and rapidly deployable;**
- (d) if so, the details and the time-frame therefor; and**
- (e) if not, the reasons therefor?**

**A N S W E R**

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

**( SHRI PIYUSH GOYAL )**

**(a) & (b) : Bloom Energy, a United States based firm tweaked the technology of Solid Oxide Fuel Cell to generate electricity with flexi fuels like - natural gas, purified biogas through a clean electrochemical process with better efficiency of electricity generation and lesser emissions of green-house gas and pollutants like - NO<sub>x</sub>, CO and Volatile Organic Compounds. Bloom Energy lists the name of about 70 customers on its website.**

**(c) to (e): The Ministry of New and Renewable Energy is implementing various programmes on new and renewable energy, under which the country has already an infrastructure consisting of 49.2 lakh Family Biogas Plants, and a few plants for Power Generation from waste through production of biogas route. This infrastructure is widening with further implementation of these programmes. The Family Biogas Plants are not feasible for coupling with Solid Oxide Fuel Cell (SOFC). Deployment of the SOFC systems is dependent on the availability of feedstock which could be natural gas; hydrogen or purified biogas.**

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