

**GOVERNMENT OF INDIA  
POWER  
LOK SABHA**

STARRED QUESTION NO:452  
ANSWERED ON:27.08.2010  
CLEANING OF TRANSMISSION LINES  
Majhi Shri Pradeep Kumar;Singh Shri Uday Pratap

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

- (a) whether tripping is one of the major reasons for the power outage;
- (b) if so, the details thereof;
- (c) whether the Power Grid Corporation of India Limited (PGCIL) has signed any agreement with Pawan Hans Helicopter Limited (PHHL) to use their choppers for cleaning the transmission lines;
- (d) if so, the details of the terms and conditions thereof;
- (e) the extent to which the lines tripping problem is likely to be solved by using the choppers; and
- (f) the details of the expenditure incurred by PGCIL for the purpose during the last three years and the current year?

**Answer**

THE MINISTER OF POWER(SHRI SUSHILKUMAR SHINDE)

(a) to (f) : A Statement is laid on the Table of the House.

**STATEMENT**

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (f) OF STARRED QUESTION NO. 452 TO BE ANSWERED IN THE LOK SABHA ON 27.08.2010 REGARDING CLEANING OF TRANSMISSION LINES.

(a) & (b) : The Extra High Voltage (EHV) Grid in the country is operated in a secured manner. Tripping in itself is for protection of transmission lines. Generally tripping of one or two elements does not affect the power supply, as the system is designed to withstand outage of any one element of the transmission system. However, multiple (more than one element) tripping / cascade tripping may cause power supply disruption / disturbance. Following are the main causes of the tripping of transmission lines:

(i) Flashover on the insulators due to dust and pollution deposits and foggy weather conditions.

(ii) Collapse of transmission tower(s) or snapping of conductors due to natural calamities.

(iii) Short circuiting of live conductor(s) due to animal contacts or overgrown vegetation.

(c) : Power Grid Corporation of India Limited (PGCIL) had entered into a Memorandum of Understanding (MOU) / Agreement with M/s Pawan Hans Helicopters Limited (PHHL) for the Financial Years 2008-09 and 2009-10 to use their choppers for cleaning of the polluted insulators of a few sections of transmission lines in the Northern Region of the country.

(d) : Salient terms and conditions for cleaning job undertaken in the Financial Year 2009-10 were as under:

(i) Providing helicopter for three months for washing of disc insulators of transmission lines.

(ii) Utilization of 225 flying hours for washing of insulators during the above period.

(iii) Undertake washing of insulators with the following scope:

(a) Providing insulator washing equipment.

(b) Arranging operating crew (Pilot, Equipment operator and Chief Coordinator).

(e) : Cleaning of insulators using helicopter as also by other means have considerably reduced tripping of the transmission lines under foggy weather conditions, thus minimizing the Northern Grid disturbances during winters.

(f) : Cleaning of Insulators by helicopter was introduced by PGCIL for the first time during the winter season of 2008-09. The approximate expenditure during the Financial Years 2008-09 and 2009-10 was Rs.7.15 crores and Rs.4.98 crores, respectively.

