

**GOVERNMENT OF INDIA
HEAVY INDUSTRIES AND PUBLIC ENTERPRISES
LOK SABHA**

UNSTARRED QUESTION NO:4597

ANSWERED ON:06.08.2009

FLEXIBLE AC TRANSMISSION SYSTEM OF BHEL

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Will the Minister of HEAVY INDUSTRIES AND PUBLIC ENTERPRISES be pleased to state:

(a) whether Bharat Heavy Electricals Limited (BHEL) has developed a new series compensation scheme Flexible AC Transmission System (FACTS) to enhance power transfer capability and reduce transmission losses;

(b) if so, the details thereof;

(c) the extent to which power transfer capability has been enhanced and transmission losses reduced so far after the use of FACTS; and

(d) the details of transmission lines in which such system has been installed so far in the country?

Answer

MINISTER OF STATE IN THE MINISTRY OF HEAVY INDUSTRIES AND PUBLIC ENTERPRISES (SHRI ARUN YADAV)

(a): Yes Madam, Bharat Heavy Electricals Limited (BHEL) has developed Thyristor Controlled Series Capacitor (TCSC) Flexible AC Transmission System (FACTS).

(b): The TCSC FACTS of BHEL was developed with indigenous efforts and successfully test charged in November 2004 on the 400 KV Kanpur-Ballabhgarh transmission line.

(c): The following were observed during the test charge of Kanpur-Ballabhgarh transmission line:-

Enhancement of power transfer in the line by 50%;

Successful damping of low frequency power oscillations;

Overall network loss reduction by 8 MW

(d): TCSC FACTS has been installed on the following four lines by Power Grid Corporation of India Limited through BHEL as well as other vendor companies:-

- i. Kanpur-Ballabhgarh;
- ii. Raipur-Rourkela line;
- iii. Purnia-Muzaffarpur line; and
- iv. Muzaffarpur-Gorakhpur line