

**GOVERNMENT OF INDIA  
MINISTRY OF POWER**

**LOK SABHA  
UNSTARRED QUESTION NO.3410  
TO BE ANSWERED ON 15.03.2018**

**CAPACITY OF POWER TRANSMISSION LINES**

**3410. SHRI RAHUL SHEWALE:  
SHRI BHARTRUHARI MAHTAB:  
SHRI SANJAY DHOTRE:  
SHRI HARIOM SINGH RATHORE:**

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

- (a) the present capacity of power transmission lines in the country, region-wise;**
- (b) whether the transmission lines are being run on their full capacity, if so, the details thereof and if not, the reasons therefor;**
- (c) whether the Government has enhanced the capacity of power transmission lines in the country during each of the last three years and the current year, if so, the details thereof, region-wise;**
- (d) the cases of deviation from the regulations and standards set by the Central Electricity Authority/Central Electricity Regulatory Commission/State Electricity Regulatory Commissions in operation of transmission lines which came to the notice of the Government during the said period along with action taken thereon;**
- (e) whether the power surplus States are unable to supply/divert their surplus power to power deficit States on account of constraints in inter-regional transmission; and**
- (f) if so, the details thereof and the reasons therefor along with the remedial measures taken/being taken by the Government in this regard?**

**A N S W E R**

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

**( SHRI R. K. SINGH )**

**(a) : The capacity of transmission lines depends on various factors viz. voltage level, conductor configuration, line length, inter-connection arrangement etc. As on 28<sup>th</sup> February 2018, a total of 3,87,383 ckm of transmission lines (220 kV and above) exists in the country. The inter-regional capacities are as below:**

<b>Present Inter regional links Capacity (MW)</b>	
<b>Eastern Region-Northern Region</b>	<b>22530</b>
<b>Eastern Region -Western Region</b>	<b>12790</b>
<b>Western Region - Northern Region</b>	<b>16920</b>

<b>Eastern Region –Southern Region</b>	<b>7830</b>
<b>Western Region - Southern Region</b>	<b>12120</b>
<b>Eastern Region - North Eastern Region</b>	<b>2860</b>
<b>North Eastern Region - Northern Region</b>	<b>3000</b>
<b>Total</b>	<b>78050</b>

(b) : The transmission lines are not loaded upto their full capacity all the time due to various technical reasons like daily/monthly/seasonal variation in demand, over voltage problem during light load condition, Surge Impedance Loading limits of long lines etc.

(c) : The inter-regional capacity of the National Grid during the last three years and the current year is as below :

<b>Year</b>	<b>Inter Regional Capacity (MW)</b>
<b>2014-15</b>	<b>45850</b>
<b>2015-16</b>	<b>61150</b>
<b>2016-17</b>	<b>75050</b>
<b>2017-18 (Upto January, 2018)</b>	<b>78050</b>

(d) : During the said period, cases of deviations from the regulations and standards set in operation of transmission lines have come to the notice of the CERC due to Grid disturbance, occurrence of tower collapse, non-implementation of under frequency relay and rate of change in frequency relay protection etc. In all such cases, CERC has taken suitable action in the form of levy of penalties, expression of displeasure, issuance of necessary directions for submission of special progress reports/status reports etc. The list of deviations in the past three years and the current year is given in the Annex.

(e) & (f) : Presently, there are no constraints in the Inter-Regional transmission system for supply/divert power from surplus States to power deficit States under Long Term Allocations. Medium Term Open Access and Short Term Open Access Transactions are allowed on the balance available margins on the inter-state transmission system.

Strengthening of inter-regional transmission corridors is a continuous process in order to improve the transfer of power across the regions. The aggregate inter-regional transmission capacity by the end of various plan periods are given below:

<b>Plan period</b>	<b>Inter Regional Capacity (MW)</b>
<b>9<sup>th</sup></b>	<b>5750</b>
<b>10<sup>th</sup></b>	<b>14050</b>
<b>11<sup>th</sup></b>	<b>27750</b>
<b>12<sup>th</sup></b>	<b>75050</b>

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**ANNEX**

**ANNEX REFERRED TO IN REPLY TO PART (d) OF UNSTARRED QUESTION NO. 3410 TO BE ANSWERED IN THE LOK SABHA ON 15.03.2018.**

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<b>Sl. No.</b>	<b>Petition No</b>	<b>date of order</b>	<b>Issue</b>
<b>1</b>	<b>146/MP/2013</b>	<b>20.02.2014</b>	<b>Issue of Providing protection systems for ensuing security of the Southern Regional grid as well as the interconnected Indian grid.</b>
<b>2</b>	<b>5/SM/2014</b>	<b>31.12.2015</b>	<b>Non Implementation of Automatic Demand Management Schemes by a few states.</b>
<b>3</b>	<b>8/SM/2015</b>	<b>14.12.2015</b>	<b>Grid Disturbance of 2012- Non compliance of Grid Code by PGCIL, WRLDC, NRLDC and SLDCs of Haryana, U.P., Punjab, Gujarat, maharashtra, M.P</b>
<b>4</b>	<b>113/MP/2014</b>	<b>27.11.2015</b>	<b>UFRs, df/dt , Islanding scheme and implementation of protection Audit remarks</b>
<b>5</b>	<b>60/MP/2014</b>	<b>27.11.2015</b>	<b>SCADA Mapping to SRLDC incomplete by constituents of Southern Region</b>
<b>6</b>	<b>6/SM/2014</b>	<b>9.10.2015</b>	<b>Non Implementation of UFR and df/dt protection</b>
<b>7</b>	<b>86/MP/2014 &amp; 374/MP/2014</b>	<b>18.8.2015</b>	<b>Non Implementation of Protection Audit Remarks pertains to KSEBL,TANTRANSCO ,KPCL and KPTCL</b>
<b>8</b>	<b>59/MP/2014</b>	<b>6.8.2015</b>	<b>Non Implementation of Protection Audit Remarks pertains to OPTCL, due to non implementation of the same initiated action under section 142 of the EA ,act,2003</b>
<b>9</b>	<b>83/MP/2015</b>	<b>14.5.2015</b>	<b>Non Implementation of Protection Audit Remarks pertains to TSTRANSCO</b>
<b>10</b>	<b>8/SM/2014</b>	<b>14.12.2015</b>	<b>Non-compliance of Regulation 5.2(o) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 by PSPTCL, HVPNL, RRVPNL, UPPTCL and BBMB for operation of SPS scheme</b>
<b>11</b>	<b>9/SM/2014 and 10/SM/2015</b>	<b>12.10.2015</b>	<b>Investigation of tower collapse and load crash in Northern Region on 30.5.2014</b>
<b>12</b>	<b>Petition No. 91/MP/2014 I.A. No. 20/2014</b>	<b>13.7.2016</b>	<b>Seeking relaxation of the frequency band, namely 49.9 Hz – 50.05 Hz to 49.7 Hz - 50.3 Hz prescribed in Regulation 5.2 (m) of the Central Electricity Regulatory Commission (Electricity Grid Code) Regulations, 2010 (Grid Code) and grant of exemption to wind and solar projects from the application of deviation limit of 150 MW or 12% of the schedule whichever is lower, as provided in Regulation 7 (1) (a) and (2) of the Central Electricity Regulatory Commission (Deviation Settlement Mechanism and related matters) Regulations, 2014 (Deviation Settlement Regulations</b>
<b>13</b>	<b>95/MP/2015</b>	<b>15.6.2016</b>	<b>Non Implementation of protection Audit remarks-time extension for APTRANSCO</b>

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14	8/SM/2015	31.5.2016	Non-compliance of Regulation 5.2(o) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 by PSPTCL, HVPNL, RRVNL, UPPTCL and BBMB for operation of SPS scheme
15	420.MP/2014	20.5.2016	Non-implementation of contingency demand disconnection scheme for sudden loss of wind generation as per CERC order 120/MP/2011 dated 22.2.2014, non-availability of LVRT protection, non-scheduling of wind generation as per Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (IEGC) 6.5.23 (i), lack of necessary demand estimation as per IEGC Regulation 5.3 and not providing real time SCADA data to LDC pertains to SR
16	265/MP/2015	3.5.2016	Non Implementation of protection Audit remarks-time extension for KPCL
17	16/SM/2014	4.2.2016	Non-compliance of Regulations 2.8.1 (c) and 5.2 (I) of the Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 by JUSNL
18	007/SM/2014	29.1.2016	Implementation of telemeter facilities- Non Non-compliance of Commission's direction dated 26.9.2012 in Petition No. 168/MP/2011.
19	420/MP/2014	5.1.2016	Non-availability of LVRT protection, non-scheduling of wind generation as per Central Electricity Regulatory Commission (Indian Electricity Grid Code) Regulations, 2010 (IEGC) 6.5.23 (i), lack of necessary demand estimation as per IEGC Regulation 5.3 and not providing real time SCADA data to LDC
20	193/MP/2016	19.12.2017	Grid disturbance due to tripping of 400 kV NPS-TPCIL line, 400 kV NPS-NCC and NCC-TPCIL lines due to mal-operation of relays

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