ENERGY FINANCING CHALLENGES

*69. SHRI MOHD. ALI KHAN:

Will the Minister of POWER be pleased to state:

(a) whether Government is working on energy financing challenges for future; and

(b) if so, the details thereof and if not, the reasons therefor?

A N S W E R

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

( SHRI PIYUSH GOYAL )

(a) & (b) : A Statement is laid on the Table of the House.

********
STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) & (b) OF STARRED QUESTION NO.69 ANSWERED IN THE RAJYA SABHA ON 27.07.2015 REGARDING ENERGY FINANCING CHALLENGES.

************

(a) & (b) : Yes, Sir.

The projected investment under Central, State and Private Sector during the 12th Five Year Plan for electricity is Rs.15,01,666 crore and for Renewable Energy, it is Rs.3,18,626 crore.

Some of the challenges in financing are improving the financial viability of distribution companies, the equity mobilization and debt financing for Independent Power Producers (IPPs), Independent Power Transmission Companies (IPTCs) and Non-Conventional Energy Sources (NCES) and captive power plants, which are addressed through appropriate policy interventions from time to time.

************
SHARE OF STATES IN POWER GENERATION

724. SHRIMATI SASIKALA PUSHPA:

Will the Minister of POWER
be pleased to state:

(a) whether Government has taken any decision to increase the share of electricity for the States
where power stations are situated and from where power is generated;

(b) if so, the details thereof;

(c) whether Government has decided to further increase the share for Tamil Nadu in the
electricity generated from Kudankulam Nuclear Power Plant; and

(d) if so, the details thereof and if not, the reasons therefor?

A N S W E R

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

( SHRI PIYUSH GOYAL )

(a) & (b) : No, Sir. However, in January, 2011, the allocation to Home State was increased to
50% in 14 new projects of NTPC. Similar dispensation has also been provided by the Government in

(c) & (d): Power from Kudankulam Nuclear Power Plant (2x1000 MW) has already been
allocated, amongst the beneficiary States/Union Territories including Tamil Nadu based on the
guidelines for allocation of power from Central Sector Generating Station to the States/UTs.

Out of total capacity of 2000 MW of Kudankulam Nuclear Power Station, the firm
share allocated to Tamil Nadu is 925 MW. Further, on request of the state, additional unallocated
power of 200 MW out of 300 MW unallocated power available with the Government was allocated
to Tamil Nadu.
725. SHRI ANAND SHARMA:

Will the Minister of POWER be pleased to state:

(a) the number of power plants commissioned during the years 2012, 2013 and 2014, along with the installed capacity of these plants;

(b) the number of approvals given by the Ministry for new power plants and their installed capacity; and

(c) the status of implementation of power projects granted approval during the last three years?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a) : The number of power plants commissioned during the years 2012-13, 2013-14 and 2014-15, along with installed capacity are as under:

<table>
<thead>
<tr>
<th>Year</th>
<th>No. of Power Projects</th>
<th>Installed Capacity (MW)</th>
</tr>
</thead>
<tbody>
<tr>
<td>2012-13</td>
<td>45</td>
<td>20,622.8</td>
</tr>
<tr>
<td>2013-14</td>
<td>42</td>
<td>17,825.0</td>
</tr>
<tr>
<td>2014-15</td>
<td>40</td>
<td>22,566.3</td>
</tr>
</tbody>
</table>

(b) & (c) : Under the Electricity Act, 2003, generation of electricity has been delicensed. As such, Techno-Economic Clearance of Central Electricity Authority (CEA) is not required for thermal power projects. However, any generating company intending to set up a hydro electric project, involving a capital expenditure exceeding such sum, as may be notified by the Central Government, from time to time, is required to submit the Detailed Project Report (DPR) for concurrence of CEA.

During the last three years, CEA has accorded concurrence to 17 hydro electric projects with a total installed capacity of 10,393 MW, out of which, 3 projects have already been taken up for construction.

**********
†726. SHRI NARAYAN LAL PANCHARIYA:

Will the Minister of POWER be pleased to state:

(a) the number of villages and districts of Rajasthan where work under the Deendayal Upadhyay Gram Jyoti Yojana (DDUGJY) has been started;

(b) the details of funds disbursed to the State till date under DDUGJY; and

(c) whether Government proposes to include hamlets (dhandis) also under the above scheme and if so, by when these would be included and if not, the reasons therefor?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a) & (b) : The Government of India has approved Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) in which Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) has been subsumed as RE component. The details of villages electrified and quantum of funds released to the Government of Rajasthan under RE component of DDUGJY are as under:-

<table>
<thead>
<tr>
<th>Sl. No.</th>
<th>Plan</th>
<th>Electrification of Un-electrified Villages</th>
<th>Intensive Electrification of electrified Villages</th>
<th>Subsidy Released (Rs. in crore)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Coverage</td>
<td>Ach.</td>
<td>Coverage</td>
</tr>
<tr>
<td>1</td>
<td>X Plan</td>
<td>1586</td>
<td>1586</td>
<td>14664</td>
</tr>
<tr>
<td>2</td>
<td>XI Plan</td>
<td>2577</td>
<td>2576</td>
<td>18554</td>
</tr>
<tr>
<td>3</td>
<td>XII Plan</td>
<td>0</td>
<td>0</td>
<td>25397</td>
</tr>
<tr>
<td>Total</td>
<td></td>
<td>4163</td>
<td>4162</td>
<td>58615</td>
</tr>
</tbody>
</table>

(e) : All the left out un-electrified villages and hamlets/dhanis irrespective of population criteria can now be considered for electrification under DDUGJY. The Detailed Project Reports (DPRs) for consideration under DDUGJY are submitted by the respective State Governments and as on date, 11 DPRs have been submitted by Government of Rajasthan covering electrification of 80 un-electrified villages and intensive electrification of 5890 electrified villages which are under techno-economic appraisal by the Nodal Agency, Rural Electrification Corporation (REC).

*******
727. SHRI BHUPINDER SINGH:

Will the Minister of POWER be pleased to state:

(a) whether any guidelines have been framed for utilization of the accumulated deposit lying idle in the Power System Development Fund (PSDF) towards transmission system improvement; and

(b) if not, whether the Ministry would take steps in this regard?

A N S W E R

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

( SHRI PIYUSH GOYAL )

(a) : Yes, Sir.

(b) : Does not arise in view of (a) above.
**CO₂ EMISSION FROM THERMAL POWER PLANTS**

†728. SHRI PREM CHAND GUPTA:

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

(a) whether it is a fact that the level of pollution is increasing in the country due to high emission of Carbon Dioxide (CO₂) from thermal power plants;

(b) if so, the steps being taken by Government to check it;

(c) whether it is also a fact that the coal based power plants in the country need highest amount of water in the world, due to which those plants have been placed at the lowest level in the grading; and

(d) if so, the steps being taken by Government for their improvement?

**A N S W E R**

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

( SHRI PIYUSH GOYAL )

(a) to (d) : CO₂ emissions from Indian power sector as monitored by Central Electricity Authority during last five years is as under:

<table>
<thead>
<tr>
<th>Year</th>
<th>Total CO₂ Emission in Million Tonnes</th>
<th>Specific CO₂ emission in Kg/kWh</th>
</tr>
</thead>
<tbody>
<tr>
<td>2009-10</td>
<td>580.0</td>
<td>1.07</td>
</tr>
<tr>
<td>2010-11</td>
<td>597.7</td>
<td>1.06</td>
</tr>
<tr>
<td>2011-12</td>
<td>637.3</td>
<td>1.05</td>
</tr>
<tr>
<td>2012-13</td>
<td>696.3</td>
<td>1.04</td>
</tr>
<tr>
<td>2013-14</td>
<td>727.4</td>
<td>1.03</td>
</tr>
</tbody>
</table>

Though the total CO₂ emissions are increasing due to large capacity additions of coal based plants in the country, however, the specific CO₂ emissions from these plants are showing a decreasing trend due to adoption of more efficient generation technologies.

.........2.
Coal based thermal power stations in India require relatively higher quantity of consumptive water because of high ash content of Indian coals and high ambient temperature conditions. Plant consumptive water requirement is governed by a number of factors such as quality of raw water, type of condenser cooling system, quality of coal, ash utilization, type of ash disposal system, waste water management aspects etc.

The Government of India has taken following steps to reduce CO₂ emission from coal based thermal power plants:

i. Adoption of more efficient Supercritical Technology for Thermal Power generation resulting in less specific coal consumption (Kg/Kwh) and thereby reducing CO₂ emissions and water consumption.

ii. Phased retirement of inefficient and old thermal power generation units is being taken up. A capacity of about 3100 MW has already been retired.

iii. Government has planned a capacity addition of 1,75,000 MW from renewable sources by 2022.

iv. Perform Achieve and Trade (PAT) Scheme under National Mission on Enhanced Energy Efficiency (NMEEE) is under implementation by Bureau of Energy Efficiency (BEE). In this scheme, individual target for improving energy efficiency has been assigned to 144 no. of thermal power stations in the country. The incremental efficiency of these thermal power stations will lead to reduction in fossil fuel consumption and thereby reducing CO₂ emissions.

v. Measures like zero liquid discharge stipulations by MOE&F, use of washed coal with lower ash content, better O&M practices etc. have led to the specific water consumption for coal based plants gradually coming down from a high of 5-7 m3/h per MW in the past to about 3 m3/h per MW presently.
ELECTRICITY WASTAGE DUE TO CONGESTION IN TRANSMISSION HIGHWAYS

(a) whether it is a fact that over three billion units of electricity or a day's national consumption were wasted during 2014-15 as congestion in the transmission highways blocked trading between surplus and deficit regions and if so, the details thereof and the reasons therefor;

(b) whether it is also a fact that the data from various power exchanges show a higher wastage during 2013-14 at 5.3 billion units and if so, the details thereof; and

(c) the details of steps Government would take to check wastage of electricity on such a large scale?

ANSWER

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

(a) & (b): As per the information available at CERC website www.cercind.gov.in, energy which could not be cleared for sale due to congestion during 2013-14 and 2014-15 was 5.591 Billion Unit (BU) (0.58% of total generation of 967.15 BU) and 3.144 BU (0.3% of total generation of 1,048.673 BU) respectively. The congestion was experienced mainly due to non-availability of sufficient inter-regional transfer capability between Western to Northern Region and Western to Southern Region.

(c): To reduce congestion in inter-regional power transfer, a number of inter-regional links have been planned which interconnect the five regional grids i.e. Northern, Western, Southern, Eastern and North Eastern. The total transmission capacity of such inter-regional links as on June, 2015 is 47,450 MW, which is planned to be increased to 68,050 MW by the end of 12th Plan.

*******
730. SHRI ABDUL WAHAB:

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

(a) whether the State Electricity Board of Kerala is running into losses year after year;

(b) if so, the details of losses during each of the last three years; and

(c) the nature of assistance given to the Board during the period?

**A N S W E R**

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

( SHRI PIYUSH GOYAL )

(a) & (b) : Kerala State Electricity Board has been corporatized to KSEB Ltd., w.e.f. 1\textsuperscript{st} November, 2013. As per the **Report on Performance of State Power Utilities published by Power Finance Corporation (PFC)** for the years 2011-12 to 2013-14, the state has been earning profit/incurring losses during the years 2011-12 to 2013-14 (as indicated below):

<table>
<thead>
<tr>
<th>Profit/ (Loss) after tax on accrual basis</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>KSEB</td>
<td>241</td>
<td>241</td>
<td>140</td>
</tr>
<tr>
<td>KSEB Ltd.</td>
<td>-</td>
<td>-</td>
<td>(29)</td>
</tr>
<tr>
<td>KERALA</td>
<td>241</td>
<td>241</td>
<td>111</td>
</tr>
</tbody>
</table>

(c) : For the development of the distribution sector, Govt. of India has approved Deendayal Upadhyaya Gram Jyoti Yojana (DDUGJY) for rural areas and Integrated Power Development Scheme (IPDS) for urban areas.

Under erstwhile Rajiv Gandhi Grameen Vidyutikaran Yojana (RGGVY) Scheme, now subsumed in DDUGJY, 15 projects covering 15 villages/habitations and 730 BPL H/Hs with total project cost of Rs.5.31 crore were sanctioned in January 2014 under DDG Projects.

Under erstwhile Restructured Accelerated Power Development and Reforms Programme (RAPDRP), now subsumed in IPDS, an amount of Rs.206.13 crore has been sanctioned and Rs.30.92 crore disbursed during the last three years for IT enablement and Strengthening of distribution network in the state.

************
ACHIEVEMENT OF NATIONAL ELECTRICITY FUND

731. SHRI SANJAY RAUT:

Will the Minister of POWER be pleased to state:

(a) the details of funds sanctioned under the National Electricity Fund (NEF) to various State power utilities for improving the power distribution network during the last three years, particularly in Maharashtra; and

(b) what are the outcome in the power distribution by the companies since the implementation of NEF?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a): Government of India launched the National Electricity Fund (Interest Subsidy Scheme) in July 2012 to provide Interest Subsidy on loans raised by both Public and Private Distribution Companies (DISCOMS), for capital works sanctioned by financial institutions to improve the infrastructure in distribution sector during the financial year 2012-13 and 2013-14. For the State of Maharashtra, project loan worth Rs.7940 crore (both for MSEDCL and BEST) for 254 Nos. of projects have been approved for coverage under NEF. State/Discoms-wise details are annexed.

(b): Distribution utilities are trying to improve the operational efficiency by way of reducing AT&C loss and Revenue gap to get the interest subsidy under NEF. The NEF Scheme is acting as one of the enablers towards improvement of performance parameters of Discoms. The benefit of interest subsidy would finally be passed on to the consumer through reflecting the same in the ARR of the respective utilities.

************
Details of Loan Approved for coverage under NEF & Drawal from Lenders

<table>
<thead>
<tr>
<th>Sl No</th>
<th>State Name</th>
<th>Utility Name</th>
<th>No of Project</th>
<th>Total Loan Amount Eligible Under NEF</th>
<th>Cumulative Disbursement as on 31.03.2015</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>Andhra Pradesh</td>
<td>Andhra Pradesh Eastern Power Distribution Company Ltd.</td>
<td>3</td>
<td>143.57</td>
<td>22.3</td>
</tr>
<tr>
<td>2</td>
<td>Andhra Pradesh</td>
<td>Andhra Pradesh Southern Power Distribution Company Ltd.</td>
<td>118</td>
<td>2,098.91</td>
<td>1329.11</td>
</tr>
<tr>
<td>3</td>
<td>Chhattisgarh</td>
<td>Chhattisgarh State Power Distribution Company Ltd.</td>
<td>6</td>
<td>406.37</td>
<td>66.18</td>
</tr>
<tr>
<td>4</td>
<td>Delhi</td>
<td>Tata Power Delhi Distribution Company Ltd.</td>
<td>1</td>
<td>60</td>
<td>0</td>
</tr>
<tr>
<td>5</td>
<td>Gujarat</td>
<td>Madhya Gujaraj Vij Company Ltd.</td>
<td>1</td>
<td>83</td>
<td>80</td>
</tr>
<tr>
<td>6</td>
<td>Haryana</td>
<td>Dakshin Haryana Bijli Vitran Nigam</td>
<td>34</td>
<td>414.12</td>
<td>74.68</td>
</tr>
<tr>
<td>7</td>
<td>Uttar Haryana</td>
<td>Uttar Haryana Bijli Vitran Nigam</td>
<td>53</td>
<td>714.53</td>
<td>265.59</td>
</tr>
<tr>
<td>8</td>
<td>Himachal Pradesh</td>
<td>Himachal Pradesh Electricity Board</td>
<td>68</td>
<td>410.62</td>
<td>153.87</td>
</tr>
<tr>
<td>9</td>
<td>Karnataka</td>
<td>Bangalore Electricity Supply Company Ltd.</td>
<td>119</td>
<td>2,564.05</td>
<td>645.55</td>
</tr>
<tr>
<td>10</td>
<td>Karnataka</td>
<td>Chamundeshwari Electricity Supply Company Ltd.</td>
<td>15</td>
<td>451.7</td>
<td>249.75</td>
</tr>
<tr>
<td>11</td>
<td>Karnataka</td>
<td>Hubli Electricity Supply Co. Ltd.</td>
<td>25</td>
<td>914.27</td>
<td>87.54</td>
</tr>
<tr>
<td>12</td>
<td>Karnataka</td>
<td>Mangalore Electricity Supply Company Limited</td>
<td>2</td>
<td>89.66</td>
<td>34.81</td>
</tr>
<tr>
<td>13</td>
<td>Madhya Pradesh</td>
<td>MP Madhya Kshetriya Vidyut Vitran Company Ltd.</td>
<td>1</td>
<td>84.3</td>
<td>60.1</td>
</tr>
<tr>
<td>14</td>
<td>Madhya Pradesh</td>
<td>MP Poorv Kshetra Vidyut Vitran Company Limited.</td>
<td>2</td>
<td>196.53</td>
<td>94.37</td>
</tr>
<tr>
<td>15</td>
<td>Maharashtra</td>
<td>Brihan-Mumbai Electric Supply &amp; Transport</td>
<td>11</td>
<td>405.19</td>
<td>0</td>
</tr>
<tr>
<td>16</td>
<td>Maharashtra</td>
<td>Maharashtra State Electricity Distribution Co. Ltd.</td>
<td>243</td>
<td>7,534.98</td>
<td>1008.06</td>
</tr>
<tr>
<td>17</td>
<td>Punjab</td>
<td>Punjab State Power Corporation Ltd.</td>
<td>25</td>
<td>1,035.84</td>
<td>330.25</td>
</tr>
<tr>
<td>18</td>
<td>Rajasthan</td>
<td>Ajmer Vidyut Vitran Nigam Ltd.</td>
<td>19</td>
<td>578.35</td>
<td>300.04</td>
</tr>
<tr>
<td>19</td>
<td>Rajasthan</td>
<td>Jodhpur Vidyut Vitran Nigam Ltd.</td>
<td>21</td>
<td>923.04</td>
<td>626.33</td>
</tr>
<tr>
<td>20</td>
<td>Rajasthan</td>
<td>Jaipur Vidyut Vitran Nigam Ltd.</td>
<td>19</td>
<td>652.97</td>
<td>443.82</td>
</tr>
<tr>
<td>21</td>
<td>Tamil Nadu</td>
<td>Tamil Nadu Generation and Distribution Corporation Ltd.</td>
<td>54</td>
<td>1,340.27</td>
<td>430.72</td>
</tr>
<tr>
<td>22</td>
<td>Telangana</td>
<td>Telangana State Southern Power Distribution Company Ltd.</td>
<td>89</td>
<td>696.19</td>
<td>438.88</td>
</tr>
<tr>
<td>23</td>
<td>Telangana</td>
<td>Telangana State Northern Power Distribution Company Ltd.</td>
<td>51</td>
<td>2,354.90</td>
<td>0</td>
</tr>
<tr>
<td>24</td>
<td>Uttarakhand</td>
<td>Uttarakhand Power Corporation Ltd.</td>
<td>11</td>
<td>371.61</td>
<td>259.97</td>
</tr>
<tr>
<td>25</td>
<td>West Bengal</td>
<td>West Bengal State Electricity Distribution Co. Ltd.</td>
<td>18</td>
<td>1,881.81</td>
<td>433.74</td>
</tr>
<tr>
<td></td>
<td><strong>Total</strong></td>
<td><strong>Total</strong></td>
<td><strong>1009</strong></td>
<td><strong>26,406.77</strong></td>
<td><strong>7435.66</strong></td>
</tr>
</tbody>
</table>

***********
732. SHRI C.M. RAMESH:

Will the Minister of POWER be pleased to state:

(a) whether the Ministry is aware that in order to become self-sufficient in power generation, Andhra Pradesh Government has entered into an agreement with M/s. Sumitomo of Japan to set up 4,000 MW super critical thermal power plant in the State;

(b) if so, whether the State Government has asked the Central Government for giving sovereign guarantee;

(c) if so, what are the reasons that the Central Government is not inclined to provide surety;

(d) whether it has found any deficiencies in the Detailed Project Report (DPR); and

(e) if so, whether it has advised the State Government to rectify the deficiencies?

A N S W E R

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

( SHRI PIYUSH GOYAL )

(a) : Government of Andhra Pradesh has entered into a Memorandum of Understanding (MoU) with M/s. SUMITOMO Corporation Limited, Japan on 27\textsuperscript{th} November, 2014 in order to cooperate with each other for development of Srikakulam Thermal Power Plant (4x1000 MW) in the district of Srikakulam, Andhra Pradesh.

(b) : No, Sir.

(c) to (e) : In view of the (b) above, question doesn’t arise.

*************
†733. SHRI LAL SINH VADODIA:

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

(a) the total requirement of electricity, in megawatts, in the country;
(b) the quantum of electricity, in megawatts, generated in the country;
(c) the quantum of electricity, in megawatts generated by Government sector;
(d) the quantum of electricity, in megawatts generated by private companies; and
(e) the plan of Government to generate electricity as per the requirements?

**ANSWER**

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

( SHRI PIYUSH GOYAL )

(a): The total energy requirement and peak demand was 273,643 MU and 145,279 MW
during April - June, 2015 respectively.

(b) to (d): The electricity generated in Mega Watts is an instantaneous value and hence varies
with time. Thus, the quantum of electricity generated is measured in Million Units (MU) for a
specified period. The details of quantum of electricity generated in the country by central sector
generating stations, state sector generating stations and private sector generating stations in terms of
MU for the year 2014-15 and the current year (April - June, 2015) are at **Annex**.

(e): To augment the generation of power in the country, capacity addition of 88,537 MW
has been planned from conventional sources for the 12th Five Year Plan on an all-India basis. With
this level of capacity addition, the demand for power on all-India basis is likely to be met by the
terminal year of 12th Plan (2016-17). In addition, as per Ministry of New Renewable Energy, grid
interactive renewable capacity of 30,000 MW has been planned during 12th Five Year Plan.

************
ANNEX

ANNEX REFERRED TO IN REPLY TO PARTS (b) TO (d) OF UNSTARRED QUESTION NO. 733 ANSWERED IN THE RAJYA SABHA ON 27.07.2015.

**********

Sector-wise generation (in MU) in the country during 2014-15 and 2015-16 (up to June, 2015)

<table>
<thead>
<tr>
<th>SECTOR</th>
<th>Generation in MU</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>2015-16 (up to June 15)*</td>
</tr>
<tr>
<td>CENTRAL</td>
<td>1,04,446.43</td>
</tr>
<tr>
<td>STATE</td>
<td>86,115.33</td>
</tr>
<tr>
<td>GOVERNMENT</td>
<td>1,90,561.76</td>
</tr>
<tr>
<td>PRIVATE</td>
<td>79,431.21</td>
</tr>
<tr>
<td>IMPORT FROM BHUTAN</td>
<td>1,095.87</td>
</tr>
<tr>
<td>Grand Total</td>
<td>2,71,088.84</td>
</tr>
</tbody>
</table>

* PROVISIONAL BASED ON ACTUAL-CUM-ASSESMENT

NOTE :- Generation from conventional sources (Thermal, Hydro and Nuclear) stations above 25 MW only.

**********
DEATHS DUE TO HIGH TENSION WIRES

734. SHRI RAJKUMAR DHOOOT:

Will the Minister of POWER
be pleased to state:

(a) whether it is a fact that high tension transmission wires have been responsible for killing many people in various parts of the country;

(b) if so, the details thereof during the last three years, year-wise, State and UT-wise; and

(c) what remedial measures Government proposes to take in this regard?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a) & (b): As the electricity is a concurrent subject, the distribution of electricity is in the purview of the concerned State Government / Power Utility which are responsible for maintaining the lines in safe condition by enforcing the safety regulations / provisions. Fatal/non-fatal electrical accidents occur in various parts of the country where the high tension transmission wires particularly the overhead lines are owned by the Distribution Companies of the State Governments. The details of fatal human electrical accidents including from High Tension (HT) wires as received from the Central/States installations by the Central Electricity Authority for three years up to 2013-14 is at Annex. In respect of the Central Government, the transmission lines are mainly with the Power Grid Corporation of India Limited where no fatal electrical accident has been reported to Electrical Inspectorate of Central Government in last three years.

(c): As per the requirement of section 53 of Electricity Act 2003, the Central Electricity Authority has framed and notified the safety Regulations namely Central Electricity Authority (Measures Relating to Safety & Electric Supply), Regulations 2010 which are applicable for all installations in the country. Chapter VII of these Regulations specifically deals with the provisions relating to safety of overhead lines. The Distribution Companies (DISCOMs) of the State Governments are responsible for maintaining their lines in safe condition as per the requirement of the said regulations. Under section 162 of the Electricity Act, 2003, the Central/State Governments have their own Electrical Inspectorates to enforce the said safety regulations in electrical installations including lines in their jurisdiction.

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ANNEX

ANNEX REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 734 ANSWERED IN THE RAJYA SABHA ON 27.07.2015.

<table>
<thead>
<tr>
<th>States &amp; UTs</th>
<th>2011-12</th>
<th>2012-13</th>
<th>2013-14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Andhra Pradesh</td>
<td>722</td>
<td>1007</td>
<td>254</td>
</tr>
<tr>
<td>Arunachal Pradesh</td>
<td>75</td>
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<td>NA</td>
</tr>
<tr>
<td>Assam</td>
<td>77</td>
<td>14</td>
<td>73</td>
</tr>
<tr>
<td>Bihar</td>
<td>NA</td>
<td>77</td>
<td>10</td>
</tr>
<tr>
<td>Chhattisgarh</td>
<td>89</td>
<td>219</td>
<td>80</td>
</tr>
<tr>
<td>Goa</td>
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<td>NA</td>
</tr>
<tr>
<td>Gujarat</td>
<td>17</td>
<td>405</td>
<td>585</td>
</tr>
<tr>
<td>Haryana</td>
<td>NA</td>
<td>146</td>
<td>59</td>
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<tr>
<td>Himachal Pradesh</td>
<td>110</td>
<td>25</td>
<td>25</td>
</tr>
<tr>
<td>Jammu and Kashmir</td>
<td>215</td>
<td>NA</td>
<td>21</td>
</tr>
<tr>
<td>Jharkhand</td>
<td>304</td>
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<td>30</td>
</tr>
<tr>
<td>Karnataka</td>
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</tr>
<tr>
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</tr>
<tr>
<td>Manipur</td>
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<td>NA</td>
</tr>
<tr>
<td>Meghalaya</td>
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<td>Mizoram</td>
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<td>Nagaland</td>
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<tr>
<td>Odisha</td>
<td>535</td>
<td>54</td>
<td>56</td>
</tr>
<tr>
<td>Punjab</td>
<td>11</td>
<td>146</td>
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<tr>
<td>Rajasthan</td>
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<tr>
<td>Sikkim</td>
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<td>Tamil Nadu</td>
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<td>569</td>
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<td>Tripura</td>
<td>14</td>
<td>11</td>
<td>16</td>
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<tr>
<td>Uttar Pradesh</td>
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<td>136</td>
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<td>West Bengal</td>
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<tr>
<td>Delhi</td>
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<td>Mines</td>
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<td>NA</td>
<td>NA</td>
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<td>Central Govt. Installations</td>
<td>9</td>
<td>12</td>
<td>5</td>
</tr>
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<td>Railways</td>
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<tr>
<td><strong>Union Territories</strong></td>
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<td></td>
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<tr>
<td>A &amp; N Islands</td>
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</tr>
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<td>Chandigarh</td>
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<td>1</td>
<td>0</td>
</tr>
<tr>
<td>D.&amp;N. Haveli</td>
<td>NA</td>
<td>3</td>
<td>0</td>
</tr>
<tr>
<td>Daman &amp; Diu</td>
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<td>NA</td>
<td>0</td>
</tr>
<tr>
<td>Lakshadweep</td>
<td>NA</td>
<td>NA</td>
<td>0</td>
</tr>
<tr>
<td>Puducherry</td>
<td>NA</td>
<td>4</td>
<td>11</td>
</tr>
<tr>
<td><strong>Total (All India)</strong></td>
<td>3056</td>
<td><strong>4099</strong></td>
<td>4933</td>
</tr>
</tbody>
</table>

**NA-Not Available**
735. SHRI VIVEK GUPTA:

SHRI AVINASH PANDEY:

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

(a) the present status of power generation in West Bengal and Maharashtra;

(b) whether Government proposes to assist these States to augment its power generation capacity;

(c) if so, the details thereof and if not, the reasons therefor;

(d) whether some regions in these States have poor potential for power generation and are facing
power shut down for hours together daily; and

(e) if so, the details thereof along with the remedial measures being taken by Government to
address the power crisis in these States?

**A N S W E R**

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

( SHRI PIYUSH GOYAL )

(a): The total power generation from conventional sources (above 25 MW) from stations located in West Bengal and Maharashtra during 2015-16 (up to June, 2015) was 11,952.85 Million Unit (MU) and 28,888.22 MU respectively.

(b) & (c): During the 12th Plan period likely benefit to the State of West Bengal from Central Generating Stations is 302 MW out of which 166 MW (share) has already been commissioned. In addition, a capacity addition of 250 MW (Thermal) in State Sector and 600 MW (Thermal) in Private Sector has already been commissioned.

During the 12th Plan period likely benefit to the State of Maharashtra from Central Generating Stations is 1,335.5 MW out of which 810 MW (share) has already been commissioned. In addition, a capacity addition of 1,160 MW (Thermal) in State Sector and 4,960 MW (Thermal-including share from UMPP) in Private Sector has already been commissioned.

(d) & (e): Electricity being a concurrent subject, supply and distribution of electricity to various consumers including villages within the State / UT is within the purview of the respective State Government/State Power Utility. The Central Government, however, supplements the efforts of the State Governments by establishing power plants and transmission systems in the Central Sector through Central Power Sector Undertakings (CPSUs).

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R&D ACTIVITIES BY NTPC

736. SHRI DEVENDER GOUD T.: SHRI A.W. RABI BERNARD:

Will the Minister of POWER be pleased to state:

(a) whether NTPC has embarked on a Rs.1,000 crore R&D exercise that would involve ground breaking work in areas of new and renewable energy, power production, waste management, efficiency improvement and cost reduction;

(b) if so, the details thereof;

(c) the details of success it has achieved through the above exercise and how those have been used in the areas mentioned in part (a);

(d) whether the company has decided to work on developing power generation technologies that would use lesser volume of coal to reduce green house gas emission; and

(e) if so, the details thereof?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a) & (b): NTPC has established NTPC Energy Technology Research Alliance (NETRA) as a state-of-the-art centre for research technology development and scientific services in the domain of electric power. NTPC spent Rs. 129.56 crore during 2014-15 on R&D.

(c): NETRA has provided a number of innovative solutions to NTPC operating stations in the areas of low grade heat recovery from waste flue gas, reduction in auxiliary power consumption, robotic inspection, health assessment of power plants components to increase reliability etc.

(d) & (e): Yes, Sir. NTPC, BHEL and Indira Gandhi Centre for Atomic Research (IGCAR) have entered into an MOU for indigenous development of advance ultra super critical technology which would have enhanced efficiency of around 46% and about 17% less CO₂ emission as compared to conventional 500 MW sub-critical thermal power plants.

*************
CONCESSION FOR POWER PLANTS

737. SHRI SUKHENDU SEKHAR ROY:

Will the Minister of POWER be pleased to state:

(a) whether Government has evolved a mechanism of gas pooling for merger of price of imported natural gas and domestic price of LNG;

(b) if so, the details thereof;

(c) the details of specific concessions like waiver of custom duty, VAT, etc. being extended to gas based power plants;

(d) what is the cost of tariff per unit of gas/coal/hydro/solar based power plants respectively; and

(e) the details of concessions given to power plants other than gas-based plants?

ANSWER

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

( SHRI PIYUSH GOYAL )

(a) to (c) : Government of India has sanctioned a scheme for importing spot RLNG in 2015-16 and 2016-17 for the stranded gas based power plants as well as for plants receiving gas upto the target PLF selected through a reverse e-bidding process. The concessions provided for under the scheme are as under:

(i) Custom duty waiver on imported LNG;
(ii) Waiver of Value Added Tax, Central Sales Tax, Octroi and Entry Tax ;
(iii) Waiver of Service Tax on regasification and transportation;
(iv) Reduction in pipeline tariff charges, regasification charges and marketing margin;
(v) Exemption from transmission charges and losses for stranded gas based power projects.

(d) : The cost of tariff per unit of gas/coal/hydro/solar based power plants varies and depends upon parameters like type of fuel, source of fuel, location of plant, size of the unit, technology of the plant and plant efficiency.

(e) Concessions given to power generation plants are given at Annex.

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(ii) The concessions/ incentives offered by the Government for solar power plants are as follows:

(a) Exemption from excise duties and concession on import duties on components and equipment required to set up a solar plant.

(b) A 10- year Income-Tax holiday for solar power projects.

(c) Wheeling, banking and third party sales, buyback facility by states.

(d) Market through solar power purchase obligation for states.

(e) GBI schemes for small solar projects connected to a grid below 33KV.

(f) Reduced wheeling charges as compared to those for conventional energy.

(g) Special incentives for exports from India in renewable energy technology under renewable sector-specific SEZ.
778. SHRI PANKAJ BORA:

Will the Minister of POWER be pleased to state:

(a) whether it is a fact that during the last two months the country has faced frequent power cuts;

(b) if so, the detail thereof;

(c) the present demand and supply of power in the country; and

(d) the action proposed by Government to remove the power crisis?

A N S W E R

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

( SHRI PIYUSH GOYAL )

(a) & (b) : As per the information given by the States, the gap between requirement and availability of the energy, which is the measure of the power cuts, during the last two months i.e. May and June, 2015, has reduced to 2.3% and 2.0% from 3.8% and 3.7% during the corresponding period last year respectively.

(e) : The details of the total demand and availability of power in the country during the current year i.e. April - June, 2015 are as under:

<table>
<thead>
<tr>
<th>Energy</th>
<th>Peak</th>
</tr>
</thead>
<tbody>
<tr>
<td>Requirement (MU)</td>
<td>Availability (MU)</td>
</tr>
<tr>
<td>2,73,643</td>
<td>2,67,670</td>
</tr>
</tbody>
</table>

..........2.
The remedial steps taken by the Government to meet the shortage of power, inter alia, are:

(i) Capacity addition of 1,18,537 MW (including 88,537 MW conventional and 30,000 MW renewable) during the 12th Plan, i.e. by 2016-17.

(ii) Efforts have been made to enhance the supply of domestic coal to power plants. During 2014-15, the coal supply to power plants has required a growth of 10.4% which is the highest achieved in a single year.

(iii) Construction of 1,07,440 ckm transmission lines and setting up of 2,82,740 MVA transformation capacity during the 12th Plan, i.e. by 2016-17.

(iv) Government of India has taken initiative to prepare State specific Action Plans for providing 24X7 Power For All (PFA) in partnership with the States.

(v) Two new schemes have been approved by the Government of India, namely, Deendayal Upadhyaya Gram Jyoti Yojana and Integrated Power Development Scheme for strengthening of sub-transmission and distribution networks and for segregation of agricultural feeders to give adequate and reliable supply and reduce line losses.

(vi) Renovation & Modernization (R&M) of old thermal power plants is planned by concerned State and Central Power Utilities for improving the Plant Load Factor of existing power stations leading to increase generation.

(vii) Promotion of energy conservation, energy efficiency and demand side management measures are being undertaken.

(viii) In order to support financial viability of State Distribution Utilities (Discoms), the Central Government had notified a Financial Restructuring Plan (FRP).

(ix) Many issues relating to Environmental and forest clearances have been expeditiously resolved for facilitating early completion of generation and transmission projects.