GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
STARRED QUESTION NO.80
ANSWERED ON 02.05.2016

ELECTRIFICATION OF VILLAGES

*80. SHRI A.K. SELVARAJ:

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

(a) whether it is a fact that Government has electrified more than 7,000 villages out of the estimated 18,452 un-electrified villages during the last financial year;

(b) if so, the details in this regard;

(c) whether Government has ordered any enquiry into this wrong data published; and

(d) if so, the details thereof?

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) : A Statement is laid on the Table of the House.

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STATEMENT

STATEMENT REFERRED TO IN REPLY TO PARTS (a) TO (d) OF STARRED QUESTION NO. 80 ANSWERED IN THE RAJYA SABHA ON 02.05.2016 REGARDING ELECTRIFICATION OF VILLAGES.

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(a) & (b) : As reported by the respective State Governments/Distribution Companies (DISCOMs), 7,108 villages stand electrified during 2015-16. The State-wise details are given at **Annex.**

(c) & (d) : In view of above, questions do not arise.

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ANNEX

ANNEX REFERRED TO IN PARTS (a) & (b) OF THE STATEMENT LAID IN REPLY TO STARRED QUESTION NO. 80 ANSWERED IN THE RAJYA SABHA ON 02.05.2016 REGARDING ELECTRIFICATION OF VILLAGES.

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State-wise no. of villages electrified during the last year

Sr. No.	States	2015-16
1	Arunachal Pradesh	174
2	Assam	942
3	Bihar	1754
4	Chhattisgarh	405
5	Himachal Pradesh	1
6	Jammu & Kashmir	27
7	Jharkhand	750
8	Madhya Pradesh	214
9	Manipur	75
10	Meghalaya	1
11	Mizoram	16
12	Odisha	1264
13	Rajasthan	163
14	Tripura	9
15	Uttar Pradesh	1305
16	West Bengal	8
	Total	**7108**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.864
ANSWERED ON 02.05.2016

PLAN TO PROVIDE LED BULBS AT CHEAPER RATES

†864. SHRI LAL SINH VADODIA:

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

(a) whether it is a fact that Government is considering to make any plan to provide LED bulbs to consumers at cheaper rates;

(b) if so, whether Government has taken any steps in this direction, so far; and

(c) 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) : Yes, Sir.

(b) & (c) : The Hon'ble Prime Minister launched the National LED Programme 'Unnat Jyoti by Affordable LEDs for All' (UJALA) on 5th January, 2015 earlier called as Domestic Efficient Lighting Programme (DELP) to provide LED bulbs to domestic consumers at an affordable price, which is being implemented by Energy Efficiency Services Ltd. (EESL), a joint venture company under Ministry of Power. The programme is voluntary in nature and is based on a sustainable business model where the cost of efficient lighting is repaid by consumers from savings in energy over a period of time through their electricity bills. The entire upfront investment is made by EESL without any Government budget allocation. EESL aggregates demand across the country and procures LED bulbs through a transparent and competitive bidding process for further distribution to domestic consumers, which has resulted in reduction of prices of LED bulbs from Rs.310/- for a 7W bulb (February, 2014) to Rs.54.90 for a 9W bulb (March 2016) without any element of Government subsidy. As of today more than 10 crore LED bulbs are already distributed across the country by EESL.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.865
ANSWERED ON 02.05.2016

PROGRESS OF ULTRA MEGA POWER PLANTS

865. SHRI V.P. SINGH BADNORE:

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

(a) what is the progress of Ultra Mega Power Plants (UMPPs) in the country, the details thereof; and

(b) what is the future of such UMPPs and the impediments in setting them up, the details thereof?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) & (b) : Four UMPPs, namely Sasan in Madhya Pradesh, Mundra in Gujarat, Krishnapattnam in Andhra Pradesh and Tilaiya in Jharkhand have already been awarded and transferred to the developers. Out of the four awarded UMPPs, two UMPPs namely Mundra UMPP and Sasan UMPP are in operation. The status of the awarded UMPPs is given at **Annex-I**.

The power generation capacity of each of the existing and proposed UMPP is 4000 MW approximately. The fund for UMPP is arranged by the developer of the project who is selected through International Competitive Bidding Route as per the Standard Bidding Document issued by Ministry of Power.

12 more UMPPs are under different stages of development. The status of these UMPPs is given at **Annex-II.**

Some issues in setting up of some UMPPs are delay in finalisation of sites by host states, transfer/acquisition of land, availability of water linkage and identification of suitable coal blocks.

Ministry of Power has constituted an Expert Committee under the Chairmanship of Shri Pratyush Sinha, ex-CVC to examine the Standard Bidding Documents (SBDs) applicable to UMPPs/Case-2. The Expert Committee, after exhaustive discussions with various stakeholders has submitted its recommendations to Ministry of Power.

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ANNEX-I

ANNEX REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 865 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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STATUS OF AWARDED ULTRA MEGA POWER PROJECTS

Sl. No	Name of UMPP	Location	Status
1	**Sasan UMPP (6x660 MW)**	Sasan in District Singrauli. Madhya Pradesh	Project awarded and transferred to M/s. Reliance Power Ltd. on 07.08.2007. Project is fully commissioned.
2	**Mundra UMPP (5x800 MW)**	Mundra in village Tundawand in District Kutch, Gujarat	Project awarded and transferred to M/s. Tata Power Ltd. on 24.04.2007. Project is fully commissioned.
3	**Krishnapatnam UMPP (6x660 MW)**	Krishnapatnam in District Nellore, Andhra Pradesh	The Project awarded and transferred to M/s. Reliance Power Ltd. on 29.01.2008. The developer has stopped work at site, citing new regulation of coal pricing in Indonesia. The procurers have issued termination notice. The matter is subjudice.
4	**Tilaiya UMPP (6x660 MW)**	Near Tilaiya village in Hazaribagh and Koderma Districts, Jharkhand	Project awarded and transferred to M/s Reliance Power Ltd on 07.08.2009. The developer (Jharkhand Integrated Power Ltd) has issued notice of termination of Power Purchase Agreement on 28.4.2015.

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ANNEX-II

ANNEX REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 865 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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STATUS OF OTHER IDENTIFIED ULTRA MEGA POWER PROJECTS

Sl. No.	Name of UMPP	Location	Status
		Odisha	
1	Bedabahal Odisha	Bedabahal in Sundergarh District.	Fresh bid would be issued after finalization of Standard Bidding Documents.
2	1st additional UMPP in Orissa	Bijoypatna in Chandbali Tehsil of Bhadrak district for coastal location	Site identified.
3	2nd additional UMPP in Orissa	Narla & Kasinga sub division of Kalahandi District for inland location	Site identified.
		Chhattisgarh	
4	Chhattisgarh UMPP	Near Salka & Khameria villages in District Surguja.	Govt. of Chhattisgarh vide letters dated 05.04.2016 & 05.10.2015 has informed that they are not keen on setting up this UMPP in view of surplus power in state.
		Tamil Nadu	
5	Cheyyur UMPP	Village Cheyyur, District Kancheepuram.	Fresh bid would be issued after finalization of Standard Bidding Documents
6	2nd Tamil Nadu UMPP	Site Not finalized	CEA vide letter dated 22.01.15 requested TANGENDCO to identify an alternative site for setting up 2nd UMPP in Tamil Nadu.
		Jharkhand	
7	Deoghar (2nd Jharkhand) UMPP	Husainabad, Deoghar Distt	Operating Special Purpose Vehicle (SPV) namely Deoghar Mega Power Ltd and Infrastructure SPV namely Deoghar Infra Limited were incorporated on 26.4.2012 and 30.06.2015 respectively. Ministry of Power has requested Ministry of Coal on 24.02.2016 to identify an alternative suitable coal block, having Geological Report (GR) available.
		Gujarat	
8	2nd UMPP in Gujarat	---	On 12.01.2016 a team of CEA & PFCCL officials visited site in Gir Somnath District identified by Govt of Gujarat to explore the possibilities for setting up of UMPP.

.....2.

Karnataka			
9	Karnataka	State Govt. has identified a suitable site in Niddodi village of Mangalore taluka Dakshina Kannada District.	Site visit report sent by CEA to Govt. of Karnataka for Niddodi village of Mangalore taluka Dakshina Kannada District highlighting issues with respect to the site and requested for quick resolution of the issues.
Maharashtra			
10	Maharashtra	----	Location is yet to be finalized.
Bihar			
11	Bihar	Kakwara in Banka Distt.	Infrastructure Special Purpose Vehicle (SPV) namely Bihar Infrapower Limited and Operating SPV namely Bihar Mega Power Limited were incorporated on 30.06.2015 and 09.07.2015 respectively. Ministry of Coal has tentatively recommended Pirpainti/ Barahat coal blocks.
Uttar Pradesh			
12	UMPP in Uttar Pradesh	Etah	In the meeting held on 21.7.2015, under the Chairmanship of Secretary (Power), Govt. of India, Principal Secretary (Energy), Govt. of U.P informed that site at Etah has been identified for UMPP at Uttar Pradesh.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.866
ANSWERED ON 02.05.2016

REVAMPING OF ULTRA MEGA POWER PROJECTS

866. SHRI T. RATHINAVEL:

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

(a) whether Government is considering to revamp the Ultra Mega Power Projects (UMPPs);

(b) whether the scheme was hit due to faulty drafting of bids;

(c) whether a senior team of experts was looking into the aspects of bid documents and these documents would be put in the public domain; and

(d) if so, the details thereof?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) & (b): Standard Bidding Documents (SBDs) under Case-2 for fuel and other location specific projects were issued in 2006 for procurement of power by Distribution Licensees through competitive bidding. The SBDs for Case-2 were also used for Ultra Mega Power Projects (UMPPs) and four UMPPs namely Mundra, Sasan Krishnapatnam and Tilaiya were awarded through the bidding process on these documents. These SBDs were further reviewed and the Model Bidding Documents (MBDs) for construction and operation of power generation projects/UMPPs on Design, Build, Finance, Operate and Transfer (DBFOT) basis were issued in September, 2013.

Based on the MBDs bids for two UMPPs namely, Odisha and Cheyyur were invited. However, the private sector bidders withdrew from bidding process at Request for Proposal (RfP) stage giving the reason that their concerns were not fully addressed in MBDs based on DBFOT structure.

(c) & (d) : To address various concerns raised by stakeholders including bankers and to encourage larger participation from investors/developers in the bidding, an Expert Committee was constituted to further examine Standard/Model Bidding Documents applicable for Ultra Mega Power Projects (UMPPs)/Case-2. The Committee, after exhaustive deliberations/discussions with various stakeholders, has prepared revised SBDs and Guidelines for UMPPs based on allocated Domestic Coal Blocks and based on imported coal. The draft SBDs for UMPPs based on allocated Domestic Coal Blocks as well as based on imported coal were placed on the website of Ministry of Power on 17th August, 2015 and 29th December, 2015 respectively for seeking comments from the stakeholders.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.867
ANSWERED ON 02.05.2016

POWER GENERATION IN STATES

†867. DR. VIJAYLAXMI SADHO:

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

(a) the details of sources of power generation in every State and the quantum of power generated during the last five years, State-wise;

(b) the details of pending power projects, till date; and

(c) the names of power projects pending in Madhya Pradesh and by when these would be completed along with the action being taken by Government in this direction?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) : The details of sources wise, state-wise and power generation from conventional sources of capacity 25 MW and above, monitored by Central Electricity Authority (CEA), in every state for last five years is given at **Annex-I**.

(b) : As per information available with CEA, the details of thermal, gas, nuclear and hydro power projects under construction are given at **Annex-IIA, Annex-IIB, Annex-IIC and Annex-IID** respectively.

(c) : In the state of Madhya Pradesh, six (6) thermal power projects aggregating to 5545 MW capacity and one (1) hydroelectric Project (Maheshwar) of 400 MW capacity are under construction. The details of these power projects along with their anticipated commissioning schedule is given at **Annex-III**.

CEA and Ministry of Power are monitoring these projects through frequent site visits and interaction with the developers and equipment suppliers for its timely completion.

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ANNEX-I

ANNEX REFERRED TO IN REPLY TO PARTS (a) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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State	Category	Fuel	Monitored Capacity as on 31.03.2016 MW	Generation MU				
				2015-16*	2014-15	2013-14	2012-13	2011-12
BBMB	HYDRO	HYDRO	2,884	11,829	10,600	12,125	10,945	12,459
BBMB Total			**2,884**	**11,829**	**10,600**	**12,125**	**10,945**	**12,459**
DELHI	THERMAL	COAL	840	2,288	3,705	4,526	5,348	5,594
		NATURAL GAS	2,208	3,918	5,018	4,111	5,393	4,377
DELHI Total			**3,048**	**6,206**	**8,723**	**8,638**	**10,741**	**9,971**
HARYANA	THERMAL	COAL	5,980	21,144	27,177	24,642	23,013	20,979
		NATURAL GAS	432	1,101	1,571	1,732	2,403	3,068
HARYANA Total			**6,412**	**22,244**	**28,749**	**26,374**	**25,416**	**24,046**
HIMACHAL PRADESH	HYDRO	HYDRO	6,597	27,081	23,319	21,681	20,331	19,161
HIMACHAL PRADESH Total			**6,597**	**27,081**	**23,319**	**21,681**	**20,331**	**19,161**
JAMMU AND KASHMIR	HYDRO	HYDRO	3,119	15,132	14,485	12,427	12,486	12,279
	THERMAL	HIGH SPEED DIESEL	175	0	0	0	0	5
JAMMU AND KASHMIR Total			**3,294**	**15,132**	**14,485**	**12,427**	**12,486**	**12,284**
PUNJAB	HYDRO	HYDRO	1,051	4,328	4,039	3,914	3,926	4,627
	THERMAL	COAL	6,540	19,008	18,922	16,818	18,012	19,068
PUNJAB Total			**7,591**	**23,337**	**22,961**	**20,731**	**21,938**	**23,695**
RAJASTHAN	HYDRO	HYDRO	411	1,034	863	1,060	845	822
	NUCLEAR	NUCLEAR	1,180	8,401	7,722	9,233	8,847	8,974
	THERMAL	COAL	6,260	32,888	32,760	25,778	23,234	23,256
		LIGNITE	1,580	8,779	9,090	6,010	5,602	2,790
		NATURAL GAS	1,023	2,836	3,751	3,770	3,837	5,485
RAJASTHAN Total			**10,454**	**53,937**	**54,186**	**45,851**	**42,366**	**41,327**
UTTAR PRADESH	HYDRO	HYDRO	502	937	1,248	1,242	1,578	1,404
	NUCLEAR	NUCLEAR	440	3,435	2,891	2,704	2,541	1,984
	THERMAL	COAL	19,063	102,401	103,569	102,706	93,035	84,365
		NATURAL GAS	1,493	4,512	4,194	5,192	7,192	9,255
UTTAR PRADESH Total			**21,498**	**111,285**	**111,902**	**111,843**	**104,347**	**97,008**
UTTARAKHAND	HYDRO	HYDRO	3,756	12,769	11,439	11,025	12,439	13,543
UTTARAKHAND Total			**3,756**	**12,769**	**11,439**	**11,025**	**12,439**	**13,543**
CHHATTISGARH	HYDRO	HYDRO	120	323	258	252	302	314
	THERMAL	COAL	19,458	89,150	79,452	70,679	67,814	59,061
CHHATTISGARH Total			**19,578**	**89,473**	**79,711**	**70,930**	**68,116**	**59,375**
GOA	THERMAL	NAPTHA	48	0	13	241	245	277
GOA Total			**48**	**0**	**13**	**241**	**245**	**277**
GUJARAT	HYDRO	HYDRO	1,990	2,951	3,812	7,106	4,578	4,959
	NUCLEAR	NUCLEAR	440	2,028	3,529	3,752	3,470	3,787
	THERMAL	COAL	14,672	81,256	84,969	74,375	60,890	39,829
		LIGNITE	1,040	6,127	6,258	5,813	6,292	5,325
		NATURAL GAS	7,695	12,551	6,971	6,152	15,760	24,524
GUJARAT Total			**25,837**	**104,913**	**105,539**	**97,199**	**90,991**	**78,425**

MADHYA PRADESH	HYDRO	HYDRO	2,395	4,870	6,300	9,216	7,228	7,736
	THERMAL	COAL	17,185	90,885	68,913	50,431	43,468	41,696
MADHYA PRADESH Total			**19,580**	**95,755**	**75,212**	**59,647**	**50,696**	**49,432**
MAHARASHTRA	HYDRO	HYDRO	2,887	4,694	5,288	6,255	5,557	6,238
	NUCLEAR	NUCLEAR	1,400	10,389	10,270	9,885	9,824	9,814
	THERMAL	COAL	23,626	96,805	87,036	72,507	66,288	59,483
		NATURAL GAS	3,072	5,300	4,716	6,053	10,465	17,856
MAHARASHTRA Total			**30,985**	**117,188**	**107,309**	**94,700**	**92,135**	**93,392**
ANDHRA PRADESH	HYDRO	HYDRO	1,100	674	1,862	2,027	916	1,791
	THERMAL	COAL	9,150	52,009	40,822	38,256	35,795	32,636
		DIESEL	37	0	0	0	0	13
		NATURAL GAS	4,880	5,477	2,561	5,244	10,300	18,101
ANDHRA PRADESH Total			**15,167**	**58,160**	**45,245**	**45,527**	**47,010**	**52,540**
KARNATAKA	HYDRO	HYDRO	3,657	7,473	13,160	13,027	10,299	14,447
	NUCLEAR	NUCLEAR	880	7,672	6,462	6,539	5,442	5,211
	THERMAL	COAL	6,280	32,402	30,541	29,774	28,014	23,482
		DIESEL	234	0	0	24	320	631
KARNATAKA Total			**11,052**	**47,547**	**50,163**	**49,365**	**44,075**	**43,770**
KERALA	HYDRO	HYDRO	1,882	6,365	6,853	7,708	4,650	7,808
	THERMAL	DIESEL	235	146	208	221	533	291
		NAPTHA	534	143	974	1,321	1,685	755
KERALA Total			**2,650**	**6,653**	**8,034**	**9,250**	**6,868**	**8,854**
PUDUCHERRY	THERMAL	NATURAL GAS	33	228	102	257	231	251
PUDUCHERRY Total			**33**	**228**	**102**	**257**	**231**	**251**
TAMIL NADU	HYDRO	HYDRO	2,182	4,468	5,059	4,995	2,868	5,199
	NUCLEAR	NUCLEAR	1,440	5,468	5,227	2,115	2,741	2,516
	THERMAL	COAL	9,370	44,214	35,819	28,299	21,559	20,324
		DIESEL	412	76	1,046	1,451	1,296	1,432
		LIGNITE	3,240	19,340	20,156	20,416	20,429	19,977
		NAPTHA	120	9	3	1	0	30
		NATURAL GAS	897	2,671	4,109	4,933	4,800	4,934
TAMIL NADU Total			**17,661**	**76,246**	**71,418**	**62,211**	**53,694**	**54,413**
TELANGANA	HYDRO	HYDRO	2,657	1,515	4,401	4,502	1,847	3,908
	THERMAL	COAL	6,083	35,352	36,501	34,651	37,616	34,948
TELANGANA Total			**8,739**	**36,867**	**40,902**	**39,153**	**39,463**	**38,856**
ANDAMAN NICOBAR	THERMAL	DIESEL	40	172	154	171	136	95
ANDAMAN NICOBAR Total			**40**	**172**	**154**	**171**	**136**	**95**
BIHAR	THERMAL	COAL	4,535	20,816	18,272	14,939	14,707	13,812
BIHAR Total			**4,535**	**20,816**	**18,272**	**14,939**	**14,707**	**13,812**
DVC	HYDRO	HYDRO	143	177	267	226	199	296
	THERMAL	COAL	7,900	27,853	25,284	27,890	26,078	19,537
		NAPTHA	90	0	0	0	0	0
DVC Total			**8,133**	**28,029**	**25,551**	**28,115**	**26,277**	**19,833**
JHARKHAND	HYDRO	HYDRO	130	51	34	110	142	270
	THERMAL	COAL	3,140	15,894	14,588	14,236	11,378	6,387
JHARKHAND Total			**3,270**	**15,945**	**14,622**	**14,345**	**11,520**	**6,657**
ORISSA	HYDRO	HYDRO	2,142	4,891	6,919	7,547	4,939	5,473
	THERMAL	COAL	8,880	52,314	44,413	38,665	37,290	35,299
ORISSA Total			**11,022**	**57,205**	**51,332**	**46,212**	**42,229**	**40,771**
SIKKIM	HYDRO	HYDRO	765	3,549	3,345	2,945	2,597	2,921
SIKKIM Total			**765**	**3,549**	**3,345**	**2,945**	**2,597**	**2,921**

WEST BENGAL	HYDRO	HYDRO	1,189	2,024	2,150	1,396	1,138	1,078
	THERMAL	COAL	9,735	44,925	47,592	44,674	45,690	45,031
		HIGH SPEED DIESEL	80	0	0	0	0	0
WEST BENGAL Total			**11,004**	**46,948**	**49,742**	**46,070**	**46,829**	**46,109**
ARUNACHAL PRADESH	HYDRO	HYDRO	405	1,280	1,109	981	1,240	978
ARUNACHAL PRADESH Total			**405**	**1,280**	**1,109**	**981**	**1,240**	**978**
ASSAM	HYDRO	HYDRO	325	1,191	1,032	1,216	1,103	1,453
	THERMAL	COAL	250	112				
		MULTI FUEL	60	0	0	0	0	0
		NATURAL GAS	567	3,212	3,268	3,149	3,100	3,103
ASSAM Total			**1,202**	**4,514**	**4,300**	**4,365**	**4,202**	**4,556**
MANIPUR	HYDRO	HYDRO	105	537	372	640	580	524
	THERMAL	DIESEL	36	0	0	0	0	0
MANIPUR Total			**141**	**537**	**372**	**640**	**580**	**524**
MEGHALAYA	HYDRO	HYDRO	332	1,036	863	982	775	595
MEGHALAYA Total			**332**	**1,036**	**863**	**982**	**775**	**595**
NAGALAND	HYDRO	HYDRO	75	164	165	246	213	229
NAGALAND Total			**75**	**164**	**165**	**246**	**213**	**229**
TRIPURA	THERMAL	NATURAL GAS	1,107	5,097	3,824	2,366	1,425	1,443
TRIPURA Total			**1,107**	**5,097**	**3,824**	**2,366**	**1,425**	**1,443**
Bhutan (IMP)	HYDRO	HYDRO		5,245	5,008	5,598	4,795	5,285
Bhutan (IMP) Total				**5,245**	**5,008**	**5,598**	**4,795**	**5,285**
Grand Total			**258,896**	**1,107,386**	**1,048,673**	**967,150**	**912,057**	**876,887**
* PROVISIONAL BASED ON ACTUAL-CUM-ASSESMENT								
Note: Generation from conventional sources (Thermal, Hydro and Nuclear) stations of 25 MW and above only.								

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ANNEX-IIA

ANNEX REFERRED TO IN REPLY TO PARTS (b) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of Under Construction Thermal power projects in the Country (as on 25-04-16)

S.No.	State	Project Name / Impl. Agency / EPC or BTG	Unit No	Cap. (MW)
CENTRAL SECTOR				
1	*Assam*	Bongaigaon TPP/ NTPC/ BHEL	U-2	250
			U-3	250
2	*Bihar*	Barh STPP-I /NTPC/Others ($ Indicates Revised Schedule)	U-1	660
			U-2	660
			U-3	660
3	*Bihar*	Muzaffarpur TPP(Kanti) Exp/ JV of NTPC& BSEB/BHEL	U-4	195
4	*Bihar*	Nabi Nagar TPP / JV of NTPC & Rly./BHEL	U-2	250
			U-3	250
			U-4	250
5	*Bihar*	New Nabi Nagar TPP /JV of NTPC & BSPGCL TG-Alsthom SG-BHEL	U-1	660
			U-2	660
			U-3	660
6	*Chhatisgarh*	Lara TPP/NTPC SG-Dooson TG-BGR Hitachi	U-1	800
			U-2	800
7	*Jharkhand*	North Karanpura TPP/ NTPC SG-Dooson TG - Thoshiba	U-1	660
			U-2	660
			U-3	660
8		Kudgi STPP Ph-I/ NTPC SG -Doosan TG-Toshiba	U-1	800
			U-2	800
			U-3	800
9	*Maharashtra*	Mouda STPP Ph-II/ NTPC /BHEL	U-4	660
10	*Maharashtra*	Solapur STPP/ NTPC/ SG-BGR TG-Alstom	U-1	660
			U-2	660
11	*MP*	Gadarwara TPP/ NTPC /BTG-BHEL	U-1	800
			U-2	800
12	*MP*	Khargone TPP/ NTPC EPC - L&T	U-1	660
			U-2	660
13	*Odisha*	Darlipalli STPP/ NTPC SG- BHEL TG-Toshiba	U-1	800
			U-2	800
14	Telangana	Telangana Ph- I / NTPC	U-1	800
			U-2	800
15	*TN*	Neyveli New TPP/ NLC/BHEL	U-1	500
			U-2	500
16	Tripura	Agartala / NEEPCO/THERMAX	ST-1	25.5
17	*UP*	Unchahar - IV/ NTPC/NBPPC	U-6	500
18	*UP*	Meja STPP/ JV of NTPC & UPRVUNL SG-BGR TG-Thshiba	U-1	660
			U-2	660
19	*UP*	Tanda TPP/ NTPC	U-1	660
			U-2	660
20	*WB*	Raghunathpur TPP, Ph-II / DVC/ Chinese	U-1	660
			U-2	660
		Total Central Sector		**24971**
STATE SECTOR				
1	*AP*	Rayalaseema TPP St-IV / APGENCO/ BTG-BHEL	U-6	600
2	*Assam*	Namrup CCGT / APGCL	GT	70
			ST	30

3	*Bihar*	Barauni TPS Extn./ BSEB/ EPC - BHEL	U-8	250
			U-9	250
4	*Chhattisgarh*	Marwa TPP / CSPGCL/BHEL	U-2	500
5	*Gujarat*	Bhavnagar CFBC TPP / BECL BTG-BHEL	U-1	250
			U-2	250
6	*Gujarat*	Wanakbori TPS Extn. / GSECL SG-Alstom TG-Siemens	U-8	800
7	*Karnataka*	Yermarus TPP/ KPCL BTG-BHEL	U-2	800
8	*Maharashtra*	Koradi TPP Expn./ MSPGCL BTG-L&T	U-10	660
9	*MP*	Shri Singhaji TPP-II / MPGENCO EPC-L&T	U-3	660
			U-4	660
10	*Odisha*	Ib valley TPP / OPGCL BTG-BHEL	U-3	660
			U-4	660
11	*Rajasthan*	Chhabra TPP Extn./RRVUNL / L&T-MHI	U-5	660
			U-6	660
12	*Rajasthan*	Suratgarh TPS/ RRVUNL SG-Alstom TG-Siemens	U-7	660
			U-8	660
13	*Telangana*	Kothagudem TPS St-VII / TSGENCO BTG-BHEL	U-1	800
14	*Telangana*	Bhadradri TPP / TSGENCO	U-1	270
			U-2	270
			U-3	270
			U-4	270
15	*Telangana*	Singareni TPP/ SCCL BTG-BHEL	U-2	600
16	*TN*	Ennore exp. SCTPP(Lanco) / TANGEDCO BTG-LANCO	U-1	660
17	*TN*	Ennore SCTPP / TANGEDCO	U-1	660
			U-2	660
18	*UP*	Harduaganj Exp.-II TPP / UPRVUNL	U-1	660
19	*WB*	Sagardighi TPP-II / WBPDCL/ BTG-BHEL	U-4	500
Total State Sector				**15360**
	PRIVATE SECTOR			
1	*AP*	Bhavanapadu TPP Ph-I / East Coast Energy Ltd. BTG-Chinese	U-1	660
			U-2	660
2	*AP*	NCC TPP / NCC Power Project Ltd. BTG-BHEL	U-1	660
			U-2	660
3	*AP*	Thamminapatnam TPP stage -II / Meenakshi Energy Pvt. Ltd. SG-Cether vessels TG-Chinese	U-3	350
			U-4	350
4	Bihar	Jas Infra. TPS / JICPL BTG-Chinese	U-1	660
			U-2	660
			U-3	660
			U-4	660
5	*Chhattisgarh*	Akaltara TPP (Naiyara) / KSK Mahandi Power Company Ltd./ Chinese	U-3	600
			U-4	600
			U-5	600
			U-6	600
6	*Chhattisgarh*	Binjkote TPP/ SKS Power Generation (Chhattisgarh) Ltd. SG-Cethar Vessels TG-Harbin China	U-1	300
			U-2	300
			U-3	300
			U-4	300
7	*Chhattisgarh*	Lanco Amarkantak TPP-II / LAP Pvt. Ltd. BTG-DEC	U-3	660
			U-4	660
8	*Chhattisgarh*	Singhitarai TPP / Athena Chhattisgarh Power Ltd. BTG -DECL	U-1	600
			U-2	600

9	*Chhattisgarh*	Nawapara TPP / TRN Energy Pvt. Ltd./ Chinese	U-1	300
			U-2	300
10	*Chhattisgarh*	Uchpinda TPP/ RKM Powergen. Pvt. Ltd. SG-China Western TG-Habin Chaina	U-3	360
			U-4	360
11	*Chhattisgarh*	Salora TPP / Vandana Vidyut BTG-Cether Vessles	U-2	135
12	*Chhattisgarh*	Deveri (Visa) TPP / Visa Power Ltd. BTG-BHEL	U-1	600
13	*Jharkhand*	Matrishri Usha TPP Ph-I / Corporate Power Ltd. EPC-BHEL	U-1	270
			U-2	270
14	*Jharkhand*	Matrishri Usha TPP Ph-II / Corporate Power Ltd. EPC-BHEL	U-3	270
			U-4	270
15	*Jharkhand*	Tori TPP PH-I / Essar Power Ltd. BTG-China	U-1	600
			U-2	600
16	*Jharkhand*	Tori TPP Ph-II / Essar Power Ltd.	U-3	600
17	*Maharashtra*	Amravati TPP Ph-II / Ratan India Power Pvt. Ltd. BTG-BHEL	U-1	270
			U-2	270
			U-3	270
			U-4	270
			U-5	270
18	*Maharashtra*	Lanco Vidarbha TPP / LVP Pvt. Ltd. EPC-LANCO	U-1	660
			U-2	660
19	*Maharashtra*	Nasiik TPP Ph-I / Ratan India Nasik Power Pvt. Ltd. BTG-BHEL	U-2	270
			U-3	270
			U-4	270
			U-5	270
20	*Maharashtra*	Nasik TPP Ph-II / Ratan India Nasik Power Pvt. Ltd. BTG-BHEL	U-1	270
			U-2	270
			U-3	270
			U-4	270
			U-5	270
21	*Maharashtra*	Bijora Ghanmukh TPP / Jinbhuvish Power Generation Pvt. Ltd. BTG-Chinese	U-1	300
			U-2	300
22	*MP*	Mahan TPP / Essar Power MP Ltd. / Chinese	U-2	600
23	*MP*	Gorgi TPP / D.B. Power (MP) Ltd. BTG-BHEL	U-1	660
24	*MP*	Niwari TPP / BLA Power Ltd. BHEL - Siemens	U-2	45
25	*Odisha*	Ind Barath TPP (Odisha) / Ind Barath BTG-Cethar Vessels	U-2	350
26	*Odisha*	KVK Nilanchal TPP/ KVK Nilanchal BTG-Harbin China	U-1	350
			U-2	350
			U-3	350
27	*Odisha*	Lanco Babandh TPP / LBP Ltd. BTG-Chinese	U-1	660
			U-2	660
28	*Odisha*	Malibrahmani TPP / MPCL BTG-BHEL	U-1	525
			U-2	525
29	*TN*	Tuticorin TPP (Ind- Barath) / IBPIL BTG-Chinese	U-1	660
30	*TN*	Tuticorin TPP St-IV / SEPC EPC-MEIL(BTG-BHEL)	U-1	525
31	*UP*	Prayagraj (Bara) TPP / PPGENCO SG-BHEL Alstom TG-BHEL - Siemens	U-2	660
			U-3	660
32	*WB*	India Power TPP / Haldia Energy Ltd BTG-BHEL.	U-1	150
			U-2	150
			U-3	150
Total Private Sector				**30765**
Grand Total				**71095.5**

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ANNEX-IIB

ANNEX REFERRED TO IN REPLY TO PARTS (b) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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State	Project Name	Unit No.	Capacity (MW)
AP	Panduranga CCPP	Module-1	116
AP	RVK Gas Engine	GE: 5-8	38
	RVK Gas Engine	GE:1-4	38
AP	RVKCCPP	Module-1	120
	RVKCCPP	Module-2	120
	RVKCCPP	Module-3	120
AP	Samalkot CCPP-II	Module-1	400
	Samalkot CCPP-II	Module-2	400
	Samalkot CCPP-II	Module-3	400
	Samalkot CCPP-II	Module-4	400
	Samalkot CCPP-II	Module-5	400
	Samalkot CCPP-II	Module-6	400
Maharashtra	Mangaon CCPP	Block-I	388
Telangana	Astha Gas Engines	4 Engines	34.88
Uttarakhand	Kashipur CCPP-I	Block-I	225
Uttarakhand	Kashipur CCPP-II	Block-II	225
Uttarakhand	Beta CCPP	GT+ST	225
Uttarakhand	Gama CCPP	GT+ST	225
		Total (Private Sector)	**4274.88**

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ANNEX-IIC

ANNEX REFERRED TO IN REPLY TO PARTS (b) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of Under Construction Nuclear Power Projects in the country

S. No.	Project	State	Developer	Sector	Capacity (MW)
1	Kudankulam U 2	TN	NPC	C	1000
2	PFBR(Kalpakkam)	TN	Bhavini	C	500
3	RAPP U 7 & 8	Rajasthan	NPC	C	1400
4	KAPP U-3,4	Gujarat	NPC	C	1400
	Total				**4300**

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ANNEX-IID

ANNEX REFERRED TO IN REPLY TO PARTS (b) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Hydro Electric Projects (above 25 MW) – Under Construction in the Country (as on 31.03.2016)

Sl. No.	Name of Scheme (Executing Agency)	Sector	I.C. (No. x MW)	Capacity Under Execution (MW)
	Andhra Pradesh			
1	Polavaram (PPA)	State	12x80	960.00
2	Nagarujana Sagar TR(APGENCO)	State	2x25	50.00
	Sub-total: Andhra Pradesh			**1010.00**
	Arunachal Pradesh			
3	Kameng (NEEPCO)	Central	4x150	600.00
4	Pare (NEEPCO)	Central	2x55	110.00
5	Subansiri Lower (NHPC)	Central	8x250	2000.00
6	Gongri(Dirang Energy)	Private	2x72	144.00
	Sub-total: Arunachal Pradesh			**2854.00**
	Himachal Pradesh			
7	Parbati St. II (NHPC)	Central	4x200	800.00
8	Uhl-III (BVPCL)	State	3x33.33	100.00
9	Swara Kuddu (HPPCL)	State	3x37	111.00
10	Sainj (HPPCL)	State	2x50	100.00
11	Shongtong Karcham (HPPCL)	State	3x150	450.00
12	Kashang -I (HPPCL)	State	1x65	65.00
13	Kashang -II & III (HPPCL)	State	2x65	130.00
14	Bajoli Holi (GMR)	Private	3x60	180.00
15	Sorang (HSPCL)	Private	2x50	100.00
16	Tangnu Romai (TRPG)	Private	2x22	44.00
17	Tidong-I (NSL Tidong)	Private	100.00	100.00
18	Chanju-I (IA Energy)	Private	3x12	36.00
	Sub-total: Himachal Pradesh			**2216.00**
	Jammu & Kashmir			
19	Kishanganga (NHPC)	Central	3x110	330.00
20	Ratle (RHEPPL)	Private	4x205 + 1x30	850.00
	Sub-total: Jammu & Kashmir			**1180.00**
	Kerala			
21	Pallivasal (KSEB)	State	2x30	60.00
22	Thottiyar (KSEB)	State	1x30+1x10	40.00
	Sub-total: Kerala			**100.00**
	Madhya Pradesh			
23	Maheshwar (SMHPCL)	Private	10x40	400.00
	Sub-total: Madhya Pradesh			**400.00**
	Maharashtra			
24	Koyna Left Bank (WRD,MAH)	State	2x40	80.00
	Sub-total: Maharashtra			**80.00**
	Meghalaya			
25	New Umtru (MePGCL)	State	2x20	40.00
	Sub-total: Meghalaya			**40.00**
	Mizoram			
26	Tuirial (NEEPCO)	Central	2x30	60.00
	Sub-total: Mizoram			**60.00**
	Punjab			
27	Shahpurkandi (PSPCL)	State	3x33+3x33+ 1x8	206.00
	Sub-total: Punjab			**206.00**

	Sikkim			
28	Bhasmey (Gati Infrastructure)	Private	3x17	51.00
29	Dikchu (Sneha Knietic)	Private	3x32	96.00
30	Rangit-IV (JAL Power)	Private	3x40	120.00
31	Rangit-II (Sikkim Hydro)	Private	2x33	66.00
32	Rongnichu (Madhya Bharat)	Private	2x48	96.00
33	Tashiding (Shiga Energy)	Private	2x48.5	97.00
34	Teesta St. III (Teesta Urja Ltd.)	State	6x200	1200.00
35	Teesta St. VI (LANCO)	Private	4x125	500.00
36	Panan (Himagiri)	Private	4x75	300.00
	Sub-total: Sikkim			**2526.00**
	Telangana			
37	Lower Jurala (TSGENCO)	State	6x40	80.00
38	Pulichintala (TSGENCO)	State	4x30	120.00
	Sub-total: Telangana			**200.00**
	Uttarakhand			
39	Lata Tapovan (NTPC)	Central	3x57	171.00
40	Tapovan Vishnugad (NTPC)	Central	4x130	520.00
41	Tehri PSS (THDC)	Central	4x250	1000.00
42	Vishnugad Pipalkoti (THDC)	Central	4x111	444.00
43	Vyasi (UJVNL)	State	2x60	120.00
44	Phata Byung (LANCO)	Private	2x38	76.00
45	Singoli Bhatwari (L&T)	Private	3x33	99.00
	Sub-total: Uttarakhand			**2430.00**
	West Bengal			
46	Teesta Low Dam-IV (NHPC)	Central	4x40	80.00
47	Rammam-III (NTPC)	Central	3x40	120.00
	Sub-total: West Bengal			**200.00**
	Total:			**13502.00**

* Subject to restart of works
# Subject to active start of works

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ANNEX-III

ANNEX REFERRED TO IN REPLY TO PARTS (c) OF UNSTARRED QUESTION NO. 867 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of Under Construction Thermal Power Projects in the state of Madhya Pradesh (as on 25-04-16)

Sl. No.	Project Name / Implementing Agency/ EPC or BTG	Unit No	Capacity (MW)	Anticipated Commissioning Schedule
CENTRAL SECTOR				
1	Gadarwara TPP/ NTPC /BTG-BHEL	U-1	800	Jun-17
		U-2	800	Dec-17
2	Khargone TPP/ NTPC EPC - L&T	U-1	660	Mar-19
		U-2	660	Sep-19
	Total Central Sector		**2920**	
STATE SECTOR				
1	Shri Singhaji TPP-II / MPGENCO EPC-L&T	U-3	660	Jul-18
		U-4	660	Nov-18
	Total State Sector		**1320**	
PRIVATE SECTOR				
1	Mahan TPP / Essar Power MP Ltd. / Chinese	U-2	600	Jul-16
2	Gorgi TPP / D.B. Power (MP) Ltd. BTG-BHEL	U-1	660	Uncertain
3	Niwari TPP / BLA Power Ltd. BHEL - Siemens	U-2	45	17-18*
	Total Private Sector		**1305**	
	Grand Total		**5545**	
PRIVATE SECTOR				
1	Maheshwar (SMHPCL)	10x40	400	2017-18 *

* No work in progress. Commissioning dates would be assessed after start of work.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.868
ANSWERED ON 02.05.2016

PROVISION FOR AFFORDABLE ELECTRICITY

†868. SHRI LAL SINH VADODIA:

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

(a) whether it is a fact that Government is seriously contemplating to provide affordable electricity to every household and business establishment;

(b) if so, whether Government has taken any steps in this regard; and

(c) 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) : Electricity is a concurrent subject. Providing affordable electricity to every household and business establishment in a State / UT is within the purview of the respective State Government / State Power Utility. The Central Government supplements the efforts of the State Governments by establishing power plants and transmission systems in the Central Sector through Central Power Sector Undertakings (CPSUs).

(b) & (c): The steps taken by the Government to assist States/UTs to provide affordable electricity to every household & business establishment 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. As against this, about 85,186 MW from conventional sources has been achieved till 31.03.2016 and about 14,612 MW from renewable sources till 31.1.2016.

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

(iii) Two new schemes are being implemented 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, affordable and reliable supply and reduce line losses.

(iv) Central Government has notified a new scheme namely Ujjawal Discom Assurance Yojana (UDAY) on 20.11.2015 for Operational & Financial Turnaround of Discoms. The lower cost of procurement of loans envisaged in the scheme will also help in bringing down the cost of power.

(v) Providing support from Power System Development Fund (PSDF) for stranded gas based generation.

(vi) Providing support from PSDF to augment the transmission system for secure operation of the Grid.

(vii) Central Government has notified the revised tariff policy on 28.01.2016.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.869
ANSWERED ON 02.05.2016

MANUFACTURING OF LED BULBS

869. SHRI PALVAI GOVARDHAN REDDY:

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

(a) the progress of Government's push to replace 750 million tungsten bulbs with LED bulbs;

(b) whether the local companies do not have the wherewithal and hence the orders would go to Chinese companies;

(c) whether it would defeat the very objective of Make in India; and

(d) if so, how the Ministry and the Bureau of Energy Efficiency are planning to move ahead?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) : The Hon'ble Prime Minister launched the National LED Programme 'Unnat Jyoti by Affordable LEDs for All' (UJALA) on 5th January, 2015 earlier called as DELP to provide LED bulbs to domestic consumers at an affordable price, which is being implemented by Energy Efficiency Services Ltd. (EESL), a joint venture company under Ministry of Power. So far, more than 10 crore LED bulbs have been successfully distributed in 13 States and 1 Union Territory.

(b) to (d) : In order to support 'Make in India', the eligibility conditions prescribed in the tenders for procurement of LED bulbs by EESL, require bidder to have manufacturing facility in India. Further, Bureau of Energy Efficiency (BEE) has developed LED standards for general lighting and others with Bureau of Indian Standards (BIS) and published 12 standards covering wide range of LED appliances. BEE has also initiated star rating of LED bulbs and EESL has been advised to procure labeled LED bulbs.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.870
ANSWERED ON 02.05.2016

RATE OF POWER

870. SHRI C.P. NARAYANAN:

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

(a) whether different States charge different rates for the same kind of power *e.g*. hydro or thermal;

(b) whether it is because those States generate or purchase it at lower rates;

(c) how Delhi is able to distribute power with 50 per cent subsidy whereas many other State Governments are not able to do so; and

(d) whether Government bears the expenses thereof?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) & (b) : Yes, Sir. The cost of generation in thermal and hydro power stations vary and depend upon parameters like type of fuel, source of fuel, life of the plant, location of plant, size of the unit, technology of the plant and plant efficiency. Different States procures power at different rates depending upon the Power Purchase Agreements (PPAs).

Further, the Appropriate Regulatory Commissions have the power to determine the tariff in line with the provisions of the Act and the policies made thereunder. The tariff for generation, supply and transmission companies owned and controlled by Central Government is regulated by the Central Electricity Regulatory Commission while the tariff for generation, supply and transmission within the States are determined by the respective State Electricity Regulatory Commissions (SERCs) and Joint Electricity Regulatory Commissions (JERCs). There is no provision for direct regulation of the electricity tariff by the Government of India.

(c) & (d) : As per the information made available by Government of NCT of Delhi, in case of Delhi, DERC decides the consumer Retail Tariff after scrutinizing the Annual Revenue and Requirement (ARR) which includes the power purchase cost from all sources such as Thermal, Hydro, Gas etc. and other expenses of DISCOMs. As per section 65 of the Electricity Act, 2003, State Governments have to bear all the expenses on subsidy on Electricity Tariff. Delhi Government is providing subsidy to the domestic consumers whose consumption is upto 400 units per month from its Annual Budget. The amount of subsidy provided during the year 2015-16 was Rs. 1440 Crore.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.871
ANSWERED ON 02.05.2016

BEST TECHNOLOGY FOR POWER GENERATION

†871. SHRI LAL SINH VADODIA:

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

(a) whether it is a fact that Government is considering to bring the best technology of the world for power generation in India;

(b) if so, whether Government has taken any steps in this regard; and

(c) 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) to (c) : The Government has taken following steps to bring the best technology for generation of power in India:-

(i) Thermal power generation

1) Ministry of Power has issued an advisory that capacity addition under 13th Plan will be through Supercritical units only.

2) An Advanced Ultra Super Critical (AUSC) Technology R&D Project has been approved by Government involving BHEL, NTPC and Indira Gandhi Centre for Atomic Research (IGCAR). The objective of the scheme is to achieve higher efficiency, reduce carbon-dioxide emissions and reduce coal consumption for coal based power plants. The R&D work for the programme has commenced. The development of AUSC technology will be carried out in two phases. First phase will comprise of R&D activities for a duration of about 2.5 years from the date of approval. The second phase will comprise installation of 800 MWe AUSC demonstration plant in about 4.5 years after completion of the first phase. Estimated expenditure on R&D Phase of AUSC technology is about Rs. 1554 crores.

.....2.

(ii) Hydro power generation

The hydro power sector in India is already using the state of the art technologies which are prevalent worldwide. The operational capabilities, efficiency, flexibility and reliability aspects of the equipment/system used in hydro power generation are comparable to the best practises being followed internationally. Further, technology improvement is a continuous process and research & development activities are carried for further improvement. Recent advances adopted in hydro power generation are greaseless turbine components, improved generators component, variable speed technologies and adjustable speed pump turbine, improved control and instrumentation system, improved governor technology, improved insulation resulting in compact generator etc.

(iii) Wind power generation

In order to ensure installation of technically best quality wind turbines, only those wind turbines that have Type Certification from any international accredited agency are allowed for installation in the country. Normally the standards followed for type certification of wind turbine are IEC or GL.

(iv) Solar power generation

The Solar Power projects, under MNRE's (Ministry of New & Renewable Energy) Schemes, are through competitive bidding, where the market forces ensure that only the best and cost-effective technologies can survive. Further, the Government has allowed international participation in most of its Solar Power Projects, thereby encouraging the best technologies of the world to be a part of Solar Power generation in India.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.872
ANSWERED ON 02.05.2016

DEMAND SUPPLY GAP IN TAMIL NADU

872. SHRI TIRUCHI SIVA:

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

(a) the data on demand supply gap of power in Tamil Nadu, district-wise;

(b) whether Government has taken any steps to meet this gap;

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

(d) the details regarding upcoming power projects in the State?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) : Electricity is a concurrent subject. The responsibility of arranging supply of power in a State/UT including to its various districts is within the purview of the respective State Government/State Power Utility. The Central Government supplements the efforts of the State Governments by establishing power plants and transmission systems in the Central Sector through Central Power Sector Undertakings (CPSUs). As reported by the State, the details of the Demand Supply Gap of power in Tamil Nadu for the year 2013-14 to 2015-16 is given at **Annex-I**.

The power energy deficit in Tamil Nadu as reported by the state has reduced to 0.7% during 2015-16 from 5.9% during 2013-14 and similarly peak power deficit has reduced to 0.3% during 2015-16 from 7.6% during 2013-14.

(b) & (c): Steps taken by the Government to meet the demand supply gap in Tamil Nadu, inter-alia, are :

(i) To meet the projected demand of power as per 18th Electric Power Survey (EPS), generation capacity addition target of 88,537 MW has been planned from conventional sources during 12th Five Year Plan. In addition, the capacity addition planned from Renewable sources is 30,000 MW during 12th Five Year Plan. With this capacity addition on All India basis, the projected demand for power as per 18th EPS is likely to be fully met by the terminal year of the 12th Five Year Plan. Government has advised States/UTs to tie up power to meet their requirement, based on their anticipated demand supply scenario.

.....2.

Out of planned capacity of 88,537 MW during the 12th Plan, 7,270 MW was targeted for Tamil Nadu. Against this, total capacity commissioned in the state of Tamil Nadu as on 31.03.2016 was 7,210 MW, comprising of 3,250 MW in Central Sector, 1,860 MW in State Sector, 2,100 MW in Private sector.

(ii) The Available Transfer Capacity (ATC) to Southern Region has increased from 3,450 MW to 5,900 MW i.e. by 71% in the last two years. The entire capacity of 5,900 MW has been allocated under LTA / MTOA for constituents states of Southern Region including Tamil Nadu. Out of the 5,900 MW ATC, the total LTA / MTOA allocation to Tamil Nadu is about 2,900 – 3,000 MW. All LTA applications of Tamil Nadu have been granted and operationalized.

(iii) Central Government has notified a new scheme namely Ujjawal Discom Assurance Yojana (UDAY) on 20.11.2015 for Operational & Financial Turnaround of Discoms. In case Tamil Nadu joins UDAY, the expected benefit would be around Rs.22400 crores.

(d) : The details regarding the upcoming power projects in Tamil Nadu are given at **Annex-II.**

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ANNEX-I

ANNEX REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 872 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of the Demand Supply Gap of power in Tamil Nadu for the year and 2013-14 to 2015-16

	Energy				Peak			
Year	Requirement	Availability	Deficit		Peak Demand	Peak Met	Deficit	
	MU	MU	MU	%	MW	MW	MW	%
2013-14	93,508	87,980	5,528	5.9	13,522	12,492	1,030	7.6
2014-15	95,758	92,750	3,008	3.1	13,707	13,498	209	1.5
2015-16 (Provisional)	97,159	96,469	690	0.7	14,217	14,180	37	0.3

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ANNEX-II

ANNEX REFERRED TO IN REPLY TO PART (d) OF UNSTARRED QUESTION NO. 872 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of Upcoming Power Projects in Tamil Nadu

S.No.	Project	Unit No.	Sector	Capacity (MW)
1	ITPCL TPP	2	Private	600
2	Kudankulam NPP	2	Central	1,000
3	PFBR Kalpakkam	1	Central	500
4	Neyveli New TPP	1	Central	500
5	Ennore exp. SCTPP	1	State	660
6	Ennore SCTPP	1	State	660
7	Tuticorin TPP	1	Private	660
8	Tuticorin TPP St-IV	1	Private	525
	Total			**5,105**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.873
ANSWERED ON 02.05.2016

STATES JOINING UDAY

873. SHRI T. RATHINAVEL:

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

(a) whether, even after six decades of independence, over 18,000 villages do not have basic facility of electricity or 25 per cent of the people are still deprived of electricity for which Government is working;

(b) whether many State Governments have expressed their desire to join Ujwal Discom Assurance Yojana (UDAY);

(c) whether UDAY is aimed at reviving the ailing State Electricity Boards and improve operational efficiency of power distribution companies; and

(d) if so, the details thereof?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) : As informed by States, there were 18,452 un-electrified census villages in the country, as on 01-04-2015. Out of the 18,452 un-electrified villages, it is reported by the States that electrification works in 7,108 un-electrified villages have been completed, as on 31-03-2016.

(b) : 18 States and one Union Territory viz. Puducherry have given their 'in-principle' approval to join the scheme Ujwal DISCOM Assurance Yojana (UDAY). So far, 10 States have already signed the Memorandum of Understanding (MoUs) with Ministry of Power under UDAY.

(c) & (d) : The Government of India has launched UDAY for the financial and operational turnaround of state-owned Power Distribution Companies (DISCOMs). The scheme aims to reduce interest burden, reduce the cost of power, reduce power losses in Distribution sector, and improve operational efficiency of DISCOMs. The scheme also incentivizes the States by exempting State takeover of DISCOM debts from FRBM limits for two years; increased supply of domestic coal; coal linkage rationalization; liberally allowing coal swaps from inefficient to efficient plants; allocation of coal linkages to States at notified prices and additional/priority funding in schemes of Ministry of Power and Ministry of New & Renewable Energy, if they meet the operational milestones in the scheme.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.874
ANSWERED ON 02.05.2016

POWER SHORTAGE IN MAHARASHTRA

874. SHRI AVINASH PANDE:

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

(a) the total peak demand and supply of electricity across various categories, including wind, solar, hydro, nuclear, thermal and gas and the shortage thereof in Maharashtra; and

(b) what measures are being taken or have been proposed by the Central Government to assist the State Government in overcoming the shortage of power?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a) : As reported by the State, during 2015-16 Maharashtra recorded a peak demand of 20,973 MW and faced energy and peak shortages of 0.3% & 1.8% respectively as per details given at **Annex.**

The energy deficit in Maharashtra as informed by the state has reduced to 0.3% during 2015-16 from 2.1% during 2013-14 and similarly peak power deficit has reduced to 1.8% during 2015-16 from 8.6% during 2013-14.

During 2015-16, the supply of electricity (energy) in Maharashtra across various categories including wind, solar, hydro, nuclear, thermal and gas is given below :

(Figures in MU)

Wind	**Solar**	**Hydro**	**Nuclear**	**Thermal**	**Gas**	**Central Sector (Thermal + Gas)**	**Net Energy**
5,129	410	5,135	4,548	86,637	4,218	35,284	141,361

(b) : Electricity is a concurrent subject. The responsibility of supply of power in a State/UT is within the purview of the respective State Government/State Power Utility. The Central Government 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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ANNEX

ANNEX REFERRED TO IN REPLY TO PARTS (a) OF UNSTARRED QUESTION NO. 874 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Details of the Demand Supply Gap of power in Maharashtra for the year and 2013-14 to 2015-16

Year	Energy				Peak			
	Requirement	Availability	Deficit		Peak Demand	Peak Met	Deficit	
	MU	MU	MU	%	MW	MW	MW	%
2013-14	126,288	123,672	2,616	2.1	19,276	17,621	1,655	8.6
2014-15	134,897	133,078	1,819	1.3	20,147	19,804	343	1.7
2015-16 (Provisional)	141,917	141,361	456	0.3	20,973	20,594	379	1.8

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.875
ANSWERED ON 02.05.2016

STANDARDS OF T & D LOSSES

875. SHRI MOHD. ALI KHAN:

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

(a) whether any standards with regard to transmission and distribution of electricity have been fixed by advanced countries;

(b) if so, the details thereof along with the Transmission and Distribution (T&D) losses suffered in the country in comparison to the advanced countries, State-wise;

(c) whether the factors responsible for T&D losses have been assessed;

(d) if so, the steps taken by Government to reduce the losses along with the success achieved; and

(e) whether Government proposes to modernize the State Electricity Boards (SEBs) specifically to reduce leakages and losses and if so, the details thereof?

A N S W E R

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

(SHRI PIYUSH GOYAL)

(a): There are no universally accepted standards for Transmission and Distribution (T&D) losses.

(b): A statement of T&D losses in some countries in the world is enclosed at **Annex-I.** T&D losses together with loss in revenue collection give Aggregate Technical & Commercial (AT&C) losses. Statement indicating the percentage of AT&C losses from 2011-12 to 2013-14 in various Discoms is given at **Annex-II.**

(c): The factors responsible for AT&C losses are overloading of existing lines and substation equipment; Low HT: LT lines ratio; poor repair and maintenance of equipment; non-installation of sufficient capacitors/reactive power equipment; low metering/billing/collection efficiency; theft, pilferage of electricity and tampering of meters and, absence of energy accounting and auditing.

(d) & (e): The responsibility of reduction of AT&C losses in the Distribution network rests with the State power departments/utilities. However, to facilitate the reduction of AT&C losses and to improve power distribution system, the Government of India has launched schemes such as Integrated Power Development Scheme (IPDS), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY), National Electricity Fund (NEF) and Ujwal DISCOM Assurance Yojana (UDAY).

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ANNEX-I

ANNEX REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 875 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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T & D Losses of Various Countries including India in 2011 & 2012 in percentage

Name of the country	Year	
	2011	2012
Korea	3.57	3.47
Japan	4.98	4.79
Germany	4.7	4.46
Italy	6.46	6.61
Australia	5.94	5.68
South Africa	9.61	10.19
France	6.47	7.99
China	6.54	6.56
USA	6.41	6.73
Canada	6.27	8.19
UK	8.06	8.26
Russia	12.59	12.59
Brazil	16.08	16.63
India	**23.97**	**23.65**
World	8.9	8.89

(Source: CEA)

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ANNEX-II

ANNEX REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 875 ANSWERED IN THE RAJYA SABHA ON 02.05.2016.

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Region	State	Utility	2011-12	2012-13	2013-14
Eastern	**Bihar**	BSEB	59.24	59.40	
		NBPDCL		50.85	41.93
		SBPDCL		45.77	48.70
	Bihar Total		**59.24**	**54.64**	**46.33**
	Jharkhand	JSEB	42.76	47.49	42.17
	Jharkhand Total		**42.76**	**47.49**	**42.17**
	Odisha	CESU	46.15	43.43	38.48
		NESCO	39.54	39.61	36.47
		SESCO	52.60	49.36	41.18
		WESCO	43.46	41.87	41.24
	Odisha Total		**44.66**	**42.88**	**39.19**
	Sikkim	Sikkim PD	58.32	53.51	71.23
	Sikkim Total		**58.32**	**53.51**	**71.23**
	West Bengal	WBSEDCL	32.90	34.43	32.05
	West Bengal Total		**32.90**	**34.43**	**32.05**
Eastern Total			**41.80**	**42.04**	**38.02**
North Eastern	**Arunachal Pradesh**	Arunachal PD	65.55	60.26	68.20
	Arunachal Pradesh Total		**65.55**	**60.26**	**68.20**
	Assam	APDCL	29.47	31.85	30.25
	Assam Total		**29.47**	**31.85**	**30.25**
	Manipur	Manipur PD	44.80	85.49	43.55
	Manipur Total		**44.80**	**85.49**	**43.55**
	Meghalaya	MeECL	45.33		
		MePDCL		36.25	35.38
	Meghalaya Total		**45.33**	**36.25**	**35.38**
	Mizoram	Mizoram PD	36.59	27.55	32.53
	Mizoram Total		**36.59**	**27.55**	**32.53**
	Nagaland	Nagaland PD	22.85	75.30	38.37
	Nagaland Total		**22.85**	**75.30**	**38.37**
	Tripura	TSECL	33.76	24.86	27.81
	Tripura Total		**33.76**	**24.86**	**27.81**
North Eastern Total			**35.22**	**38.31**	**33.94**
Northern	**Delhi**	BSES Rajdhani	16.65	15.16	16.19
		BSES Yamuna	25.54	17.94	15.51
		TPDDL	15.67	13.12	9.75
	Delhi Total		**18.56**	**15.22**	**14.09**
	Haryana	DHBVNL	27.53	28.31	30.89
		UHBVNL	29.06	36.97	38.61
	Haryana Total		**28.27**	**32.55**	**34.33**
	Himachal Pradesh	HPSEB Ltd.	18.04	11.90	15.13
	Himachal Pradesh Total		**18.04**	**11.90**	**15.13**
	Jammu & Kashmir	J&K PDD	71.16	60.87	49.14
	Jammu & Kashmir Total		**71.16**	**60.87**	**49.14**
	Punjab	PSPCL	18.96	17.52	17.91
	Punjab Total		**18.96**	**17.52**	**17.91**
	Rajasthan	AVVNL	28.12	19.90	22.04
		JDVVNL	23.83	18.97	25.69
		JVVNL	23.18	20.91	31.08
	Rajasthan Total		**24.81**	**20.00**	**26.76**

	Uttar Pradesh	DVVN	40.50	45.69	36.47
		KESCO	30.48	37.61	34.29
		MVVN	44.42	45.83	14.32
		Pash VVN	35.95	33.39	23.49
		Poorv VVN	52.37	52.37	20.09
	Uttar Pradesh Total		**41.95**	**42.85**	**24.65**
	Uttarakhand	Ut PCL	25.84	23.18	19.01
	Uttarakhand Total		**25.84**	**23.18**	**19.01**
Northern Total			**30.34**	**28.89**	**24.86**
Southern	**Andhra Pradesh**	APCPDCL	17.77	15.64	17.54
		APEPDCL	10.53	10.15	6.57
		APNPDCL	17.26	13.09	20.80
		APSPDCL	12.19	12.74	11.77
	Andhra Pradesh Total		**15.27**	**13.70**	**14.77**
	Karnataka	BESCOM	22.57	20.45	18.93
		CHESCOM	28.99	30.42	33.92
		GESCOM	23.96	18.28	30.45
		HESCOM	23.62	20.44	20.42
		MESCOM	17.94	14.57	14.83
	Karnataka Total		**23.29**	**20.78**	**22.02**
	Kerala	KSEB	12.17	12.32	11.45
		KSEBL			22.78
	Kerala Total		**12.17**	**12.32**	**16.38**
	Puducherry	Puducherry PD	18.91	9.13	16.18
	Puducherry Total		**18.91**	**9.13**	**16.18**
	Tamil Nadu	TANGEDCO	21.70	20.71	22.35
	Tamil Nadu Total		**21.70**	**20.71**	**22.35**
Southern Total			**18.89**	**17.40**	**19.08**
Western	**Chhattisgarh**	CSPDCL	29.05	25.12	23.17
	Chhattisgarh Total		**29.05**	**25.12**	**23.17**
	Goa	Goa PD	15.12	14.14	10.72
	Goa Total		**15.12**	**14.14**	**10.72**
	Gujarat	DGVCL	13.14	10.40	10.83
		MGVCL	14.40	14.94	14.77
		PGVCL	28.03	30.41	24.12
		UGVCL	14.01	14.37	9.10
	Gujarat Total		**19.26**	**19.87**	**15.93**
	Madhya Pradesh	MP Madhya Kshetra VVCL	45.85	29.97	29.60
		MP Paschim Kshetra VVCL	34.43	28.16	21.15
		MP Purv Kshetra VVCL	34.94	36.40	34.83
	Madhya Pradesh Total		**38.26**	**31.15**	**28.03**
	Maharashtra	MSEDCL	21.63	21.95	14.39
	Maharashtra Total		**21.63**	**21.95**	**14.39**
Western Total			**24.81**	**23.36**	**18.37**
Grand Total			**26.63**	**25.45**	**22.70**
Source: PFC					

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GOVERNMENT OF INDIA
MINISTRY OF POWER

RAJYA SABHA
UNSTARRED QUESTION NO.876
ANSWERED ON 02.05.2016

SMART GRID PROJECTS

†876. SHRI MEGHRAJ JAIN:

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

(a) whether Government has any plan to increase the number of Smart Grid projects in the country and if so, the details thereof;

(b) the details of expenditure incurred by Government for development of Smart Grid network in the country during the last three years, year-wise;

(c) whether Government is contemplating to take more initiatives to accelerate the development of Smart Grid network in the country; and

(d) if so, the details thereof?

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. Government of India (GOI) has launched National Smart Grid Mission (NSGM), to plan and monitor implementation of policies and programmes related to Smart Grid activities in India.

(b): An expenditure of Rs. 21.73 crore has been incurred for development of four Smart Grid pilot projects and one Smart City Pilot project during 2015-16.

(c) & (d) : NSGM envisages implementation of Smart Grid projects in the country to make Indian Power infrastructure cost effective, responsive, reliable and self healing. Two smart grid projects for Amravati and Chandigarh have been approved under NSGM, at a cost of Rs 118.63 crore with 30% funding from GoI under NSGM. The Budgetary support for NSGM activities for the Financial Year 2016-17 is Rs.30 crore.

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