

Year	Coal import by Thermal Power Stations		Total Import (MT)
	Designed to operate on Domestic coal (for blending) (In Million Ton) Domestic coal Based TPS (for blending)	Designed to operate on Imported coal (In Million Ton) Imported coal Based TPS	
2007-08	8.1	2.1	10.2
2008-09	13.9	2.2	16.1
2009-10	18.8	4.4	23.2
2010-11	21.3	9.2	30.5
2011-12	27.2	17.7	44.9
2012-13 (upto Nov.)	18.6	17.9	36.5

(d) and (e) Increase in variable cost of generation with 10% of blending of imported coal in the plant design to operate on the domestic coal is of the order of 10 to 45 paisa per Kilowatt hour depending upon location of plant.

To keep the operating cost of generating power plants at reasonable level, the new thermal power plants are based on super critical/ultra super critical technology with higher plant efficiency.

Assessment of power requirement during Twelfth Five Year Plan

2762. SHRI RAM KRIPAL YADAV: Will the Minister of POWER be pleased to state:

(a) whether Government has made any State-wise assessment about requirement of power during the Twelfth Five Year Plan;

(b) if so, how much power would be required to Bihar as well all other States in the country during the Twelfth Five Year Plan, State-wise;

(c) the steps being taken by Government to fulfil these requirements; and

(d) how much investment would be required for the same and their source of funding?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI JYOTIRADITYA MADHAVRAO SCINDIA): (a) and (b) The 18th Electric Power Survey (EPS) of India, has made year-wise forecast for Electrical Energy Requirement and Peak Electric Load at Power Stations for Twelfth Plan period for all States/UTs including Bihar. According to this report, the Electrical Energy Requirement and Peak Electric Load of Bihar by end of Twelfth Plan period are estimated to be 29,447 MU and 5,018 MW respectively.

The State-wise forecast of electrical energy requirement and peak electrical load for Twelfth Plan period is given in the Statement (*See below*).

(c) and (d) As per Planning Commission, the capacity addition target of 88,537 MW is planned from conventional sources for the Twelfth Five Year Plan on an all-India basis to fulfill these requirements for which the Estimated investment requirement is Rs. 5,74,214 crore. The sources of funds would be loan from banks, PFC, REC, Bonds/Debentures, Multilateral/ Bilateral Credit, etc.

Statement

(A) All India & State wise/UT wise forecast

Electrical Energy Requirement at Power Station Bus Bars (Utilities Only) (U/R) 2012-13 to 2016-17

(In Million Unit)

State/UTs	12th Plan				
	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6
Delhi	29100	31011	33047	35217	37529
Haryana	40750	44254	48060	52193	56681
Himachal Pradesh	8974	9421	9891	10384	10901
Jammu and Kashmir	14425	14872	15333	15808	16298
Punjab	51595	55567	59844	64450	69410
Rajasthan	54243	59382	65007	71166	77907
Uttar Pradesh	93148	102924	113727	125664	138854

1	2	3	4	5	6
Uttarakhand	10735	11207	11700	12214	12751
Chandigarh	1767	1859	1956	2058	2165
Northern Region	304737	330497	358565	389153	422498
Goa	3641	3912	4204	4517	4853
Gujarat	82331	88254	94603	101409	108704
Chhattisgarh	17703	19146	20707	22396	24222
Madhya Pradesh	56763	61448	66519	72010	77953
Maharashtra	140736	147402	154383	161695	169353
Dadra and Nagar Haveli	4977	5276	5593	5930	6286
Daman and Diu	2375	2479	2587	2700	2817
Western Region	308527	327917	348597	370655	394188
Andhra Pradesh	93189	101231	109968	119458	129767
Karnataka	58513	63001	67833	73036	78637
Kerala	20516	21889	23354	24917	26584
Tamil Nadu	91625	97865	104529	111648	119251
Puducherry	3024	3155	3293	3436	3586
Southern Region	266867	287141	308977	332495	357826
Bihar	16529	19096	22062	25489	29447
Jharkhand	21309	22844	24407	25990	27691
Orissa	26265	28374	30652	33113	35772
West Bengal	51021	55288	59912	64923	70352
Sikkim	440	461	482	504	528
Eastern Region	115564	126063	137515	150018	163790

1	2	3	4	5	6
Assam	6392	6953	7562	8225	8947
Manipur	737	840	956	1089	1241
Meghalaya	1749	1861	1981	2108	2243
Nagaland	692	725	760	796	834
Tripura	1029	1112	1201	1297	1401
Arunachal Pradesh	524	531	538	545	552
Mizoram	503	588	686	801	936
North E. Region	11628	12609	13684	14862	16154
Andman and Nicobar	328	337	347	356	366
Lakshadweep	43	45	47	49	52
ALL INDIA	1007694	1084610	1167731	1257589	1354874

(B) All India and State-wise/-UT-wise forecast

Peak Electric Load at Power Station Bus Bars (Utilities Only) (U/R)
2012-13 to 2016-17

State/UTs	12th Plan				
	2012-13	2013-14	2014-15	2015-16	2016-17
1	2	3	4	5	6
Delhi	5290	5547	5818	6101	6398
Haryana	7291	7944	8655	9429	10273
Himachal Pradesh	1459	1558	1665	1778	1900
Jammu and Kashmir	2471	2523	2577	2631	2687
Punjab	10292	10770	11271	11794	12342
Rajasthan	9396	10360	11422	12594	13886
Uttar Pradesh	14152	15993	18073	20424	23081

1	2	3	4	5	6
Uttarakhand	1716	1824	1938	2060	2189
Chandigarh	352	370	387	406	426
Northern Region	44033	47758	51799	56181	60934
Goa	622	666	712	762	815
Gujarat	13047	14350	15782	17358	19091
Chhattisgarh	3534	3792	4070	4367	4687
Madhya Pradesh	10299	11102	11967	12899	13904
Maharashtra	22368	23795	25313	26928	28645
Dadra and Nagar Haveli	693	749	809	874	944
Daman and Diu	380	394	409	425	441
Western Region	46909	50300	53936	57835	62015
Andhra Pradesh	15553	17044	18681	20476	22445
Karnataka	9742	10473	11258	12102	13010
Kerala	3701	3922	4157	4405	4669
Tamil Nadu	14174	15736	17497	19489	20816
Puducherry	533	555	579	604	630
Southern Region	39850	43623	47752	52273	57221
Bihar	2843	3277	3777	4354	5018
Jharkhand	3452	3727	4010	4301	4616
Orissa	4397	4686	4994	5322	5672
West Bengal	8289	9052	9887	10798	11793
Sikkim	117	123	130	137	144
Eastern Region	16638	18291	20109	22106	24303
Assam	1300	1414	1537	1671	1817
Manipur	180	212	249	294	346
Meghalaya	338	362	388	415	445

1	2	3	4	5	6
Nagaland	145	154	164	174	185
Tripura	254	274	294	317	340
Arunachal Pradesh	111	117	123	129	135
Mizoram	174	197	223	252	285
North East Region	2214	2382	2563	2757	2966
Andman and Nicobar	59	61	63	65	67
Lakshadweep	8	9	10	10	11
ALL INDIA	143967	156208	169491	183902	199540

Development of smart grids in country

2763. SHRI ALI ANWAR ANSARI: Will the Minister of POWER be pleased to state:

(a) whether Government has initiated any pilot/test projects for development of smart grids in the country;

(b) if so, the details thereof;

(c) whether Government plans to utilize smart grid technology for wind and solar generated power during the Twelfth Plan period; and

(d) if so, the details thereof?

THE MINISTER OF STATE OF THE MINISTRY OF POWER (SHRI JYOTIRADITYA MADHAVRAO SCINDIA): (a) and (b) On the recommendations of India Smart Grid Task Force, Ministry of Power has shortlisted 14 Smart Grid pilot projects in different DISCOMS. The details of shortlisted pilot projects are as given in the Statement (*See below*).

Implementation of these pilots would be taken up on continuation of R-APDRP in Twelfth Plan and availability of funds for Smart Grid pilot projects.

(c) and (d) The Working Group on Renewable Energy for Twelfth Plan has suggested that the concept of Smart grid will help in integration of different renewable power sources with grid effectively. Development of smart grid and its utilization for renewable energy will be helpful for effectively utilizing power generation from various renewable energy technologies.