GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4164
ANSWERED ON 19.03.2020

INDIA'S RANKING IN ELECTRICITY PRODUCTION

4164. SHRI RAJA AMARESHWARA NAIK:
DR. JAYANTA KUMAR ROY:
SHRIMATI SANGEETA KUMARI SINGHDEO:
SHRI VINOD KUMAR SONKAR:
SHRI BHOLA SINGH:
DR. SUKANTA MAJUMDAR:

Will the Minister of POWER be pleased to state:

(a) whether India is 5th largest producer of electricity in the world but it ranks 105th in terms of per capita consumption and if so, the details thereof;

(b) whether there is urgent need for reforms in power sector, as estimated financial loss amount to over 3 per cent of GDP; and

(c) if so, the steps being taken by the Government in this regard?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (c) : As per the latest key world energy statistics published by the IEA in 2019, India is the 3rd largest producer of electricity in the world and it ranks 106th in terms of per capita consumption in 2017.

Reforms in power sector is a continuous process due to changes in the situation. India has become power surplus from power deficit situation. Thus, power sector reforms now focus on supply of 24x7 quality power to consumers, higher standards of service, promotion of renewable energy sources, development of hydro power, improving efficiency, specially in distribution sector, etc. Reforms linked distribution scheme and changes in tariff policy are some of the measures under consideration in this regard.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4186
ANSWERED ON 19.03.2020

TRADE IN ELECTRICITY

4186. SHRI JASBIR SINGH GILL:

Will the Minister of POWER be pleased to state:

(a) whether the Government has trade relation in electricity with neighbouring countries such as Nepal, Bhutan, Bangladesh, if so, the details thereof and if not, the reasons therefor;

(b) the steps taken by the Government to improve power connectivity between neighbouring countries such as Nepal, Bhutan and Bangladesh;

(c) whether Nepal and Bangladesh are using the Indian transmission grid to trade power between the two countries and if so, the details thereof;

(d) the benefits the Government expects to accrue from a robust power trading regime between India, Nepal, Bangladesh and Bhutan; and

(e) whether India has learned from the best practices in regional power systems integration like in European Union?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : Yes, Sir. Presently, India exports electricity to Nepal, Bangladesh and Myanmar, while India imports power from Bhutan. However, sometimes India also exports power to Bhutan during lean hydro season. Import / Export of energy by India into/from these countries during the Financial Year 2019-20 (as on January, 2020) is as follows:-

Sl. No.	Country	Import (In Million Units)	Export (In Million Units)
1.	Nepal	---	1839.25
2.	Bhutan,	6165.78	--
3.	Bangladesh	--	6168.14
4.	Myanmar	--	7.34

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(b) : **India has signed Memorandum of Understanding with Bhutan, Bangladesh, Nepal, and Myanmar to inter-alia improve power connectivity with these neighbouring countries. The Ministry of Power issued the Guidelines on Cross Border Trade of Electricity on 05.12.2016, which was subsequently substituted by the 'Guidelines for Import/Export (Cross Border) of Electricity-2018' issued on 18.12.2018, to promote cross border trade of electricity with neighbouring countries. Central Electricity Regulatory Commission (CERC) issued CERC (Cross Border Trade of Electricity) Regulations, 2019 on 8th March 2019. Further to improve power connectivity with neighbouring countries, following interconnections are at various stages of implementation:-**

(i) **400kV operation of Muzaffarpur (India) – Dhalkebar (Nepal) 400kV D/c line (operated at 220kV)**

(ii) **Baharampur (India) – Bheramara (Bangladesh) 2nd 400kV D/c line**

(iii) **Alipurduar (India) – Jigmeling (Bhutan) 400kV D/c (Quad) line**

(iv) **Gorakhpur (India) – New Butwal (Nepal) 400kV D/c (Quad) line**

(v) **Sitamarhi (India) – Dhalkebar (Nepal) – Arun-3 HEP (Nepal) 400kV D/c (Quad) line**

(c) : **No, Sir. Nepal and Bangladesh are not using Indian Transmission Grid to trade power between two countries.**

(d) : **The trading arrangement for import/export of electricity with neighboring countries, including Nepal, Bhutan and Bangladesh would facilitate regional trade in power and help in meeting the requirement of power in the respective countries thereby moving towards greater energy security in the region.**

(e) : **India already has regional power system integration with Bangladesh, Bhutan and Nepal through high voltage synchronous (Alternating Current) and asynchronous (High Voltage Direct Current) connections. Learning from the best practices of advanced nations, the latest technologies like STATCOM, Voltage Source Converter based HVDC system, etc. have been deployed in the Indian grid as a continuous measure of improvement for facilitating power transfer with reliability amongst regional neighbouring countries.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4195
ANSWERED ON 19.03.2020

BAD CONDITION OF POWER GRID

4195. SHRI CHANDRA SEKHAR SAHU:
DR. PRITAM GOPINATHRAO MUNDE:
SHRI ARVIND KUMAR SHARMA:

Will the Minister of POWER
be pleased to state:

(a) whether India's state-run power grids are in bad condition and if so, the details thereof;

(b) the steps taken by the Government to modernise India's outdated electricity grid;

(c) whether the poor operational status of India's power grids is not solely due to pricing but rampant theft, degraded equipment, and the introduction of higher-cost renewable power have all contributed to the situation and if so, the details thereof; and

(d) whether the Union Government has take up this matter with the State Governments to find out the solution and if so, the response of the State Governments in this regard?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : No, Sir. India's Power Grid is not in a bad condition. The availability of AC and HVDC transmission systems of POWERGRID for 2019-20 (up to Jan, 2020) is 99.81% and 98.51% against normative annual Transmission System availability factor(NATAF) of 98% and 95% respectively specified in the CERC tariff Regulation 2019.

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(b) : India has established a strong national electricity grid leading to One Nation-One Grid-One Frequency and this has facilitated seamless transfer of power from resource rich areas to load centres without any transmission constraint. As on 31st January 2020, the National Electricity Grid has Transmission lines of 4,23,001 ckm and transformation capacity in substations of 9,60,453 MVA (voltage level of 220 kV and above). Development and Modernisation of transmission system is a continuous and evolving process, based on electricity demand and generation. At present, the Ministry of Power is implementing following Central Schemes for strengthening/modernising transmission system in the country:-

i. **Comprehensive Scheme for strengthening of Transmission & Distribution in Arunachal Pradesh and Sikkim**

ii. **North Eastern Region Power System Improvement Project (NERPSIP) for Six (6) North Eastern States (Assam, Manipur, Meghalaya, Mizoram, Tripura and Nagaland) for strengthening of the Intra-State Transmission and Distribution Systems (33kV and above).**

iii. **Financial assistance to UTs of Jammu and Kashmir and UT of Ladakh as part of Prime Minister's Development Package-2015 for improving sub-transmission and distribution grids in these UTs.**

iv. **Establishing 13 nos Renewable Energy Management Centre to facilitate scheduling, forecasting and monitoring of Renewable Energy Generators which would in turn lead to improvement in Grid Stability.**

(c) & (d) : Transmission system comprises of Inter State and Intra-State component. Inter State Transmission System is planned by Central Transmission Utility, while Intra State Transmission System is planned by State Transmission Utility. Performance of Inter State Transmission System is not affected by rampant theft or degraded equipment or cost of renewable energy. Dedicated Green Energy Corridor has been planned for evacuation of Renewable Energy (RE) Generation from RE rich states. Further, all necessary safeguards have been taken for integration of Renewable Energy in the Grid, so that grid stability and security are not compromised. As explained in reply to part (b), the Central Government also from time to time assists the States in upgradation of their Intra-State Transmission System to ensure better performance.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4202
ANSWERED ON 19.03.2020

ANTICIPATED POWER LOAD

†4202. SHRI DULAL CHAND GOSWAMI:

Will the Minister of POWER
be pleased to state:

(a) whether the Government has made any assessment of the anticipated power load during the period of peak demand of power after completion of SAUBHAGYA Yojana and if so, the details thereof, State-wise;

(b) whether the grid capacity is sufficient to meet the anticipated power load, if so, the details thereof; and

(c) if not, whether the Government proposes to formulate any scheme to enhance the production and grid capacity accordingly?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : Central Electricity Authority (CEA) conducts Electric Power Survey (EPS) every five years for estimating the electricity demand of the country. The state wise demand as projected by the 19th EPS (published in January 2017) for the year 2018-19 to 2026-27 is given at Annexure. The impact of increase in demand due to SAUBHAGYA Yojana has also been considered in this assessment.

(b) & (c) : As per National Electricity Plan (NEP) published in March 2018, likely installed capacity to meet the projected energy demand in 2021-22 is 4,79,418 MW and in 2026-27 is 6,19,066 MW. To enhance generation capacity to meet the growing demand of power in the country, the following measures have been taken by Government of India to increase power production:

(i) Thermal and hydro power plants are at various stages of construction in the country;

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(ii) Nuclear Power projects of 1700 MW capacity are in an advanced stage of planning; and

(iii) The Government has a target of 1,75,000 MW installed capacity from renewable sources, including solar, wind, biomass and small hydro; out of which 86,759 MW have been installed and 33,720 MW are under installation.

Requirement of transmission system addition in the country has been estimated for the period 2017-22 as part of National Electricity Plan (Volume II: Transmission). As per National Electricity Plan (Volume II: Transmission), about 110,000 ckm of transmission lines and about 383,000 MVA of transformation capacity in the substations (at 220 kV and above voltage levels) would be required to be added during the period 2017-22. Out of this, during April 2017 to February 2020, 55,782 ckm and 2,21,658 MVA have been added to the electricity grid.

With this estimated generation installed capacity & additional transmission system, the electricity demand projected as per 19th Electric Power Survey (EPS) is likely to be fully met.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4202 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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State-wise demand as projected by the 19th EPS (published in January 2017) for the year 2018-19 to 2026-27

19TH ELECTRIC POWER SURVEY FORECAST
ALL INDIA & STATE WISE / UT WISE
Electrical Energy Requirement (MU) (Ex Bus)
(Utilities only)

State/UTs	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Delhi	34201	35380	36573	37778	38997	40224	41557	42904	44267
Haryana	54062	57083	60336	63618	66747	70333	75110	80239	85743
Himachal Pradesh	10523	10949	11394	11866	12360	12876	13417	13983	14576
Jammu & Kashmir	16283	17109	18017	18819	19963	21161	22433	23795	25254
Punjab	61076	64730	68502	72392	76826	81369	86027	90789	95658
Rajasthan	79485	83168	87051	91216	95782	101200	108808	117219	126290
Uttar Pradesh	123951	132476	141426	150797	159412	167731	176477	185674	195323
Uttarakhand	15880	17007	18181	19406	20687	22029	23438	24920	26480
Chandigarh	2070	2145	2223	2304	2388	2475	2566	2659	2756
Northern Region	397530	420047	443704	468196	493162	519399	549833	582182	616345
Goa	4802	5068	5332	5593	5855	6120	6389	6660	6932
Gujarat	113187	120693	128368	136159	144186	152475	160989	169732	178693
Chhattisgarh	31383	33463	35559	37840	40155	42661	45315	48146	51088
Madhya Pradesh	81732	88022	94301	99871	104772	109727	114765	120027	125394
Maharashtra	161926	171313	180338	189983	200288	211307	223171	235949	249628
D. & N. Haveli	7653	8210	8775	9343	9920	10513	11120	11741	12373
Daman & Diu	2327	2449	2577	2712	2855	3006	3166	3337	3517
Western Region	403010	429217	455250	481501	508032	535810	564915	595591	627624
Andhra Pradesh	63290	68034	73090	78540	84429	90794	97181	104072	111485
Telangana	67680	75164	80700	84603	88130	91836	95776	99945	104345
Karnataka	73636	77532	81622	85932	90381	95042	99916	105017	110368
Kerala	27184	28535	29924	31371	32861	34393	35964	37582	39357
Tamil Nadu	117505	123724	130189	136643	144145	152357	161349	170822	180989
Puducherry	3254	3387	3521	3664	3809	3959	4114	4279	4448
Southern Region	352549	376376	399047	420753	443754	468380	494301	521717	550992
Bihar	28637	31017	35152	38416	41208	43926	46735	50717	54363
Jharkhand	25880	27488	29052	30649	32209	33850	35544	37354	39252
Odisha	29124	30302	31224	32164	33172	34163	35219	36326	37453
West Bengal	61485	63979	66634	69361	72222	75264	78463	81915	85590
Sikkim	548	577	607	638	669	702	737	773	810
Eastern Region	145674	153363	162669	171228	179480	187906	196698	207085	217468
Assam	10831	11894	12959	14051	15164	16355	17631	18998	20462
Manipur	1592	1769	1925	2103	2300	2515	2760	3020	3300
Meghalaya	2242	2378	2470	2566	2667	2771	2900	3036	3177
Nagaland	930	992	1059	1129	1200	1275	1356	1441	1524
Tripura	1394	1456	1525	1595	1661	1731	1796	1866	1930
Arunachal Pradesh	1089	1210	1345	1498	1669	1863	2081	2326	2601
Mizoram	681	737	799	866	937	1013	1095	1181	1307
North E. Region	18758	20437	22083	23809	25598	27523	29619	31869	34301
Andaman & Nicobar	385	414	446	475	504	535	566	598	632
Lakshadweep	55	57	59	62	64	66	68	70	73
All India	1317962	1399913	1483257	1566023	1650594	1739618	1836001	1939111	2047434

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19TH ELECTRIC POWER SURVEY FORECAST
ALL INDIA & STATE WISE / UT WISE
PEAK ELECTRICITY DEMAND (MW) (Ex Bus)
(Utilities only)

State/UTs	2018-19	2019-20	2020-21	2021-22	2022-23	2023-24	2024-25	2025-26	2026-27
Delhi	6764	6997	7233	7471	7712	7954	8217	8482	8751
Haryana	10397	10975	11596	12222	12819	13501	14415	15398	16451
Himachal Pradesh	1683	1751	1822	1898	1977	2059	2146	2236	2331
Jammu & Kashmir	2565	2733	2920	3095	3332	3585	3859	4157	4482
Punjab	12914	13559	14216	14886	15654	16431	17217	18009	18809
Rajasthan	12540	13133	13761	14435	15176	16048	17282	18651	20131
Uttar Pradesh	18821	20334	21948	23664	25331	26658	28053	29522	31064
Uttarakhand	2536	2739	2953	3180	3420	3675	3945	4232	4538
Chandigarh	441	457	474	491	509	527	546	566	587
Northern Region	62279	65919	69766	73770	77929	82017	86776	91835	97182
Goa	721	767	813	858	904	951	999	1047	1096
Gujarat	17734	18937	20172	21429	22730	24079	25471	26908	28387
Chhattisgarh	5080	5442	5809	6208	6613	7050	7513	8006	8518
Madhya Pradesh	12829	13816	14802	15676	16445	17223	18014	18840	19682
Maharashtra	23953	25544	27148	28866	30725	32717	34911	37269	39828
D. & N. Haveli	1026	1112	1201	1291	1385	1483	1584	1689	1798
Daman & Diu	366	385	405	426	449	473	498	525	553
Western Region	58654	62728	66847	71020	75275	79748	84502	89528	94825
Andhra Pradesh	9544	10259	11021	11843	12731	13690	14656	15698	16820
Telangana	11262	12712	13757	14499	15338	16086	16885	17738	18653
Karnataka	12169	12834	13534	14271	15033	15834	16674	17554	18481
Kerala	4561	4788	5021	5263	5513	5770	6034	6305	6603
Tamil Nadu	17230	18213	19240	20273	21471	22784	24225	25750	27392
Puducherry	518	539	561	583	606	630	655	681	708
Southern Region	52171	56007	59581	62975	66710	70579	74666	79002	83652
Bihar	4904	5308	6016	6576	7054	7521	8003	8681	9308
Jharkhand	4378	4656	4915	5193	5450	5733	6013	6326	6626
Orissa	4816	5016	5176	5340	5517	5691	5878	6073	6273
West Bengal	11267	11724	12191	12688	13318	13873	14435	15065	15680
Sikkim	146	154	162	170	179	187	197	206	216
Eastern Region	23868	25130	26633	28046	29500	30895	32319	34031	35674
Assam	2091	2297	2502	2713	2979	3271	3590	3868	4166
Manipur	303	339	372	410	453	499	553	611	667
Meghalaya	427	453	470	488	508	528	552	578	605
Nagaland	191	204	219	234	250	266	284	303	322
Tripura	333	351	371	391	411	432	452	474	495
Arunachal Pradesh	202	224	249	278	309	345	386	431	482
Mizoram	137	148	159	171	185	199	213	229	252
North E. Region	3537	3856	4170	4499	4891	5319	5790	6235	6710
Andaman & Nicobar	78	84	91	97	103	109	115	122	129
Lakshadweep	10	11	11	11	12	12	13	13	13
All India	188360	200696	213244	225751	238899	252288	266844	282418	298774

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4206
ANSWERED ON 19.03.2020

EXTERNAL HELP IN ENERGY FIELD

†4206. SHRIMATI RANJANBEN DHANANJAY BHATT:

Will the Minister of POWER
be pleased to state:

(a) whether the Government is considering to take help from Britain in the field in energy;

(b) if so, whether the Government proposes to take any action in this regard;

(c) if so, the details thereof; and

(d) if not, the reasons therefor?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (d) : Government of India signed an MoU on 11th November, 2015 with the Government of the United Kingdom of Great Britain and Northern Ireland on "Co-operation in the Energy Sector".

The areas of mutual cooperation identified are as follows:

(i) Market reforms, regulatory structures and the role of competition in the supply and distribution of electricity, including regulations and incentives for Renewable Energy deployment;

(ii) The integration of renewable energy into the grid;

(iii) Energy efficiency policies and practice, including industrial energy efficiency and vehicular fuel efficiency;

(iv) Off-shore wind energy and solar energy;

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(v) Smart grids;

(vi) Energy storage and new energy technologies;

(vii) Capacity building of renewable energy institutions;

(viii) Off-grid renewable energy services;

(ix) Tidal Energy;

(x) Any other area of co-operation approved in writing by the Participants.

The forms of co-operation under this MoU will include but are not limited to:

(i) Exchange of publicly available scientific and technical information;

(ii) Facilitating dialogue through organisation of conferences, seminars, workshops and other meetings on agreed topics;

(iii) Exchange of policy, technical and academic experts, including those from government, industry and other non-government sectors, and the facilitation of links and collaboration between expert institutions and organisations, including on R&D;

(iv) Facilitating commercial links between industry bodies, corporations and business;

(v) Provision of technical assistance and other support through relevant projects initiated by the United Kingdom, where these projects receive the necessary approvals. Project-specific MoUs may also be developed, as appropriate from time-to-time;

(vi) Identification of specific areas/ projects which may be explored and developed further in future;

(vii) Any other form of co-operation approved in writing by the Participants.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4212
ANSWERED ON 19.03.2020

POWER GENERATION COST

†4212. SHRI AJAY BHATT:

Will the Minister of POWER
be pleased to state:

(a) whether there is a huge difference in the cost of power generation and power tariff of electricity supplied to the consumers;

(b) if so, the State-wise details thereof and the reasons therefor; and

(c) the steps taken by the Government to bridge this gap of per unit power generation cost and power tariff of electricity supplied to the consumers?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (c) : Yes, Sir. Besides cost of power generation, the tariff of electricity supplied to the end consumers includes the transmission charges, transmission losses, distribution network charges, distribution losses and commercial losses, cross subsidy surcharge, finance cost and other administrative expenses etc. Thus, there will be a gap between the cost of power generation and the retail tariff of electricity supplied to the consumers.

The Central Government has been urging the DISCOMs to take steps for reduction of losses in the distribution of electricity, increase efficiency in metering, billing and collection and strengthening the distribution system through schemes such as the Ujwal DISCOM Assurance Yojana (UDAY), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Integrated Power Development Scheme (IPDS) and give subsidies through Direct Benefit Transfer etc.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4214
ANSWERED ON 19.03.2020

ELECTRICITY TO EVERY HOUSEHOLD

†4214. SHRI SANTOSH PANDEY:

Will the Minister of POWER be pleased to state:

(a) whether the Government had set any target of providing electricity to every households in the country;

(b) if so, whether any time limit has been fixed in this regard;

(c) the district-wise number of households in rural areas of Chhattisgarh which have been provided electricity by December 31, 2019;

(d) the total number of households in Rajnandgaon and Kabirdham in Chhattisgarh which have been provided electricity by December 31, 2019 along with the number of registered households having no electricity; and

(e) the funds allocated and sanctioned to Chhattisgarh till December 31, 2019 under 'Saubhagya' Yojana?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : Government of India launched Pradhan Mantri Sahaj Bijli Har Ghar Yojana– Saubhagya in October, 2017 to achieve universal household electrification by providing last mile connectivity and electricity connections to all willing households in rural and all poor households in urban areas across the country by March, 2019.

(c) : As reported by State, since launch of Pradhan Mantri Sahaj Bijli Har Ghar Yojana – Saubhagya, 7,45,647 households in rural area of Chhattisgarh have been electrified upto 31.12.2019. District-wise detail is given at Annexure.

(d) : As reported by the State of Chhattisgarh, total 24,706 households in Rajnandgaon and 28,609 households in Kabirdham districts have been electrified since launch of Saubhagya up to 31.12.2019 and no household remains un-electrified.

(e) : There is no upfront allocation for any State under Saubhagya Scheme. Funds are released for sanctioned projects in installments based on the reported utilization of the previous installment(s) and fulfillment of stipulated conditionalities. Under the scheme, Government of India have sanctioned projects of Rs.648 crore for the State of Chhattisgarh and disbursed Rs.284 crore, as grant, up to 31.12.2019. In addition to this, Government of India have also sanctioned projects of Rs.83.64 crore for additional infrastructure up to 31.12.2019, to support household electrification under Saubhagya.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4214 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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DISTRICT-WISE DETAILS OF RURAL HOUSEHOLD ELECTRIFICATION DURING 11.10.2017 TO 31.12.2019 IN THE STATE OF CHHATTISGARH

	District	Number of rural households
1	Balod	16110
2	Baloda Bajar	38609
3	Balrampur	45204
4	Bastar	57969
5	Bemetara	30758
6	Bijapur	24152
7	Bilaspur	47672
8	Dantewada	27686
9	Dhamtari	6027
10	Durg	12893
11	Gariyabandh	32313
12	Janjgir - Champa	24068
13	Jashpur	56839
14	Kabirdham	28198
15	Kanker	23431
16	Kondagaon	19506
17	Korba	26098
18	Koriya	23828
19	Mahasamund	8745
20	Mungeli	25163
21	Narayanpur	10810
22	Raigarh	22952
23	Raipur	11461
24	Rajnandgaon	24565
25	Sukma	20136
26	Surajpur	35946
27	Surguja	44508
	Total	745647

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4262
ANSWERED ON 19.03.2020

FLY ASH BRICK PLANTS

4262. SHRI MANOJ TIWARI:
SHRI REBATI TRIPURA:

Will the Minister of POWER be pleased to state:

(a) whether the Government has any proposal to establish fly ash brick plants in nearby areas of NTPC plants, if so, the details thereof specially in Delhi-NCR and if not, the reasons therefor; and

(b) the details of implementation procedure and time-limit for any such proposal in near future?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : To promote ash utilization by thermal power plants, MoEF&CC's amended Notification dated 25th January, 2016 has been notified in which para 2(b): sub-para (11) and (12) states that:

sub-para (11): The coal or lignite based thermal power plants shall promote, adopt and set up the ash based product manufacturing facilities within their premises or in the vicinity of their premises so as to reduce the transportation of ash.

sub-para (12): The coal or lignite based thermal power plants in the vicinity of the cities shall promote, support and assist in setting up of ash based product manufacturing units so as to meet the requirements of bricks and other building construction materials and also to reduce the transportation.

M/s NTPC Ltd. has established fly ash brick plants in all its Coal based Thermal Power Stations, including those in Delhi NCR, as per its Ash Utilization Policy in order to promote use of fly ash bricks. Fly ash bricks manufactured at NTPC plants are exclusively utilized for all in-house construction activities.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4263
ANSWERED ON 19.03.2020

POWER GENERATION

4263. ADV. ADOOR PRAKASH:

Will the Minister of POWER be pleased to state:

(a) the share of hydro-electric projects in the total power generation of the country;

(b) the details of major hydro power projects alongwith the capacity and actual power generation during the last three years, State-wise;

(c) whether any study has been conducted on the capacity and utilization of hydro-electric projects and if so, the details thereof, State-wise;

(d) the number of proposals for new hydro-electric projects pending for approval and the details of the same, State-wise; and

(e) the details of hydro-electric power projects to be commissioned along with the present status, State-wise?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : The share (%) of generation from hydro-electric projects (above 25 MW) in the total power generation of the country during the current year up to February 2020 is 11.49%.

(b) : State-wise details of hydro power projects and generation of 25 MW & above capacity during the last three years & the current year (Up to Feb.2020) is enclosed at Annexure- I.

.....2.

(c) : No, Sir. However, Capacity Utilization Factor (CUF) of hydroelectric projects depends on factors like rainfall and snowfall during the year, operational constraints due to silt, planned and forced outages etc. CUF in the case of run-of-the-river hydroelectric projects with pondage is around 45%, while for storage based hydroelectric projects, it is around 32-35%. The overall CUF of hydroelectric projects (above 25 MW) for the year 2018-19 was around 34%. State-wise details of CUF for the year 2018-19 is enclosed at Annexure-II.

(d) : 5 Detailed Project Reports (DPRs) of hydroelectric projects with an aggregate installed capacity of 1116 MW are presently under examination in Central Electricity Authority / Central Water Commission/ Geological Survey of India / Central Soil and Materials Research Station and Ministry of Jal Shakti (erstwhile MoWR, RD & GR) for concurrence. State-wise details of these projects are as under:

Sl. No.	Scheme	Executing Agency	Installed Capacity (MW)
	Uttarakhand		
1.	Bowala Nand Prayag	Uttarakhand Jal Vidyut Nigam Limited	300
2.	Goriganga-IIIA	National Hydro-electric Power Corporation	150
	Jammu & Kashmir		
3.	Kirthai-I	Jammu & Kashmir State Power Development Corporation	390
	Himachal Pradesh		
4.	Thana Plaun	Himachal Pradesh Power Corporation Ltd.	191
	Meghalaya		
5.	Wah-Umiam Stage-III	North Eastern Electric Power Corporation Limited	85
		TOTAL (MW)	1116

(e) : Presently, 38 Hydro Electric Projects (above 25 MW) aggregating to 12973.5 MW are under construction in the Country. The State-wise details of these Projects are given at Annexure-III.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 4263 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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State-wise / Station-wise Generation for last three years and current year

Name of the Station	Monitored Capacity as on 29.02.2020 (MW)	Generation (Mus)			
		2019-20 (upto-Feb. 20) *	2018-19	2017-18	2016-17
NORTHERN REGION					
HIMACHAL PRADESH					
ALLAIN DUHANGAN HPS	192.00	745.46	582.23	683.01	679.12
BAIRA SIUL HPS	180.00	284.03	366.67	641.73	669.33
BASPA HPS	300.00	1324.14	1275.58	1336.65	1342.75
BASSI HPS	66.00	312.15	251.56	315.17	297.76
BHAKRA HPS				5134.02	5168.27
BHAKRA LEFT HPS	594.00	2566.37	2248.69		
BHAKRA RIGHT HPS	785.00	3256.92	1989.50		
BUDHIL HPS	70.00	275.27	288.08	317.63	261.25
CHAMERA- I HPS	540.00	2485.03	2484.56	2344.08	2224.39
CHAMERA- II HPS	300.00	1173.83	1508.02	1487.11	1443.93
CHAMERA-III HPS	231.00	1010.14	1043.42	1068.05	917.09
CHANJU-I HPS	36.00	161.55	137.44	79.42	11.29
DEHAR H P S	990.00	3217.13	3226.30	3086.24	3184.68
GIRI BATA HPS	60.00	205.78	214.45	169.94	140.60
KARCHAM WANGTOO HPS	1000.00	4524.56	3968.69	4569.93	4372.29
KASHANG INTEGRATED HEP	195.00	189.16	118.24	197.13	56.09
KOLDAM	800.00	3338.93	3013.93	3313.62	3225.16
LARJI HPS	126.00	640.67	593.86	612.36	611.66
MALANA HPS	86.00	360.56	320.55	346.29	353.79
MALANA-II HPS	100.00	396.75	349.39	368.89	366.54
NATHPA JHAKRI HPS	1500.00	7217.71	6507.15	7207.73	7050.64
PARBATI-II HPS	0.00	0.00	0.00	0.00	
PARBATI-III HPS	520.00	674.96	608.30	710.53	682.48
PONG H P S	396.00	1290.77	1512.56	1641.57	1369.93
RAMPUR HPS	412.02	2030.99	1828.76	2015.00	1960.42
SAINJ HPS	100.00	329.82	408.81	134.99	0.00
SANJAY HPS	120.00	575.89	589.42	493.39	187.40
SAWRA KUDDU HPS	0.00	0.00			
SHANAN HPS	110.00	535.03	472.39	508.52	472.88
SORANG HPS	0.00	0.00	0.00	0.00	0.00
TIDONG HPS	0.00	0.00	0.00	0.00	
UHL-III HPS	0.00	0.00	0.00	0.00	0.00
HIMACHAL PRADESH Total	9809.02	39123.60	35908.55	38783.00	37049.74
JAMMU AND KASHMIR					
BAGLIHAR HPS	450.00	2394.62	2291.15	2506.71	2184.56
BAGLIHAR II HPS	450.00	1909.97	1857.91	1821.95	1758.98
CHUTAK HPS **	44.00	94.48	48.96	45.72	44.12
DULHASTI HPS	390.00	1962.96	2273.38	2343.86	2280.02
KISHANGANGA HPS	330.00	820.38	529.25	1.68	0.00
LOWER JHELUM HPS	105.00	501.27	589.33	480.99	483.15
NIMMO BAZGO HPS **	45.00	156.96	105.55	98.83	95.21
SALAL HPS	690.00	3755.90	3412.55	3247.09	3423.09
SEWA-II HPS	120.00	560.43	498.32	506.39	470.61
UPPER SINDH-II HPS	105.00	216.45	305.97	327.24	362.91
URI-I HPS	480.00	3049.52	3048.29	2349.66	2803.10
URI-II HPS	240.00	1613.77	1580.92	1207.44	1471.94
JAMMU AND KASHMIR Total	3449.00	17036.71	16541.58	14937.56	15377.69
PUNJAB					
ANANDPUR SAHIB HPS				647.81	673.87
ANANDPUR SAHIB-I HPS	67.00	297.90	390.79		
ANANDPUR SAHIB-II HPS	67.00	294.00	36.99		
GANGUWAL HPS	77.65	563.75	599.37	494.09	416.54
KOTLA HPS	77.65	570.61	609.60	508.22	430.58
MUKERIAN HPS				1270.76	1083.51
MUKERIAN-I HPS	45.00	921.02	1175.44		

MUKERIAN-II HPS	45.00	43.75	19.20		
MUKERIAN-III HPS	58.50	55.21	24.66		
MUKERIAN-IV HPS	58.50	54.44	24.83		
RANJIT SAGAR HPS	600.00	1993.71	1454.52	1803.42	1306.08
PUNJAB Total	1096.30	4794.39	4335.40	4724.30	3910.58
RAJASTHAN					
JAWAHAR SAGAR HPS	99.00	278.75	247.00	261.10	307.55
MAHI BAJAJ HPS				180.17	209.66
MAHI BAJAJ-I HPS	50.00	153.40	99.76		
MAHI BAJAJ-II HPS	90.00	54.38	17.32		
R P SAGAR HPS	172.00	54.53	334.32	378.26	448.78
RAJASTHAN Total	411.00	541.06	698.40	819.53	965.99
UTTAR PRADESH					
KHARA HPS	72.00	320.33	286.14	259.14	268.93
MATATILA HPS	30.60	63.00	97.48	93.81	122.68
OBRA HPS	99.00	173.12	231.03	299.96	216.71
RIHAND HPS	300.00	414.45	561.71	833.78	567.24
UTTAR PRADESH Total	501.60	970.90	1176.36	1486.69	1175.56
UTTARAKHAND					
CHIBRO (YAMUNA) HPS	240.00	897.34	809.53	783.57	714.00
CHILLA HPS	144.00	725.06	632.41	811.66	769.35
DHAKRANI HPS	33.75	157.75	147.48	129.68	120.19
DHALIPUR HPS	51.00	204.95	219.99	186.71	180.40
DHAULI GANGA HPS	280.00	1286.80	1106.21	1153.16	956.13
KHATIMA HPS	41.40	218.59	232.25	212.60	180.14
KHODRI HPS	120.00	399.34	369.68	355.75	333.29
KOTESHWAR HPS	400.00	1105.46	1223.84	1220.33	1224.55
KULHAL HPS	30.00	140.77	146.55	123.97	122.20
MANERI BHALI – I HPS	90.00	335.47	430.40	394.77	349.22
MANERI BHALI – II HPS	304.00	1317.40	1302.34	1276.65	1251.71
RAMGANGA HPS	198.00	142.93	188.14	250.64	180.94
SHRINAGAR HPS	330.00	1480.70	1375.31	1382.54	1280.75
TANAKPUR HPS	94.20	527.10	452.89	459.74	430.29
TEHRI ST-1 HPS	1000.00	2809.49	3172.08	3080.94	3146.32
VISHNU PRAYAG HPS	400.00	1954.52	1932.02	2160.90	2042.05
UTTARAKHAND Total	3756.35	13703.67	13741.12	13983.61	13281.53
NORTHER REGION Total	19023.27	76170.33	72401.41	74734.69	71761.09
WESTERN REGION					
CHHATTISGARH					
HASDEOBANGO HPS	120.00	226.14	243.08	178.07	153.76
CHHATTISGARH Total	120.00	226.14	243.08	178.07	153.76
GUJARAT					
KADANA HPS	240.00	447.20	237.39	308.92	339.01
S SAROVAR CHPH HPS	250.00	839.80	594.84	562.86	876.34
S SAROVAR RBPH HPS	1200.00	3093.16	0.00	376.61	2332.87
UKAI HPS	300.00	715.82	210.58	303.53	395.66
GUJARAT Total	1990.00	5095.98	1042.81	1551.92	3943.88
MADHYA PRADESH					
BANSAGAR TONS-I HPS	315.00	1160.33	578.35	545.37	1239.02
BANSAGAR-II HPS	30.00	84.55	37.09	56.12	109.73
BANSAGAR-III HPS	60.00	138.90	85.32	68.80	53.48
BARGI HPS	90.00	345.02	356.19	159.05	445.47
GANDHI SAGAR HPS	115.00	33.81	249.88	351.38	351.00
INDIRA SAGAR HPS	1000.00	2643.92	1308.79	881.76	3320.79
MADHIKHERA HPS	60.00	128.79	88.99	22.52	147.21
MAHESHWAR HPS	0.00	0.00	0.00	0.00	0.00
OMKARESHWAR HPS	520.00	1177.54	612.04	443.60	1427.70
RAJGHAT HPS	45.00	82.72	80.02	58.21	62.26
MADHYA PRADESH Total	2235.00	5795.58	3396.67	2586.81	7156.66
MAHARASHTRA					
BHANDARDHARA HPS ST-II	34.00	15.85	56.44	42.55	47.12
BHIRA HPS	150.00	328.79	351.02	341.17	379.14
BHIRA PSS HPS	150.00	467.26	558.77	551.13	572.49
BHIRA TAIL RACE HPS	80.00	90.06	94.57	97.15	101.58
BHIVPURI HPS	75.00	298.45	315.90	307.20	206.59
GHATGHAR PSS HPS	250.00	135.33	192.98	152.83	383.87
KHOPOLI HPS	72.00	310.43	342.49	316.38	307.24
KOYNA DPH HPS	36.00	130.43	196.18	135.15	156.02
KOYNA-I HPS				517.92	640.51

KOYNA-I&II HPS	600.00	1137.46	1024.61		
KOYNA-II HPS				533.30	649.70
KOYNA-III HPS	320.00	671.49	480.65	498.91	614.14
KOYNA-IV HPS	1000.00	1573.64	1066.51	945.47	1245.48
PENCH HPS	160.00	213.13	131.61	159.53	360.14
TILLARI HPS	60.00	101.43	110.96	57.81	106.16
VAITARNA HPS	60.00	73.49	154.17	204.62	153.52
MAHARASHTRA Total	3047.00	5547.24	5076.86	4861.12	5923.70
WESTERN REGION Total	7392.00	16664.94	9759.42	9177.92	17178.00
SOUTHERN REGION					
ANDHRA PRADESH					
LOWER SILERU HPS	460.00	756.38	1094.06	1109.77	831.90
NAGARJUN SGR TPD	50.00	78.26	49.92	42.13	7.35
NAGARJUN SGR RBC HPS	90.00	102.83	101.55	59.73	4.15
SRISAILAM HPS	770.00	1293.54	551.07	574.95	640.61
UPPER SILERU HPS	240.00	561.09	476.34	482.22	340.41
ANDHRA PRADESH Total	1610.00	2792.10	2272.94	2268.80	1824.42
KARNATAKA					
ALMATTI DPH HPS	290.00	618.69	408.42	441.58	404.05
BHADRA HPS	26.00	67.02	55.21	15.69	27.06
GERUSUPPA HPS	240.00	520.86	525.67	280.89	276.60
GHAT PRABHA HPS	32.00	40.06	80.67	48.37	48.74
HAMPI HPS	36.00	53.86	19.21	36.26	0.10
JOG HPS	139.20	267.64	194.44	191.48	288.25
KADRA HPS	150.00	430.91	375.85	192.91	176.42
KALINADI HPS	855.00	3157.84	2777.85	1537.28	1344.82
KALINADI SUPA HPS	100.00	538.89	596.16	290.98	239.20
KODASALI HPS	120.00	419.17	345.56	170.94	154.16
LIGANAMAKKI HPS	55.00	267.89	252.53	125.55	105.64
MUNIRABAD HPS	28.00	78.10	89.42	51.38	31.49
SHARAVATHI HPS	1035.00	4593.04	4786.18	2722.35	2708.77
SIVASAMUNDRUM HPS	42.00	251.84	284.19	176.81	145.14
T B DAM HPS	36.00	140.39	152.54	97.71	81.16
VARAHI HPS	460.00	1094.00	1243.79	762.44	740.75
KARNATAKA Total	3644.20	12540.20	12187.69	7142.62	6772.35
KERALA					
IDAMALAYAR HPS.	75.00	231.27	345.50	256.26	171.72
IDUKKI HPS.	780.00	1664.11	2920.43	1611.06	1380.06
KAKKAD HPS.	50.00	162.66	221.66	159.88	131.68
KUTTIYADI HPS.	75.00	191.10	233.75	430.12	327.24
KUTTIYADI ADDL. EXTN.	100.00	285.08	332.21	170.94	151.48
KUTTIYADI EXTN. HPS.	50.00	74.88	127.42		
LOWER PERIYAR HPS.	180.00	407.43	525.18	507.74	307.23
NARIAMANGLAM HPS	45.00	294.59	377.85	310.60	197.30
PALLIVASAL HPS.	37.50	130.43	185.25	188.39	166.05
PANNIAR HPS.	30.00	120.27	114.59	129.47	62.33
PORINGALKUTTU HPS.	32.00	97.03	94.60	116.74	91.10
SABARIGIRI HPS.	300.00	1015.50	1516.40	968.46	798.79
SENGULAM HPS.	48.00	142.46	122.98	144.91	115.66
SHOLAYAR HPS.	54.00	190.17	202.39	204.69	166.85
KERALA Total	1856.50	5006.98	7320.21	5199.26	4067.49
TAMIL NADU					
ALIYAR HPS.	60.00	62.77	48.57	90.08	61.73
BHAWANI BARRAGE-II HPS	30.00	57.76	77.16	37.62	19.83
BHAWANI BARRAGE-III HPS	30.00	35.87	34.06	0.00	17.47
BHAWANI KATTAL	30.00	62.64	70.21	16.96	20.59
KADAMPARI HPS.	400.00	326.67	434.75	384.36	289.39
KODAYAR HPS.				123.98	169.43
KODAYAR-I HPS.	60.00	113.78	144.11		
KODAYAR-II HPS.	40.00	45.07	49.97		
KUNDAH HPS.				806.23	815.61
KUNDAH-I HPS.	60.00	219.29	270.77		
KUNDAH-II HPS.	175.00	608.24	678.67		
KUNDAH-III HPS.	180.00	367.13	397.66		
KUNDAH-IV HPS.	100.00	158.08	172.05		
KUNDAH-V HPS.	40.00	70.55	89.84		
LOWER METTUR HPS.				131.95	92.27
LOWER METTUR-I HPS.	30.00	65.72	69.66		

LOWER METTUR-II HPS.	30.00	63.69	31.68		
LOWER METTUR-III HPS.	30.00	61.69	65.27		
LOWER METTUR-IV HPS.	30.00	48.58	53.70		
METTUR DAM HPS.	50.00	136.13	147.96	52.24	44.75
METTUR TUNNEL HPS.	200.00	372.03	440.59	163.32	80.73
MOYAR HPS	36.00	115.86	161.99	94.40	61.52
PAPANASAM HPS.	32.00	98.08	120.91	115.28	66.54
PARSON`S VALLEY HPS.	30.00	18.70	45.94	27.11	23.95
PERIYAR HPS.	161.00	502.07	703.00	287.10	93.91
PYKARA HPS.	59.20	17.90	22.05	0.98	12.74
PYKARA ULTMATE HPS.	150.00	338.04	507.96	274.11	192.55
SARKARPATHY HPS.	30.00	101.16	129.65	85.46	63.29
SHOLAYAR HPS (TN)	70.00	290.40	220.86	157.73	228.11
SURULIYAR HPS.	35.00	113.59	92.55	70.69	42.71
TAMIL NADU Total	2178.20	4471.49	5281.59	2919.60	2397.12
TELANGANA					
LOWER JURALA HPS	240.00	317.97	153.31	205.90	176.34
NAGARJUN SGR HPS	815.60	1511.36	338.82	184.49	186.15
NAGARJUN SGR LBC HPS	60.00	97.93	53.30	12.80	0.00
POCHAMPAD HPS	36.00	39.04	31.70	35.69	75.29
PRIYADARSHNI JURALA HPS	234.00	321.74	165.00	217.40	211.99
PULICHINTALA HPS	120.00	202.50	17.30	6.60	13.00
SRISAILAM LB HPS	900.00	1928.61	985.18	829.10	617.22
TELANGANA Total	2405.60	4419.15	1744.61	1491.98	1279.99
SOUTHERN REGION Total	11694.50	29229.92	28807.04	19022.26	16341.37
EASTERN REGION					
JHARKHAND					
PANCHET HPS.	80.00	106.40	79.79	141.94	133.51
SUBERNREKHA HPS.				190.38	30.13
SUBERNREKHA-I HPS.	65.00	0.38	51.47		
SUBERNREKHA-II HPS.	65.00	35.74	49.72		
JHARKHAND Total	210.00	142.52	180.98	332.32	163.64
ORISSA					
BALIMELA HPS.	510.00	1447.12	1732.21	1477.19	1001.38
CHIPLIMA HPS	72.00	229.95	168.31		
HIRAKUD HPS	275.50	525.43	380.27	863.05	716.97
MACHKUND HPS	114.75	610.55	593.68	467.70	700.31
RENGALI HPS.	250.00	611.04	837.89	762.61	553.56
UPPER INDRAVATI HPS.	600.00	2084.15	2141.84	1745.57	1521.64
UPPER KOLAB HPS.	320.00	747.32	923.25	706.87	619.34
ORISSA Total	2142.25	6255.56	6777.45	6022.99	5113.20
SIKKIM					
CHUZACHEN HPS	110.00	461.53	417.40	444.79	494.75
DIKCHU HPS	96.00	476.73	462.24	370.10	
JORETHANG LOOP	96.00	398.51	409.75	406.01	405.63
RANGIT HPS	60.00	339.87	349.09	345.91	347.14
TASHIDING HPS	97.00	435.15	423.73	73.07	0.00
TEESTA V HPS	510.00	2719.73	2701.46	2818.78	2773.46
TEESTA-III HPS	1200.00	5883.06	4258.40	4429.33	309.42
SIKKIM Total	2169.00	10714.58	9022.07	8887.99	4330.40
WEST BENGAL					
JALDHAKA HPS ST-I	36.00	180.28	197.04	145.18	205.46
MAITHON HPS.	63.20	78.00	101.36	114.41	122.03
PURULIA PSS HPS.	900.00	1047.59	1103.97	1014.37	1106.97
RAMMAM HPS.	50.00	238.11	236.93	122.47	248.42
TEESTA LOW DAM-III HPS	132.00	564.44	572.06	386.87	553.87
TEESTA LOW DAM-IV HPS	160.00	716.49	708.45	495.15	602.53
WEST BENGAL Total	1341.20	2824.91	2919.81	2278.45	2839.28
EASTERN REGTION Total	5862.45	19937.57	18900.31	17521.75	12446.52
NORTH EASTERN REGION					
ARUNACHAL PRADESH					
KAMENG HPS	300.00	8.12	0.00	0.00	
PARE	110.00	453.70	347.16	0.00	0.00
RANGANADI HPS.	405.00	1236.34	1051.86	1416.74	1249.01
ARUNACHAL PRADESH Total	815.00	1698.16	1399.02	1416.74	1249.01
ASSAM					
KARBI LANGPI HPS.	100.00	384.11	372.72	484.98	396.59
KHONDONG HPS.	50.00	190.52	203.82	260.77	197.10
KOPILI HPS.	200.00	716.90	1117.82	1172.83	1088.27
ASSAM Total	350.00	1291.53	1694.36	1918.58	1681.96

MANIPUR					
LOKTAK HPS.	105.00	343.86	602.61	837.74	741.07
MANIPUR Total	105.00	343.86	602.61	837.74	741.07
MEGHALAYA					
KYRDEMKULAI HPS.	60.00	133.09	134.84	132.18	65.29
MYNTDU(LESHKA) St-1 HPS	126.00	419.69	362.95	502.47	391.65
NEW UMTRU HPS	40.00	174.31	180.03	159.52	0.00
UMIAM HPS ST-I	36.00	101.26	85.11	128.65	96.65
UMIAM HPS ST-IV	60.00	157.35	166.60	217.44	166.01
MEGHALAYA Total	322.00	985.70	929.53	1140.26	719.60
MIZORAM					
TUIRIAL HPS	60.00	169.90	168.44	78.37	
MIZORAM Total	60.00	169.90	168.44	78.37	
NAGALAND					
DOYANG HPS.	75.00	176.39	231.47	274.39	258.94
NAGALAND Total	75.00	176.39	231.47	274.39	258.94
NORTH EASTERN REGION Total	1727.00	4665.54	5025.43	5666.08	4650.58
GRAND TOTAL	45699.22	146668.30	134893.61	126122.70	122377.56

** Under Ladakh since August 2019

* PROVISIONAL BASED ON ACTUAL-CUM-ASSESMENT

Note: 1. Gross Generation from fuel sources (Hydro) stations of 25 MW and above only.

2. Figures given above indicate gross generation of all power stations (Central, State& Private Sector) located geographically in the respective State/UT.

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ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4263 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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STATE-WISE DETAILS OF CAPACITY UTILIZATION FACTOR (CUF) FOR THE YEAR 2018-19

STATES	2018-19	
	Installed Capacity (in MW)	Capacity Utilization Factor (CUF)
HIMACHAL PRADESH	9809	41.79
UT OF J & K AND UT OF LADAKH	3360	55.67
PUNJAB	1096.3	45.14
RAJASTHAN	411	19.40
UTTAR PRADESH	501.6	26.77
UTTRAKHAND	3756.35	41.76
LADHAK	89	19.82
Northern Region	19023.25	43.45
CHHATISGARH	120	23.12
GUJRAT	1990	5.98
MADHYA PRADESH	2235	17.35
MAHARASTRA	3047	19.02
Western Region	7392	15.07
ANDHRA PRADESH	1610	16.12
KARNATAKA	3644.2	38.18
KERELA	1856.5	45.01
TAMIL NADU	2178.2	27.68
TELENGANGA	2405.6	8.28
Southern Region	11694.5	28.12
JHARKAND	210	9.84
ODISHA	2142.25	36.12
SIKKIM	2169	47.48
WEST BENGAL	1341.2	24.85
Eastern Region	5862.45	36.80
ARUNACHAL PRADESH	815	31.01
ASSAM	350	55.26
NAGALAND	75	35.23
MANIPUR	105	65.52
MEGHALAYA	322	32.95
MIZORAM	60	32.05
North Eastern Region	1427	40.20
TOTAL INDIA	45699	33.92

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ANNEXURE-III

ANNEXURE REFERRED TO IN REPLY TO PART (e) OF UNSTARRED QUESTION NO. 4263 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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STATE-WISE DETAILS OF UNDER CONSTRUCTION HYDRO-ELECTRIC PROJECTS (ABOVE 25 MW)

(AS ON 15.03.2020)

Sl. No.	Name of Scheme/ Executing Agency	Capacity Under Execution (MW)	Present Status
	Andhra Pradesh		
1	Polavaram (APGENCO/ Irrigation Dept., A.P.)	960.00	Spillway, Earth cum Rockfill Dam, Power House Foundations Works awarded in March, 2013 to M/s. Transtroy- JSC EC UES JV. ECRF DAM: Earth work of 508.06 L.Cum /833.169L.Cum is completed. Diaphragm Wall concreting – completed. SPILLWAY: Excavation-838.80 L Cum out of 1115.59 L Cum completed. Concreting 9.60 L Cum out of 36.79 L cum completed. Gates: Radial Gate fabrication – 11010 MT completed out of 18000 MT (61.17%). Power House: Earth work of 112.20 L Cum / 114 L.Cum is completed & embankment of 9.79 L.Cum / 10 L.Cum is completed. B) The LoA for works of Power House on turnkey basis was issued to M/s Navayuga Engineering company Limited (NECL) on 06.12.2017. Contract was terminated by APGENCO on 14.08.2019. M/s. NECL challenged the termination order in Hon'ble High Court of A.P. on 19.08.2019. Hon'ble High Court granted interim stay on 22.08.2019. In the meanwhile, on retendering, LOI was issued to M/s Megha Engg. Infrastructure Limited. (MEIL) on 01.11.2019. Since stay order is in force. No further action could be initiated.
	Arunachal Pradesh		
2	Kameng (NEEPCO) 2 units taken in opertaion	300.00	All major works related to commissioning of project completed. All Units Boxed up. Leakage observed in penstocks during water filling in March, 2018. Thereafter, complete NDT of all joints of pressure shaft / penstock is in progress along with rectification of defects. Progress of Rectification :- Penstock-1 :- Rectification / Repair works completed. Penstock -2 : Repair Welding of WELD DEFECT 2532 RM completed out of 5071 RM. Unit#1 & 2 taken as Capacity addition on 10.02.2020 & 03.02.2020 respectively. ii) Repair Welding of OFFSETS:- 786 RM completed out of 873.85 RM.

3	Subansiri Lower (NHPC)	2000.00	Dam :- Dam concreting 53.42% & Intake concreting 96% completed. HRT:- 98% heading excavation, 73.65% benching excavation & 56.80% concrete overt lining completed. Surge Tunnel :- Heading excavation 86.40% & benching excavation 12% completed. Pressure Shaft :- Vertical PS slashing 199m (51.82%) out of 384m. Power House :- Excavation almost completed & concreting 35% completed E&M Works:- Unit-1: Elbow Erection (1 to 6) and Turbine Stay Ring and Spiral Case erection completed. Unit-2: Elbow Erection (2 to 6) and Turbine Stay Ring and Spiral Case erection completed. HM Works: Erection of Diversion Tunnel Gates: 51.80% completed. Erection of Intake Gates: 8% completed. Out of total 1594m, 293m pressure shaft steel liner erected. All work except safety works were stalled from December, 2011 to September, 2019 due to agitation launched by various activists against construction of Subansiri Lower HE Project and as per directions of NGT. Works restarted w.e.f. 15.10.2019 after clearance from NGT.
	Himachal Pradesh		
4	Parbati St. II (NHPC)	800.00	All major works related to commissioning of the project completed except HRT. Head Race Tunnel-Excavation: 28.82 km out of 31.5km completed Total Overt lining: 26.89 km lining out of 31.5km completed. E&M Works: All units have been synchronized with grid at part load using water from Jiwa Nallah.
5	Uhl-III (BVPCL)	100.00	All works completed. During Hydro Static pressure Test (HST) of Penstock some leakage was observed. Repair of penstock & HST completed and filling of water conductor system is in progress.
6	Sawra Kuddu (HPPCL)	111.00	All works related to commissioning of the project completed except cleaning of HRT.
7	Shongtong Karcham (HPPCL)	450.00	River Diversion achieved on 10.02.2017. Barrage: Drawings are to be submitted by contractor. HRT: Heading excavation of HRT 5.72 km out of 7.712km completed. Surge shaft: 95m out of 100m pilot hole completed. Power House: 98% excavation of Power House completed. Works hampered in some portion of HRT due to re-location of Army ammunition depot. Issue is under resolution between Army, GoHP & HPPCL.
8	Bajoli Holi (GMR)	180.00	Civil Works: 86% works completed. Dam: Excavation completed. Concreting 1,36,844 cum out of 2,10,000 cum completed. HRT: Excavation completed. 6.485 km lining out of 15.9 km completed. Surge Shaft: Excavation completed. Lining-4470/5200 cum completed. Pressure shaft: Excavation completed. Lining-664MT / 2440MT completed. Power house: Excavation completed and concreting almost completed. HM Works: 72% works completed. E&M Works: 82% works completed.

9	Sorang (HSPCL)	100.00	All Civil Works completed. Both the units are boxed up. During the filling of water conductor system in 1st week of Nov., 2013, leakage occurred in penstock due to cracks. Rectification work completed in April, 2015. Unit #1 synchronized with grid on 30.10.2015, however, could not be commissioned due to non-availability of rated discharge. On 18-11-2015 when Unit # 2 was under trial run, there was rupture in the surface penstock pipe. The incidence caused loss of lives and property. The rectification work is under progress. Land acquisition for new alignment of Penstock & other infrastructure is completed. Fabrication of Ferrules under progress.
10	Tangnu Romai (TRPG)	44.00	Civil works awarded on 14.06.2010 to M/s Sai Urja Hydel Project (P) Ltd. Barrage and Diversion Cannel: 26211 cum out of 93800 cum excavation completed. Desilting Chambers & SFTPC: Excavation completed. SFT excavation 420 / 450.66 m completed. HRT: 2826m out of 6300m excavation completed. Power House, Switchyard & Misc.: 60275 m3 out of 72000 m3 excavation completed. In February-2015, due to land slide the steel bridge on Pabbar River, connecting Project components has been completely damaged. The restoration works are completed.
11	Tidong-I (Statkraft IPL)	100.00	Barrage & River Diversion Works: Common Excavation completed and 71700.84/73409.00 open cut rock excavation completed. 32144 cum out of 37159 cum concreting done. Head Regulator & Desilting arrangement: Common excavation completed. 9763 cum open cut rock excavation out of 10,000 cum completed. HRT (8526m): Excavation 3054m completed and 10,299/83,800 cum Head works concreting has been completed. Surge Shaft: Excavation 63m/87m completed. Pressure Shaft: Excavation completed. 205m / 1310m lining completed. Power house and Tail race channel- 87709 cum out of 92500 cum excavation completed. 11237 cum out of 16156 cum concreting completed. Overall 72 % of Powerhouse civil works completed. M/s Statkraft India Pvt Ltd has acquired the 100% equity of the project on 04.09.2018 and remobilization of manpower on the project is in progress.
12	Kutehr (JSW Energy Ltd)	240.00	Civil works awarded on 29.10.2019.
	Jammu & Kashmir		
13	Pakal Dul (CVPPL)	1000.00	Infrastructural works: Excavation of MAT and adit to Powerhouse completed. Dam: Letter of Acceptance issued to M/s Jaiprakash Associates on 21.06.18. Surge Shaft: Access road to Surge shaft top completed on 30.11.18. Power House(157mx20.20mx49m): Letter of Acceptance issued to M/s. AFCON-JP Associates JV on 21.02.18. Excavation of MAT completed on 20.12.18 E&M Package: Letter of Award issued to M/s. Voith Hydro Ltd. On 02.01.2019. HM Works Package: Letter of Award issued to M/s. PES Engineers Pvt. Ltd. on 26.08.2019.

14	Parnai (JKSPDC)	37.50	The implementation of the project has been undertaken by awarding the EPC contract in favour of M/s. Patel Engg. Ltd. in 2013. Barrage:- Excavation 32603 cum out of total 46364 cum completed. Concreting 19128 cum out of 34589 cum completed. HRT (D-shaped, 3.2m diameter, 9.236km long):- 4787m out of 9236m excavation completed. Pressure shaft (1no. 2mdia, 1733mlong): Excavation: 11254 cum out of 80,000 cum completed. Concreting: 454cum out of 7212 cum completed. Surge shaft (3.2m dia.): Excavation: 704cum out of 14000cum completed.
15	Lower Kalnai (JKSPDC)	48.00	EPC contract awarded to M/s. CPL in Sept., 2013. Diversion tunnel has been completed and river diversion made on 30.11.2016. Work on coffer dams has been started Dam:- Excavation work completed for right abutment of the dam bridge. Excavation of left abutment completed upto 50%. HRT:-Adit excavation is in progress. After suspending works in January, 2017, works resumed at site since 12th April, 2017. Due to poor progress of the Contractor, JKSPDC has revoked the advance payment and the performance bank guarantee aggregating to Rs.79.21 Crores. Now the contract with M/s. Coastal Project Ltd. has been terminated and the process of retendering is under progress.
16	Kiru (CVPPL)	624.00	Civil, HM and E&M works awarded on 24.02.2020.
17	Ratle (RHEPPL / NHPC)	850.00	EPC Contract for Civil & HM works awarded to M/s GVK Projects & Technical Services Limited on 04.07.2013. Excavation of DT1 (298m out of 472m) & DT2 (192m out of 552m) completed. -Works have been suspended at Project site due to frequent local disturbances since 11.07.2014. -Govt. of J&K, PDD have terminated PPA on 09.02.2017 and directed JKSPDC to take over the project and implement in JV mode with GoI. MoU for execution of project in JV mode was signed on 03.02.2019 between JKPDD, JKSPDC & NHPC. Cost estimate vetted by CEA on 7.5.2019. PIB meeting held on 09.03.2020
	Kerala		
18	Pallivasal (KSEB)	60.00	Intake structure: Excavation – 28398/33492 cum completed. Leading channel of Water conductor system replaced by cut & cover/soil tunnel and accordingly intake is shifted. HRT: Excavation –2858/3330 m completed. Overt conc. 1637/3330 m completed. Invert Conc.. – 1637/3330 m completed. Surge Tank/Forebay: Exc.–7640/13400 cum. Conc.423/843 cum. Pressure Shaft: Excavation completed. Fabrication of steel liner completed and erection of 96/1096 m completed. Surface penstock: Excavation –109354/122600 cum. Concreting- 11641/12850 cum and 1701m out of 2036m erection completed. Power House: Excavation completed. Concreting 3980/11225cum. Tail race Channel (2 Nos.): Excavation & lining completed. E&M Works: 75% supply completed.

19	Thottiyar (KSEB)	40.00	Civil Works: Weir: 3590.17 cum excavation out of total 10208 cum and 5550 Cum concreting out of 10928 Cum completed. Approach Channel & Intake: Excavation-3184 cum out of 9584 cum done. Power Tunnel : Excavation completed. Power House, switchyard & allied works: 33785 cum excavation out of 43690 cum and 3676 cum concreting out of 16209 m done.
	Madhya Pradesh		
20	Maheshwar (SMHPCL)	400.00	Civil & HM Works: All major civil works completed. All 27 nos radial gates commissioned. Unit Erection: Unit-10: Initial spinning achieved on 14.10.2011. Unit-9 & 8: Ready for spinning. Unit-7: Guide apparatus trial assembly in progress. Unit-6: Erection of turbine embedded parts & foundation parts completed. Unit-5 to 1: Erection of units is in initial stages. Works suspended since Nov-11 due to cash flow problem with developer. Recently, the GoMP constituted a High-Level Task Force vide Energy Department Order dtd. 18.04.2019, under the Chairmanship of Dr. Rajan Katoch (IAS Retd.) and having Senior IAS Officers from GoMP among others as members to examine the difficulties in implementation of the project and suggest the way forward. In the first meeting of the Task Force held on 25.05.2019, the Chairman of the Task Force directed the Promoter and Lenders to engage in discussions to reach an understanding on the way forward. Pursuant to the directions of the Task Force, a Memorandum of Understanding (MoU) has been executed on 22.07.2019 between the Entegra Limited (Promoter), Power Finance Corporation (Lead Lender) and SMHPCL. As agreed in the MoU, new Management nominated by the Promoter has taken over charge of SMHPCL, in August 2019.
	Maharashtra		
21	Koyna Left Bank (WRD,MAH)	80.00	Civil Works: Excavation of intake structure 4781 cum out of 14105 cum and lining 2485 cum out of 3381 cum completed. Excavation of Switchyard completed. Excavation of Approach tunnel & Ventilation tunnel is in progress. Tail surge shaft : Excavation in soft strata completed. Excavation for inclined / vertical / lateral shafts in hard rock 6448 / 9223 cum completed. TRT : 364 / 24003 cum excavation completed. Machine Hall : Underground Excavation is under progress. 22600 cum excavation out of 55050 cum completed. E&M works: The contract for details engineering manufacturing supply, supervision erection, testing commissioning and putting into commercial use of pump turbine, generator motor and associated equipments is signed with M/s IVRCL Ltd., Pune on 16.12.2010. Further TG set has been ordered. EOT Crane :- Works awarded to M/s Pedvak Cranes Private Limited Hyderabad on 12.04.2013.

	Punjab		
22	**Shahpurkandi (PSPCL/ Irrigation Deptt., Pb.)**	**206.00**	**Main Dam: 13.55 lacs cum Excavation out of 18.40 lacs cum and 3.25 lacs cum concreting out of 11.05 lacs cum completed.** **Hydel Channel: Excavation / concreting is in advance stage of completion.** **Works of Dam stopped since 29.08.2014 due to inter-state dispute between states of J&K & Punjab on sharing of waters of river Ravi & tariff. An agreement was signed on 8.9.2018 between Chief Secretary, Govt. of Jammu & Kashmir and Chief Secretary, Govt. of Punjab. The Punjab Cabinet ratified the above agreement. Zero date of the project was 1st November, 2018.**
	Sikkim		
23	**Teesta St. VI NHPC**	**500.00**	**Barrage and Desilting: Excavation completed & concreting 98% of 380003 cum completed.** **HRT: Heading excavation 10650m and benching excavation 4270 m out of total 27505 m completed. Overt lining 1550 m completed.** **Surge Tank: Excavation completed & concreting under progress.** **Pressure Shaft: Underground excavation of 4 no. pressure shaft completed, lining of one no. pressure shaft completed, balance lining under progress.** **HM works: 2 nos. radial gates erection in bay 1&2 completed. Erection of 1st stage embedded parts of radial gates in bay 3&4 under progress.** **Power House: Excavation completed & conc. 21945 / 44578 cum completed. Concreting to Draft Tube Liners for all the 4 nos. Units completed. Erection of spiral casing of Unit #1 completed.** **Transformer Cavern: Excavation completed & concreting 2539/7101 cum completed.** **TRT: Excavation & Lining almost completed.**
24	**Bhasmey (Gati Infrastructure)**	**51.00**	**Project is in initial stage of construction. River diversion achieved.** **Barrage: 61555cum/194600cum excavation completed.** **HRT: 1670m/4460m excavation completed.** **PH: 136105 cum/185937cum excavation completed.** **Surge Shaft : 8567cum / 22000cum Surface excavation completed.**
25	**Rangit-IV (JAL Power)**	**120.00**	**Dam & Intake works: Excavation 409184 / 492775 cum completed and concreting 61045 cum out of 173229 cum completed. Excavation of road diversion tunnel has been completed.** **HRT: Excavation in progress and 3794 m out of 6488 m completed.** **Surge Shaft: Excavation has been completed.** **Pressure Shaft: Excavation of Horizontal Pressure Shaft completed. Vertical Pressure Shaft 60.5 m out of 84.7m completed.** **Power House: Excavation in Power House completed. Concreting 8565 cum out of 19900 cum completed.** **Desilting chamber: Excavation 2143 m out of 3360 m completed.** **In the Joint Lenders Forum meet held in PFC on 5th April, 18, Lenders decided to file application in NCLAT and the same has been filed on 24th April, 18. Last hearing of NCLT held on 29.03.2019 and order pronounced on 9.04.2019. As per the order IRP has been appointed.** **NHPC Ltd. submitted EOI on dated 08.07.2019 and was shortlisted under final list of Prospective Resolution Applicants on dated 23.08.2019. The Resolution Plan submitted by NHPC on 04.12.2019.**

26	Rangit-II (Sikkim Hydro)	66.00	EPC contract awarded to M/s Coastal in February, 2012. Diversion Tunnel: River diversion through diversion tunnel has been achieved. Dam : Excavation 53100cum out of 85000cum completed. HRT: Excavation 623m out of 4745m completed. Surge Shaft: Excavation completed. Concreting 37/1667 cum done. Pressure shaft: Excavation of pressure shaft I – 25m out of 128m and pressure shaft II – 154m out of 377m completed Power House: Excavation of surface power house is being taken up.
27	Rongnichu (Madhya Bharat)	96.00	The civil works have been re-awarded to M/s Moshvaraya Infrastructure Ltd. and E&M works to M/s Litosroj Power, Slovania & CG Electric system, Hungary. Barrage: Excavation completed & 71300 out of 71700 cum concreting completed. HRT: Excavation completed and concreting 8217cum out of 12600cum completed. Surge shaft: Excavation & Concreting completed. Pressure Shaft: 175m out of 1426.50m of steel lining completed. Civil works of VPS completed. Power House: Excavation completed. 15482cum out of 24644 cum Concreting has been completed. E&M works: EOT Crane works completed Unit #1 & #2 : Erection works are in progress.
28	Panan (Himagiri)	300.00	Civil works awarded on 22.02.2014. Infrastructural works and geological investigations are in progress. NBWL clearance obtained in December, 2015. However, there is a case challenging the Eco-Sensitive zone notification of MoEF & Climate Change in NGT. The case is disposed on 21.8.2017. The developer applied for issuance of clearance from Forest, Environment & Wild Life Management Dept., Govt. of Sikkim.
	Tamil Nadu		
29	Kundah Pumped Storage Phase-I,II&III)	500.00	Civil & HM Works: LOI issued to M/s Patel Engg. Ltd. for Package-I & M/s Kundah PSP Consortium for Package-II on 15-02-2018. Excavation of balance MAT, balance CCVT, Adits to TRT, TRSS, Power House top/bottom, Pressure Shaft bottom have been completed. HRT portal: Benching under progress. Power House: Slashing of PH & transformer cavern completed & benching is in progress. Pressure Shaft: Excavation in Horizontal & inclined position are under progress. TRT: Excavation under progress. Head Race Surge Shaft:- Excavation under progress. E&M works: works awarded to M/s. Megha Engg. & Infrastructure Ltd. on 28.11.2019.

	Uttarakhand		
30	Lata Tapovan (NTPC)	171.00	Infrastructure works are almost completed. Main works stalled due to stay by Hon'ble Supreme Court. EPC contract for Civil & HM works awarded to M/s L&T on 17-08-2012. E&M package awarded to M/s BHEL on 07.12.12.
31	Tapovan Vishnugad (NTPC)	520.00	Barrage: Excavation Completed and Concreting 126313 cum out of 129358 cum completed. HRT: Excavation of 3.52km out of 4.95km by DBM & 5.47km out of 8.27km by TBM completed. 7.10km concrete lining out of 12.09km completed PH Cavern: Excavation and concreting completed. Desilting Chamber & Intake: Excavation completed. TRT: Excavation completed. Surge shaft: Excavation & Lining completed. Penstock: Excavation and Lining completed. E&M works: Pit liner erection on all 4 units completed. Turbine housing erection of all 4 units completed. Erection of EOT crane in BVC & service bay completed. Unit #1 & #2: Boxed up. Unit #3: Turbine erection completed. Unit #4: Turbine erection in progress. Critical : HRT
32	Tehri PSS (THDC)	1000.00	Upstream (Tehri Dam) and Downstream (Koteshwar Dam), intake and Head Race Tunnels (2 Nos.) already completed alongwith Tehri Stage-I works. Surge Shafts Upstream (2 nos- 140m).: Excavation, Mucking & Rock bolt, Lattice Girder Support work in Progress. Surge Shafts Downstream (2 Nos): Excavation, Mucking & Rock Bolt, Lattice Girder Support work in progress. Butterfly Valve Chamber (BVC 78x10x26m): Excavation of 7th & 8th bench is under progress. Cumulative benching excavation is 10541 cum (63%). Penstock Assembly Chamber (PAC): Crown slashing with steel ribs completed. Excavation of 3rd bench including stabilization work is in progress. Power House: Excavation completed. TRT-3(1151 RM): Excavation in Heading 1005 RM, Benching 624 RM, Invert Lining-150m, Overt Lining 130m completed TRT-4 (1255 RM): Excavation in Heading-967 RM, Benching- 920 RM, Invert Lining-354m & Overt Lining: 244m completed. E&M Works: Manufacturing & supplies are in progress.
33	Vishnugad Pipalkoti (THDC)	444.00	River diverted on 02.04.2018. Work on construction of coffer dam is in progress. Development for TBM platform excavation 95% has been completed. Main Access Tunnel (MAT) 413.50m: Excavation completed upto 397.50m. HRT (13400m): 686m completed by DBM. Construction of Adits and infrastructure works are in progress Desilting Chambers (3 No. X 390m) : Crown Slashing completed in DC #2 & DC #3 and Benching is under progress in DC #1, DC #2 and DC#3. Upstream Surge Shaft: 102 RM out of 325.5 RM excavation from bottom adit to Upstream Surge Shaft has been completed. Downstream Surge Shaft : 337.17 RM out of 352 RM excavation from adit to Downstream Surge Tank bottom has been completed.

34	Naitwar Mori (SJVNL)	60.00	River Diverted on 31.01.2019 Desilting Tank: Excavation: 1,27,950cum out of 1,35,000cum completed. Barrage: 1,23,910 cum out of 1,28,000 cum excavation completed. HRT: Excavation 2604m out of 4317m completed. Power House & Transformer Hall: 15400cum out of 45,000 cum excavation completed. TRT: 49m out of 174m completed. HM works : LoA issued to M/s GMW Private Ltd. on 18.04.18. E&M works : Works awarded to M/s. Voith Hydro Pvt. Ltd. On 11.06.2018.
35	Vyasi (UJVNL)	120.00	Civil Works: Dam : Excavation completed. 3.22 Lakh cum out of 3.6 lakh cum of Concreting completed. Diversion Channel : Completed. Head Race Tunnel (2.7 Km): Excavation of HRT completed. 2632m Overt Lining and 2544m Invert Lining out of 2655m has been done. Pressure Shaft: 4939cum out of 5000cum Excavation completed. Surge Shaft : Excavation completed. Concreting-2118cum out of 6626cum completed. Power House: 2,58,500 cum out of 270,000cum Excavation completed. 14498 cum out of 17,800 cum Concreting of Sub structure completed. Erection of Draft Tube in both the units completed.
36	Phata Byung (LANCO)	76.00	Dam concreting: 17800/18000 cum concreting completed. P.H.: Excavation completed & Concreting in progress. HRT: Excavation almost completed. 1400 m Lining has been completed. Excavation and lining of Intake-I & Intake-II completed. Pressure shaft: Excavation completed & lining is in progress. TRT: Excacation 178/235m completed. E&M Works: Pit liner erection of units completed. EOT Crane installed and Commissioned. Ferrule Fabrication work is in progress.
37	Singoli Bhatwari (L&T)	99.00	Dam & Dykes/Barrage: Excavation almost completed and concreting 66169 out of 70220 cum completed. HRT: Excavation completed Overt Concrete Lining 11127m out of 11257m completed. Invert Lining: 11127 m out of 11257m completed. Pressure Shaft:: Excavation completed. Power House: Excavation completed & concreting 29365cum out of 29959cum completed. Surge Tank: Excavation completed. 4113.93cum out of 5349cum concreting completed. E&M Works: Boxing up of Unit#1 & Unit#3 completed & Boxing up of Unit#2 is in progress.
	West Bengal		
38	Rammam-III (NTPC)	120.00	First stage river diversion done on 23.03.2016. First phase Barrage excavation completed and Raft concreting in progress. Intake structure 1 & 2: Excavation completed, SFT excavation 20% completed. HRT excavation 11% completed. Excavation of Desilting chamber completed. Surge Shaft: Excavation 72% completed. Pressure Shaft: Excavation 32% completed Power House: Excavation 94% completed. TRC: Excavation 84% and concreting 95% completed Switchyard : Excavation and filling completed
	Grand Total	12973.50	

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4272
ANSWERED ON 19.03.2020

CHARGING INFRASTRUCTURE

4272. SHRI RANJEETSINGH HINDURAO NAIK NIMBALKAR:

Will the Minister of POWER
be pleased to state:

(a) whether the Government has formulated any plan to roll out charging infrastructure across the country for electric vehicles;

(b) if so, the details thereof and if not, the reasons for the delay; and

(c) the steps taken by the Government for promoting vehicles among the people as much as possible to reduce air pollution?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : Yes, Sir, following actions have been taken to facilitate installation of charging infrastructure for electric vehicles:

(i) No license requirement for charging of Electric Vehicles: Ministry of Power on 13.04.2018 has issued clarification on Charging Infrastructure for Electric Vehicles with reference to the provisions of the Electricity Act, 2003 that no license will be required for setting up charging stations.

(ii) Charging Infrastructure for Electric Vehicles – Revised Guidelines and Standards: The Government of India have, after extensive consultations with State Governments, different departments/agencies of Central Government and the stakeholders issued "Charging Infrastructure for Electric Vehicles – Guidelines and Standards" dated 14.12.2018, which was further revised on 01.10.2019 to roll out EV Public Charging Infrastructure as national priority.

(iii) Grid Connectivity and Safety regulations: Central Electricity Authority (CEA) has issued amendments to following regulations of CEA:

1. Central Electricity Authority (Technical Standards for Connectivity to the Distributed Generation Resources) Amendment Regulations, 2019.

.....2.

2. **Central Electricity Authority (Measures relating to Safety and Electric Supply) Amendment Regulations, 2019.**

(iv) Ministry of Housing and Urban Affairs (MoHUA) has issued following amendments to building by-laws and Urban and Regional Development Plan Formulation for facilitation of Charging Infrastructure for Electric Vehicles:

a. Amendments in Model Building Bye-Laws (MBBL – 2016) for Electric Vehicle Charging Infrastructure.

b. Amendments in Urban and Regional Development Plans Formulation and Implementation Guidelines (URDPFI – 2014) for Electric Vehicle Charging Infrastructure.

(v) EESL and NTPC have installed Public Charging Stations (PCS) at various locations. EESL has installed 68 PCS while NTPC has installed 72 PCS in various cities across the country.

(c) : Government is providing incentives to the consumers for adoption of Electric Vehicles (EVs). Some of the incentives are as follows:

(i) The Department of Heavy Industry (DHI), Government of India has launched the National Electric Mobility Mission Plan (NEMMP) 2020 which provides for the vision and roadmap for the faster adoption of electric vehicles and their manufacturing in the country. This plan has been designed to enhance national fuel security, to provide affordable and environmentally friendly transportation and to enable the Indian automotive industry to achieve global manufacturing leadership.

(ii) Under Phase-I of Faster Adoption and Manufacturing of (Hybrid &) Electric Vehicles in India (FAME-India) Scheme, the Department of Heavy Industry sanctioned about 500 Charging Stations/ Infrastructure for about Rs. 43 Crore (approx.) in cities like Bangalore, Chandigarh, Jaipur and NCR of Delhi.

(iii) Phase-II of FAME-India Scheme will mainly focus on supporting electrification of public & shared transportation, and aims to support through incentives about 7000 e-Buses, 5 lakh e-3 Wheelers, 55000 e-4 Wheeler Passenger Cars and 10 lakh e-2 Wheelers. In addition, creation of charging infrastructure will be also supported to address range anxiety among users of electric vehicles. The scheme provides for INR 1000 Crores for installation of Charging Infrastructure for Electric Vehicles for year 2019-22. Under Phase-II of Fame India Scheme, Department of Heavy Industry has sanctioned 2,636 EV Charging Stations amounting to Rs 500 Crore (Approx.) in 62 cities across 24 States/UTs till date.

(iv) Recent initiatives taken by the Government to promote Electric Vehicles:

- ✓ **GST on EVs has been reduced from 12% to 5%**
- ✓ **Income tax rebate of up to INR 1.5 lakhs on interest payable on loans for purchase of EVs**
- ✓ **Customs duty exemptions on parts exclusively used in EVs (e-drive assembly, on-board charger, e-compressor, and charging gun)**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4273
ANSWERED ON 19.03.2020

POWER PROJECTS IN TAMIL NADU

4273. SHRI GNANATHIRAVIAM S.:

Will the Minister of POWER
be pleased to state:

(a) the details of the power projects along with their capacities undertaken by the Government in Tamil Nadu;

(b) the status of the proposed Green Power Corridors in Tamil Nadu; and

(c) the status and implementation of the inter-State transmission scheme in Tamil Nadu?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : Presently, power projects with a total capacity of 11385 MW are under construction in the state of Tamil Nadu. The details of the same are given at Annexure-I.

(b) : The status of existing/under implementation Green Energy Corridors (GEC) projects for Transmission Lines and Substations in Tamil Nadu are given at Annexure-II and Annexure-III respectively. Further, to achieve the target of integration of 175 GW Renewable Energy (RE) capacity by 2020-22, a potential RE capacity of 3 GW has been identified in Tamil Nadu. For evacuation of identified potential RE Power from Tamil Nadu, transmission schemes as under have been identified:

(i) **Karur Wind Energy Zone (WEZ):**

- **Establishment of 2500MVA, 400/230Kv Karur Pooling Station**
- **LILO of Pugalur - Pugalur HVDC kVD/C (Quad) line at Karur Pooling Station.**

.....2.

(ii) **Tuticorin/ Tirunelveli Wind Energy Zone (WEZ):**

- **Augmentation of 500MVA, 400/230 kv ICT at Tuticorin-II substation.**
- **Upgradation of Tuticorin- Dharampuri (Salem New) – Madhugiri-Narendra 765kV transmission corridor (presently operating at 400kV its rated voltage level.**

In addition, Kadaladi-Kamudhi 400kV intra-state DC transmission line has been approved in Tamil Nadu by the Standing Committee on Power System Planning Southern Region.

(c) : The status of Inter-State Transmission Schemes under implementation in Tamil Nadu is given at Annexure-IV.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PART (a) OF UNSTARRED QUESTION NO. 4273 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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List of Under Construction Power Projects in Tamil Nadu

Sl. No.	Project Name	Fuel	Unit No	Capacity (MW)
CENTRAL SECTOR				
1	Neyveli New TPP	Thermal	U-2	500
2	PFBR (Kalpakakam) / Bhavini	Nuclear	U-1	500
3	Kudankulam Nuclear Power Project	Nuclear	U-3 to U-5	3000
STATE SECTOR				
1	Ennore exp. SCTPP	Thermal	U-1	660
2	Ennore SCTPP	Thermal	U-1	660
3	Ennore SCTPP	Thermal	U-2	660
4	North Chennai TPP St-III	Thermal	U-1	800
5	Uppur SCTPP	Thermal	U-1	800
6	Uppur SCTPP	Thermal	U-2	800
7	Udangudi STPP Stage I	Thermal	U-1	660
8	Udangudi STPP Stage I	Thermal	U-2	660
9	Kundah Pumped Storage (phase-I, II & III)	Hydro	U-1 to U-4	500
PRIVATE SECTOR				
1	Tuticorin TPP St-IV	Thermal	U-1	525
2	Tuticorin STPS	Thermal	U-1	660

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ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 4273 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Status of existing/under implementation GEC projects in Tamil Nadu (Transmission Lines)

Green Energy Corridor - I

Sl No	Name of Transmission Lines	Executing Agency	Ckts [Single Circuit (S/C) & Double Circuit (D/C)]	Voltage Level (kV)	Total Length (cKm)	Progress Status of Transmission lines as on 29.02.2020				Target Date		Remarks
						Total Locations (Nos)	Foundation completed (Nos)	Tower Erected (Nos)	Stringing completed (CKm)	Schedule	Revised/ Anticipated	
1	Kayathar - Thennampatty	TANTRANSCO	D/C	400	48	76	76	76	48	Jul-18	May-19	Commissioned 05/2019.
2	Arasur (PGCIL) - Gobi S/S	TANTRANSCO	S/C	230	48	192	192	192	48	Sep-16	May-18	Commissioned 31/12/2018
3	Kayathar - Tuticorin S/S	TANTRANSCO	D/C	230	113	230	230	230	113	DEC-16	Jul-18	Commissioned 20.8.2018
4	Veeranam - Kodikurichi	TANTRANSCO	S/C	220	24	86	86	86	24	SEP-16	Mar-18	Commissioned 20.02.2018
5	Veeranam - Tirunelveli	TANTRANSCO	S/C on D/C	230	31	11	11	11	31	Sep-16	Dec-17	Commissioned 22.12.2017
6	Cuddalore - Veerapuram (SP Koil) Via Neyveli.	TANTRANSCO	D/C	230	348	706	699	699	339	SEP-16	Mar-20	Under construction
7	Ingur - Arasur (PGCIL)	TANTRANSCO	S/C	230	54	228	226	218	32	SEP-16	Mar-20	Under construction
8	Rasipalayam - Dharmapuri (Palavadi)	TANTRANSCO	D/C	400	390	564	560	554	250	Jun-17	Dec-20	Under construction
Green Energy Corridor - I ISTS												
1	Tirunelveli PS/Tuticorin - II - Tuitcorin PS (Quad) line-1	PGCIL	D/C	400	24	33	33	33	24	APR-17	Mar-18	Commissioned 03/2018
2	Tirunelveli PS/Tuticorin - II - Tuitcorin PS (Quad) line-2	PGCIL	D/C	400	24	34	34	34	24	APR-17	Mar-18	Commissioned 03/2018

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ANNEXURE-III

ANNEXURE REFERRED TO IN REPLY TO PART (b) OF UNSTARRED QUESTION NO. 4273 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Status of existing/under implemantation GEC projects in Tamil Nadu (Substations)

GEC - I - ISTS

Sl No	Name of Sub Stations	Executing Agency	Voltage Ratio (kV/kV)	Capacity (No.x MVA)	Progress of substation				Target Date		Remarks
					Land Acquired (%)	Civil works completed (%)	Materials / Equipments Received (%)	Materials / Equipments erected (%)	Original	Revised/ Anticipated	
1	Tirunelveli Pooling Station (GIS)/ Tuticorin - II	PGCIL	400/230	2x500	100	100	100	100	MAR-18	Jun-18	Commissioned 06/18
Intrastate											
1	Thennampatty	TANTRANSCO	400/230/110	2x315+2x200	100	100	100	100	Jul-17		commissioned on 05.11.2019.
2	Sembatty (Aug.)	TANTRANSCO	230/110	3 X 160	Existing SS	100	100	100	Feb-17		commissioned on 07.07.2018,04.12.2018,22.02.2019
3	Anupankulam (Aug.)	TANTRANSCO	230/110	3 X 160	Existing SS	100	100	100	Feb-17		commissioned on 23.02.2018,11.10.2018,25.10.2019
4	Pudukottai (Aug.)	TANTRANSCO	230/110	3 X 160	Existing SS	100	100	100	Feb-17		commissioned on 25.02.2018,19.07.2018, 05.01.2019
5	Cuddalore (Aug.)	TANTRANSCO	230/110	3 X 160	Existing SS	45	40	40	Feb-17	Dec-20	Under Construction
6	Tiruvannamalai (Aug.)	TANTRANSCO	230/110	3 X 160	Existing SS	100	90	90	Feb-17	Dec'20	2 units commissioned on 14.08.2018 & 06.03.2019
7	Villupuram (Aug.)	TANTRANSCO	230/110	2 X 160	Existing SS	50	50	50	Feb-17	June'20	1 unit commissioned on 27.09.2019

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ANNEXURE-IV

ANNEXURE REFERRED TO IN REPLY TO PART (c) OF UNSTARRED QUESTION NO. 4273 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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DETAILS OF THE INTER STATE TRANSMISSION SCHEMES UNDER IMPLEMENTATION IN TAMIL NADU

1. **±800kV Raigarh-Pugalur 6000 MW HVDC System (Expected Commissioning- Bipole-I (March, 2020) & Bipole-II (May, 2020))**
   a. **±800kV Raigarh & Pugalur HVDC Stn**
   b. **± 800 kV Raigarh – Pugalur HVDC Bipole link – 3676 ckm**

2. **400kV AC System Strengthening at Pugalur end (Expected Commissioning- Progressively from March, 2020 to June, 2020)**
   a. **Pugalur HVDC – Pugalur 400kV (quad) D/c line – 58 km- (March, 2020)**
   b. **Pugalur HVDC – Arasur 400kV (quad) D/c line – 60 ckm (March, 2020)**
   c. **Pugalur HVDC – Thiruvalam 400kV (quad) D/c line – 390 km (June, 2020)**
   d. **Pugalur HVDC – Edayarpalayam 400kV (quad) D/c line – 57 km (June, 2020)**
   e. **Edayarpalayam – Udumalpet 400kV (quad) D/c line – 54 km (June, 2020)**

3. **±320kV, Pugalur- Trichur 2000 MW VSC Based HVDC System (Expected Commissioning- 1st Monopole - May, 2020 & 2nd Monopole- June, 2020)**
   a. **±320kV, VSC based HVDC terminal at Pugalur & Trichur**
   b. **VSC based HVDC link between Pugalur and North Trichur (Kerala). – 250 km**

4. **Transmission System for LTA of 314 MW for 2x500 MW Neyveli Lignite Corporation Limited TS-1 (Replacement) (NNTPS) in Neyveli (Expected Commissioning - March, 2020)**
   a. **NNTPS switchyard – Ariyalur (Villupuram) 400 kV D/c line – 74km**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4283
ANSWERED ON 19.03.2020

GROWING DEMAND OF POWER

4283. SHRI BALLI DURGA PRASAD RAO:

Will the Minister of POWER
be pleased to state:

(a) the steps the Government proposes to take to meet the growing demand for electricity as projected to triple between 2018 and 2040; and

(b) whether inefficient State Government-owned power plants, under-investment in transmission, under-priced electricity, high losses of distribution utilities, groundwater depletion apart from cheap electricity are the key challenges to India's power generation sector and if so, the steps being taken/proposed to be taken by the Government in this regard?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : As per the 19th Electric Power Survey (EPS) report brought out by Central Electricity Authority, the demand of electricity is likely to increase by 231 percent in terms of energy and 237 percent in terms of peak demand by the year 2036-37, as compared to 2018-19.

As per the National Electricity Plan (Generation) notified in 2018, the all India power generation installed capacity by the end of 2026-27 is projected to be 6,19,066 MW which includes both conventional and renewable sources. This projected installed generation capacity is expected to meet the demand projection for the year 2026-27 made by the 19th Electric Power Survey. The technology is fast changing and so is the generation mix. The optimum generation mix for 2026-27 will depend on technological and other developments, specially with regard to renewable energy and storage of electricity.

.....2.

(b) : India has moved from being an energy deficit country to power surplus country. Country has power generation installed capacity of 369 GW against the peak demand of 183 GW occurred during the current year 2019-2020 (upto February 2020). We have developed adequate transmission systems to transfer electricity across the country. Power generation sector in the country is facing challenges because of poor financial health of Discoms mainly due to higher losses of power distribution utilities. To improve financial position of Discoms, Government of India has taken various reform initiatives like UDAY (Ujjawal Discom Assurance Yojana), Integrated Power Development Scheme (IPDS) and Deen Dayal Upadhyaya Gramin Jyoti Yojana (DDUGJY).

Electricity tariff for different class of consumers is determined by the State Commissions after considering all costs including power purchase costs from state generating plants. As per provisions of section 65 of the Electricity Act, State Governments can provide subsidy to consumers on tariff determined by the State Commissions. Issue of depletion of ground water due to wasteful consumption of electricity has been recognized in the Tariff Policy issued by the Central Government. It recognizes the need for levy of reasonable user charges to the consumers. It provides that the subsidized rates of electricity should be permitted only up to a pre-identified level of consumption beyond which tariffs reflecting efficient cost of service should be charged from consumers.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4290
ANSWERED ON 19.03.2020

THERMAL POWER PLANT IN CUDDALORE

4290. SHRI T.R.V.S. RAMESH:

Will the Minister of POWER be pleased to state:

(a) whether the Government has any plan to open Thermal Power Plant in Cuddalore region and if so, the details thereof;

(b) the total budget allocated for opening of Thermal Power Plant in Cuddalore region; and

(c) the timeline fixed by the Government for opening of Thermal Power Plant for the said area?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (c) : After the enactment of Electricity Act 2003, generation of electricity has been delicensed and Techno- Economic Clearance from Central Electricity Authority (CEA) is not required for Thermal Power Projects.

The following project of Neyveli Lignite Corporation Limited (NLCIL) has been granted Environmental Clearance in Cuddalore.

Sl. No.	Name of Project	Capacity (MW)	Developer	Date of Environment Clearance Granted
1.	Proposed Thermal Power Station-II (2nd expansion), Lignite based Pithead Supercritical Project at villages Mudhanai, Kunakurichi, Uthangal, Tehsil Vridhachalam, District-Cuddalore, Tamil Nadu	2x660	NLC India Ltd.	29.10.2018

The estimated project cost for Thermal Power Station-II (2nd Expansion) Project is Rs.8733.49 Crore.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4309
ANSWERED ON 19.03.2020

EXISTING POWER GENERATION

4309. DR. NISHIKANT DUBEY:

Will the Minister of POWER be pleased to state:

(a) whether the Government has formulated any comprehensive scheme to enhance the existing power generation;

(b) if so, the details thereof; and

(c) if not, the reasons therefor?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (c) : At present the installed generation capacity is about 369 Giga Watt (GW). This is more than adequate to meet the maximum electricity demand in the country of about 184 GW. To enhance generation capacity to meet the growing demand of power in the country, the following measures have been taken by Government of India to increase power production:

- **(i) Thermal and hydro power plants are at various stages of construction in the country;**
- **(ii) 1,700 MW of nuclear power projects are in an advanced stage of planning; and**
- **(iii) The Government has a target of 1,75,000 MW installed capacity from renewable sources, including solar, wind, biomass and small hydro; out of which 86,759 MW have been installed and 33,720 MW are under installation.**

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4310
ANSWERED ON 19.03.2020

LOSS DURING POWER TRANSMISSION

4310. SHRI G.S. BASAVARAJ:

Will the Minister of POWER
be pleased to state:

(a) whether independent statistical analytics firm based in US (Energy Information Administration)has found that India suffers from one of the highest levels of power transmission and distribution losses globally;

(b) whether according to EIA findings India's I&D losses equal 20% of the generated amount which is more than twice the global average and nearly three times as much as the US; and

(c) the solutions the Government proposes to take to tackle the energy crisis?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : US (Energy Information Administration) is a US Government agency, and specific information regarding their statistical analysis of Indian energy sector is not available. However, as per information available from International Energy Agency (IEA), the transmission and distribution (T&D) losses for calendar year 2016 in United States (US) was 5.81% while the world average was 8.64%. As per information made available by UDAY States, the Aggregate Technical &Commercial (AT&C) losses of the Distribution Utilities in India in the year 2018-19 was 18.19%.

(c) : Electricity is a concurrent subject and distribution of electricity falls under the purview of the respective State Government / State Power Utility. It is the responsibility of distribution licensees to take necessary steps for reducing the AT&C losses in their system. However, Government of India is assisting states/ utilities to achieve this objective under various schemes, which include Integrated Power Development Scheme (IPDS), Deen Dayal Upadhyaya Gram Jyoti Yojana (DDUGJY) and Ujwal Discom Assurance Yojana (UDAY), to enable States to improve their Distribution infrastructure and systems so that AT&C losses are reduced. Under IPDS/DDUGJY, technical loss reduction measures such as creation /augmentation of sub-transmission & distribution infrastructure; metering of distribution transformers/feeders/ consumers; underground (UG) cabling; aerial bunched (AB) cables; and, IT enablement of distribution infrastructure have been envisaged.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4318
ANSWERED ON 19.03.2020

ELECTRIFICATION OF VILLAGES

†4318. SHRI ANURAG SHARMA:

Will the Minister of POWER
be pleased to state:

(a) whether all the villages in Indian territory including UTs have been electrified and if so, the details thereof;

(b) the time by which pre-paid model is likely to be expanded in Uttar Pradesh;

(c) whether any proposal to restart Saubhagya Scheme is under consideration of the Government;

(d) the qualitative outcome of the modern measures being taken to increase accountability and transparency and to reduce loss of power along with the amendments being carried out in this regard;

(e) whether power connection is cut in case ledger positive is not done despite adoption of modern system of submitting electricity bill online in Uttar Pradesh; and

(f) if so, the directions to be given to the said State in this regard?

A N S W E R

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

(SHRI R.K. SINGH)

(a) : As reported by the States, all the inhabited census villages across the country stand electrified as on 28.04.2018.

(b) : As reported by Government of Uttar Pradesh, so far about 13,000 pre-paid smart meters have been installed in the State and they propose to cover all consumers in the next three years.

(c) : There is no such proposal under consideration.

(d) : It has been reported by the Government of Uttar Pradesh that accountability matrix have been introduced for senior staff which is based on on-line monitoring parameters. Feeder level managers have been nominated for high loss feeders for monitoring the losses. Aerial Bunch Cables are being installed in place of open conductors to prevent theft. Armoured Service cable has been mandated for all new connections.

(e) & (f) : According to Government of Uttar Pradesh, the posting of money receipt is done on-line at the very instant a payment is received. Therefore, disconnection of such cases is not carried out. Even where the line man is carrying a disconnection list of previous day, a consumer will not be disconnected on showing the proof of payment.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4325
ANSWERED ON 19.03.2020

HYDRO ELECTRIC POWER PROJECTS

†4325. SHRIMATI REKHA VERMA:

Will the Minister of POWER be pleased to state:

(a) the details of the proposed hydro-electric power projects to enhance the production of power in Uttar Pradesh and Uttarakhand; and

(b) the amount of funds proposed to be spent in the installation of these hydro-electric power projects?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : Four Hydro Electric Projects (HEPs) in Uttarakhand with an aggregate installed capacity of 1067 MW have been concurred by the Central Electricity Authority (CEA) for construction. The details of these HEPs alongwith their estimated cost are summarized at Annexure-I. Apart from these, 8 HEPs with an aggregate installed capacity of 2490 MW are under construction in Uttarakhand. Details of these HEPs with the estimated cost are at Annexure-II.

At present, there is no Hydro Electric Project proposed for construction in Uttar Pradesh.

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4325 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Hydro Electric Projects in Uttarakhand concurred by CEA

Sl. No	Scheme / Executing Agency	Installed Capacity (MW)	Estimated Cost (₹ crores) PL	Remarks
1.	Kotlibhel Stage-IA, NHPC	195	1095.77 (12/05)	EC accorded on 9.05.07. FC-I accorded on 13.10.11 The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
2.	Kotlibhel Stage –IB, NHPC	320	1806.43 (12/05)	EC accorded earlier on 14.08.07 is withdrawn on 15.09.10. MoEF&CC declined FC-I on 7.07.11. The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
3.	Alaknanda, GMR (Badrinath) HPG Ltd.	300	1415.96	EC accorded on 12.3.08, FC-I accorded on 8.11.11. FC-II accorded on 09.11.2012. The project is included in the list of 24 projects under review by Hon'ble Supreme Court.
4.	Devsari, SJVN Limited	252	1558.84 (06/10)	EC was recommended on 27.03.2018. FC-I accorded on 26.02.18. The Developer has informed that the DPR of the project is under revision considering e-flows notified vide Notification No. 4009 dated 09.10.2018.
	Total	1067	5877.00	

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ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4325 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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List of under construction Hydro Electric Projects (above 25 MW)

(As on 29.02.2020)

Sl. No.	Scheme / Executing Agency	State	Installed Capacity (MW)	Cost (in Crore) (Price Level)
1	Tapovan Vishnugad / NTPC	Uttarakhand	520	2978.48 (03/2004)
2	Lata Tapovan /NTPC*	Uttarakhand	171	1527.00 (07/2012)
3	Tehri PSS / THDC	Uttarakhand	1000	1657.60 (12/2005)
4	Vishnugad Pipalkoti / THDC	Uttarakhand	444	2491.58 (03/2008)
5	Naitwar Mori / SJVNL	Uttarakhand	60	648.33 (10/2016)
6	Vyasi / UJVNL	Uttarakhand	120	936.23 (02/2010)
7	Phata Byung / M/s. LANCO	Uttarakhand	76	520.00 (2007)
8	Singoli Bhatwari / L&T Uttaranchal Hydro Power Limited	Uttarakhand	99	666.47 (2008)
		TOTAL	2490	11425.69

* Stalled due to stay by Hon'ble Supreme Court.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4333
ANSWERED ON 19.03.2020

ELECTRICITY IN UTTAR PRADESH

†4333. SHRI RAJESH VERMA:

Will the Minister of POWER be pleased to state:

(a) the district-wise details of number of villages or houses in Uttar Pradesh connected/yet to be connected with electricity line; and

(b) the details of average number of houses for which electricity is provided in these villages?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : As reported by the State of Uttar Pradesh, all the inhabited census villages in the State stood electrified in October, 2017.

Further, State of Uttar Pradesh, reported electrification of all 79,80,568 willing households, on Pradhan Mantri Sahaj Bijli Har Ghar Yojana (Saubhagya) portal, as on 31.03.2019. The district-wise household electrified in Uttar Pradesh since launch of Saubhagya is given at Annexure. Subsequently, the State of Uttar Pradesh reported 12,00,003 households which were un-willing earlier but later willing to get electricity connection. Out of these un-electrified households; 6,17,649 households have been electrified up to 28.02.2020.

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ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4333 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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District-wise Households Electrified in Uttar Pradesh Under Saubhagya

Source: Saubhagya Portal

Sl. No.	District	Households Electrified under Saubhagya
1	Lucknow	95801
2	Deoria	160634
3	Ghaziabad	20429
4	Gorakhpur	220984
5	Varanasi	125380
6	Allahabad	189562
7	Agra	66261
8	Saharanpur	115706
9	Meerut	56776
10	Jaunpur	204482
11	Azamgarh	179851
12	Bareilly	136750
13	Aligarh	116897
14	Fatehpur	144821
15	Bulandshahar	135881
16	Moradabad	130484
17	Muzaffarnagar	67687
18	Bijnor	114379
19	Sitapur	205334
20	Kheri	141143
21	Pratapgarh	131670
22	Kushinagar	179254
23	Unnao	225645
24	Hardoi	215616
25	Ghazipur	141070
26	Rae Bareli	90357
27	Mahrajganj	143604
28	Bahraich	214472
29	Ballia	138067
30	Siddharthnagar	126101
31	Basti	130364
32	Shahjahanpur	145246
33	Sultanpur	116136
34	Barabanki	120565
35	Firozabad	79014
36	Mathura	83798
37	Faizabad	102487
38	Chandauli	81047
39	Gautam Buddha Nagar	23850
40	Mirzapur	131526
41	Sonbhadra	168897
42	Budaun	100475
43	Mau	87848
44	Rampur	110536

.....2.

45	Gonda	158833
46	Ambedkar Nagar	57550
47	Pilibhit	76100
48	Jyotiba Phule Nagar	83850
49	Balrampur	86036
50	Jhansi	56621
51	Mahamaya Nagar	54550
52	Sambhal	101048
53	Farrukhabad	93425
54	Baghpat	24251
55	Banda	108132
56	Jalaun	92992
57	Mainpuri	84383
58	Sant Kabir Nagar	95592
59	Auraiya	77369
60	Amethi	64092
61	Shamli	28564
62	Kannauj	86274
63	Kanpur Dehat	93269
64	Sant Ravidas Nagar	71777
65	Hapur	35598
66	Kanpur Nagar	73819
67	Etawah	53826
68	Etah	69973
69	Hamirpur	64549
70	Kanshiram Nagar	56224
71	Chitrakoot	89636
72	Shrawasti	54621
73	Kaushambi	64452
74	Lalitpur	63501
75	Mahoba	42774
Total		79,80,568

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4336
ANSWERED ON 19.03.2020

STEPS TO PREVENT NPAs IN POWER SECTOR

4336. SHRI RAJIV PRATAP RUDY:

Will the Minister of POWER be pleased to state:

(a) whether the Government has taken steps to prevent Non-Performing Assets (NPAs) in the Power sector and ensure completion of ongoing projects on time and if so, the details thereof;

(b) the details of the number of firms that have initiated insolvency proceedings in the Power sector, year-wise, in the last 10 years and the current status of these proceedings;

(c) the details of the risk exposure to the Power sector by various banks in the country, bank-wise; and

(d) details of the current quantum of NPAs/debt in the Power sector in the country, particularly in the State-owned power companies?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (d) : Department of Financial Services on 22.03.2017 had provided a list of 34 coal based Thermal Power Projects, mostly private, totaling to 40,130 MW which were considered 'Stressed'.

A High Level Empowered Committee (HLEC) was constituted by Government of India in July, 2018 which gave its recommendations in November, 2018. In the report, factors like coal supply issues, slow growth in power demand, delayed payments by Discoms, Banks/ Financial Institutions related issues, aggressive tariffs quoted by bidders in competitive bidding process, legal issues related to auctioned coal mines, regulatory & contractual disputes, inability of promoters to infuse equity, tardy implementation and other operational issues were identified as cause of stress in coal based power plants. Out of 34 stressed projects, 14 projects with capacity of 16,450 MW have already been resolved and 14 projects with capacity of 17,320 MW having debt of Rs 91,773 Crore are likely to be resolved under National Company Law Tribunal (NCLT) or outside. The remaining 6 projects with capacity of 6,360 MW are unlikely to be resolved and are heading towards liquidation, having a debt of Rs 26,806 Crore.

.....2.

The following Steps have been taken by the Government to resolve the stress in thermal power sector:

(i) Introduction of Transparent Linkage policy: On 22.05.2017, Government introduced SHAKTI Policy for grant of linkage to power sector. Linkages granted under SHAKTI Policy:

(a) Shakti Policy Para B(i): Linkage granted to 23 nos. Thermal Power Projects (TPPs) totaling 25,060 MW under Central/State Sector category.

(b) Shakti Policy Para B(ii): Coal linkages have been allotted under 1st round of B(ii) of Shakti (IPP Projects having PPA but no linkage) for 9045 MW capacity (32.68 MT) and 2nd round of B(ii) for 877.4 MW capacity (3.34 MT).

(c) Shakti Policy Para B(iii): Bidding held from 5th to 7th February, 2020. A total capacity of 3775 MW (Total 5995 MW) which did not have PPAs have secured linkage for 6.49 MT.

(d) Shakti Policy Para B(iv): Coal linkages granted to the State of Gujarat for 4,000 MW, to the State of UP for 1,600 MW and to the State of MP for 2640 MW power to be raised through tariff based competitive bidding based on the above linkage.

(e) Under B(v), aggregator (PFC) has been allotted Coal linkage (10 MT) for aggregating demand for tariff based bidding.

(f) Shakti Policy Para B(viii)(a): Methodology issued by MoP. Guidelines issued by CEA. Applications received from 14 nos. of bidders with plant capacity of 9,813 MW and 8145 MWs without PPAs.

(ii) Pilot project for procurement of 2500 MW power: In order to address the problem of lack of Power Purchase Agreements (PPAs) in the country, the Ministry of Power had notified a scheme for procurement of 2500 MW on competitive basis for a period of 3 years from the generators with commissioned projects having untied capacity.

(a) 1st Round (2500 MW): Letter of Award (LOA) was issued to all the successful bidders (1900 MW) - PPA signed.

(b) 2nd Round (2500 MW): Bid Security for 21 bidders for a total capacity of 6000 MW was received. Bids opened on 07.02.2020. 12 bidders were successful. Final tariff received is 3.26 per unit.

(iii) Payment Security Mechanism: Ministry issued an order on 28.06.2019 and subsequent corrigendum thereon 17.07.2019. NLDC & RLDC have been directed to despatch power only after it is intimated by the Generating Company and /Distribution Companies that a Letter of Credit (LC) for the desired quantum of power has been opened. This has ensured timely payments by Discoms to the generators.

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4340
ANSWERED ON 19.03.2020

POWER PROJECTS

4340. SHRI VASANTHAKUMAR H.:

Will the Minister of POWER be pleased to state:

(a) whether the Ministry has unveiled the list of ongoing/upcoming power projects across the country for thermal/nuclear/solar/hydro-power, State/UT-wise and if so, the details thereof;

(b) the details regarding its commissioning of each of such projects across the country;

(c) the funds allocation, project-wise, across the country; and

(d) the details about withdrawn projects State/UT-wise particularly for Tamil Nadu?

A N S W E R

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

(SHRI R.K. SINGH)

(a) to (d) : As per Electricity Act 2003, generation is a de-licensed activity. Investment in the setting up of power projects is made by the concerned developers. Therefore, no funds are sanctioned / allocated by the Government of India in this regard, except contribution in equity of the Central Public Sector Units (CPSUs) for setting up of such projects on a case-to-case basis.

The details of ongoing thermal, hydro and nuclear power projects State/UT-wise across the country are given in Annexure-I, Annexure-II, Annexure-III respectively. The State/UT-wise details of installed capacity of solar power are given at Annexure-IV.

No specific information is available regarding withdrawn projects across the country. However, as per the information provided by Government of Tamil Nadu cancellation notices have been issued for the following two projects in Tamil Nadu:

(i) **M/s Dynamize Solar (P) Ltd, Ramnad (5 MW)- Cancellation notice issued on 18.02.2019**

(ii) **M/s Uthayasooriyan, Tuticorin (1 MW) - Cancellation notice issued on 31.10.2019**

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ANNEXURE-I

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4340 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Details of Under Construction Thermal Power Projects with sanctioned costs in the Country

Sl. No.	Project Name	Unit No	State/ UT	Cap. (MW)	Anticipated Commissioning Schedule	Anticipated Cost (cr.)
CENTRAL SECTOR						
1	Barh STPP-I	U-1	Bihar	660	Apr-20	21312.1
		U-2		660	Apr-21	
		U-3		660	May-22	
2	Nabi Nagar TPP	U-4	Bihar	250	Apr-20	9996.59
3	New Nabi Nagar TPP	U-2	Bihar	660	Apr-20	17304.3
		U-3		660	Mar-22	
4	North Karanpura	U-1	Jharkhand	660	Oct-20	15164.05
		U-2		660	Oct-21	
		U-3		660	Mar-22	
5	Gadarwara STPP	U-2	M.P.	800	Jan-20	12865.92
6	Khargone STPP	U-2	M.P.	660	Mar-20	11148.86
7	Darlipalli STPP	U-2	Odisha	800	Jun-20	13740.53
8	Neyveli New TPP	U-2	Tamil Nadu	500	Mar-20	5907.11
9	Telangana STPP St- I	U-1	Telangana	800	Jul-20	11811
		U-2		800	Jul-21	
10	Lara STPP	U-2	Chhatisgarh	800	Jan-20	12739.82
11	Meja STPP	U-2	U.P.	660	Jun-20	12176.28
12	Tanda TPP St II	U-6	U.P.	660	Apr-20	10016.1
13	Ghatampur TPP	U-1	U.P.	660	Feb-22	17237.8
		U-2		660	Feb-23	
		U-3		660	Aug-23	
14	Barsingar TPP ext	U-1	Rajasthan	250	Apr-23	2112.59
15	Bithnok TPP	U-1	Rajasthan	250	Sep-23	2196.3
16	Patratu STPP	U-1	Jharkhand	800	May-22	17113
		U-2		800	Sep-22	
		U-3		800	Dec-22	
17	Rourkela PP-II Expansion	U-1	Odisha	250	Apr-22	1885.13
18	Khurja SCTPP	U-1	U.P	660	Apr-23	11089.42
		U-2		660	Sep-23	
19	Buxar TPP	U-1	Bihar	660	Jul-23	10439.09
		U-2		660	Jan-24	
STATE SECTOR						
1	Namrup CCGT	ST	Assam	36.15	Jan-20	693.73
2	Dr.Narla Tata Rao TPS St-V	U-1	A.P.	800	Feb-20	5286.54
3	Sri Damodaran Sanjeevaiah TPP St-II	U-1	A.P.	800	Sep-20	6034
4	Suratgarh SCTPP	U-7	Rajasthan	660	Jan-20	9161.35
		U-8		660	Sep-20	
5	Bhadradri TPP	U-1	Telangana	270	Mar-20	8536.98
		U-2		270	Sep-20	
		U-3		270	Mar-21	
		U-4		270	Mar-22	
6	Ennore exp. SCTPP (Lanco)	U-1	Tamil Nadu	660	Jun-23	5421.38

7	Ennore SCTPP	U-1	Tamil Nadu	660	May-22	9800
		U-2		660	Jul-22	
8	North Chennai TPP St-III	U-1	Tamil Nadu	800	Sep-20	6376
9	Uppur Super Critical TPP	U-1	Tamil Nadu	800	Apr-22	12778
		U-2		800	Aug-22	
10	Harduaganj TPS Exp-II	U-1	U.P.	660	Apr-20	5500.98
11	Yelahanka CCPP	GT+ST	Karnataka	370	Jan-20	1571.18
12	Jawaharpur STPP	U-1	U.P.	660	Dec-21	10566.27
		U-2		660	Apr-22	
13	Obra-C STPP	U-1	U.P.	660	Mar-22	10416
		U-2		660	Apr-22	
14	Yadadri TPS	U-1	Telangana	800	Sep-22	29965
		U-2		800	Oct-22	
		U-3		800	Mar-23	
		U-4		800	Mar-23	
		U-5		800	Sep-23	
15	Panki TPS Extn.	U-1	U.P.	660	Sep-23	NA
16	Udangudi STPP Stage I	U-1	Tamil Nadu	660	Apr-22	NA
		U-2		660	Jul-22	NA
17	Bhusawal TPS	U-6	Maharashtra	660	Nov-22	NA
PRIVATE SECTOR						
1	Bhavanapadu TPP Ph-I	U-1	A.P.	660	-	9343.15
		U-2		660	-	
2	Thamminapatnam TPP stage-II	U-3	A.P.	350	Dec-20	5005
		U-4		350	Mar-21	
3	Akaltara TPP(Naiyara)	U-4	Chhattisgarh	600	Apr-23	27080
		U-5		600	-	
		U-6		600	-	
4	Siriya TPP (Jas Infra. TPP)	U-1	Chhattisgarh	660	-	11120
		U-2		660	-	
		U-3		660	-	
		U-4		660	-	
5	Binjkote TPP	U-3	Chhattisgarh	300	-	7940
		U-4		300	-	
6	Lanco Amarkantak TPP-II	U-3	Chhattisgarh	660	-	10815.24
		U-4		660	-	
7	Singhitarai TPP	U-1	Chhattisgarh	600	-	8443.79
		U-2		600	-	
8	Salora TPP	U-2	Chhattisgarh	135	-	1458.44
9	Deveri (Visa) TPP	U-1	Chhattisgarh	600	-	3930
10	Matrishri Usha TPP Ph-I	U-1	Jharkhand	270	-	2900
		U-2		270	-	
11	Matrishri Usha TPP Ph-II	U-3	Jharkhand	270	-	3182
		U-4		270	-	
12	Tori TPP Ph-I	U-1	Jharkhand	600	-	5700
		U-2		600	-	
13	Tori TPP Ph-II	U-3	Jharkhand	600	-	2500
14	Amravati TPP Ph-II	U-1	Maharashtra	270	-	6646
		U-2		270	-	
		U-3		270	-	
		U-4		270	-	
		U-5		270	-	

15	Lanco Vidarbha TPP	U-1	Maharashtra	660	-	10433
		U-2		660	-	
16	Nasik TPP Ph-II	U-1	Maharashtra	270	-	6789
		U-2		270	-	
		U-3		270	-	
		U-4		270	-	
		U-5		270	-	
17	Bijora Ghanmukh TPP	U-1	Maharashtra	300	-	3450
		U-2		300	-	
18	Shirpur TPP	U-2	Maharashtra	150	Jul-23	2413
19	Gorgi TPP	U-1	M.P.	660	-	3941
20	Ind Barath TPP (Odisha)	U-2	Odisha	350	Jun-23	4001
21	KVK Nilanchal TPP	U-1	Odisha	350	-	6000
		U-2		350	-	
		U-3		350	-	
22	Lanco Babandh TPP	U-1	Odisha	660	-	10430
		U-2		660	-	
23	Malibrahmani TPP	U-1	Odisha	525	-	6330
		U-2		525	-	
24	Tuticorin TPP (Ind- Barath)	U-1	Tamil Nadu	660	-	3595
25	Tuticorin TPP St-IV	U-1	Tamil Nadu	525	Sep-21	3514
26	Hiranmaye Energy Ltd (India Power corporation (Haldia) TPP	U-3	West Bengal	150	Sep-23	3307

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ANNEXURE-II

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4340 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Under construction Hydro Electric Projects (above 25 MW) along with commissioning schedule and project cost details

Sl. No.	Name of Project	Unit No.	State/UT	Capacity (MW)	Anticipated Commissioning Schedule	Anticipated Cost (cr.)
Central Sector						
1	Pakal Dul 4x250= 1000 MW	U-1 to U-4	Jammu & Kashmir	1000	2024-25	8112.12
2	Kiru 4x156=624 MW	U-1 to U-4	Jammu & Kashmir	624	2023-24	4287.59
3	Parbati St. II 4x200= 800 MW	U-1 to U-4	Himachal Pradesh	800	2021-22	3919.59
4	Subansiri Lower 8x250= 2000 MW	U-1 to U-8	Arunachal Pradesh	2000	2023-24	6285
5	Teesta- VI 4x125= 500 MW	U-1 to U-4	Sikkim	500	2023-24	5748.04
6	Tapovan Vishnugad 4x130=520 MW	U-1 to U-4	Uttarakhand	520	2021-22	2978.48
7	Rammam III 3x40=120 MW	U-1 to U-3	West Bengal	120	2022-23	1381.84
8	Lata Tapovan 3x57= 171 MW	U-1 to U-3	Uttarakhand	171	2023-24 *	1527
9	Tehri PSS 4x250= 1000 MW	U-1 to U-4	Uttarakhand	1000	2021-23	1657.6
10	Vishnugad Pipalkoti 4x111= 444 MW	U-1 to U-4	Uttarakhand	444	2022-23	2491.58
11	Kameng 4x150= 600 MW (2 units taken in operation)	U-3 to U-4	Arunachal Pradesh	300	2019-21	2496.9
12	Naitwar Mori 2x30=60 MW	U-1 to U-2	Uttarakhand	60	2021-22	648.33
13	Ratle # 4x205+1x30= 850 MW	U-1 to U-5	Jammu & Kashmir	850	2023-24 *	5517.02
State Sector						
14	Parnai 3x12.5= 37.5 MW	U-1 to U-3	J&K	37.5	2021-22	640.86
15	Lower Kalnai 2x24= 48 MW	U-1 to U-2	J&K	48	2023-24 *	577
16	Shahpurkandi 3x33+3x33+1x8= 206 MW	U-1 to U-7	Punjab	206	2022-23	1835.5
17	Uhl-III 3x33.33= 100 MW	U-1 to U-3	Himachal Pradesh	100	2019-20	431.56
18	Sawra Kuddu 3x37= 111 MW	U-1 to U-3	Himachal Pradesh	111	2020-21	558.53
19	Shongtong Karcham 3x150= 450 MW	U-1 to U-3	Himachal Pradesh	450	2023-25	2807.83
20	Vyasi 2X60=120 MW	U- 1 & U- 2	Uttarakhand	120	2020-21	936.23
21	Koyna Left Bank PSS 2x40= 80 MW	U-1 to U-2	Maharashtra	80	2022-23 *	245.02

22	Polavaram 12x80= 960 MW	U-1 to U-12	Andhra Pradesh	960	2021-23	3013.68
23	Pallivasal 2x30= 60 MW	U-1 to U-2	Kerala	60	2021-22	283.19
24	Thottiyar 1x30 + 1x10= 40 MW	U-1 to U-2	Kerala	40	2020-21	145.47
25	Kundah Pumped Storage (Phase-I, Phase-II & Phase-III) 4x125= 500 MW	U-1 to U-4	Tamil Nadu	500	2022-23	488
Private Sector						
26	Sorang 2x50= 100 MW	U-1 & U-2	Himachal Pradesh	100	2020-21	586
27	Tangnu Romai- I 2x22= 44 MW	U-1 to U-2	Himachal Pradesh	44	2022-23 *	255
28	Bajoli Holi 3x60= 180 MW	U-1 to U-3	Himachal Pradesh	180	2020-21	1696.93
29	Tidong-I 2x50= 100 MW	U-1 to U-2	Himachal Pradesh	100	2021-22	940
30	Phata Byung 2x38= 76 MW	U-1 to U-2	Uttarakhand	76	2021-22*	520
31	Singoli Bhatwari 3x33= 99 MW	U-1 to U-3	Uttarakhand	99	2020-21	666.47
32	Maheshwar ## 10x40= 400 MW	U-1 to U-10	Madhya Pradesh	400	2020-22 *	1569.27
33	Rangit-IV 3x40= 120 MW	U-1 to U-3	Sikkim	120	2022-23 *	726.16
34	Bhasmey 2x25.5= 51 MW	U-1 to U-2	Sikkim	51	2022-23 *	408.5
35	Rangit-II 2x33= 66 MW	U-1 to U-2	Sikkim	66	2022-23 *	496.44
36	Rongnichu 2x48= 96 MW	U-1 to U-2	Sikkim	96	2020-21	491.32
37	Panan 4x75= 300 MW	U-1 to U-4	Sikkim	300	2023-24 *	1833.05
38	Kutehr 3x80= 240 MW	U-1 to U-3	Himachal Pradesh	240	2024-25	1798.13

*** Subject to re-start of works**

CIRS:-Central India River System; EFR:-Eastern Flowing Rivers; WFR:-Western Flowing Rivers.

 # Govt. of J&K, PDD have terminated PPA on 09.02.2017 and directed JKSPDC to take over the project. MoU between NHPC (51% share) & JKSPDC (49% share) signed for implementation of project in JV mode on 03.02.2019.

PFC as lead lender have acquired majority equity i.e. 51% in the SMHPCL w.e.f. 1st June, 2016. Matter Sub-judice.

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ANNEXURE-III

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4340 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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List of under construction nuclear power plants

Sl. No.	Project Name	State	Capacity (MW)	Anticipated Commissioning Schedule	Anticipated Cost (cr.)
1	Kakrapar Atomic Power Plant	Gujarat	1400	NA	NA
2	Rajasthan Atomic Power Station	Rajasthan	1400	NA	NA
3	PFBR (Kalpakkam)	Tamil Nadu	500	NA	NA
4	Kudankulam Nuclear Power Project (U3&4)	Tamil Nadu	2000	NA	NA
5	GHAVP(U1)	Haryana	700	NA	NA
6	Kudankulam Nuclear Power Project (U5)	Tamil Nadu	1000	NA	NA

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ANNEXURE-IV

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) TO (d) OF UNSTARRED QUESTION NO. 4340 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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State-wise installed capacity of Solar Power
(as on 29.02.2020)

S. No.	STATES / UTs	Solar Power Installed Capacity (MW)
1	Andhra Pradesh	3559.02
2	Arunachal Pradesh	5.61
3	Assam	41.23
4	Bihar	151.57
5	Chhattisgarh	231.35
6	Goa	4.78
7	Gujarat	2886.16
8	Haryana	252.14
9	Himachal Pradesh	32.93
10	Jammu & Kashmir	19.30
11	Jharkhand	38.40
12	Karnataka	7277.93
13	Kerala	142.23
14	Madhya Pradesh	2258.46
15	Maharashtra	1801.80
16	Manipur	5.16
17	Meghalaya	0.12
18	Mizoram	1.52
19	Nagaland	1.00
20	Odisha	397.84
21	Punjab	947.10
22	Rajasthan	5035.08
23	Sikkim	0.07
24	Tamil Nadu	3915.88
25	Telangana	3620.75
26	Tripura	9.41
27	Uttar Pradesh	1095.10
28	Uttarakhand	315.90
29	West Bengal	114.46
30	Andaman & Nicobar	12.19
31	Chandigarh	36.99
32	Dadra & Nagar Haveli	5.46
33	Daman & Diu	17.31
34	Delhi	165.16
35	Lakshadweep	0.75
36	Pondicherry	5.51

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GOVERNMENT OF INDIA
MINISTRY OF POWER

LOK SABHA
UNSTARRED QUESTION NO.4361
ANSWERED ON 19.03.2020

HYDRO ELECTRIC PROJECTS IN KERALA

4361. ADV. DEAN KURIAKOSE:

Will the Minister of POWER
be pleased to state:

(a) whether the Government is aware that there is requirement/need of renovation/modernization of hydroelectric projects in Kerala especially after the recent flood;

(b) if so, the details thereof;

(c) whether the Kerala State Electricity Board (KSEB)has sought more funds from the Central Electricity Regulatory Commission to cover the increased maintenance cost of the hydro power plants; and

(d) If so, the details thereof?

A N S W E R

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

(SHRI R.K. SINGH)

(a) & (b) : After the floods that occurred in the years 2018 & 2019 in Kerala rehabilitation works were carried out for the restoration of the 19 Hydropower Plants, the details of which are given in the Annexure. Further, Renovation / Modernization works in 4 Hydro Electric Projects namely Sholayar (3x18 MW), Idukki St-I (3x130 MW), Kuttiyadi (3x25 MW) & Idukki St-II (3x130 WM) were taken up before the floods and, at present, these are in various stages of completion.

(c) & (d) : The Kerala State Electricity Board (KSEB) has not sought any funds from the Central Electricity Regulatory Commission (CERC) to cover the increased operation & maintenance cost of the Hydro Power Plants.

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ANNEXURE

ANNEXURE REFERRED TO IN REPLY TO PARTS (a) & (b) OF UNSTARRED QUESTION NO. 4361 ANSWERED IN THE LOK SABHA ON 19.03.2020.

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Details of Generating Stations of Kerala State Electricity Board Limited where restoration works were carried out after Flood in the year 2018 & 2019

Sl No.	Name of power station	Installed capacity in MW
1.	Idamalayar HEP	2x37.5 = 75
2.	Lower Periyar Power House HEP	3x60 = 180
3.	Pallivasal HEP	3x5+3x7.5=37.5
4.	Urumi II SHEP	3x0.8= 2.4
5.	Pozhithode SHEP	3x1.6=4.8
6.	PLBE SHEP	1x16= 16
7.	Poringalkuthu	4x9 = 36
8.	Panniar	2x16.2=32.4
9.	Malampuzha	1x2.5=2.5
10.	Peechi	1x1.25=1.25
11.	Vilangad	3x2.5=7.5
12.	Chimmony	1x2.5=2.5
13.	Adyanpara	2x1.5+0.5=3.5
14.	Madupatty	1x2=2
15.	Chembukadavu - 2	3x1.25=3.75
16.	Ranni-Perinadu	2x2=4
17.	Barapole	3x5=15
18.	Vellathooval*	2x1.8=3.6
19.	Perunthenaruvi	2x3=6

* Restoration work is going on.

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