

STU Five Year Transmission Plan for the Year 2014-15 to 2018-19



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Nomenclatures for substation

Sr. No	Substations	Nomenclature used in plan	
1	400 kV Akola (existing)	400 kV Akola-I	
2	765 kV Akola (proposed)	765 kV Akola-II	
3	400 kV Aurangabad (existing at Waluj)	400 kV Aurangabad-I	
4	400 kV Aurangabad(proposed)	400 kV Aurangabad-II (Tapti Tanda)	
5	765 kV Aurangabad (proposed)	765 kV Aurangabad-III (Ektuni)	
6	400 kV Bhusawal (existing)	400 kV Bhusawal-I (Khadka)	
7	400 kV Bhusawal (proposed)	400 kV Bhusawal-II	
8	400 kV Dhule (existing)	400 kV Dhule-I	
9	400 kV Karad (existing)	400 kV Karad-I	
10	400 kV Koradi (existing)	400 kV Koradi-I	
11	400 kV Koradi (proposed)	400 kV Koradi-II (New Generation)	
12	765 kV Koradi (proposed)	765 kV Koradi-III (MEGPTCL)	
13	400 kV Lonikand (existing)	400 kV Lonikand-I	
14	400 kV Lonikand (proposed)	400 kV Lonikand-II	
15	400 kV Padghe (existing)	400 kV Padghe-I	
16	400 kV Padghe (proposed at Kudus)	400 kV Padghe-II (Kudus)	

INTRODUCTION

"We as a **State Transmission Utility (STU)** dedicate ourselves to plan, develop, operate and maintain the State Transmission System to facilitate transmission of electricity from its source to load centres in a secure, reliable and economic manner for the best services to the consumers."

Methodology of Planning

The UHV & EHV network of 765 kV, 400 kV, 220 kV, 132 kV, 110/100 KV & HVDC networks are modelled in detailed along with their respective transformer capacities considering Western regional Network.

The load flow & Short Circuit studies are carried out on International Software by critical analysis of the network in terms of voltage profile and network loading. The simulation is carried out by matching the power flows at all UHV/EHV voltage levels along with voltage profile at various buses.

The STU Five year transmission plan is formulated taking in to account previous years load growth of distribution and upcoming load centers SEZ's, MIDC, New Industrial corridors, agriculture & commercil complex etc.

Load Growth is considered as per the District wise Load forecasting by distribution licencies.

The following guidelines given by CEA and State Grid Code have been incorporated while conducting the simulation studies which are reproduced below.

Scope

The Central Electricity Authority is responsible for preparation of perspective generation and transmission plans and for coordinating the activities of planning agencies as provided under Section 73(a) of the Electricity Act 2003. The Central Transmission Utility (CTU) is responsible for development of an efficient and coordinated inter-state transmission system (ISTS). Similarly, the State Transmission Utility (STU) is responsible for development of an efficient and coordinated intra-state transmission system (ISTS).

Planning Philosophy

- The transmission system forms a vital link in the electricity supply chain. Transmission system provides 'service' of inter-connection between the source (generator) and consumption (load centers) of electricity.
- The transmission system is generally augmented to cater to the long term requirements posted by eligible entities.

- The long term applicants seeking transmission service are expected to pose their end-toend requirements well in advance to the CTU/STUs so as to make-available the requisite transmission capacity, and minimise situations of congestion and standard assets.
- The system parameters and loading of system elements shall remain within prescribed limits.
- Critical loads such as railways, metro rail, airports, refineries, underground mines, steel plants, smelter plants, etc. shall plan their interconnection with the grid, with 100% redundancy and as far as possible from two different sources of supply, in coordination with the concerned STU.
- The system shall be planned to operate within permissible limits both under normal as well as after more probable credible contingency. However, the system may experience extreme contingencies which are rare, and the system may not be planned for such rare contingencies. To ensure security of the grid, the extreme/rare but credible contingencies should be identified from time to time & suitable defence mechanism, such as load shedding, generation rescheduling, islanding, system protection schemes, etc. may be worked out to mitigate their adverse impact.

VOLTAGES (kV rms)				
Nominal IX	Normal I	Rating kV		
nommai k v	Maximum kV	Minimum kV		
765	800	728		
400	420	380		
220	245	198		
132	145	122		
110	123	99		
66	72.5	60		

Steady State Voltage Limits

Temporary over voltage limits due to sudden load rejection:

- 800 kV system 1.4 p.u. peak phase to neutral (653 kV = 1 p.u.)
- 420 kV system 1.5 p.u. peak phase to neutral (343 kV = 1 p.u.)

- 245 kV system 1.8 p.u. peak phase to neutral (200 kV = 1 p.u.)
- 145 kV system 1.8 p.u. peak phase to neutral (118 kV = 1 p.u.)
- 123 kV system 1.8 p.u. peak phase to neutral (100 kV = 1 p.u.)
- 72 kV system 1.9 p.u. peak phase to neutral (59 kV = 1 p.u.)

Switching over Voltage Limits

- 800 kV system 1.9 p.u. peak phase to neutral (653 kV = 1 p.u.)
- 420 kV system 2.5 p.u. peak phase to neutral (343 kV = 1 p.u.)

Reliability Criteria

Criteria for system with no contingency ('N-0')

A. The system shall be tested for all the load-generation scenarios as given below

Load Generation scenarios

The load-generation scenarios shall be worked out so as to reflect in a pragmatic manner the typical daily and seasonal variations in load demand and generation availability.

> Load Demands

The system peak demands (state-wise, regional and national) shall be based on the latest Electric Power Survey (EPS) report of CEA. However, the same may be moderated based on actual load growth of past three years.

The sub-station wise annual load data, both MW and MVAr shall be provided by the State Transmission Utility.

From practical considerations the load variations over the year shall be considered as under:

- Annual Peak Load
- Seasonal Variation in Peak Loads for winter, summer and Monsoon.
- Seasonal Light Load (for Light Load scenario, motor load of pumped storage plants shall be considered)
- **B.** For the planning purpose all the equipments shall remain within their normal thermal loadings and voltage ratings.
- C. The angular separation between adjacent buses shall not exceed 30 degree.

Criteria for single contingency ('N-1') Steady – State

- All the equipments in the transmission system shall remain within their normal thermal and voltage ratings after a disturbance involving loss of any one of the following elements (called single contingency or 'N-1' condition), but without load shedding / rescheduling of generation :
- Outage on 765/400/220/132/110/100 kV single circuit
- > Outage on 400 kV single circuit with fixed series capacitor (FSC)
- Outage of an Inter Connecting Transformer (ICT)
- Outage of one pole of HVDC bi-pole
- The angular separation between adjacent buses under ('N-1') conditions shall not exceed 30 degree.

For the transmission system connecting generators or a group of generators radially with the grid, the following criteria shall apply:

- The radial system shall meet 'N-1'reliability criteria for both the steady-state as well as transient state.
- For subsequent contingency i.e. 'N-1-1' only temporary fault shall be considered for the radial system.

If the 'N-1-1' contingency is of permanent nature or any disturbance/contingency causes disconnection of such generator/group of generators from the main grid, the remaining main grid shall asymptotically reach to a new steady – state without losing synchronism after loss of generation. In this new state the system parameters shall not exceed emergency limits, however, there may be requirement of load shedding/ rescheduling of generation so as to bring system parameters within normal limits

System Studies for transmission Planning

The system shall be planned based on one or more of the following power system studies, as per requirements:

- Power Flow Studies
- Short Circuit Studies
- Stability Studies (including transient stability and voltage stability)
 EMTP studies (for switching / dynamic over-voltages, insulation coordination, etc)

Short Circuit Studies

- i. The short circit studies shall be carried out using the classical method with pre-fault voltages and subtransient reactance (X"d) of the synchronous machines.
- ii. MVA of all the generating units in a plant may be considered for determining maximum short-circuit level at various buses in system. This short-circuit level may be considered for substation planning.
- iii. The maximum short-circuit level on any new substation bus should not exceed 80% of the rated short circuit capacity of the substation. The 20% margin is intended to take care of the increase in short-circuit levels as the system grows. The rated breaking capability of switchgear at different voltage levels may be taken as given below:

Voltage Level	Rated Breaking Capacity
132 kV	25 kA / 31.5 kA
220 kV	31.5 kA / 40 kA
400 kV	50 kA / 63 kA
765 kV	40 kA / 50 kA

Voltage	Level (KV)	765	500	400	220	132	110	100	66	Total
	MSETCL	-	2	26	193	282	34	37	34	608
	R-Infra	-	0	0	8	0	0	0	0	8
	TPC-T	-	0	0	7	0	13	0	0	20
	JPTL	-	-	-	-	-	-	-	-	0
	APML-T	-	-	-	-	-	-	-	-	0
No. of	APTCL	-	-	-	-	-	-	-	-	0
EHV S/s	SPTCL	-	-	-	-	-	-	-	-	0
	MEGPTCL	2	-	-	-	-	-	-	-	2
	STU (InSTU)	2	2	26	208	282	47	37	34	638
	PGCIL	2	0	5	0	0	0	0	0	7
	Total	4	2	31	208	282	47	37	34	645
	MSETCL	-	3582	22280	45733	25554.5	2699	2610	1144	103602.5
	R-Infra	-	0	0	2975	0	0	0	0	2975
	TPC-T	-	0	0	4630	0	4242	0	0	8872
	JPTL	-	-	-	-	-	-	-	-	-
Trans	APML-T	-	-	-	-	-	-	-	-	-
Capa-	APTCL	-	-	-	-	-	-	-	-	-
City (MVA)	SPTCL	-	-	-	-	-	-	-	-	-
	MEGPTCL	3000	-	-	-	-	-	-	-	3000
	STU (InSTU)	3000	3582	22280	53338	25554.5	6941	2610	1144	118449.5
	PGCIL	6000	0	3965	0	0	0	0	0	9965
	Total	9000	3582	26245	53338	25554.5	6941	2610	1144	128414.5
	MSETCL	-	1504	7468.3 6	14587. 64	13312.8 4	1738.25	697.15	3270	42578.24
	R-Infra	-	0	0	539	0	0	0	0	539
	TPC-T	-	0	0	403	0	734	0	0	1137
	JPTL	-	0	328.5	0	0	0	0	0	328.5
FHV	APML-T	-	0	438	0	0	0	0	0	438
Lines	APTCL	-	-	14	-	-	-	-	-	14
Ckt (km)	SPTCL	-	-	57	-	-	-	-	-	57
	MEGPTCL	360		61.6						421.6
	STU (InSTU)	360	1504	8367.4 6	15529. 64	13312.8 4	2472.25	697.15	3270	45531.34
	PGCIL	528.6	-	3128.1	0	0	0	0	0	3656.7
	Total	888.6	1504	11495. 56	15529. 64	13312.8 4	2472.25	697.15	3270	49170.04

Table – 1.1 - The Existing network of Transmission System of Maharashtra as on 31-03-2014

	Pe	eak Demand (M	Availability	Peak Shortfall (-)	
Year	State	MSEDCL	Mumbai	(MW)	/Surplus(+) (MW)
2007-08	18390	10078	2444	12522	-5868
2008-09	18072	10747	2442	13189	-4883
2009-10	19120	12414	2538	14952	-4168
2010-11	19764	13078	2714	15792	-3972
2011-12	20907	12721	2771	15492	-5415
2012-13	18268	14095	3007	17102	-1166
2013-14	19635	17158	3217	17980	-1655

Table – 1.2-Previous	Power	scenarios	in	Maharashtra
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Table- 1.3 MSPGCL Installed Capacity of Other minor Hydro Generations as on 31.03.2014

Sr. No.	Power Stations	Unit	Capacity (MW)
1	Bhatghar(IP)	1x16	16
2	Bhatsa (DW)	1x15	15
3	Bhira Tail Race (PP)	2x40	80
4	Dhom (IP)	2x1	2
5	Dimbhe (IP)	1x5	5
6	Dhudhganga (IP)	2x12	24
7	Eldari (IP)	3x7.5	22.5
8	Kanher (IP)	1x4	4
9	Manikdoh (IP)	1x6	6
10	Paithan PSS (DW)	1x12	12
11	Panshet (DW)	1x8	8
12	Pawna (IP)	1x10	10
13	Radhanagari (IP)	4x1.2	4.8
14	Surya (DW & IP)	1x6	6
15	Terwanmedhe(IP)	1x0.2	0.2
16	Tillari (PP)	1x66	66
17	Ujani PSS (DW&IP)	1x12	12
18	Vaitrna (DW &PP)	1x60	60
19	Vaitarna Dam Toe (DW)	1x1.5	1.5
20	Varasgaon (DW)	1x8	8
21	Veer (IP)	2x4.5	9
22	Warna (IP)	2x8	16
	TOTAL 388		

Sr. No.	Installed Capacity	MW (Ex-Bus)
1	Nasik (3x210 MW)	567
2	Koradi (2x210 + 1x200 MW)	558
3	Khaperkheda (4x210+1x500 MW)	1206
4	Parli (3x210 + 2x250 MW)	1017
5	Paras (2x250 MW)	450
6	Chandarpur $(4x210 + 3x500MW)$	2106
7	Bhusawal (2x210+2x500 MW)	1278
8	Uran (4x108 MW + 2x120(WHR) MW	605
9	Bhatghar (2x125 MW)((25 % of installed capacity)	200
10	Koyna (4x70 + 4x80+ 4x250+ 4x80 + 2x18 MW) (25 % of installed capacity)	500
11	Other minor Hydro Generations (388MW) As per Table 1.3 (25 % of installed capacity)	100
,	Total Existing MAHAGENCO Generation	8587
Consideri Non-a	ing Planned & Forced outages, Poor Coal Quality & availability of Gas, 65 % of the net generation is considered.	5582

Table – 1.4 Existing Generation by MSPGCL as on 31.03.2014

Sr. No.	Name of Applicant/ District Type of Generate		Capacity (MW)
1	M/s JSW Energy Ltd./ Ratnagiri (4 x 300 MW)		1200
2	M/s Wardha Power Company Pvt. Ltd./ Chandrapur (4 x 135 MW)		540
3	M/s Abhijit MADC Nagpur Energy Pvt.Ltd./ Nagpur (4 x 61.5 MW)		246
4	M/s Adani Power Maharashtra Ltd. (4x660 MW)		2460
5	M/s Vidarbha Industries Power Ltd. (2X300 MW)		600
6	M/s India Bulls Amaravati (2x270MW)		540
7	M/s India Bulls sinner (1x270MW)	IPP	270
8	M/s Gupta Energy Pvt. Ltd/ Chandrapur (1 x 60 MW)		60
9	Dhariwal		300
10	Sun Flag Bandhara		15
11	BILT Power Chandrapur		10
12	Gopani Chandrapur		12
13	M/s Technocraft Industries Ltd. Thane		5

Table- 1.5-Ex	isting Generation	n from IPP/CPP	Plants as on 31.03.2014
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STU FIVE YEAR TRANSMISSION PLAN FOR THE YEAR 2014-15 TO 2018-

Sr. No.	Name of Applicant/ District	Type of Generator	Capacity (MW)
14	M/s Indrajit Infrastructure Pvt.Ltd./ Wardha		80
15	INDO RAMA		82.5
16	M/s Finolex Industries Ltd./ Ratnagiri		43
17	JSW Boisar		37.6
18	Uttam Galva Steels Ltd. Ph- I/ Raigad	Coal Based	60
19	M/s RPL URJA (Division of Rasoya Protiens Ltd)./ Yavatmal	Captive	10
20	Siddhabati Ispat, Chandrapur	Siddhabati Ispat, Chandrapur	
21	Vayunandana power limited		10
22	M/s Ultra Tech Cement Ltd./ Chandrapur		84.22
23	M/s Shree Virangana Steels Pvt. Ltd. / Nagpur		22
	Total	670	7
	Considering PLF 65%	436	0

Table- 1.6- Existing Wind Generation as on 31.03.14

Sr. No.	Name of site	District	Installed Capacity (MW)
1	Dahanu	Thane	0.09
2	Deogad	Sindhudurgo	1.10
3	Vijaydurga	Siliuluuuiga	1.50
4	Chalkewadi		28.32
5	Thoseghar		37.26
6	Vankusavade	Satara	242.83
7	Matrewadi		56.55
8	Varekarwadi		19.60

Sr. No.	Name of site	District	Installed Capacity (MW)
9	Ambheri		133.93
10	Sadawaghpur	-	117.90
11	Agaswadi		173.60
12	Chavneshwar		73.60
13	Kas	-	19.80
14	Palsi	-	168.95
15	Maloshi	Satara	23.75
16	Humbarne		18.00
17	Bothe		88.90
18	Khokade	-	12.10
19	Khanapur	-	28.00
20	Ghotane	-	15.00
21	Girijashankarwadi	-	26.00
22	Vaspeth		405.40
23	Gudepachgani	-	133.46
24	Dhalgaon	-	277.50
25	Bhud		208.35
26	Mendhegiri Sangl		109.50
27	Jath	Jath	
28	Jath - 2		29.40
29	Sanmadi		25.50
30	Jadhavwadi		14.00
31	Bhendawade	Kolhapur	54.10
32	Kavadya Dongar		64.50
33	Panchpatta	A'Nagar	136.40
34	Khandke		116.80
35	Sautada	-	38.70
36	Gangadevi	Beed	73.50
37	Mirkala		24.00
38	Brahmanwel	Dhule	547.90
39	Jaibhim	Difuic	33.60
40	Chakala	Nandurbar	312.50
41	Motha	Amarawati	2.00
42	Aundhewadi	Nachik	52.40
43	Ramoshiwadi & Godhewadi	TNUSHIK	8.40
44	Andhralake	Pune	106.40
	TOTAL (MW)	4079.98	
	Considering 15% PL	612	

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)
1	M/s A.A. Energy Ltd, 101, Nikalas Tower, Central Bazar Road, Ramdaspeth, Nagpur- 440 010.	Kh. No.324, Mauza Wadsa, Desaiganj, Dist. Gadchiroli		10
2	M/s Vayunandana Power Ltd, 12-2- 460,Plot No.2, New Huda layout, Gudimalkapur, Mahadipatnam, Hyderabad-500 028.	At Village Kaneri, Dist. Gadchiroli.		12
3	M/s Greta Energy Ltd, Station Road, Brahampuri- 441206.	Mul MIDC,Tal Mul, Dist. Chandrapur	Nagpur	15
4	M/s Maharashtra Vidyut Nigam Ltd. 7th Floor,Shriram Towers, Kingsway, S.V.Patel Marg, Sadar,Nagpur	MIDC Deoli Dist. Wardha		10
5	M/s Mahatma Sugar and Power Ltd,Mangulkar Niwas, Opp. Canara Bank,Walkar Road, Mahal, Nagpur-440 002.	At Village Jamni, Tal. Seloo, Dist.Wardha.		15
6	M/s Lokmangal Sugar Ethanol & Co Generation Industries Ltd, 33/A, Sahyadri Nagar,Hotgi Road, Solapur - 413 003	Bhandarkavathe, Tal. South Solapur, Dist. Solapur.		15
7	M/s Daund Sugar Ltd, ICC Trade Tower, B-Wing 201, Senapati Bapat Road, Pune - 411 016.	Village Alegaon, Tal. Daund, Dist. Pune.		18
8	M/s Baramati Agro Ltd, Maharashtra - 413 102.	At Pimpli, Tal. Baramati, Dist. Pune.		22
9	M/s Someshwar Sahakari Sakhar Karkhana Ltd.	At Someshwarnagar, Tal. Baramati, Dist. Pune.		18
10	M/s Sidhanath Sugar Mills Pvt. Ltd	At Tirhe, Dist. Solapur		12
11	M/s Shri Vithal Sahakari Sakhar Karkhana Ltd	At Venunagar, Tal. Pandharpur, Dist. Solapur	Pune	10
12	M/s Bhairavnath Sugar Works Ltd	At Village Vihal, Tal. Karmala, Dist. Solapur.		12
13	M/s Shree Pandurang Sahakari Sakhar Karkhana Ltd.	At Shreepur, Tal. Malshiras, Dist. Solapur.		10
14	M/s Bhima Sahakari Sakhar Karkhana Ltd	At Village Takli Sikandar, Tal. Mohol; Dist. Pandharpur.		19.5
15	M/s Indreshwar Sugar Mills Ltd	Barshi, Solapur		12
16	M/s Karmayogi Shankaraoji Patil Sahakari Sakhar Karkhana Ltd	At Mahatma Phulenagar Bijwadi, Tal. Indapur		19.5
17	M/s Bhimashankar Sahakari Sakahar Karkhana Ltd	At Dattatraya Nagar, Tal. Ambegaon, Dist Pune.		19

Table- 1.7-Existing Generation from Biomass / Baggase as on 31.03.2014

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)
18	M/s Vitthal Corporation Ltd, Mahisgaon	At Mahisgaon, Tal. Mhada, Dist. Solapur.		12
19	M/s Shri Shankar Maharshi Shankarrao Mohite-Patil SSK Ltd	At Sadashivnagar, Tal. Malshiras, Dist.Solapur.		33
20	M/s Nira-Bhima Sahakari Sakhar Karkhana Ltd	At Sahajinagar (Reda), Tal. Indapur, Dist. Pune.		16
21	M/s Green Power Sugars Ltd	At Gopuj, Tal. Khatav, Dist. Pune.	Pune	16
22	M/s Matoshri Laxmi Sugar Co-generation Industries Ltd,82/93/94 Salting Nagar	At Ruddhewadi, Post, Dudhani, Tal. Akkalkot, Dist. Solapur.		16
23	M/s Solapur Bio-Energy Systems Pvt. Ltd	502, Centrium, Plot No.27, Sector-15, CBD Belapur, Navi-Mumbai-400 614		3
24	M/s Shriram Jawahar Shetkari Sahakari Sakhar Udyog	Phaltan, Tal.Satara		1.5
25	M/s Hemarus Technologies Ltd, Gatt. No.76	At Village Rajgoli (KH), Tal. Chandgad, Dist. Kolhapur.		20
26	M/s Sonhira Sahakari Sakhar Karkhana Ltd	At Mohanrao Kadam Nagar, Wangi. Tal. Kadegaon Dist. Sangli.		22
27	M/s Sadashivrao Mandlik Kagal Taluka Sahakari SSK Ltd	At Sadashivnagar Hamidwada - Kaulage, Tal.Kagal, Dist. Kolhapur.		12
28	M/s Kisanveer Satara Sahakari Sakhar Karkhana Ltd	At Kisan Veer Nagar, Tal. Wai. Dist. Satara		22
29	M/s Dudhaganga Vedganga SSK.Ltd.	At Mouninagar (Bidri) Dist. Kolhapur.	¥7 1	20
30	M/s Orient Green Power Company Ltd, No.9, Vanagaram Road, Ayanambakkam, Chennai -600 095.	At Padmashri Dr. D.Y. Patil SSK Ltd, Dnyanshanti Nagar, Tal. Gaganbawada	Karad	18.15
31	M/s Gurudatt Sugars Ltd, A/P Takaliwadi, Tal. Shirol	Village Takaliwadi, Tal. Shirol, Dist. Kolhapur.		15
32	M/s Udagiri Sugar & Power Ltd	Babaji Complex, Near Bharti Bank, Opp. S.T.Stand, Vita Bamni- Pare, Tal. Khanapur, Dist. Sangli.		14
33	M/s Kranti Sahakari Sakhar Karkhana Ltd	At Kundal, Tal. Palus, Dist. Sangli.		10.85
34	M/s Shree Chhatrapati Shahu SSK Ltd.	At Kagal, Tal. Kagal, Dist. Kolhapur.		12.5
35	M/s Kumbhi –Kasari Sahakari Sakhar Karkhana Ltd	At Kuditre, Tal. Karveer, Dist. Kolhapur.		17.5

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)
36	M/s Shri Datta Sakhar Karkhana Ltd	Kolhapur		23
37	M/s Urjankur Shree Datta Power Company Ltd.at Datta Nagar	Datta Nagar, Tal. Shirol, Dist. Kolhapur.		36
38	M/s Renuka Sugars Ltd.at Deshbakta Ratnnappanna Kumbhar Panchaganga Sahakari Sakhar Karkhana	Ganga Nagar, Dist.Ichalkarangi	Karad	30
39	M/s Kranti Sahakari Sakhar Karkhana	Kundal, Tal. Palus, Dist. Sangli.		8.85
40	M/s Yashvantrao Mohite Krishna Sahakari Sakhar Karkhana Ltd	Rehthare BK., P.O. Shivajinagar, Tal. Karad, Dist. Satara	-	16
41	M/s Shri Dnyaneshwar Sahakari Sakhar Karkhana Ltd	Dnyaneshwarnagar, P.O. Bhenda, Tal. Newasa, Dist.Ahmednagar.		12
42	M/s Shri Vasant Dada Sahakari Sakhar Karkhana	Vithewadi (Lohoner) Tal. Deola, Dist. Nasik.		17
43	M/s Kukadi Sahakari Sakhar Karkhana Ltd	Pimpalgaon Pisa, Tal. Shrigonda, Dist.Ahmednagar		12
44	M/s Ashok Sahakari Sakhar Karkhana Ltd	At Ashoknagar, P.O.Koregaon Factory, Tal. Shrirampur, Dist Ahmednagar	Nasik	15
45	M/s The Sanjivani (Takli) Sahakari Sakhar Karkhana Ltd.	Sahajanandnagar, Tal. Kopargaon, Dist. Ahmednagar.		6.6
46	M/s Gangamai Industries and Construction Ltd, 2nd Floor, Tapadia Terraces, Adalat Road, Aurangabad - 431 001.	At Najik Babhulgaon, post Rakshi, Tal. Shevgaon, Dist. Ahmednagar.	_	7.5
47	M/s Samarth Sahakari Sakhar Karkhana Ltd, Post. Ankushnagar, Tal. Ambad, Dist. Jalna.	At Ankushnagar, Tal.Ambad, Dist. Jalna.		18
48	M/s Purna Sahakari Sahkar Karkhana Ltd	At Basmatnagar Dist. Hingoli		18
49	M/s Vikas Sahakari Sakhar Karkhana Ltd	At Vaishalinagar Nivli, Tal. & Dist. latur.		18
50	M/s Bhairavnath Sugar Works Ltd,S.No.21/2, Sawant Plaza, Satara Road,Dhankawadi, Pune-43	At Bhairavnath Sugar Works Ltd, at Sonari, Tal. Paranda, Dist. Osmanabad.	Aurangabad	14.5
51	M/s Shendra Green Energy (Gaps Power & Infrastructure Pvt Ltd.)	Shendra MIDC, Aurangabad		13
52	M/s Vaidyanath Sahakari Sakhar Karkhana Ltd, Tal. Parli-Vaijanath	At Village Pangri, Tal. Parli vaijanath, Dist. Beed		21

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)		
53	M/s Manjara Shetkari SSK Ltd	At Vilasnagar, Tal. & Dist. Latur.		18		
54	M/s Jay Mahesh Sugar Industries Ltd, Off.	Pawarwadi, tal. Majalgaon, Dist. Beed.		30		
55	M/s Majalgaon Sahakari Sakhar Karkhana Ltd At Sudernagar	At Post Telgaon, Tal. Majalgaon, Dist. Beed.		22		
56	M/s Lokmangal Mauli Industries Ltd	Khed -Lohara (BK), Tal. Lohara, Dist. Osmanabad.	A	30		
57	M/s Gangakhed Sugar and Energy Pvt. Ltd. C/O Sunil Hitech Engineers Ltd,97, East High Court Road, Ramdaspeth	Gangakhed, Dist. Parbhani	Aurangabau	30		
58	M/s Shri Samrudhhi Suagar Ltd, 10 Siddhi, Keshavnagri, Shahanoorwadi, Aurangabad.	At Village Devidahagaon, Tal. Ghansavangi, dist. Jalna.		16		
59	M/s Maharashtra Shetkari Sugar Ltd, Uttamrao Nagar	At Village Saikheda, Tal. Sonpeth, dist. Parbhani		20		
Total						
	Considering	PLF 30%		295		

Table 1.8- Existing Solar Generation as on 31.03.2014

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)		
1	MAHAGENCO	Chandrapur	Nagpur	5		
2	M/s. Videocon Industries Ltd.	Warora	Nagpur	5		
3	M/s. Clover Solar Pvt. Ltd. Baramati, Pune.		Pune	2		
4	M/s. Enrich Energy Pvt. Ltd.	Mandrup, Solapur	Pune	40		
5	M/s. Welspun Energy Maharashtra Pvt. Ltd.	Mangalwedha, Solapur.	Pune	20		
6	MAHAGENCO	Shivajinagar, Sakri, Dhule	Nashik	125		
7	M/s. Firestone Trading Pvt. Ltd.	Karjat, Ahmednagar	Nashik	5		
8	M/s. Jain Irrrigation System Ltd.	Shiroli, Jalgaon MIDC, Jalgaon	Nashik	8.5		
9	9 M/s. Essel MP Energy Ltd. Kilaj, Tuljapur, Osmanabad. Aurangab		Aurangabad	20		
Total						
	Considering l	PLF 15%		35		

Sr No	Developer	Location (Village/Dist)	Zone	Capacity (MW)
1	M/s R.M Mohite Textile Ltd, R.S.347, Ambapwadi Phata, Off NH4, P.O.1 Wadgaon, Tal. Hatkanagle, Dist.Kolhapur	At Radhanagari Dam Dist. Kolhapur Karad		10
2	M/s Tembhu Power Pvt. Ltd, Krishnagaon C-7, Karad Wakhan Road, Karad Gramin, Tal. Karad, Dist. Satara.	Koregaon, Tal. Karad, Dist. Satara.	Karad	4.5
3	M/s Krishna Valley Power Private Ltd and M/s Sahyadri Renevable Energy Pvt. Ltd, at Shahapur, Dist. Thane	At Kasgaon, Tal. Shahapur, Dist. Thane.	Washi	1.5
4	M/s Sahyadri Renevable Energy Pvt. Ltd, at Shahapur, Dist. Thane, at Shahapur, Dist. Thane.	At Khutgaon, Tal. Shahapur, Dist. Thane.	Washi	1.5
5	M/s Mahati Hydro Power Projects Pvt. Ltd.32-33, Shankarshet Road,Behind S.T.Workshop, Pune	Sonwade (Chandoli), Tal. Shirala, Dist.Sangli.	Karad	4.8
6	M/s Mahalaxmi Vidyut Private Ltd, 363/11, Balaji Niwas,Deep Bangalow Chowk, Shiwaji Nagar, Pune-411 016	At Konal, Sindhudurg	Karad	10
	ΤΟΤΑ	L		32.3
	Considering	PLF 15%		4.85

Table-1.9- Existing Private Small Hydro Generation as on 31.03.2014

Table – 2.0 Available Existing Allocation of Central Sector as on 31-03-14

				MSEDCL	MSEDCL SHARE			
Sr No	Central Sector Power Station	Installed Capacity	MSEDCL firm Share	Unallocated Share + NVVNL Coal	Share (%)	Total	Ex-Bus Share	Available at MSETCL N/W
1	KSTPS (Korba)	2100.00	610.00	63.26	31.86	669.05	615.53	600.14
2	VSTPS-I (Vindhyachal)	1260.00	410.00	54.11	36.63	461.53	424.61	413.99
3	VSTPS-II (Vindhyachal)	1000.00	319.00	41.05	35.80	358.01	329.37	321.14
4	VSTPS –III (Vindhyachal)	1000.00	258.00	41.61	29.76	297.57	273.76	266.92
5	KGPS (Kawas)	656.20	204.00	0.00	31.09	204.00	199.92	194.92
6	GGPS (Gandhar)	657.39	200.00	0.00	30.42	200.00	196.00	191.10
7	SIPAT-II	1000.00	258.00	39.76	29.57	295.73	272.07	265.27

				MSEDCL		MSEDO	CL SHARI	E
Sr No	Central Sector Power Station	Installed Capacity	MSEDCL firm Share	Unallocated Share + NVVNL Coal	Share (%)	Total	Ex-Bus Share	Available at MSETCL N/W
8	KAPS (Kakrapar)	440.00	137.00	15.58	34.21	150.54	143.01	139.43
9	TAPS (Tarapur) St 3 & 4	1080.00	393.00	49.50	40.97	442.50	407.10	396.92
10	KSTPS-7 (Korba Unit-7)	500.00	108.20	27.23	27.09	135.43	124.60	121.49
11	SIPAT-I	1980.00	510.00	111.86	31.20	617.84	568.41	554.20
12	VSTPS- IV(Vindhyachal)	1000.00	270.48	56.50	32.49	324.94	298.94	291.47
13	MSTPS-I	500.00	185.24	28.25	42.49	212.47	195.47	190.58
	Total Central Sector	13173.59	3862.92	528.71		4369.62	4048.79	3947.57
10	ER-NTPC							
10.1	ER – Farrakka STPS	1600.00			0.00%	0.00		
10.2	ER – Talcher STPS	1000.00			0.00%	0.00		
10.3	ER – Kahalgaon STPS – I	840.00			0.00%	0.00		
10.4	ER – Kahalgaon STPS – II	1500.00			9.87%	148		
	NTPC ER to MSEDCL(UA)*					148	136	130.10
	Total WR+ER					4517.62	4184.95	4077.67
11	TAPS (Tarapur) St1 & 2	320.00	160.00	0.00	50.00%	160.00	152.00	152.00
12	Pench	160.00	53.00	0.00	33.33%	53.00	52.47	49.85
13	SSP	1450.00	392.00	0.00	27.00%	392.00	388.08	368.68
14	CGPL (Mundra UMPP)	4000.00	800.00	0.00	20.00%	800.00	760.00	741.00
15	RGPPL**	1967.08	1869.00	0.00	95.00%	1869.00	1831.62	1831.62
			5922.62	5537.5	5389.2			

****RGPPL** generation is not considered due to non availability of gas.

Installed Capacity	2014-15	2015-16	2016-17	2017-18	2018-19
Parli Rep.Unit 8 (1x250)	250	-	-	-	
Chandrapur Unit 8 (1x500)	500	-	-	-	
Chandrapur Unit9 (1x500)	500	-	-	-	
Koradi Unit 8 (1x660)	660	-	-	-	
Koradi Unit 9 (1x660)	660	-	-	-	
Uran B1 (1x814)	-	406*	-	-	
Uran B2 (1x406)		814*	-	-	
Koradi Unit 10 (1x660)		660		-	
Paras unit no.5				250	
Bhusaval Unit no.6(1x660)					660
Nashik unit no.6(1x660)					660
Dondaicha Unit-1(1x660)	-	-			
Dondaicha Unit-2(1x660)	-	-			
Total	2570	660	0	250	1320
Considering Planned & Forced outages, Poor Coal Quality & Non- availability of Gas, 65 % of the net generation is considered.	1670	429	0	163	858
Existing MAHAGENCO Generation	5583	7253	7692	7692	7855
Yearwise Generation Availability (Cumulative)	7253	7692	7692	7855	8713

Table – 2.1 – Proposed Year wise Generation addition by MSPGCL

*Uran generation not considered due to uncertainity in gas availability

	1	1		1	1
Sr. No.	Name of Applicant	Location of the Plant	Type of Generator	Generation Available (MW)	Connectivity
1	M/s Indiabulls Real Tech Limited (3 X 270 MW) Unit no.3,4&5	Amravati	IPP	810	 400 kV Nandgaon Peth- Akola D/C line with quad cond. LILO on Akola- Koradi-II S/C at Nandgaon Peth.
2	M/s Ideal Energy Projects Ltd.	Nagpur	IPP	270	400 kV D/C line from I plant to 400 kV Warora S/S.
3	M/s Adani Power Maharashtra Ltd. (1 x 660)	Gondia	IPP	660	765 kV 2 X S/C Line from Tiroda-Koradi- Akola-Aurangabad
4	M/s Bombay Rayon Fashions Ltd.	At Tarapur MIDC	IPP	6	33 kV lines from their plant to MSETCL 220/132/33 kV Boiser –II S/S.
5	M/s Indiabulls Power Limited (4 X 270 MW)	Sinnar	IPP	1080	400 kV Sinnar – Babhaleshwar D/C line with quad cond.
6	M/s ISMT Ltd./	Chandrapur	IPP	40	132 kV D/C line from their plant upto 220 kV Hinganghat S/S.
7	M/s Pioneer Gas Power Ltd,	Washi	IPP	388	220 kV twin conductor D/C line from their plant to 220 kV Ville- Bhagad S/S using AL 59 Conductor.
8	M/s JSW Steel Ltd.	Tarapur	Coal Based Captive	30	220 kV D/C line from Tarapur to Boiser-II.
9	M/s Prithvi Ferro Alloys (P) Ltd.	Chandrapur	Coal based Captive	18 (Phase-I)	132 kV D/C line from their plant at Mul upto 132 kV Mul S/S.
10	M/s Manikgarh Cement Unit-II	Chandrapur	Coal based Coal	40	132 kV D/C line from their plant at village Bijora upto 132 kV Umerkhed S/S.

Table -2.2- Proposed Generation Addition by IPP/CPP Plants for the year 2014-15

Sr. No.	Name of Applicant	Location of the Plant	Type of Generator	Generation Available (MW)	Connectivity
11	Uttam Galva Steels Ltd. Ph- II	Raigad	Coal based Captive	60	100 kV D/C line from Donavat to Tambati S/S
12	M/s Lloyds Metals & Engineers Ltd. (3 X 30 MW)	Chandrapur	Co- Generation (Coal based)	90	220 kV D/C line from From Plant to Matradevi.
13	M/s Shirpur Power Private Ltd. (2 X 150 MW)	Dhule.	Captive	300	220 kV lines from their plant to 220 kV Dhule- II(Dondaicha-II) S/S.
14	M/s Wardha Power Company Ltd.	Chandrapur	Coal	300	400 kV D/C line from their plant to 400 kV Warora S/S.
15	M/s Ind-barath Engineers (Maharashtra)	Nanded	Coal Based Captive	20	132 kV line from their plant upto 132 kV Mukhed S/S.
16	M/s Uttam Galva Metallics Ltd	Wardha	Coal Based Captive	18	220 KV D/C from their plant to 220 KV Bhugaon S/s
17	M/s Birla carban Ltd.	Raigad	Co- Generation (Coal based)	30	100 KV D/C line from their plant to 100 KV Patalganaga S/s
18	M/s Lloyds Metals & Engineers Ltd	Chandrapur	Co- Generation (Coal based)	30	220 KV D/C line from their plant to 220 KV Matradevi S/s
	TOTAL	1		4190	
	Considering PL	LF 65%		2724	

Existing Generation - 4360 MW Proposed Generation - 2724 MW Total Generation - 7084 MW

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village / District)	District	Evacuation Arrangement
1	M/s. Vish Wind Infrastructure LLP	100	Khandke Phase-IV, Dist. Ahmednagar & Beed.	Ahmednag ar & Beed.	 3 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C from Wind Farm S/s to 132 kV Ghodegaon S/s. 2nd ckt. Stringing of 132 kV Ghodegaon - Shevgaon SCDC.
2	M/s. Suzlon Energy Ltd.	100	Sautada, Beed		 1) 132/33 KV, 2 X 50 MVA S/S at Chikhali Wind Farm Site. 2) 132KV Line Bays at Raimoha S/S2 Nos 3) 132 KV DC line - 28KM.
3	M/s. Panama Wind Energy Pvt. Ltd.	80	Mirkala, Georai, Beed	Beed	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line from Wind Farm S/s. to 132 kV Georai S/s. 132 kV SCDC line from Georai - Pachod
4	M/s. GR Greenlife Energy Pvt. Ltd.	60	Sautada, Tal. Patoda, Dist. Beed	Beed	 1) 1 x 50 MVA, 220/33 kV T/F at 220/33 kV Patoda S/s. 2) 33 kV Feeder from Wind Mills to 220/33 kV Patoda S/s : 3 Nos
5	M/s. GR Greenlife Energy Pvt. Ltd.	40	Sautada, Tal. Patoda, Dist. Beed	Beed	33 kV Feeder from Wind Mills to 132/33 kV Kharda S/s: 2 Nos
6	M/s. Vish Wind Infrastructure LLP	200	Jeur, Dist. Beed & Ahmednagar.	Beed & Ahmednag ar.	 2 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 2) LILO of one ckt. of 220 kV Babhaleshwar - Ahmednagar D/C at Wind Farm S/s.
7	M/s. Suzlon Energy Ltd.	30	Pangam, Sakri, dhule	Dhule	33 kV Feeder from Wind Mills to 220/33 kV Valve S/s.: 2 Nos. (Already constructed.)
8	M/s. Sri Maruti Wind Park Developers.	300	Peth Shivapur, Kolhapur	Kolhapur	 3 x 100 MVA, 220/33 kV TF at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to Jath S/s.
9	M/s. Sri Maruti Wind Park Developers.	35	Peth Shivapur, Kolhapur	Kolhapur	33 KV 1 No D/C & 1 No. S/C line from Wind Farm S/S to MSETCL's 220/33 KV Mudhaltitta.

Table -	-2.3-	Proposed	Wind	Generation	Addition	2014-2019
		1				

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
10	M/s. Sri Maruti Wind Park Developers.	65	Peth Shivapur, Kolhapur	Kolhapur	 1) 132 kV D/C line from Wind Farm S/s. to 220/132/33 kV Mudhaltitta S/s. 2) 1 x 100 MVA, 220/132-110 kV ICT at Mudhaltitta S/s. 3) 2 x 50 MVA, 132-110/33 kV TF at Wind Farm S/s.
11	M/s. Sri Maruti Wind Park Developers.	125	Peth Shivapur, Kolhapur	Kolhapur	 33 kV S/C lines from Wind Farm S/s. to 220/33 kV Mumewadi S/s.: 5 Nos. 1 x (50-25) MVA, 220/33 kV TF at 220/33 kV Mumewadi S/s. 1 x 50 MVA, 220/33 kV TF at 220/33 kV Mumewadi S/s.
12	M/s. Sri Maruti Wind Park Developers.	100	Alamprabhu, Kolhapur	Kolhapur	 2 x (100 - 50) MVA, 220/33 kV TF at Tilawani S/s. 33 kV feeders from Wind Farm Site to 220/132/33 kV Tilawani S/s. : 4 Nos.
13	M/s. Sri Maruti Wind Park Developers.	75	Peth Shivapur, Kolhapur	Kolhapur	1) Out of Exisiting 2x25 MVA, 220/33 KV T/F at Halkarni,replacement of 1x25 MVA T/F by 1x50 MVA 220/33 KV T/F 2)Addition of 1x50 MVA,220/33 KV at 220/33 KV Halkarni S/s 3) 33 KV Feeders from Wind Farm Site to MSETCL 's 220/33 KV Halkarni S/s
14	M/s. Suzlon Energy Ltd.	150	Panchpatta, Nashik	Nashik	 2 x 100 MVA, 220/33 kV TF at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to Babhaleshwar.
15	M/s. Vish Wind Infrastructure LLP	150	Nagarsol, Yeola, Nashik	Nashik	 1) 2 x 100 MVA, 132/33 kV T/F at Wind Farm S/s. 2) 132 kV D/C line from Wind Farm S/s. to 132 kV Manmad S/s.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
16	M/s. Vish Wind Infrastructure LLP	200	Yermala, Osmanabad	Osmanabad	 2 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 220 kV Paranda S/s.
17	M/s. Aditya Engineers	200	Bhud, Tal. Khanapur, Dist. Sangli	Sangli	 2 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 220 kV Kadegaon S/s.
18	M/s. Sri Maruti Wind Park Developers.	250	Bhud, Khanapur, Sangli	Sangli	 5 x 100 MVA, 220/33 kV TF at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 220 kV Bhalawani S/s.
19	M/s. T.S.Wind Power Developers Pvt. Ltd.	75	Vaspeth, Tal. Jath, Dist. Sangli	Sangli	 2 x 50 MVA, 1 x 25 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line from Wind Farm S/s. to 132 kV Kavthemahankal S/s.
20	M/s. Enercon India Pvt. Ltd.	32	Dongerwadi, Tal. Kavthemahakal, Dist. Sangli.	Sangli.	02 Nos of 33 kV Bays at MSETCL's existing Kavthemahakal SS & 33 kV DCOH line from Wind project to MSETCL's 132 kV Kavthemahakal SS
21	M/s. T.S.Wind Power Developers Pvt. Ltd.	100	Gudepachgani Tal- Shirala, Dist Sangli.	Sangli.	 2 x 50 MVA, 220/33 kV TF at Wind Farm S/s. 2) LILO of 220 kV Karad- Kolhapur ckt. 3 (Wathar) at Wind Farm S/s.
22	M/s. Sri Maruti Wind Park Developers.	75	Bhud site, Tal. Mayani Dist. Satara	Satara	 1 x 50 MVA, 1 x 25 MVA, 132-110/33 kV T/F at Wind Farm S/s. 2) LILO of 132 kV Mayni - Dighanchi S/C at Wind Farm S/s.
23	M/s. Vish Wind Infrastructure LLP	100	Khandke Phase-III, Ahmednagar, Beed	Ahmednagar, Beed	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line from Wind Farm S/s. to 220/132 kV Bhenda S/s.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
24	M/s. Aditya Engineers	57.6	Panchpatta, Tal. Akole, Dist. Ahmednagar.	Ahmednagar.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 2) LILO of one ckt. of 132 kV Akole - Sangamner D/C at Wind Farm S/s.
25	M/s. Vish Wind Infrastructure LLP	100	Kavdya Dongar, Tal. Parner, Dist. Ahmednagar.	Ahmednagar.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C from Wind Farm S/s. to Wadzire S/s.
26	M/s. Suzlon Energy Ltd.	100	Kankora, Aurangabad	Aurangabad	 1 x 50 MVA, 220/33 kV TF at 220/33 kV Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to Phulambri.
27	M/s. Suzlon Energy Ltd.	150	Khandke, Beed	Beed	 3 x 50 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 220 kV Ahmednagar S/s.
28	M/s. Sri Maruti Wind Park Developers.	80	Sautada, Beed	Beed	 TF: 2 x 50 MVA, 220/33 kV at proposed 220 kV Patoda s/s. 2 nos. of 33 kV D/C lines from wind farm s/s to proposed 220 kV Patoda s/s of MSETCL.
29	M/s. T.S.Wind Power Developers Pvt. Ltd.	75	Khandke, Ashti, Beed & Ahmednagar	Beed & Ahmednagar	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 2) LILO of 132 kV Ashti - Ahmednagar S/C at Wind Farm S/s.
30	M/s. Suzlon Energy Ltd.	300	Kitawade, Kolhapur	Kolhapur	 3 x 100 MVA, 220/33 kV TF at Wind Farm S/s. LILO on 220 kV Kolhapur - Sawantwadi D/C.
31	M/s. Sri Maruti Wind Park Developers.	185	Peth Shivapur, Kolhapur	Kolhapur	 2 x 100 MVA, 220/33 kV TF at Wind Farm S/s. 1 x (100-50) MVA, 220/33 kV TF at Hamidwada S/s. 220 kV D/C line from Wind Farm S/s. to Hamidwada S/s.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
32	M/s. Sri Maruti Wind Park Developers.	240	Bhendawade, Kolhapur	Kolhapur	 3 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 2) LILO of 220 kV Karad - Kolhapur ckt. IV at Wind Farm S/s.
33	M/s. T.S.Wind Power Developers Pvt. Ltd.	30	Gudepanchgani, Tal- Shahuwadi, Dist- Kolhapur	Kolhapur	 2 x (50 - 25) MVA, 132/33 kV TF at Bambavde S/s. 33 kV D/C line from Wind Farm Site to 132/33 kV Bambavde S/s.
34	M/s. Sri Maruti Wind Park Developers.	180	Sukalmala, Kolhapur & Ratnagiri	Kolhapur & Ratnagiri	 2 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 220 kV Kharepatan S/s.
35	M/s. GR Greenlife Energy Pvt. Ltd.	100	Rohina, Tal. Chakur, Dist. Latur.	Latur.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C from Wind Farm S/s. to 132 kV Chakur S/s.
36	M/s. Vish Wind Infrastructure LLP	250	Nagarsol, Tal. Yeola, Dist. Nashik	Nashik	 3 x 100 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C from Wind Farm S/s. to 220 kV Malegaon S/s.
37	M/s. Suzlon Energy Ltd.	100	Nagewadi, Tal. Bhoom, Dist. Osmanabad.	Osmanabad.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line from Wind Farm S/s. to 220/132 kV Paranda S/s.
38	M/s. Sri Maruti Wind Park Developers.	500	Vaspeth, Mendhegiri, Sangli, Solapur	Sangli, Solapur	 5 x 100 MVA, 220/33 kV TF at Wind Farm S/s. 220 kV D/C line from Wind Farm S/s. to 400/220 kV Alkud S/s.
39	M/s. T.S.Wind Power Developers Pvt. Ltd.	20	Panchgani, Satara	Satara	33 kV Feeder from wind farm to 132/33 kV Wai S/s.: 1 No.
40	M/s. R.S. India Wind Energy Pvt. Ltd.	58.2	Jinti, Tal. Patan, Dist. Satara.	Satara.	 2 x 50 MVA, 220/33 kV T/F at Wind Farm S/s. 2) LILO of 220 kV Karad - Nigde S/C at Wind Farm S/s.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
41	M/s. Suzlon Energy Ltd.	50	GudePanchgani, Satara.	Satara.	 1) 132/33 KV, 1 X 50 MVA Transformer installation at Shirala S/S. 2) 33KV Line Bays at Shirala S/S2 Nos
42	M/s. Aditya Engineers	25	Varekarwadi, Tal. Karad, Dist. Satara.	Satara.	1) 1 x 25 MVA, 132-110/33 kV T/F at 110/33 kV Kale (T) S/s. 2) 33 kV Feeder from Wind Mills to 110/33 kV Kale (T) S/s.: 1 No.
43	M/s. Aditya Engineers	50	Khokade, Tal. Man, Dist. Satara.	Satara.	 1 x 50 MVA, 132/33 kV T/F at Phaltan S/s. 2) 33 kV Feeder from Wind Mills to 132/33 kV Phaltan S/s.: 2 Nos.
44	M/s. Acorn Properties Pvt. Ltd.	50	Amberi, Tal. Khatav, Satara.	Satara.	1) 2 x 50 MVA, 132-110/33 kV T/F at 110/33 kV Tembhu S/s. 2) 33 kV Feeder from Wind Mills to 110/33 kV Tembhu S/s. : 2 Nos.
45	M/s. Acorn Properties Pvt. Ltd.	50	Amberi, Tal. Khatav, Satara.	Satara.	1) 33 kV Feeder from Wind Mills to 220/33 kV Kadegaon S/s.: 2 Nos.
46	M/s. Gamesa Wind Turbines Pvt. Ltd.	30	Panchpatta, Ahmednagar	Ahmednagar	 1 x 50 MVA, 132/33 kV TF at 132/33 kV Panchpatta S/s. 2) 33 kV Feeders from Wind Farm to 132/33 kV Panchpatta S/s. :2 Nos.
47	M/s. Leitner Shriram Manufacturing Pvt. Ltd.	100.5	Panchpatta, Akole/Sinnar, Ahmednagar, Nashik	Ahmednagar, Nashik	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line from Wind Farm S/s. to 132 kV Malegaon- Sinnar S/s.
48	M/s. Vish Wind Infrastructure LLP	100	Dongarkinhi, Beed.	Beed.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C line to Kharda S/s.
49	M/s. Theolia Wind Pvt. Ltd.	20	Taluk : Jath District: Sangli	Sangli	133 kV Feeder from wind farm to 132/33 kV Jath S/s.: 2 Nos.
50	M/s. Theolia Wind Pvt. Ltd.	10	Taluk : Jath District: Sangli	Sangli	33 kV Feeder from wind farm to 132/33 kV Sankh S/s.: 1 No.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
51	M/s. Vish Wind Infrastructure LLP	125	Mahaje, Dindore, Nashik	Nashik	 1) 2 x 50 MVA and 1 X 25 MVA 132/33 kV T/fs at 132/33 kV Wind Farm S/s. 2) 132 kV DC line from wind farm S/s to 132/33 kV Dindori S/s.
52	M/s. Vish Wind Infrastructure LLP	125	Bhose, Tal. Miraj, Dist. Sangli.	Sangli.	 4 x 50 MVA, 220/33 kV T/F at Wind Farm S/s. 220 kV D/C from Wind Farm S/s. to 400/220 kV Alkud S/s.
53	M/s. Leitner Shriram Manufacturing	25.5	Dongarwadi, Miraj, Sangli.	Sangli.	33 kV Feeder from Wind Mills to 132/33 kV Kavthemahankal S/s.: 1 No.
54	M/s. Panama Wind Energy Pvt. Ltd.	50	Matrewadi, Patan, Satara	Satara	 2 x 25 MVA, 132-110/33 kV T/F at Wind Farm S/s. 2nd ckt. Stringing of 110 kV Kale (T) - Warna SCDC. LILO of 1 ckt. of 110 kV Kale(T) - Warna D/C at Wind Farm S/s.
55	M/s. Gamesha Wind Turbines Pvt. Ltd.	50	Kosegavhan, Shrigonda, Ahmednagar	Ahmednagar	33 kV Feeder from Wind Mills to 132/33 kV Shrigonda S/s.: 2 Nos.
56	M/s. Suyog Urja Pvt. Ltd.	50	Anjannadi, Kannad, Aurangabad	Aurangabad	33 kV Feeder from Wind Mills to 132/33 kV Pishor S/s.: 2 Nos.
57	M/s. GR Greenlife Energy Pvt. Ltd.	125	Manjranadi, Beed.	Beed.	 2 x 50 MVA, 132/33 kV T/F at Wind Farm S/s. 132 kV D/C from Wind Farm S/s. to 132 kV Bhoom S/s.
58	M/s. Vatsala Wind Farms Pvt. Ltd.	22.5	Palsi, Satara	Satara	1) 33 kV Feeder from Wind Mills to 220/33 kV Wind Farm S/s. Nerle of M/s. Panama: 1 No.
59	M/s. T.S.Wind Power Developers Pvt. Ltd.	100	Nandurpathar, Parner & Junnar, Ahmednagar & Pune	Ahmednagar & Pune	At 220/33 kV Alephata S/s. at 33 kV level.

Sr. No	Name of Developer	Installed Capacity (MW)	Location (Village/District)	District	Evacuation Arrangement
60	M/s. GR Greenlife Energy Pvt. Ltd.	100	Kharda, Jamkhed, Patoda, Ahmednagar, Beed	Beed	At 132/33 kV Kharda S/s. with 132 kV D/C line. Connectivity will be issued after submission of documents.
61	M/s. Vish Wind Infrastructure LLP	200	Amba, Sahuwadi, Kolhapur	Kolhapur	At 220 kV Mudshingi (Kolhapur) S/s. with 220 kV D/C line. Connectivity will be issued after submission of documents.
62	M/s. Ecoren Energy India Pvt. Ltd.	67.2	Jwalya, Deola & Kalwan, Nashik	Nashik	By making LILO on 132 kV Kalwan - Satana SCDC.
63	M/s. Ecoren Energy India Pvt. Ltd.	128	Mangi Tungi, Baglan & Sakri, Nashik	Nashik	At MSETCL's 220 kV Satana S/s. through their proposed Wind Farm S/s. at Site: Mulher.
64	M/s. Ecoren Energy India Pvt. Ltd.	90	Mulher, Baglan & Sakri, Nashik	Nashik	At MSETCL's 220 kV Satana S/s. through their proposed Wind Farm S/s. at Site: Mulher.
65	M/s. Ecoren Energy India Pvt. Ltd.	200	Vani, Dindori & Kalwan, Nashik	Nashik	At MSETCL's 220 kV Kalwan-II S/s.
66	M/s. Ecoren Energy India Pvt. Ltd.	78.4	Nampur, Baglan, Nashik	Nashik	At MSETCL's underconstruction 132 kV Tahrabad S/s.
67	M/s. Ecoren Energy India Pvt. Ltd.	128	Chandwad, Deola & Chandwad, Nashik	Nashik	At MSETCL's 132 kV Chandwad S/s.
68	M/s. Ecoren Energy India Pvt. Ltd.	200	Tahrabad, Baglan & Malegaon & Sakri, Nashik & Dhule	Nashik & Dhule	At MSETCL's 220 kV Malegaon S/s.
69	M/s. Suyog Urja Pvt. Ltd.	125	Koral, Lohara, & Umerga, Osmanabad	Osmanabad	Grid Connectivity proposed at proposed 132/33 kV Kondajigad S/s.
70	M/s. Suyog Urja Pvt. Ltd.	125	Nagral, Lohara, Tuljapur, Osmanabad	Osmanabad	At 132/33 kV Ujani S/s. with 132 kV D/C line.
	TOTAL	7767.9			
Cor	nsidering 15% PLF	1165			

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
1	M/s GMT Mining and Power Ltd, Shop No.LG 002, 172, Shradhanandpeth, South Ambazari Road, Nagpur.	At Village Madnapur, Tal. Kuhi, Dist. Nagpur.		9.2
2	M/s 21st Century Infrastructure (India) P.Ltd Corporation Building, Old Motor Stand, Itwari, Nagpur-440 008.	At Waki, Tal. Deulgaon Raja, Dist. Buldhana	Nagpur	8.5
3	M/s ASN Power Projects Pvt. Ltd, 5th Floor, Babukhan Millennium Centre, Raj Bhavan Road, Somajiguda, Hyderabad.	At Mul MIDC, Dist. Chandrapur.	Ivagpui	10
4	M/s Yash Agro Energy Ltd, "Sahas", 1st Floor, 64, Bajaj Nagar, Nagpur-440 010.	At Village Kolari, Tal. Chimur, Dist. Chandrapur.		8
5	M/s Chintamani Agrotech (India) Ltd.101, East High Court Road, New Ramdaspeth, Nagpur -440 010.	At Village Bijora, Tal. Mahagaon, Dist. Yavatmal		30
6	M/s Kalyani Renewable Energy India Ltd, D.No.5-6, Prathipadu Village, Tadepalligudem, west Godavari, Dist. A.P.534 146.	At Balapur MIDC, Dist. Akola	Amaravati	3.8
7	M/s Shree Renuka Sugars Ltd,7th floor, Devchand House, Shiv sagar Estate, Dr.Annie Beasant Road, Worli, Mumbai-400 018.	At Ajinkyatara SSK,Shahunagar, Shendre,Satara		22
8	M/s Renuka Sugar Ltd, 7th Floor, Devchand House, Shiv Sagar Estate,Dr. Annie Besant Road, Worli, Mumbai-400 018.	Balaji nagar, Nandur, Tal. Mangalweda Dist. Solapur		26
9	M/s Saikrupa Sakhar Karkhana Ltd, A/P Hiradgaon, Tal.Shigonda, Dist. Kolhapur.	Village Takaliwadi, Tal. Shirol, Dist. Kolhapur.	Karad	35
10	M/s Sine Wave Biomass Power(P) Ltd, 133, Bhandari Street, Null Bazar, Mumbai-400 004	At Village Tung, Tal. Miraj, Dist. Sangli.		10
11	M/s Sine Wave Biomass Power (P) Ltd 133, Bhandari Street, Null Bazar, Mumbai-400 004.	At Thikurli, Tal. Radhanagari, Dist. Kolhapur.		10
12	M/s Mahadik Sugar & Agro Products Ltd	Kolhapur		17

Table- 2.4- Proposed Generation Addition by Biomass / Baggase Plants for the year 2014-19
Sr No	Developer Location (Village/Dist		Zone	Installed Capacity (MW)
13	M/s Vishwasrao Naik SSK Ltd, At Yashwantnagar, Chikhali, Tal. Shirala, Dist. Sangli	At Yashvantnagar, Chihkali, tal. Shirala, Dist. Sangli.		15
14	M/s Jarandeshwar Sugar Mills Ltd, At Chimangaon, Tal. Koregaon, Dist.Satara.	At Chimangaon, Tal. Koregaon, Dist.Satara.		20.5
15	M/s D M Corporation Private Ltd.	Satara		5
16	M/s Sar Senapati Santaji Ghorpade Sugar Factory Pvt Ltd	Kolhapur		22
17	M/s Rajarambapu Patil Sahakari Sakhar Karkhana Ltd	Sangli	Karad	28
18	M/s Jaywant Sugars Ltd	Satara		12
19	M/s Swaraj India Agro Ltd	araj India Agro Ltd Gate No. 332, Village Upalave, Phaltan, Satara		20
20	M/s Sharad Sahakari Sakhar Karkhana Ltd	Shamrao Patil (Yadraokar) Nagar, Nardane, Tal. Hatkanagle, Dist. Kolhapur		11
21	M/s R. M. Mohite Industries Ltd.	A/P Farale Radhanagri, Kolhapur		3.5
22	M/s Spark Green energy (Satara), Ltd,"Link Side" 50, Carter Road, Bandra (West), Mumbai -400 050	MIDC Lonand		25
23	M/s Shankar Sahakari Sakhar Karkhana LtdKaulage, Tal.Kagal Dist.Kolahapur.	At Sadashivnagar, Tal. Malshiras, Dist.Solapur.		17.5
24	M/s Lokmangal Agro Industries Ltd, Shree Pandurang Sahakari Sakhar Karkhana Ltd	At Post Bididharphal, Tal. North Solapur, Dist. Solapur		27
25	M/s Rochem Green Enrgy Pvt. Ltd, 101, Dheeraj Arma, Ananat Kanekar Marg, Bandra (East), Mumbai-400 051	Plot No.86, Hadapsar, Pune.	Pune	5.4
26	M/s Aryan Sugars Ltd	At Dilip Nagar, Post Khamgaon, Tal. Barshi, Dist. Solapur.		5
27	M/s Lokshakti Sugar & Allied Industries Ltd,Dr. Dwarkanath Kothanis Shopping Centre, Ground Floor, Bhagini Samaj, Solapur.	At Aurad (Mandrup) Tal. South Solapur, Dist. Solapur.		13
28	M/s Vitthal Sahakari Sakhar Karkhana Ltd	At Venunagar, Tal. Pandharpur, Dist, Solapur.		19.42

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
29	M/s Loknete Baburao Patil Agro Industries Ltd	At Laxminagar, Angar, Tal. Mohol, Dist. Solapur.		18
30	M/s Vitthalrao Shinde Sahakari Sakhar Karkhana Ltd, At Gangamainagar- Pimpalner, Tal. Madha, Dist. Solapur.	At Gangamainagar- Pimpalner, Tal. Madha, Dist. Solapur.		38
31	M/s Jai Hind Sugar Pvt. Ltd, Jai Hind House, Plot No.1, Dr. Kotnis Nagar, Vaijapur Road, Solapur - 413 004.	At Achagaon, Tal.South Solapur, Dist. Solapur.		20
32	M/s Shankar Shiromani Vasantrao Kale SSK Ltd. Chandrabhaganagar, Post.Bhalwani, Tal. Pandharpur, Dist. Solapur.	At Post. Bhalwani, Tal. Pandharpur, Dist. Solapur		18
33	M/s Utopian Sugars Pvt Ltd	Solapur		14.8
34	M/s Saswad Mali Sugar Factory Ltd	Solapur		14.8
35	M/s Shivaratna Udyog Ltd.	Solapur		12.5
36	M/s Bhairavnath Sugar Works Ltd	Solapur		12
37	M/s Jaihind Sugar Industries Pvt Ltd	Solapur		20
38	M/s Fabtech Sugar Private Ltd	Solapur	Pune	16
39	M/s Shri Sant Tukaram Shakari Sakhar Karkhana Ltd	Pune		15
40	M/s ACI Infotech Ltd, A division of Infocom Ltd, 278, Vasan Udyog Bhawan, Opp. Highstreet Phoenix Mill, Lowar Parel(W), Mumbai-400 013	At Bhigwan, Tal. Indapur, Dist. Pune.		15
41	M/s Vighnahar Sahakari Sakhar Karkhana Ltd	At Nivrutinagar (Dhalewadi) Tal. Junnar,Dist. Pune		10
42	M/s D.M. Corporation Ltd	Post. Tarali, Tal. Patan, Dist. Satara.		5
43	M/s Audumbarraoji SSK.Ltd.	At Ashti, Tal.Mohol, Dist. Solapur.		10
44	M/s Hindustan Sugars Ltd	At Village Gujarwadi, Tal. Koregaon, Dist. Satara.		10
45	M/s Raosahebdada Pawar Ghoganga SSK Ltd	Pune		20.5
46	M/s Shree Siddheshwar Sahakari Sakhar Karkhana	Solapur		38

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
47	M/s Jaykara Sugar Ltd	Solapur		11
48	M/s Venketeshkrupa Sugar Mills Ltd	A/P Jategaon		7
49	M/s Shri Chhatrapati Sahakari Sakhar Karkhana Ltd	Bhavaninagar Indapur Pune	PUNE	18
50	M/s Vitthal Refined Sugars Ltd	Village Pande, Karmala, Solapur		26
51	M/s Spark Green energy (Satara), Ltd,"Link Side" 50, Carter Road, Bandra (West), Mumbai -400 050	MIDC Newasa		25
52	M/s Dwarkadhish SSSK Ltd, KarkhanaShalivahana Projects Ltd, 1582, 7th Floor, Minerva Complex, S.D. Road, Secunderabad.	At Village Seware, Taharabad, tal. Satana,Dist. Nasik		10
53	M/s Seena Sugar Manufacturing Co.Ltd	At Village Jyotibawadi, Konkangaon, Tal. Karjat, Dist. Ahmednagar.		20
54	M/s Pravara Renewable Energy Limited, Gaman House, Veer Savarkar Marg, Prabhadevi, Mumbai- 400 025.	At Pravara Nagar, Rahata, Dist. Ahmednagar.		30
55	M/s Rukminibai Estate & Investments Pvt. Ltd	At Akhatwadi, Tal. Chopda,Dist. Jalgaon	Nashik	8
56	M/s Ambalika Sugar Private Ltd	At Post. Baradgaon, Tal. Karjat, Dist. Ahmednagar.		15
57	M/s Bhoruka Cogen Power Private Ltd. TCI Industries Complex, N.A.Sawant Marg, Near Colaba Fire Bridge, Colaba, Mumbai-400 005.	At Rahuri, Dist. Ahmednagar.		28
58	M/s KGS Sugars & Infra Corporation Ltd (Kadwa Goda Khore Sugar Manufacturing Karkhana Ltd)	Pimpalgaon Tal Niphad Dist Nashik		12
59	M/s Utech Sugar Pvt Ltd	G No 15, Mouj Kavathe Malkapur Tal Sangamner		14.9
60	M/s Astoria agro & Allied Industries Pvt Ltd	Samsherpur Nandurbar		24
61	M/s Ratnaprabha Sugars Ltd, 7th Floor,Devchand House, Shivsagar Estate, Dr. Annie Besant Road, Worli, Mumbai -400 018.	Tal. Pathri, Dist. Parbhani.	Aurangabad	25

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
62	M/s Tara Power Generation Co.Pvt. Ltd, "Tara" 17, Swapnanagari, N2 CIDCO, Aurangabad-431 005.	At additional Latur MIDC, Dist. Latur.		8
63	M/s Bhaurao Chavan Sahakari Sakhar Karkhana Ltd, Laxminagar, Degaon- Yelegaon.	Laxminagar, Tal.Ardhapur, Dist.Nanded		16.2
64	M/s Jagruti Sugar and Allied Industries Ltd	At Talegaon, Tal. Devni,Dist. Latur		13
65	M/s 21st Century Infrastructure (India) P.Ltd Corporation Building, Old Motor Stand, Itwari, Nagpur- 440 008.	At Waki, Tal. Deulgaon Raja, Dist. Buldhana		10
66	M/s Indrajit Infrastructure Pvt. Ltd., Modern Centre, B Wing, 2nd Floor, Sane Guruji Marg, Mahalaxmi, Mumbai-400 011.	At Kalamb, Dist. Osmanabad.		12.5
67	M/s Jailaxmi Sugar Products (Nitali) Pvt. Ltd, Shop No.145, Tulja Bhavani Complex,Shivaji Chowk, Osmanabad -413501.	At Village Nitali, Dist. Osmanabad.		10
68	M/s Kesona Power Pvt. Ltd, Opposite Police Head Quarters, Nagar Road,Beed.	At Pargaon (J), Taluka Dist. Beed	Aurangabad	6
69	M/s Siddhivinayak Sugars Ltd, Goldan Sand CHS. Ltd, RH-08, Plot No.08, Sector No.40, Nerul Navi Mumbai.	At village Borwanti, Tal. Kalamb, Dist. Osmanabad.		15
70	M/s Yedeshwari Agro Products Ltd, Pavansootnagar	At Anandgaon (Sarni), P.O. Jawakban, Tal. Kaij, Dist. Beed.		20
71	M/s DDN SFA Ltd	At Ghat No.186, Wathwada, Tal. Kallam, Dist. Osmanabad		2
72	M/s Dr. Babasaheb Ambedkar Sahakari Sakhar Karkhana Ltd.Arvindnagar, Keshegaon - 413 506, Tal. &Dist. Osmanabad.	At Arvindnagar, Keshegaon, Tal. & Dist. Osmanabad.		9.7
73	M/s Baramati Agro Ltd	Mahatma Phule Nagar, Tal Kannad Dist Aurangabad		18
74	M/s Kancheshwar Sugar Ltd	~		20
75	M/s Shri Ramgiri Sugars Ltd	Tuljapur		14.9

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)		
76	M/s Shree Shiv Parwati Sakhar Karkhana Ltd	A/P Mungi		14.8		
77	M/s Baliraja Sakhar Karkhana Ltd	Kanadkhed		15		
78	M/s Rena Sahkari Sakhar Karkhana Ltd	Dilip Nagar, Niwada, Renapur, Latur		12		
79	M/s Yash sugar Ltd	Georai		20		
80	M/s Lokvikas Sugar Mills Ltd	Vaijapur	AURANGABAD	12.5		
81	M/s Shraddha Energy & Infra Projects Pvt Ltd	Maa Bageshwari Sugar Unit, Village Warfal		12		
82	M/s Shree Swami Samarth Energy & Sugar Pvt Ltd	Post Babhulgaon Sengaon, Hingoli		20		
83	M/s Twentyone Sugars Ltd	Shirur Anantpal, Latur		30		
Total						
	Considering PLF 30 %					

Table 2.5– Proposed Solar Generation (2014-15 to 2018-19)

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
1	M/s. Simplex Renewables Pvt. Ltd.	Gondia.		5
2	M/s. Pradhan Energy Projects Pvt. Ltd.Arun Kunj, Plot No. 12, Bajaj Nagar, Near Basket Ball Ground, Nagpur – 440 010.	Nagpur	Nagpur	2
3	M/s. Sunbless Solar Pvt. Ltd. Kanzara, Murtizapur, Akola	Akola		30
4	M/s. Treta Solar Pvt. Ltd.	Mouje Taralwadi, Rajapur, Ratnagiri	Washi	10
5	M/s. KC Power Infra Pvt. Ltd.	Ramnagar, Digras, Yawatmal	Amravati	2
6	M/s. Tata Power Renewable Energy Ltd.	Dighanchi, Tal. Atpadi, Dist. Sangli.	Karad	50
7	M/s. Nipro India Pvt. Ltd.	MIDC Kesurdi, Khandala, Satara Karad		1.5
8	M/s. Intellectual Power Systems Pvt. Ltd. 205, A, Akshay Complex, Dhole Patil Road,Pune – 411 001.	Wathar Nimbalkar, Tal. Phaltan, Dist. Satara	Karad	40
9	M/s. Visa Ecotech Ltd. W – 223, MIDC TTC Industrial Area, Khairne, Navi Mumbai – 400 709.	Mograle, Tal. Mann, Dist. Satara	Karad	50

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
10	M/s. Sri Maruti Solar Power	Dahiwadi, Man, Solapur		40
11	M/s. Sri Maruti Solar Power	Malinagar, Malshiras, Solapur		20
12	M/s. Sri Maruti Solar Power	Akkalkot, Solapur		20
13	M/s. Sri Maruti Solar Power	Karkambh, Pandharpur, Solapur		20
14	M/s. Sri Maruti Solar Power	Barshi, Solapur		20
15	M/s. Sri Maruti Solar Power	Tembhurni, Madha, Solapur		20
16	M/s. Capture Solar Energy Ltd. 15/2/2/6, Kanishka Hotel Building, 1st Floor, NDA Road, Warje, Pune – 411 058.	Nirvi, Shirur, Pune		30
17	M/s. Enrich Energy Pvt. Ltd.	Akkalkot, Solapur		125
18	M/s. Sri Maruti Solar Power	Kurduwadi, Madha, Solapur		20
19	M/s. Sri Maruti Solar Power	Puluj, Pandharpur, Solapur		20
20	M/s. Sri Maruti Solar Power	Velapur, Malshiras, Solapur	Pune	20
21	M/s. Sri Maruti Solar Power	Soregaon, Madha, Solapur		20
22	M/s. Sri Maruti Solar Power	Karajgi, Akkalkot, Solapur		20
23	M/s. Sri Maruti Solar Power	Sherewadi Pathar, Man, Satara		300
24	M/s. Morries Solar Park (M/s. Morries Energy Ltd.)	Aundh, Vaduj, Satara		10
25	M/s. Lokmangal Sugar Ethanol & Co-Generation Industries Ltd.	Bhandarkavthe, South Solapur, Solapur		7
26	M/s. RYB Electricals Pvt. Ltd.	Sangola, Solapur		5
27	M/s. Sri Maruti Solar Power	Jeur, Karmala, Solapur		20
28	M/s. Sri Maruti Solar Power	Mohol, Solapur		20
29	M/s. Sri Maruti Solar Power	Parewadi, Karmala, Solapur		20
30	M/s. Enrich Energy Pvt. Ltd.	Karajgi, Solapur		25
31	M/s. Gangakhed Sugars Pvt. Ltd.	Dhule		250
32	M/s. Meenaxi Fabrics Pvt. Ltd.	Dhule		250
33	M/s. Jain Irrigation System Ltd.	Shiroli, Jalgaon MIDC, Jalgaon	Nashik	10
34	M/s. Verroc Engineering Pvt. Ltd.	Shivajinagar, Sakri, Dhule		5

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)
35	M/s. Enrich Energy Pvt. Ltd.	Tuljapur, Osmanabad		100
36	M/s. Fourth Dimension Power & Infra Ltd.	Naldurg, Tuljapur, Osmanabad		25
37	M/s. Enrich Energy Pvt. Ltd.	Naldurg, Tuljapur, Osmanabad		25
38	M/s. T.S. Wind Power Projects Pvt. Ltd.	Tuljapur, Osmanabad		15
39	Mahagenco	Kaudgaon, Osmanabad	-	100
40	Mahagenco	Pokharni, Parbhani		50
41	M/s. T.S. Wind Power Developers	Naldurg, Tuljapur, Osmanabad	_	20
42	M/s. Solpower REC Pvt. Ltd.	Bhoom, Osmanabad	-	25
43	M/s. Satyam Green Energy Ltd.	Aaranvihir, Ashti, Beed	-	<u> </u>
44	Co-Generation Industries Ltd.	Osmanabad		10
45	M/s. Green K Energy Ltd.	Tamalwadi, Tuljapur, Osmanabad		22
46	M/s. Katare Spinning Mills Ltd.	Tamalwadi, Tuljapur, Osmanabad		1
47	M/s. Orange Solar Pvt. Ltd.	Malumbre, Tuljapur, Osmanabad		50
48	M/s. Sri Maruti Solar Power	Koyna, Latur	Aurangabad	20
49	M/s. Sri Maruti Solar Power	Latur MIDC ,Latur		20
50	M/s. Sri Maruti Solar Power	Nilanga, Latur	-	30
51	M/s. Sri Maruti Solar Power	Udgir, Latur		20
52	M/s. Sri Maruti Solar Power	Ujani, Latur		20
53	M/s. Sri Maruti Solar Power	Ahmedpur, Latur		30
54	M/s. Sri Maruti Solar Power	Chakur, Latur		20
55	M/s. Sri Maruti Solar Power	Ausa, Latur		20
56	M/s. Sri Maruti Solar Power	Renapur, Latur		20
57	M/s. Sri Maruti Solar Power	Killari, Ausa, Latur		20
58	M/s. Sri Maruti Solar Power	Osmanabad		25
59	M/s. Sri Maruti Solar Power	Paranda, Osmanabad		25
60	M/s. Sri Maruti Solar Power	Tuljapur, Osmanabad		25
61	M/s. Sri Maruti Solar Power	Bhoom, Osmanabad	-	25
62	M/s. Sri Maruti Solar Power	Kalamb, Osmanabad		25
63	M/s. Sri Maruti Solar Power	Naldurg, Osmanabad		50
64	M/s. Sri Maruti Solar Power	Harangul, Latur		50
65	M/s. Sri Maruti Solar Power	Umerga, Osmanabad		25

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)	
66	M/s. Sri Maruti Solar Power	Murud, Latur		50	
67	M/s. Spark Electro Consultants (I) Pvt. Ltd.	park Electro Consultants (I) Pvt. Ltd. Bhoom, Osmanabad		15	
Total					
Considering PLF 15%					

Table 2.6– Proposed Small Hydro Generation (2014-15 to 2018-19)

Sr No	Developer	Location (Village/Dist)	Zone	Installed Capacity (MW)	
1	M/s Mahati Electrics, 32-33, Shankarshet Road, Behind S.T. Workshop, Pune- 411 037.	Gosikhurd Dam, Tal. Wahi (Pauni), Dist. Bhandara.	Nagpur	24	
2	M/s Mahati Hydro Power Projects Pvt. Ltd, 32-33, Shankarshet Road, Behind S.T. Workshop, Pune-411 037.	Left Bank Canal Outlet of Ujjani Dam, Bhimanagar, Tal. Madha, Dist. Solapur.	Pune	2	
3	M/s Laxmi Organic Industries Ltd	Yedegaon, Narayangaon		3	
4	M/s Suvas Holding Ltd	Temghar		4	
5	M/s New Asian Infrastructure Development Pvt. Ltd.At Nilwade Hydro Electric Project, Tal. Akole, Dist. Ahmednagar.	At Nilwande Hydro Electric Project, Tal. Akole, Dist. Ahmednagar	Nashik	7	
6	M/s Global Coke Ltd, At Village Vazare, Tal. Dodamarg, Dist. Sindhudurg.	At Village Vazare, Tal. Dodamarg, Dist. Sindhudurg.	Karad	20	
7	M/s D M Corporation Pvt Ltd	Kolhapur		13	
8	M/s Twentyone Sugars Ltd	GNo. 48, Village Dhanora	Aurongohod	30	
9	M/s Twentyone Sugars Ltd	GNo. 76, Village Malavati	Aurangabau	30	
10	M/s Shree Balaji Power Services Pvt Ltd	Raigad		4.5	
11	M/s Mahalaxmi Konal Urja Pvt Ltd M/s Mahalaxmi Konal Urja Pvt Ltd Thane		Washi	11	
	T	otal		148.5	
Considering PLF 15%					

Central Sector allocation w.e. f 09-04-2014

Name of Generating Station	13-14	14-15	15-16	16-17	17-18	18-19
N Karanpura Jharkhad (660 MW)	-	-	_	33		
Krishnapattanum UMPP 1 (660 MW)	-	-	-	-	132	
Krishnapattanum UMPP 2 (660 MW)	-	-	_	_	132	
Krishnapattanum UMPP 3 (660 MW)	-	-	-	-	132	
Krishnapattanum UMPP 4 (660 MW)	-	-	-	-	132	
Krishnapattanum UMPP 5 (660 MW)	-	-	-	-	132	
Krishnapattanum UMPP 6 (660 MW)	-	-	-	-	132	
N Karanpura Jharkhad (660 MW)	-	-	-	33		
N Karanpura Jharkhad (660 MW)	-	-	_	33		
NTPC Vindhychal-V (500 MW)	-	165	-	-		
Subansiri Hydro Arunachal (2000 MW)	-	-	-	183		
Mauda II U-1 & 2 (2 x 660 MW)	-	-	500	-		
NTPC Lara Unit-I (1 x 800 MW)	-	-	114	-		
NTPC Lara Unit-II & III (2 x 800 MW)	-	-	-	228		
Tilaiya Jharkhand UMPP Unit-I, II, III (3 x 660 MW)	-	-	-		150	
Tilaiya Jharkhand UMPP Unit-IV,V ,VI (3 x 660 MW)						150
Surguja Chattisgad (660 MW)	-	-	-		831	
Surguja Chattisgad (660 MW)						166
NTPC Gadarwara Stage I U-I (2 x 660 MW)	-	-	-	25		
Titaya UMPP Andhra						137
NTPC Khargone (2 x 660 MW)	-	-	-	50		
NTPC Dhuvaran (2 x 660 MW)	-	-	-	25		
NTPC Gadarwara Stage I U-II (2 x 660 MW)	-	-	-	-	25	
NTPC Dhuvaran (1 x 660 MW)	-	-	-	-	25	
NTPC Lara Unit-IV & V (2 x 800 MW)	-	-	-	-	228	
Cheyur UMPP Tamilnadu U I & II					133	
Total allocation		165	614	610	2184	453
Existing Allocation		5538	5703	6317	6927	9111
Yearwise Allocation Availability(Cumulative)		5703	6317	6927	9111	9564

Table – 3 – Proposed Year wise Allocation of power by Central Sector 2014-15 to 2018-19

Table – 4 - Demand/Generation Scenario in Mumbai

	Trombay unit 5	500 MW
	Trombay unit 6	500 MW
Toto Dowor	Trombay units 7A&7B	180 MW
Tata Power	Trombay unit 8, 250 MW	250 MW
	Hydro - Bhira, Bhivpuri and Khopoli	447 MW
	Tata Power Total	1877 MW
Reliance Infrastructure Ltd	Dahanu Thermal Power Station	500 MW
	R-Infra Total	500 MW
	Mumbai Total	2377 MW
Cons	1711 MW	

Tahla _	4 1-Existing	generation	availahle i	n Mumhai	(TATA/I	REL) as c	n 31_03_14
Table -	4.1- L'AISUNG	gener ation	available li	li iviuilibai	(IAIA/I	NEL) as c	JII 31-03-14

Import into MMR through interconnections 1044 MW

Generation	2014-15	2015-16	2016-17	2017-18	2017-18	2018-19
TPC	-	-	-	-	-	-
REL	-	-	-	-	-	-
Total	0	0	0	0	0	0
Existing Generation Availability (TPC + REL)	2377	2377	2377	2377	2377	2377
Considering 72% PLF	1711	1711	1711	1711	1711	1711

Table -	- 4.2 Proposed	Year wise tota	l generation	available in	Mumbai (TATA/REL)
Table -	- - .2 I Toposcu	I cal wise tota	n generation	available m	Mumbar	$(\mathbf{I}\mathbf{A}\mathbf{I}\mathbf{A}/\mathbf{K}\mathbf{E}\mathbf{L})$

		Peak De	Generation A	Load-				
Year	Tata Power-D (A)	R Infra-D (B)	BEST (C)	MSEDCL load catered through Tata Power network (D)	Total (A+B+C+D)*	in Mumbai (MW)	Generation Gap (MW) Shortfall (-)	
2012-13	1136	1110	903	233	3382	1711	-1671	
2013-14	1278	1030	910	235	3453	1711	-1742	
2014-15	1355	1092	965	235	3647	1711	-1936	
2015-16	1436	1157	1022	235	3850	1711	-2139	
2016-17	1522	1227	1084	235	4068	1711	-2357	
2017-18	1613	1300	1149	235	4297	1711	-2586	
2018-19	1710	1378	1217	235	4540	1711	-2829	

Table – 4.3 - Power scenario in Mumbai (TATA / R-INFRA)

*Projection is done by considering 6% for MMR

 Table – 4.4 - Power scenario in Maharashtra (including Mumbai)

Generation Available By -A. Mahagenco (Table 2.1, Page – 22) B. IPP (Table 2.2, Page – 23-24) C. Central Sector (Table – 3, Page – 42) D. Mumbai (Table – 4.1, Page – 43)

Year	A	В	С	D	Total A+B+C+D (Availibility)* MW	Total Demand (coincident) MW	Peak Shortfall (-) / Surplus (+) (MW) (coinc)
2014-15	7253	7084	5703	1711	21751	20178 (23586)	(+)1573
2015-16	7692	7084	6317	1711	22804	23835 (25693)	(-)1031
2016-17	7692	7084	6927	1711	23414	24930** (28645)	(-)1516
2017-18	7855	7084	9111	1711	25761	26004 (29983)	(-)243
2018-19	8713	7084	9564	1711	27072	27207 (32122)	(-)135

Note – 1) * Availability Considered subject to timely commissioning of upcoming generation 2) **Additional Trigerring Load of DMIC (Dhule, Shendra (bedkin), Nasik, and Dighi) in

2015-16 is 2651



3) Bracket values indicate 18th EPS figures

Table-5 -PGCIL Network in Maharashtra

Sr. No.	Name of S/Stn		Line length (km)	
		1	400/220 KV, 2 X315 MVA ICT with bays	
1 400/220 KV Boisar (PG)		2	400 KV Tarapur - Boisar(PG) D/C Line	20.88
	400/220 KV	3	3 400 KV Tarapur – Padghe-I D/C Line	
	Boisar (PG)	4	400 KV Boisar – Padghe- S/C Line	101
	5	5 400 KV Boisar – Vapi - S/C Line		
		6	220Kv Tarapur -Boisar	20.56
		1	400 KV Bhadravati (PG) – Chandrapur-I4 ckts.	2 ckts - 20 & 2 ckts -22.42
2	400KV Bhadravati (PG)	2	400 KV Bhadravati (PG) - Raipur3 ckts	1 ckt - 222 & 2 ckts- 233
	(10)	3	400 KV Bhadravati (PG) - Bhilai S/C Line	222
		4	+/-500 KV Bhadravati (PG)-Ramagundam BTB HVDC	
	1	765/400 KV, 2X1500 MVA ICT with bays		
	765/400/220 KV Wardha (PG)	2	400/220 KV, 2X315 MVA ICT with bays	
		3 765 kV Seoni (PG)–Wardha (PG) 2 x S/C line		267.94
3		4	400 KV Wardha (PG) – Akola-I D/C Line	161.865
5		Wardha (PG) 5 400 KV Akola-I – Aurangabad-I D/C Line		110.398
		6	400 kV Wardha (PG)–Parli (PG) (Quad.) D/C Line	168.939
		7	400 kV Raipur (PG)–Wardha (PG) D/C Line	370.565
		1	400 kV Bhadravati (PG)-Parli (PG) D/C Line	189.708
1	400KV Parli (PG)	2	400 kV Parli (MSEB) – Parli (PG) D/C Line	4.959
4	(Commissioned)	3	400 kV Parli (PG) - Solapur (PG) D/C Line	189
		4	400 kV Parli (PG) – Pune (PG) D/C Line	308
_	400 KV Pune (PG)	1	400/220 KV, 2X315 MVA ICT with bays (ICT- 1 Errected)	
5	(Commissioned)	2	LILO of 400 kV Lonikand (MSETCL) – Kalwa (MSETCL) D/C at Pune (PG)	10
	765/400KV	1	400 kV Pune (PG) – Aurangabad-I (MSETCL) D/C Line	225
6	Aurangabad (PG) (Commissioned)	2	LILO of both circuits of 400 kV Akola (MSETCL) – Aurangabad –I (Waluj) at 400 KV Aurangabad (PGCIL)	52

Sr. No.	Name of S/Stn		Particulars			
			400/220 KV, 2X315 MVA ICT with bays (ICT-			
		1	1 Errected)			
		2	400 kV South Solapur (PG) –	180		
	765/400/220 KV South Solapur		Kolhapur(MSETCL) D/C Line	107		
7		3	LILO of 400 kV Solapur (MSEB) – Karad			
/	(PG)	5	(MSEB) S/C at South Solapur (PGCIL)	105		
	(Commissioned)	4	765/400 KV, 2X1500 MVA ICT with bays			
		4	(ICT-1 Errected)			
		5	⁵ 765KV 2xSC Raichur – Solapur line (One line			
		5	Commssioned)	208		

Table 5.2-PGCIL'S Existing Interstate Lines in Maharashtra

Sr. No.	Particulars	Line length (km)
1	400 KV Bhilai – Koradi-I S/C Line	272
2	400 KV Satpur – Koradi-I S/C Line	149
3	400 KV Khandva – Dhule-I D/C Line	210
4	400 KV Sardar Sarovar – Dhule-I D/C Line	142
5	400 KV Kolhapur - Mhapusa D/C Line	192.7

Table -5.3- Proposed Network of PGCIL (2013-14 to 2017-18)

Sr. No.	Name of S/s		Total Scope of Work	Length (km)
		1	400/220 KV, 2X315 MVA ICT with bays	
1	400 KV Navi Mumbai (PG)	2	400 kV Navi Mumbai (PG) – Wapi terminated at 400 kV Kudus	
		3	LILO of 400 kV Padghe – Kharghar (MSETCL) S/C at Navi Mumbai (PG)	10

The transmission system proposed by CEA in Power System Planning up to 2017-18

1) Transmission System within WR associated with New IPP projects in Chattishgarh

- > 765 KV Raipur Pooling station Wardha line $2 \times D/C$ or $4 \times S/C$.
- > 765 kV Wardha Aurangabad (PG) line $2 \times D/C$ or $4 \times S/C$.
- > 765 kV Aurangabad (PG) Kudus (PG) line 1 x D/C or 2 x S/C.
- > 765/400 kV 2 x 1500 MVA substations at Aurangabad and Kudus (GIS)
- > 765 kV Aurangabad 765 KV Padghe (PG) DC line
- > 765 kV Aurangabad Dhule (IPTC) S/C line 191 K.M
- ▶ 400 kV Aurangabad (PG) Boisar D/C (quad) line.
- > 400 kV Kudus (PG) Kudus (MSETCL) D/C (quad) line
- > 765/400 kV 2 x 1500 MVA substations at Dhule (IPTC)
- ▶ 400 KV Dhule (IPTC) Dhule (MSETCL) D/C (quad) line 36 K.M

2) Transmission system associated with Krishnapatnam (5 x 800 MW) (WR Portion)

- ➢ Raichur Solapur 765 kV 2 x S/c (one circuit commissioned)
- Solapur Pune 765 kV S/c
- > 765/400 kV substations at Solapur & Pune with 2 x 1500 MVA transformation capacity.
- LILO of both 400 KV Aurangabad- Pune DC lines at Pune (GIS)
- LILO of both 400 KV Parli- Pune DC lines at Pune (GIS)

3) Solapur STPP(2x660MW) transmission system

- ➢ 400 kV Solapur (PG) − Solapur STPP D/c (Quad)
- Augmentation of 400/220 kV ICT by 1 X 315MVA transformer (3rd) at Solapur (PG)
 By shifting 3rd transformer from Wardha (PG) to Solapur (PG)

4) Depending upon the Southern Region IPP, PGCIL has planned the following

infrastructure

- > 765 kV Narendra (PG) 765 kV Kolhapur (PG) Double ckt line
- ➢ 765 kV Padghe (PG) − 765 kV Kolhapur (PG) 2 X SC line
- > 765 kV Aurangabad- 765 KV Solapur (PG) DC line
- LILO on circuit 765 kV Aurangabad- 765 KV Padghe (PG) DC line at 765 KV Pune (PG)
- > 765 kV Solapur (PG) 765 KV Pune(PG) DC line

5) Transmission system associated with Mundra UMPP (4000 MW) (WR Portion)

Wardha-Aurangabad 400 KV (Quad) DC line (with provision to upgrade at 1200KV as later stage)

MSETCL PLAN FOR THE YEAR 2014-15 TO 2018-19

	1	TECHNIC	CAL ABS	IRACII	MSEICL				
Sr. No.	Vol level	2014-15	2015-16	2016-17	2017-18	2018-19	Total		
New Sub-Sta	tion	r			1				
1	765 KV	0	1	0	0	0	1		
2	400 KV	4	0	2	2	3	11		
3	220 KV	12	13	12	12	5	54		
4	132 KV	8	10	11	6	9	44		
5	110-100 KV	0	0	0	1	0	1		
TOTAL		24	24	25	21	17	111		
Transmission Lines (Ckt. KM)									
TL1 - Transn	nission Lines f	or New Sub-S	tation	1	1		-		
1	765 KV	0	0	0	0	0	0		
2	400 KV	266	942	291	652	761	2912		
3	220 KV	527	514	1000	940	714	3695		
4	132 KV	363	471	690	367	697	2588		
5	110-100 KV	4	0	0	85	0	89		
TOTAL (TL1)		1160	1927	1981	2044	2172	9285		
TL2 - Transn	hission Lines f	or S/S where	only Single Sc	ource & Single	e ckt is availab	ble			
1	765 KV	0	0	0	0	0	0		
2	400 KV	0	0	0	0	0	0		
3	220 KV	/2	5	80	0	0	157		
4	132 KV	558	423	275	458	67	1/81		
5 110-100 KV		0	0	37	0	0	37		
TUTAL (IL2)) 	630	428	392	458	67	1975		
IL3 - Transn	Tission Lines t		adility						
1	765 KV	0	0	0	0	0	0		
2	400 KV	0	0	0	156	0	156		
3	220 KV	168	685	260	348	85	1546		
4	132 KV	65	267	332	383	61	1108		
	110-100 KV	0	0	0 502	15	0	15		
TUTAL (TL3)	nission Linos t	233 Altorn	952 ata Sourco	592	902	140	2023		
1L4 - Transi				0	0	0	0		
2	105 KV	0	0	0	120	0	120		
2	400 KV	0	121	0	120	0	120		
3	122 KV	0	0	0	125	100	225		
5	132 KV	0	0	0	135	100	235		
		0	121	0	255	100	476		
TI 5 - Transn	, nission Lines f	or Strengthen	ing of Evacua	tion	233	100	470		
1	765 KV	0	0	0	0	0	0		
2	400 KV	0	0	0	0	0	0		
3	220 KV	0	0	100	71	25	196		
4	132 KV	30	0	30	0	0	60		
5	110-100 KV	0	0	0	0	0	0		
TOTAL (TL5)		30	0	130	71	25	256		
TOTAL EHV	LINES (TL1+TI		TL5) (KM)						
1	765 KV	0	0	0	0	0	0		
2	400 KV	266	942	291	928	761	3188		
3	220 KV	767	1325	1440	1359	824	5715		
4	132 KV	1016	1161	1327	1343	925	5772		
5	110-100 KV	4	0	37	100	0	141		
TOTAL E									
(TL1+TL2+T	L3+TL4+TL5)	2053	3428	3095	3730	2510	14816		
(r	(IVI)	1	1		1				

TECHNICAL ABSTRACT MSETCL										
Sr. No.	Vol level	2014-15	2015-16	2016-17	2017-18	2018-19	Total			
Capacity Ad	dition (MVA)			-	-					
TF1 - Capac	ity addition by I	New Sub-Stat	tion							
1	765 KV	0	3000	0	0	0	3000			
2	400 KV	4000	0	1000	3000	3000	11000			
3	220/132 KV	800	1400	1600	800	800	5400			
4	220/33 KV	1050	1150	900	1100	600	4800			
5	132/33 KV	550	575	650	350	500	2625			
6	110-100 KV	100	0	0	50	0	150			
TOTAL (TF1)	6500	3125	4150	5300	4900	23975			
TF2 - Capac	ity addition by	Augmentatio	h by Addition	of Transforme	r					
1	765 KV	0	0	0	0	0	0			
2	400 KV	815	815	500	0	0	2130			
3	220 KV	1300	800	700	300	100	3200			
4	220/33 KV	1550	850	125	150	0	2675			
5	132 KV	1300	875	150	25	0	2350			
6	110-100 KV	50	100	0	0	0	150			
TOTAL (TF2	2)	5015	3440	1475	475	100	10505			
TF3 - Capac	ity addition by A	Augmentatio	n by Replacem	nent of Transf	ormer					
1	765 KV	0	0	0	0	0	0			
2	400 KV	0	0	570	0	185	755			
3	220 KV	500	570	150	50	100	1370			
4	220/33 KV	805	675	325	50	0	1855			
5	132 KV	836	768	230	0	0	1833			
6	110-100 KV	0	125	0	25	0	150			
TOTAL (TF3	3)	2141	2138	1275	125	285	5963			
TOTAL CAP	ACITY ADDITIO	N (TF1+TF2+	TF3) (MVA)	-						
1	765 KV	0	3000	0	0	0	3000			
2	400 KV	4815	815	2070	3000	3185	0			
3	220 KV	2600	2770	2450	1150	1000	0			
4	220/33 KV	3405	2675	1350	1300	600	0			
5	132 KV	2686	2218	1030	375	500	0			
6	110-100 KV	150	225	0	75	0	450			
TOTAL ADDITION (CAPACITY TF1+TF2+TF3) //VA)	13656	8703	6900	5900	5285	40443			
()										



EVACUATION SCHEMES

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	FVACUATION SCHEMES					
			EVACUATION SCHEMES (2014-15)			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	400 kV CHANDRA - PUR -II AND SWITCHING S/S (2X500 MW) (2014-15)	C'PUR	220 KV CHANDRAPUR II - CHANDRAPUR MIDC D/C LINE- 20 KM REORIENTATION OF EXISTING 220 KV CHANDRAPUR - I - WARORA LINE AND 220 KV CHANDRAPUR-II - WANI LINE AT CHANDRAPUR II - 20 KM	Evacuation of power from Chandrapur- II UNIT NO 8 (2014-15) & 9 (2015-16). Other 400 kV lines & ICT are commissioned		
2	220 KV SHIRSUPHAL (50 MW) (2014-15)	PUNE	LILO OF 220 KV KALYANI - BARAMATI AGRO LINE - 5 KMS 2 X 50 MVA 220/33 KV	Evacuation Solar power of MEPGCL		
			400 kV AURANGABAD - III - AURANGABAD - II D/C QUAD LINE WITH BAYS ON EITHER SIDE - 5 KMS. 400 kV AURANGABAD III - BABHAI ESHWAR			
3	765 kV		D/C QUAD LINE - 122 KMS (ORDER PLACED) 400 kV BABHALESHWAR - KUDUS D/C QUAD LINE - 180 KMS (ALSO CONSIDERED IN	REMARKS Evacuation of power from Chandrapur-II UNIT NO 8 (2014-15) & 9 (2015-16). Other 400 kV lines & ICT are commissioned Evacuation Solar power of MEPGCL For evacuation of power generated by Korad (3X660 MW), India bulls(5X270 MW) and M/s Adani Tiroda (5X660 MW) and onward transmission of power to the load centre wesern part of state. The proposed. 765 KV Tiroda -Koradi-Akola - Aurangabad 2 X S/C line is constructed by MEGPTCL. Hydro Power Evacuation Hydro Power Evacuation Strengthening of 220 kV Nagpur ring main (WIP)		
	AURAN - GABAD III S/S (2015-16)	A'BAD	WASHI ZONE) 2 X 1500 MVA (7 X 500 MVA 1Ph UNIT), 765/400 kV ICT's PHASE WISE 7 X 80 MVAR 765 kV FIXED LINE REACTORS AKOLA - II - AURANGABAD 2 X S/C 765 kV LINES (ALSO CONSIDERED IN MEGPTCL PLAN) PHASE WISE 4 X 80 MVAR 765 kV SWITCHABLE BUS REACTOR (ALSO			
4	132 kV GOSIKHURD S/S (4X6 MW) (2015-16)	BHANDARA	LILO ON 132 KV ASGAON - PAGHORA LINE - 9.8 KMS 1 X 25 MVA, 132/33 kV T/FS WITH BAYS 33 kV OUTLETS - 2 NOS.	Hydro Power Evacuation		
5	400/220 kV KORADI - II S/S (3 X 660 MW) (2015-16) (S/S COMMI- SSIONED)	NAGPUR	220 KORADI - II - BUTTIBORI-II D/C LINE - 55 KM WITH BAYS 220 KV KORADI - II - 400/220 KV KHAPERKHEDA D/C LINE - 15 KM WITH BAYS LILO OF ONE CKT OF 400 kV WARORA - WARDHA PG DC QUAD LINE AT 400 kV KORADI II S/S - 120 KMS LILO OF ONE CKT OF 400 kV CHANDRAPUR - PARLI DC (AFTER CONVERSION) LINE AT 400 kV WARORA S/S - 30 KM (2017-18) 400 KV KORADI II - KORADI - III D/C QUAD LINE -15 KMS (ALSO CONSIDERED IN MEGPTCL PLAN) CONVERSION OF EXISTING 400 KV CHANDRAPUR - PARLI SC LINE TO DC USING SAME ROW - 371 KMS (2017-18)	Evacuation of power from Koradi-II & Ideal Energy (2X270 MW) and strengthening of 220 kV Nagpur ring main (WIP)		
				58 P a g e		

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19 EVACUATION SCHEMES					
			EVACUATION SCHEMES			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
6	400 kV NANDGAON PETH S/S (2016-17)	AMRAVATI	LILO ON ONE CKT OF 400 kV AMRAVATI IPP - 765/400 KV AKOLA-II DC QUAD LINE AT 400 kV NANDGAON PETH - 10 KMS (2018-19) LILO ON 400 kV KORADI II - AMRAVATI IPP SC LINE AT 400 kV NANDGAON PETH - 5 KMS 220 kV M/C LINE FROM 400 kV NANDGAON PETH S/S TO 220 kV NANDGAON PETH (WIP) - 3.0 KMS. 220 kV NANDGAON PETH - 220 kV WARUD D/C LINE - 60 KMS. (2017- 18) - 220 kV NANDGAON PETH - 220 kV	Evacuation of power of Amravati India Bulls IPP. Strengthening of 220 kV network in Amravati & Akola districts.		
			ANJANGAON D/C LINE - 60 NVIS. (2017-10) 2 X 500 MVA 400/220 kV ICT 400 KV SINNAR (IPP) - NASHIK D/C LINE 20 KMS.			
7	400 KV NASHIK GIS (EKLAHRE) S/S NASHIK A GEO MW	LINE - 150 KM (2018-19) LILO OF BOTH CKTS OF 220 KV NASHIK - NAVSARI LINE AT 400 KV NASHIK (EKLAHARE) 2 KM.	Evacuation of Power from Nasik (1X660 MW), Dondaicha (5X660 MW) & Sinnar IPP (10 X270 MW) Towards Mumbai / Pune and strengthening of			
	(2017-18)		2 X 500 MVA 400/220/33 KV ICT'S WITH BAYS (COMPRISING OF 7 X 167 MVA UNITS INCLUDING A SPARE XMER UNIT WITH BAYS) (+/-) 320 KV, 1500 MW IGBT NASIK - PUNE (CHAKAN)	220 KV Nasik network.		
			220 KV PARLI - NANDED D/C LINE -110 KM (COMMISSIONED) 220 KV INTER CONNECTION BETWEEN PARLI UNIT NO.6-7 AND PARLI (REP) 8 - 1.0 K.M			
8	PARLI TPS EXTN 1 X 250 MW (2017-18) & 220 / 132 KV WADWANI	ARLI TPS KTN 1 X 250 MW 017-18) & BEED 0 / 132 KV /ADWANI S (2017-18)	220 / 132 kV WADWANI S/S (2017-18) 220 kV D/C LINE FROM PARLI 8th (REPLACEMENT UNIT) - WADAWANI - 60 KM. LILO ON 132 kV TELGAON - BEED LINE AT 220 kV WADWANI S/S - 5.0 KM.	Evacuation of power from Parli TPS 1 X 250 MW To minimize loading of 220 kV Beed S/S and to have additional source to 132 kV S/S in Beed District.		
	S/S (2017-18)		LILO ON 132 kV TELGAON - MAJALGAON LINE AT 220 kV WADWANI S/S - 12.0 KM 2 X 100 MVA, 220/132 kV ICTS at WADWANI 2 X 25 MVA, 220/33 kV TF WITH BAYS 33 kV OUTLETS - 06 NOS			
9	220 kV KAUDGAON S/S MW SOLAR (2017-18)	OSMANABAD	LILO ON 220 KV OSMANABAD - PARANDA LINE - 1 KM 2 X 25 MVA 220/33 KV XMER 33 kV OUTLET - 4 NOS	For evacuation of power generated by MSEPGCL Solar Power		
10	400KV DONDAICHA S/S 5 X 660 MW (2018-19)	DHULE	400KV DONDAICHA -MALEGAON(NASIK) D/C QUAD LINE- 60KM WITH BAYS 400KV DONDAICHA-DHULE D/C-QUAD LINE 60 KM WITH BAYS 220 KV D/C LINE, High Ampacity Conductor TO DONDAICHA (existing) S/S -15 KMS +/- 320 KV 2000 MW IGBT HVDC LINE FROM 400 KV DONDAICHA S/S TO MUMBAI(MARVE)- 350K Ms	Evacuation of Power Towards Load Centers of Nasik, Pune & Mumbai, Also with meeting local Demand		
	ii	<u>. </u>	550K.MS	50 D a a a		

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
			EVACUATION SCHEMES			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
11	400KV MALEGAON (SAUNDANE) (2018-19)	NASIK	400KV MALEGAON -NASIK D/C QUAD LINE 100 KM WITH BAYS 2X500MVA,400/220KV ICT REORINTATION OF EXISTING 220 KV MALEGAON - SATANA S/C LINE AT 400 KV MALEGAON (Proposed) - 10 kms. LILO OF ONE CKT OF 220KV MALEGAON - KALWAN D/C LINE AT 400KV MALEGAON - 22KM	For Evacuation of Dondaicha (5X660 MW) power and to improve voltage profile of the area and to meet the upcoming demand.		
	400 KV BHUSAWAL		INTERCONNECTION OF 400 KV BHUSAWAL (DEEPNAGAR) - NEW 400 KV BHUSAWAL- 1.0 KM, ROUTE LENGTH. (4 X SINGLE CORE XLPE CABLE).			
12	NEW (1x660 MW)S/S (2018-19)	JALGAON	220 KV BHUSAWAL NEW - MALKAPUR D/C LINE-50 KM. 220 KV BHUSAWAL NEW- VIRODA D/C LINE - 5 KM.	Evacuation of Power from Bhusawal plant & to feed the upcoming load.		
			2 x500 MVA,400/220kV ICT AT NEW BHUSAWAL			
13	220 KV		LILO ON ONE CKT OF 220 KV M/C LINE FROM 220 KV PARAS - BALAPUR AT MALKAPUR - 80 KM.	220 KV Malkapur s/s is proposed for evacuation of power from Paras		
13	S/S (2018-19)	DOLDANA	2 X 100 MVA 220/132 KV ICT. REORIENTATION OF 132 KV DC LINES - 30 KMS.	MW) MSEPGCL power & improve voltage profile in Buldana District.		
	1 1					
		LINK	LINE FOR EVACUATION OF POWER FROM URAI	<u>I G I PS</u>		
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	EVACUATION OF POWER FROM URAN i) Block I - 406 MW	RAIGARH	220 kV LINK LINE STRINGING OF TWO CKTS OF URAN- KHARGHAR DC ON MC LINE 36 KMS	Evacuation of power from Uran generation and strengthening of EHV		
	(2017-18) ii) Block II- 814 MW (2017-18)		UPGRADATION OF EXISTING 220 kV URAN - APTA FOUR CIRCUITS	n/w in Raigad district.		

WASHI EHV CONSTRUCTION CUM O&M ZONE

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19 WASHI EHV CONSTRUCTION CUM (O&M) ZONE						
	ONGOING SCHEMES: 2014-15						
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	400 kV PADGHE - II (KUDUS) S/S (2014-15)	THANE	LILO OF ONE CIRCUIT OF 400 kV TARAPUR - PADGHE D/C AT PADGHE - II (KUDUS) - 15 KM 400 kV BABHALESHWAR - KUDUS D/C QUAD LINE - 180 KMS (2015-16) 400 kV DC LINE FROM VAPI TO KUDUS (BY PGCIL) - 125 KM 400 kV PADGHE (PG) - 400 kV PADGHE - II (KUDUS) MSETCL USING D/C QUAD MOOSE CONDUCTOR - 10 KM (BY PGCIL) (2016-17) 220 kV M/C LINE FROM 400 kV KUDUS TO 220 kV KOLSHET - 40 KM.(2017-18) INTERCONNECTING D/C LINE BETWEEEN 400 kV KUDUS TO 220 kV KUDUS - 5 KMS 2 X 500 MVA, 400/220 kV 1 PHASE ICT SPARE	This substation is proposed to reduce loading of existing 400 kV Padghe S/S & to cater up coming load of Wada, Kudus, Bhiwandi and Kolshet area.			
2	220 kV VILE- BAGAD S/S (2014-15)	RAIGAD	LILO ON 220 kV POSCO - NAGOTHANE LINE AT VILE BHAGAD - 4 KM (2017-18). LILO ON 220 kV KANDALGAON - TOPWORTH LINE AT VILE BHAGAD - 4 KM. <u>2 X 25 MVA - 220/22 kV TF</u> 22 kV OUTLETS - 08 NOS	Voltage improvement & load catering.			
3	220 kV KUDUS S/S (WADA -II) (2014-15)	THANE	220 kV D/C LINE ON D/C TOWER, LILO ON EXISTING KOLSHET - WADA LINE - 0.5 KMS 2 X 100 MVA, 220/33-22 kV T/F WITH ASSOCIATED BAYS 33 kV OUTLETS - 8 NOS. 22 kV OUTLETS - 12 NOS.	To reduce loading of existing 220 kV Wada S/S and to meet upcoming load of nearby area new S/S is proposed			
4	100 kV MUMBRA S/S (2014-15)	THANE	LILO ON 100 kV KALWA - DOMBIVALI LINE - 4 CKM WITH BAYS 2 X 50 MVA, 100/22 kV T/FS WITH BAYS 10 X 22 kV OUTLETS	Voltage improvement & load catering.			

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

NIL

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2014-15)

NIL

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV KHARGHAR S/S (2014-15)	THANE	1 X 500 MVA, 400/220 kV ICT WITH BAYS	Existing transformer capacity available in S/S is 400/220 kV, 2 X 315 MVA and the load reached is 386 MVA Considering the maximum load reach on the transformer in event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.
2	220 KV KHARGHAR S/S (2014-15)	THANE	1 X 50 MVA 220/33 kV	Presently installed capacity is 2 x 50 MVA 220/22 kV and existing load is 56 MVA. To meet upcoming load this xmer is considered.
3	220 kV PAL (DOMBIVALI) S/S (2014-15)	THANE	1 X 100 MVA 220/22-22 kV	Presently installed capacity is 2 x 50 MVA 220/22 kV and existing load is 72 MW. To meet upcoming load this xmer is considered.

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19						
			WASHI EHV CONSTRUCTION CUM (O	&M) ZONE			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
4	220 kV MAHAPE S/S (2014-15)	THANE	1 x 50 MVA ,220/22 kV T/F WITH BAYS.	Presently installed capacity is 3 x 50 MVA 220/22 kV and existing load is 115 MVA. To meet upcoming load this x mer is considered.			
5	132 kV PALGHAR S/S (2014-15)	THANE	1 X 50 MVA ,132/33 kV T/F WITH BAYS.	Existing xmer capacity available in S/S is 2 X 50 MVA and load is 65 MVA. Considering the max load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load			

	AUGMENTATION OF S/S BY REPLACEMENT OF ICT/T/F (2014-15)						
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	220 kV NALA - SOPARA S/S (2014-15)	THANE	1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY	Existing xmer capacity available in S/S is 3 X 5 and the load reached is 140 MVA.Considering the max load reached on the xmer in the even of interruptions/outage on any one of the xmer other xmer should take care of existing load			
2	220 kV WADA S/S (2014-15)	THANE	1 X (100-50) MVA 220/22-22 kV T/F WITH BAY	Existing transformer capacity is 2 X 100 and 2 X 50 MVA and the load reached is 110 MVA.			
3	220 kV WADKHAL S/S (2014-15)	RAIGAD	1 X (50-20) MVA 220/22 kV T/F WITH BAYS	Existing xmer capacity available in S/S is 1 X 2 , 1 X 50 and the Load reach is 25 MVA.Considering the maximum load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load			
4	132 kV MIDC BOISAR I S/S (2014-15)	THANE	2 X (25-20) MVA 132/11 kV XMER WITH BAYS (COMMISSIONED)	Existing xmer is 2 X 25 and 2 X 20 MVA 132/1 kV and load reached is 43 MVA			

	CREATION O	F NEW 22 kV	LEVEL	(2014-15)
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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV VASAI	THANE	2 X 50 MVA 220/22 kV T/F WITH BAYS	Creation of new level
	(2014-15)	MANE	8 X 22 kV OUTLETS	Creation of new rever
2	220kV JAMBHUL	THANE	2 X 50 MVA 220/22 kV T/F WITH BAYS	Creation of now lovel
2	(ANBER - NATH) S/S (2014-15)	THANE	12 X 22 kV OUTLETS	Creation of new level

NEW SCHEMES: 2015-19

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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
	220 kV		220 kV DC LINE ON DC TOWER BY LILO ON PROPOSED 220 kV PADGHE - WADA LINE - 9 KMS		
1	ABITGHAR WADA S/S (2015-16)	THANE	I IOTAL SCOPE OF WORK REMARKS 220 kV DC LINE ON DC TOWER BY LILO ON PROPOSED 220 kV PADGHE - WADA LINE - 9 KMS To reduce loading of existing 220 kV Wada S/S and to meet upcoming load of nearby area new S/S is proposed 220 kV DC LINE ON DC TOWER BY LILO ON PROPOSED 220 kV PADGHE - WADA LINE THROUGH UG CABLE - 1 KMS To reduce loading of existing 220 kV Wada S/S and to meet upcoming load of nearby area new S/S is proposed 22 kV GIS OUTLETS - 12 NOS LILO OF 220 kV BOISAR - DAHANU LINE AT BOISAR III (VIRAJ PROFILES) - 0.7 KM To reduce loading of existing 220 kV Boisar and 132 kV Boisar MIDC S/S and to meet upcoming load of nearby area new S/S is proposed		
	(====,=,		2 X 50 MVA 220/22 kV T/F	22 kV T/F	
			22 kV GIS OUTLETS - 12 NOS		
	220 kV VIRAJ		LILO OF 220 kV BOISAR - DAHANU LINE AT BOISAR III (VIRAJ PROFILES) - 0.7 KM	To reduce loading of existing 220 kV Boisar an	
2	(2015-16)	THANE	2 X 50 MVA 220/33 kV TFS	load of nearby area new S/S is proposed	
	(33 kV GIS OUTLETS - 12 NOS		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 WASHI EHV CONSTRUCTION CUM (O&M) ZONE

			WASHI EHV CONSTRUCTION CUM (O&I	M) ZONE
SR			1	
NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
3	220 kV KAMAN S/S (2015-16)	THANE	LILO ON 220 kV PADGHE - VASAI SECTION OF PADGHE - VASAI - PGCIL LINE THROUGH 1000 SQ MM UG CABLE - 2 KMS 2 X 50 MVA 220/22 kV T/F	To meet upcoming load of nearby Vasai area
4	220 kV VIRAR (W) (CHIKAL DONGRI) S/S (2015-16)	THANE	D/C ON NARROW BASE D/C TOWER LILO ON PROP 220 kV BOISAR - KOPRI LINE AT 220 kV CHIKHAL DONGRI S/S - 4 KMS 2 X 50 MVA 220/22 kV T/F 22 kV GIS OUTLETS - 12 NOS	To reduce loading of Nalsopara and Vasai S/S and to meet upcoming load this new S/S is proposed
5	220 kV VIRAR (E) (KOPRI) S/S (2016-17)	THANE	220 kV DCDC LILO ON NARROW BASE DC TOWERS ON 220 kV BOISAR - VASAI LINE UP TO LOC NO A - 7 KM 220 kV MC LINE ON NARROW BASE MC TOWERS FROM LOC A TO PROP 220 kV KOPRI (VIRAR E) S/S - 5 KM 220 kV DCDC LINE LILO ON NARROW BASE DC TOWERS ON 220 kV BOISAR - VARSOVA LINE UP TO LOC NO A - 2 KMS 2 X 50 MVA, 220/22 kV XMERS WITH BAYS 22 kV GIS OUTLETS - 12 NOS	To reduce loading of Nalsopara S/S and to meet upcoming load this new S/S is proposed
6	220 kV MANOR S/S (2016-17)	THANE	220 kV D/C ON M/C TOWER FOR LILO ON PROPOSED 220 kV PGCIL - WADA LINE AT 220 kV MANOR - 1 KMS 2ND CKT STRINGING OF PROPOSED 220 kV PGCIL - MANOR LINE - 32 KMS (2017-18) 2 X 50 MVA 220/33 kV T/F 33 kV GIS OUTLETS - 12 NOS	To reduce loading of 132 kV Palghar S/S and to meet upcoming load this new S/S is proposed
7	220 kV ULHAS - NAGAR S/S (2017-18)	THANE	LILO ON 220 KV PADGHE - JAMBHUL LINE - 10 KMS WITH BAYS 2 X 50 MVA, 220/22 KV T/FS WITH BAYS 12 X 22KV OUTLETS	Present recorded peak load on Mahane - 100 kV, Amernath - 100 kV S/S are 50 MW and 40 MW respectively. It is anticipated that total load will reach to about 108 MW. Hence it is necessary to go in for new 220 kV sub-station at Ulhasnagar.
8	220 kV DOMBIVALI (W) S/S (2017-18)	THANE	LILO OF NASIK - KALWA AT DOMBIVALI WEST S/S - 6 KMS 2 X 50 MVA, 220/22 kV XMER 22 kV BAYS - 9 NOS	To meet upcoming load in Dombivali (W) area
9	220 kV GOREGAON FILMCITY S/S (2017-18)	MUMBAI	LILO OF 220 kV AAREY (R INFRA T) - 220 KV BORIVALLI (R INFRA T) AT GOREGAON FILM CITY - 5 KMS BY USING UG CABLE LILO OF 220 kV AAREY (R INFRA T) - 220 KV BORIVALLI LINE (MSETCL)(PROPOSED CABLE) AT GOREGAON FILM CITY - 5 KMS BY USING UG CABLE (2018-19) 2 X 100 MVA, 220/33 kV XMER 2 X 100 MVA, 220/33 kV XMER (2018-19) 33 KV - 40 OUTLETS	To cater upcoming load of Goregaon Film city (MSEDCL) and Nagri Newara (R Infra D)
10	100 kV AGARDANDA (MURUD) (2017-18)	RAIGAD	100 kV D/C LINE FROM MHASALA TO AGARDANDA – 32.6 KMS 2 X 25 MVA 100/22 kV TRANSFORMERS. 22 kV OUTLET – 6 NOS.	To overcome low voltage & to feed the upcoming load.
11	220 kV PALGHAR S/S (2018-19)	THANE	220 kV NALASOPARA - PALGHAR D/C LINE WITH BAYS - 40 KMS 2 X 50 MVA, 220/22 kV T/FS WITH BAYS 12 X 22 kV OUTLETS	Palghar 220 kV S/S is considered to cater increasing loads in the area.

1		STU	TRANSMISSION PLAN FOR MAHARAS	HTRA STATE			
			YEAR 2014-15 TO 2018-19	M) ZONE			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
	220 kV		220 KV PADGHE - KALYAN D/C LINE WITH BAYS - 20 KMS				
12	KALYAN S/S	THANE	2 X 50 MVA, 220/22 kV TFS WITH BAYS	It is necessary to go in for new 220 kV sub- station at kalyan to feed the upcoming load			
	(2018-19)		12 X 22 KV BAYS FOR FUTURE EXPANSION				
			132 KV DHANU - DAPCHERI D/C LINE WITH BAYS - 25 KMS				
13	132 kV DAPCHERI	THANE	132 KV BOISAR - II - DAPCHERI SCDC LINE - 25 KM	Dapcheri - 132 kV S/S is considered for reducing the loading and to feed the upcomming load at proper voltage.			
	S/S (2018-19)		2 X 25 MVA, 132/33 kV T/FS WITH BAYS 8 X 33 kV OUTLETS	upcomming load at proper voltage.			
	132 kV	THANE	LILO ON 132 KV BOISAR - I - DAHANU S/C LINE AT JAWHAR - 75 KM WITH BAYS	To overcome low voltage & to feed the			
14	(2018-19)	THANE	2 X 25 MVA, 132/33 kV T/FS WITH BAYS	upcoming load.			
			33 kV BAYS - 8 NOS				
			ADDITIONAL LINK LINES (2015-19)				
	ADDITIONAL	LINK LINES F	OR S/S WHERE ONLY SINGLE CKT AND SING	LE SOURCE IS AVAILABLE (2015-19)			
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	100 kV LINK LINE (2016-17)	RAIGAD	2ND CIRCUIT STRINGING OF 100 kV MHASALA - KANDALGAON LINE - 37 KM	100 kV Mhasala S/S is fed from 100 kV Kandalgaon S/s with S/c line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line Commissioning of 100 kV Agardanda S/S is proposed in 15-16 by making LILO of this ckt.			
	·	ADDITION AL	. LINK LINES FOR NEW S/S TO HAVE ALTERNA	ATE SOURCE (2015-19)			
			NIL				
		STR	RENGTHENING FOR EVACUATION ARRANGEM	<u>ENT (2015-19)</u>			
SR	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	220 kV LINK LINE (2018-19)	RAIGAD	CONVERSION OF 220 kV APTA - URSE S/C LINE TO D/C LINE - 25 KM	For strengthening of evacuation scheme of Uran. Considering uncertainity of Uran gas Expansion project / Space constrain at 220 KV Chinchwad S/s and non availability of 400 KV Vapi- Navi Mumbai DC Quad line , Conversion of Apta - Chinchwad line not feasible at this stage.			
	ADDITION	AL LINK LINE	S TO MEET DEMAND WITHOUT LOAD SHEDDII _AND QUALITY OF SUPPLY (2015-19)	NG AND TO ENSURE RELIABILITY			
SR	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	400 kV NAVI MUMBAI S/S	THANE	LILO ON 220 KV APTA - KALWA S/C TO NAVI MUMBAI (PGCIL) - 1 KMS WITH BAYS	Voltage improvement & load catering (in view non availability of 400 KV Vapi - Navi Mumbai DC line, LILO of one circuit of 400 KV Padobe kharobar line, is proposed by PGCII			
	(PGCIL) (2015-16)		LILO ON 220 KV KANDALGAON - KHARGHAR FOR NAVI MUMBAI - 7 KM.	As such MSTCL not ready to connect 220 KV lines to 400 KV Navi Mumbai S/s. The matter is under corrsespondence.			

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
	1					
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
			COVERSION OF EXISTING D/C TOWER IN TO M/C NARROW BASE TOWER USING EXISTING CORRIDOR FROM 220 kV KHARGHAR - KALWA - BORIVALI - BOISAR.			
2	220 kV LINK LINE (2015-16)	THANE	REPLACEMENT OF 0.4 ACSR CONDUCTOR, WITH AAAC TWIN CONDUCTOR a) 220 kV LILO PT OF TARAPUR - BORIVALI - 95 KM b) 220 kV LILO PT OF MULUND - BORIVALI - 15 KM c) 220 kV KALWA - LILO PT OF MULUND -6.2 KM d) 220 kV KALWA - LILO PT OF MAHAPE - 8.1 KM e) 220 kV LILO PT OF MAHAPE - 1.10 PT OF TIFFIL - 1.6 KM f) 220 kV LILO PT OF MAHAPE - 1.10 PT OF TROMBAY - 31 KM g) 220 kV LILO PT OF NERUL - KHARGHAR - 9.7 KM REPLACEMENT OF 0.4 ACSR CONDUCTOR, WITH AAAC TWIN CONDUCTOR OF 220 kV KHARGHAR - KALWA - BORIVALI - BOISAR S/C ON M/C.	Existing Kharghar - Kalwa S/C line is of 1971. Existing Boiser (MSETCL) - Borivali (MSETCL) S/C line is of 1973. For srengthening of network and upcoming future demand of mumbai area this work is proposed.		
	220 kV LINK		STRINGING OF D/C ON M/C FROM 220 kV KHARGHAR - BORIVALI - BOISAR WITH AAAC TWIN CONDUCTOR BY PASSING KALWA SWITCHYARD WITH 220 kV CABLES - 140 KM	For strengthening of evacuation of Dabhol		
3	LINE (2015-16)	RAIGAD	30 KM	power.		
4	220 kV LINK LINE (2015-16)	THANE	220 kV COLOURCHEM - KOLSHET D/C - 8 KM	Strengthining of existing network.		
5	220 kV LINK LINE (2016-17)	RAIGAD	LILO OF 220 kV NAGOTHANE - MAHAD AT KANDALGAON - 10 KMS.	Strengthining of existing network.		
6	100 kV LINK LINE (2017-18)	THANE	CONVERSION OF EXISTING 100 kV S/C PADGHE - MOHANE TO D/C USING SAME ROW - 15 KM	Since the existing 100 kV Mohane - Padghe S/C line is 60 MW. Mohane being the industrial estate and considering heavy load growth it is suggested to add proposed line to meet additional load growth and contingency.		
7	100 kV LINK LINE (2017-18)	THANE	CONVERSION OF 100 kV BHIVANDI - PADGHE DC LINE USING HIGH AMPICITY CONDUCTOR (BETWEEN LOC NO. 1 - 53) .	Strengthining of existing network.		
		AUGMENTAT	TION OF S/S BY ADDITION TO REDUCE LOADIN	<u>G OF ICT / TF (2015-19)</u>		
SR	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV URAN S/S (2015-16)	RAIGAD	1 X 50 MVA 220/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 and the load reached is 51 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
2	100 kV MOHNE S/S (2015-16)	THANE	1 X 50 MVA 100/22 kV T/F WITH 22 kV GIS BAYS	Existing xrmer capacity available in S/S is 2 X 50 & the Load reached is 69 MVA.Considering the max load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load

1	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
1	YEAR 2014-15 TO 2018-19				
		1	WASHI EHV CONSTRUCTION CUM (O	&M) ZONE	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
3	100 kV VASAI S/S (2015-16)	THANE	1 X 50 MVA 100/22 kV XMER	Existing xmer capacity is 3 X 50 MVA 100/22 kV and maximum load reached is 131 MVA	
4	220 kV MAHAD (2017-18)	RAIGAD	1 X 50 MVA 220/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 3 X 50 and the Load will reach 102 MVA Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	

AUGMENTATION OF S/S BY REPLACEMENT OF ICT/TF (2015-19)

SM NO NAME OF S/S DISTRICT TOTAL SCOPE OF WORK REMARKS 1 22013/2 Status	0.5	· · · · ·	()	r	
220kV THANE 1 X (200-150) MVA, 220/132 kV ICT'S WITH BAYS Existing transformer capacity available in S/S in 20/132/V 2 x 200 and 1 x 150 MVA and the bod reached in S30 MVA considering the maximum load reached on the transformer, in event of interruption/outage on any one of the transformer other transformer should bake care of existing load so as to avaid load shedding. 2 200 kV 200 SAR-II SS (2015-16) THANE 1 X (100-50) MVA, 220/33-33 kV T/F WITH BAYS Existing transformer capacity available in S/S in 1 X (100-50) MVA, 220/33-33 kV T/F WITH BAYS 3 KQL SHET S/S (2015-16) THANE 1 X 100 MVA 220/22-22 kV T/F REPLACING 1 X 50 MVA 100/22 kV To reduce loading of xmer 4 COLORE CHEM S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MA. 5 MULLIND S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MA. 5 MULLIND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MA. 6 X20 kV KAMBA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV V/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 140 MVA Considering the maximum l	NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
2 220 kV BOISAR-II S/S (2015-16) THANE 1 X (100-50) MVA ,220/33-33 kV T/F WITH BAYS Existing transformer capacity available in S/S in 1X100 A 1 X 50 MVA and load is 70. MVA Considering the maximum load reached on the transformer in the event of interruptionsloutage on any one of the transformer should take care of existing load 3 220 kV KOLSHET S/S (2015-16) THANE 1 X 100 MVA 220/22-22 kV T/F REPLACING 1 X 50 MVA 100/22 kV To reduce loading of xmer 4 220 kV COLOUR- CHEM S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 134 MVA.Considering the maximum load reached on the transformer in the event of interruptonsloutage on any one of the transformer other tansformer should take care of existing load 5 MULUND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Considering the maximum load reached on the transformer should take care of existing load 6 220 kV (KAMBA S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 143 MVA. Considering the maximum load reached on the transformer other transformer should take care of existing load 6 220 kV (KAMBA S/S (2015-16) THANE 1 X (100-50) MVA ,220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 143 MVA.Considering the maximum loa	1	220kV BOISAR II S/S (2015-16)	THANE	1 X (200-150) MVA, 220/132 kV ICT'S WITH BAYS	Existing transformer capacity available in S/S is 220/132kV 2 x 200 and 1 x 150 MVA and the load reached is 330 MVA,Considering the maximum load reach on the transformer, in event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.
3 220 kV KOLSHET S/S (2015-16) THANE 1 X 100 MVA 220/22-22 kV T/F REPLACING 1 X 50 MVA 100/22 kV To reduce loading of xmer 4 220 kV COLOUR- CHEM S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 134 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MVA. 5 220 kV MULUND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MVA. 6 220 kV MULUND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MVA. 6 220 kV KAMBA S/S (2015-16) THANE 1 X (100-50) MVA ,220/22-22 kV WITH GIS BAYS. Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 143 7 SOPARA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY Existing transformer capacity available in S/S in 3 X 50 And the Load reach is 140 7 220 kV NALA - SOPARA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY Existing transformer capacity available in S/S in 3 X 50 And the Load reach is 140 8 22	2	220 kV BOISAR-II S/S (2015-16)	THANE	1 X (100- 50) MVA ,220/33-33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1X100 & 1 X 50 MVA and load is 70. MVA Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
4 220 kV COLOUR- COLOUR- CHEM S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 134 WAC.Considering the maximum load reached on the transformer other transformer should take care of existing load 5 220 kV MULUND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MVA. 6 220 kV MULUND S/S (2015-16) MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 131 MVA. 6 220 kV KAMBA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV WITH GIS BAYS. Existing transformer capacity available in S/S in 4 X 50 And the Load reach is 143 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 7 SOPARA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY Existing transformer capacity available in S/S in 3 x 50 And the Load reach is 140 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer in the event of interruptions/outage on any one of the transformer other transformer in the event of interruptions/outage on any one of the transformer other transformer in the event of interruptions/outage on any one of the transformer other transformer capacity available in S/S in 1 X 50 and 1 X 25 and	3	220 kV KOLSHET S/S (2015-16)	THANE	1 X 100 MVA 220/22-22 kV T/F REPLACING 1 X 50 MVA 100/22 kV	To reduce loading of xmer
220 kV MUMBAI 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 131 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 6 220 kV KAMBA S/S (2015-16) THANE 1 X (100-50) MVA ,220/22-22 kV WITH GIS BAYS. Existing transformer capacity available in S/S is 4 x 50 And the Load reach is 143 MVA.Considering the maximum load reached on the transformer other transformer capacity available in S/S is 3 x 50 And the Load reach is 140 7 220 kV NALA - SOPARA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY Existing transformer capacity available in S/S is 3 x 50 And the Load reach is 140 8 TAMBATI - II S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S is 3 x 50 And the Load reach is 32 8 TAMBATI - II S/S is (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS Existing transformer capacity available in S/S is 3 x 50 And the Load reach is 32 8 TAMBATI - II S/S is (2015-16) TAMBATI - II S/S is (100-50) MVA	4	220 kV COLOUR- CHEM S/S (2015-16)	THANE	1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 134 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
220 kV THANE 1 X (100-50) MVA ,220/22-22 kV WITH GIS BAYS. Existing transformer capacity available in S/S is 4 x 50 And the Load reach is 143 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer capacity available in S/S is 3 x 50 And the Load reach is 140 MVA.Considering the maximum load reached on the transformer capacity available in S/S is 3 x 50 And the Load reach is 140 MVA.Considering the maximum load reached on the transformer capacity available in S/S is 3 x 50 And the Load reach is 140 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 220 kV THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY Existing transformer capacity available in S/S is 3 x 50 And the Load reach is 140 8 220 kV TAMBATI - II S/S (2015-16) THANE 1 X (50-25) 100/22 kV T/F WITH BAYS Existing transformer capacity available in S/S is 1 X 50 and 1 X 25 and the Load reach is 32 MVA. The T/F is replaced to meet anticipated load growth	5	220 kV MULUND S/S (2015-16)	MUMBAI	1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 131 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
220 kV NALA - 7 SOPARA S/S (2015-16) THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE 1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY THANE X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY BAY TAMBATI - II S/S X (2015-16) X (100-50) MVA 220/22-22 kV T/F WITH BAYS X (2015-16) X (2015-16)	6	220 kV KAMBA S/S (2015-16)	THANE	1 X (100- 50) MVA ,220/22-22 kV WITH GIS BAYS.	Existing transformer capacity available in S/S is 4 x 50 And the Load reach is 143 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
8 220 kV 7AMBATI - II RAIGAD 1 X (50-25) 100/22 kV T/F WITH BAYS 1 X 50 and 1 X 25 and the Load reach is 32 MVA. The T/F is replaced to meet anticipated load growth	7	220 kV NALA - SOPARA S/S (2015-16)	THANE	1 X (100-50) MVA 220/22-22 kV T/F WITH GIS BAY	Existing transformer capacity available in S/S is 3 x 50 And the Load reach is 140 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
	8	220 kV TAMBATI - II S/S (2015-16)	RAIGAD	1 X (50-25) 100/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 X 50 and 1 X 25 and the Load reach is 32 MVA. The T/F is replaced to meet anticipated load growth

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
-	YEAR 2014-15 TO 2018-19 WASHI EHV CONSTRUCTION CUM (ORM) ZONE				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
9	100 kV SHAH APUR S/S (2015-16)	THANE	2 X (50-25) MVA 100/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 25 And the Load reached is 41 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
10	100 kV THAL S/S (2015-16)	RAIGAD	1 X (50-25) MVA 100/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 x 50 and 1 x 25 and the Load reach is 27 MVA. The T/F is replaced to meet anticipated load growth	
11	100 kV ROHA S/S (2015-16)	RAIGAD	1 X (50-25) MVA 100/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 X 50 and 1 X 25 And the Load reach is 41 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
12	220 kV BOISAR II S/S (2016-17)	THANE	1 X (200-150) MVA, 220/132 kV ICT'S WITH BAYS	Existing transformer capacity available in S/S is 220/132 kV 2 X 200 and 1 X 150 MVA and the load reached is 330 MVA,Considering the maximum load reach on the transformer, in event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.	
13	220 kV TALOJA S/S (2016-17)	RAIGAD	1 X (200-100) MVA, 220/100 kV WITH BAYS	Existing Transformer capacity available is 1 X 200 and 1 X 100 MVA and load reached is 83 MVA, Considering the maximum load reach on the transformer, in event of intruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.	
14	220 kV KOLSHET S/S (2016-17)	THANE	1 X 100 MVA 220/22-22 kV T/F REPLACING 1 X 50 MVA 100/22 kV	To reduce loading of xmer	
15	220 kV COLOUR- CHEM S/S (2016-17)	THANE	1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 134 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
16	220 kV MULUND S/S (2016-17)	MUMBAI	1 X (100-50) MVA 220/22-22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 131 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
17	220kV KAMBA S/S (2016-17)	THANE	1 X (100- 50) MVA ,220/22-22 kV WITH GIS BAYS.	Existing transformer capacity available in S/S is 4 X 50 And the Load reach is 143 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
18	100 kV PATAL GANGA S/S (2017-18)	RAIGAD	1 X(50-25) 100/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 X 50 and 1 X 25 and the Load reach is 32 MVA. The T/F is replaced to meet anticipated load growth	
19	400 kV NAGOTHANE S/S (2018-19)	RAIGAD	1 X(500-315) 400/220 kV T/F WITH BAYS	Existing ICT capacity available in S/S is 1 X 500 and 2 X 315 and the Load reach is 450 MVA. The T/F is replaced to meet anticipated load growth	

PUNE EHV CONSTRUCTION CUM O&M ZONE

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
	PUNE EHV CONSTRUCTION CUM (O&M) ZONE					
	ONGOING SCHEMES: 2014-15					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
			LILO OF ONE CKT OF 400 kV KOYANA - LONIKAND DC LINE AT 400 kV JEJURI - 10.5 K.M (2016-17)			
1	400 kV HINJEWADI	PUNE	LILO OF ONE CKT OF 400 kV LONIKAND - JEJURI DC LINE AT 400 kV HINJEWADI - 100 KM WITH BAYS (2016-17)	400 kV Hinjewadi S/S is considered to cater the upcoming EHV load and for strengthening		
	S/S (2014-15)		220 kV D/C INTERCONNECTION FROM 400 kV HINJEWADI - HINJEWADI - II - 5 KM 2 X 500 MVA, 400/220 kV ICT WITH BAYS 1 X 167 MVA, 400/220 kV SPARE	of Pune region.		
			2 X 100 MVA, 220/33-33 kV XMER			
	220 k\/		220 kV BHIGWAN - WALCHAND NAGAR D/C LINE - 20 KM (2017-18)	220 kV Walchandnagar substation is proposed		
2	WALCHAND NAGAR (2014 15)	PUNE	220 kV PHALTAN (MIDC) - WALCHAND NAGAR D/C LINE - 26 KM 132 kV D/C LINE TO 132 kV	to reduce overloading of 132 kV Walchandnagar- Indapur line and to cater		
	(2014-13)		WALCHANDNAGAR - 5 KM	upcoming load in that area.		
			220 kV D/C LINE FROM 400 kV SOLAPUR (PG)			
3	220 kV BHALAWANI (TAL PANDHAR - PIID)	SOLAPUR	- BHALAWANI - 70 KMS WITH BAYS (2016-17) LILO OF 220 kV VITA - PANDHRPUR LINE AT 220 kV BHALAWANI (TAL PANDHARPUR) WITH BAYS - 20 KMS (2016-17) LILO OF 220 kV PANDHRPUR - MALINAGAR	This substation is proposed for evacuation of power from 400 kV South Solapur substation and feeding to Malinagar- Jeur area at better		
	(2014-15)		LINE AT 220 kV BHALAWANI (TAL PANDHARPUR) WITH BAYS - 25 KMS (2016-17) 2 X 25 MVA 220/33 kV T/F WITH BAYS. 33 kV OUTLETS - 6 NO'S	vonage.		
4	220 kV INDAPUR MIDC (LONI DEOKAR) S/S (2014-15)	PUNE	220 kV DCDC LINE FROM 220 kV TEMBHURNI S/S - 30 KM LILO ON 220 kV BHIGWAN - WALCHANDNAGAR DC LINE - 21 KMS LILO OF 132 kV WALCHANDNAGAR - INDAPUR DC LINE AT LONI DEOKAR S/S - 30 KMS 132 kV SCDC LINE TO BAWDA S/S - 10 KMS 2 X 100 MVA, 220/132 kV ICT'S 2 X 50 MVA 132/33 kV XMERS 33 kV OUTLETS - 8 NO'S	To meet upcoming load of MIDC and strengthening of 132 kV network nearby Indapur		
5	132 kV PIMPALGAON (KHADKI) (2014-15)	PUNE	132 KV DC LINE FROM 220 KV KATHAPUR TO <u>PIMPALGAON (KHADAKI) - 20 KM</u> 2 X 100 MVA, 220/132 kV ICT AT 220 kV KATHAPUR (PARGAON) WITH BAYS <u>(COMMISSIONED))</u> 2 X 50 MVA, 132/33 kV TF WITH BAYS 33 kV OUTLETS- 08 NO'S	Presently 33 kV supply to Pimpalgaon area is being fed from 220 kV Kathapur and 220 kV Alephata S/S. To reduce loading and length of 33 kV feeder this S/S is proposed.		
6	132 kV MANEGAON (2014-15)	SOLAPUR	LILO ON ONE CKT OF132 kV VASPETH - SANGOLA DC LINE AT 132 KV MANEGAON WITH BAYS - 15 KMS (2016-17) 2 X 25 MVA.132/33 kV TF WITH BAYS 33 kV OUTLETS - 6 NO'S	Presently 33 kV supply to Manegaon area is being fed from 132 kV Sangola S/S. To reduce loading and length of 33 kV feeder this S/S is proposed.		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 PUNE EHV CONSTRUCTION CUM (O&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
	132 kV WAGHDARI	132 kV AGHDARI S/S OGAON) 132 kV AKKALKOT - WAGDARI S/C LINE ON D/C TOWER - 25 P 132 kV NALDURG - WAGDARI S/C D/C - 25 KM WITH BAY	132 kV AKKALKOT - WAGDARI (GHOGAON) - S/C LINE ON D/C TOWER - 25 KM WITH BAY	Presently 33 kV supply to Waghadari area is being fed from 132 kV Akkalkot S/S. To reduce loading and line length this S/S is
7	S/S (GOGAON)		132 kV NALDURG - WAGDARI (GHOGAON) S/C D/C - 25 KM WITH BAY (2015-16)	
	(2014-15)		2 X 25 MVA. 132/33 kV T/FS WITH BAYS 33 kV OUTLETS - 8 NO'S	proposea.

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2014-15)	SOLAPUR	LILO OF 132 kV SOLAPUR - AKKALKOT LINE AT SOUTH SOLAPUR S/S - 3 KM	Remainng scope of 220 KV South Solapur S/s.
2	132 kV LINK LINE (2014-15)	PUNE	132 kV NCL (PUNE) - RAHATANI SCDC LINE - 6.4 KMS WITH BAYS	Since the existing 132 kV NCL Pune-Rahatani S/C line is critically loaded to an extent of 75 MW. Hence it is suggested to add proposed line to reduce the loading of existing line and to meet additional load growth and contingency.
3	132 kV LINK LINE (2014-15)	PUNE	CONVERSION OF EXISTING 132 kV PHURSUNGI - MUNDWA SC LINE TO DC LINE USING SAME ROW - 12 KMS WITH BAYS	Since the existing 132 kV Mundwa-Phursangi S/C line is critically loaded to an extent of 103 MW. Hence it is suggested to add proposed line to reduce the loading of existing line and to meet additional load growth and contingency.

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE ICT/TF IS AVAILABLE (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV	DUNE	1 X 100 MVA, 220/22-22 KV WITH BAYS	Existing installed capacity is 100 MVA and load is 53 MVA and proposed laod by MSEDCL is
	S/S (2014-15)	PUNE	22 kV OUTLETS - 4 NOS	which 30 MVA will be diverted on 400 kV Hinjewadi S/S
2	132 kV KAMTHADI		1 X 50 MVA, 132/33 kV T/F WITH BAYS.	Existing Transformer capacity available is 1 X 50 MVA. And the load reached is 16
2	S/S (2014-15)	TONE	4 X 33 kV OUTLETS	MVA.To avoid loss of supply in case of outages or interruptions on transformer.
3	132 kV MARKAL S/S	PUNE	1 X 50 MVA , 132/33 kV T/F WITH BAYS	Existing Transformer capacity available is 1 X 25 MVA132/33 kV. To avoid loss of supply in
Ŭ	(2014-15)	TONE	4 X 33 kV OUTLETS	case of outages or interruptions on transformer.
4	132 kV KURULI S/S	PUNE	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing Transformer capacity avaible is 1 X 50 MVA 132/33 kV. To avoid loss of supply in
	(2014-15)		2 X 33 kV OUTLETS	case of outages or interruptions on transformer.
5	132 kV	PLINE	1 X 25 MVA, 132/22 kV T/F WITH BAYS.	Existing Transformer capacity available is 1 X 25 MVA132/22 kV. To avoid loss of supply in
J	(2014-15)	TONE	2 X 22 kV OUTLETS	case of outages or interruptions on transformer.
6	132 kV VARASGAON	132 kV 1 X 25 MVA , 13 RASGAON DUNE	1 X 25 MVA , 132/22 kV T/F WITH BAYS	Existing Transformer capacity available is 1 X 25 MVA132/22 kV. To avoid loss of supply in
0	S/S (2014-15)	FUNE	4 X 22 kV OUTLETS.	case of outages or interruptions on transformer.
7	132 kV MUNDHVA S/S (2014-15)	PUNE	1 X 25 MVA , 132/11 kV T/F WITH BAYS	Existing xmer capacity available is 1 X 25 MVA 132/11 kV. To provide redundancy.
SI	U TRANSMISSION PLAN FOR MAHARASHTRA STATE			
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	YEAR 2014-15 TO 2018-19			
	PLINE FHV CONSTRUCTION CUM (O&M) ZONE			

	AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV JEUR S/S (2014-15)	SOLAPUR	1 X 100 MVA, 220/132 kV T/F WITH BAYS	Existing capacity is 2 x 100 MVA 220/132 kV ICT'S and load is 98 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of ICT other ICT should take care of existing load.
2	220 kV KARKAMB (2014-15)	SOLAPUR	1 X 50 MVA , 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 75 MVA. Considering the upcoming load in this area new T/F is proposed.
3	220 kV JEUR S/S (2014-15)	SOLAPUR	1 X 50 MVA 220/33 kV XMER	Existing capacity is 2 x 50 MVA 220/33 kV Xmers and load is 62 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load.
4	220 kV THEUR S/S (2014-15)	PUNE	1 X 50 MVA 220/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 and load reach is 75 MVA.Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
5	220 kV RANJAN - GAON S/S (2014-15)	PUNE	1 X 50 MVA 220/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA,Load reached is 39 MVA Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
6	132 kV SOLAPUR MIDC S/S (2014-15)	SOLAPUR	1 X 50 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2X50 MVA and load is 52 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
7	132 kV CHAKAN 1 (AMBETHAN) S/S (2014-15)	PUNE	1 X 50 MVA,132/33 kV XMER WITH BAYS	Existing installed capacity is 2 X 50 MVA and existing load is 76.5 MVA. Additional load of 68.5 MVA is reported by MSEDCL. Also saving in losses and improvement in voltage PU
8	132 kV BARAMATI S/S (2014-15)	PUNE	1 X 25 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 34 MVA. Considering thre maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
9	132 kV WALCHAND- NAGAR (2014-15)	PUNE	1 X 25 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 x 50 and 1x25 MVA and load is 55 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	PUNE EHV CONSTRUCTION CUM (0&M) ZONE				
	AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2014-15)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV MALINAGAR (2014-15)	SOLAPUR	1 X (200-100) MVA, 220/132 kV WITH BAYS	Existing xmer capacity available in S/S is 220/132, 1 X 100 MVA and 1 X 200 MVA 220/132 kV already proposed.The max load reached is 170 MW. Considering the max load reached on the xmer, in event of interruption/outage on any one of the xmer other xmer should take care of existing load	
2	220 kV PANDHAR - PUR S/S (2014-15)	SOLAPUR	1 X (100-50) MVA, 220/33-33 kV TF WITH BAYS	Existing capacity is 2x50 MVA 220/33 kV Xmers and load reached is 84 MVA	
3	220 kV TEMBHURNI S/S (2014-15)	PUNE	1 X (50-25) MVA, 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 25 MVA and the load reached is 40 MVA The transformer is replaced to meet anticipated load growth.	
4	220 kV KHADKI S/S (2014-15)	PUNE	2 X (100-50) MVA, 220/22-22 kV TF WITH BAYS	To meet upcoming load of MSEDCL	
5	220 kV BHOSARI S/S (2014-15)	PUNE	2 X (100-50) MVA, 220/22-22 kV TF WITH BAYS	To meet upcoming load of MSEDCL	
6	220 kV HINJEWADI - II S/S (2014- 15)	PUNE	2 X (100-50) MVA 220/22-22 KV WITH BAYS	Existing installed capacity is 100 MVA and load is 53 MVA and proposed laod by MSEDCL is 152 MVA total load will be 205 MVA out of which 30 MVA will be diverted on 400 kV Hinjewadi S/S	
7	220 kV CHINCHWAD S/S (2014-15)	PUNE	1 X (100-50) MVA, 220/22-22 kV TF WITH BAYS	To meet upcoming load of MSEDCL	
8	220 kV PHURSUNGI S/S (2014-15)	PUNE	1 X (100-50) MVA, 220/22-22 kV TF WITH BAYS	Existing capacity is 2x50 MVA 220/22 kV Xmers and load reached is 80 MVA	
9	132 kV MARKAL S/S (2015-16)	PUNE	1 X (50-25) MVA,132/33 kV TF WITH BAYS	To meet upcoming load of MSEDCL	
10	132 kV BAWADA S/S (2014-15)	PUNE	1 X (50-25) MVA, 132/33 kV T/F WITH BAYS	To meet upcoming load of MSEDCL	
11	132 kV CHINCHOLI - KATI S/S (2014-15)	SOLAPUR	1 X (50-25) MVA, 132/33 kV TF WITH BAYS	Existing capacity is 1x50 and 1x25 MVA 132/33 kV Xmers and load reached is 31 MVA	
12	132 kV SANASWADI S/S (2014-15)	PUNE	1 X(50-25) MVA 132/33 kV T/F WITH BAYS	Existing capacity is 1x25 MVA 132/33 kV Xmer and load reached is 15 MVA	
13	132 kV MANDRUP S/S (2014-15)	SOLAPUR	1 X (50-25) MVA, 132/33 kV TF WITH BAYS	Existing capacity is 1x50 and 1x25 MVA 132/33 kV Xmers and load reached is 38 MVA	
14	132 kV MANGAL - WEDHA S/S (2014-15)	SOLAPUR	1 X (50-25) MVA, 132/33 kV TF WITH BAYS	Existing capacity is 1x50 and 1x25 MVA 132/33 kV Xmers and load reached is 54 MVA	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
	PUNE EHV CONSTRUCTION CUM (0&M) ZONE				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
15	132 kV PURANDA - WADE S/S (2014-15)	SOLAPUR	1 X (50-25) MVA, 132/33 kV TF WITH BAYS	Existing capacity is 1x50 and 1x25 MVA 132/33 kV Xmers and load reached is 30 MVA	
16	132 kV RAHATANI S/S (2014-15)	PUNE	1 X (50- 25) MVA, 132/22 kV T/F WITH BAYS	To meet upcoming load of MSEDCL	
17	132 kV DAUND S/S (2014-15)	SOLAPUR	1 X (50-25) MVA, 132/22 kV TF WITH BAYS	Existing capacity is 2x25 MVA 132/22 kV Xmers and load reached is 41 MVA	
18	132 kV SANASWADI S/S (2014-15)	PUNE	1 X(50-25) MVA 132/22 kV T/F WITH BAYS	Existing capacity is 1x25 MVA 132/22 kV and 1 X 10 and 1 X 12.5 MVA 33/22 Xmer and load reached is 33 MVA	
19	132 kV NARAYAN - GAON S/S (2014-15)	PUNE	1 X (25-16) 132/11 kV XMER WITH BAYS	Existing capacity is 2x16 MVA 132/11 kV Xmers and load reached is 31.5 MVA	
20	132 kV KOTHRUD S/S (2014-15)	PUNE	1 X (25-16) MVA , 132/11 kV T/F WITH BAYS	Existing xmer capacity available is 2 X 25 and 1 X16 MVA 132/11 kV. To meet increased load demand	
21	132 kV MUNDHVA S/S (2014-15)	PUNE	1 X (25-20) MVA , 132/11 kV T/F WITH BAYS	Existing xmer capacity available is 1 X 20 MVA 132/11 kV. To meet increased load demand	
	ICT/ T/F_PROPOSED TO INTRODUCE 132 kV AND 22 kV LEVEL (2014-15)				

ICT/ T/F PROPOSED TO INTRODUCE 132 KV AND 22 KV LEVEL (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV BRIDGE - STONE S/S (CHAKAN MIDC) (2014-15)	PUNE	1 X 50 MVA, 220/33 kV XMER WITH BAYS	Upcoming 40.5 MVA load. Due to non availaibility of space only one xmer is proposed. Redundancy can be maintained by 132 kV Chakan.Saving in losses and improvement in voltage PU.	
2	220 kV SERUM 2 INSTITUTE S/S (2014-15)	PUNE	1 X 25 MVA , 220/22 kV T/F WITH BAYS	To cater additional load in this area new T/F	
-		1 ONL	6 X 22 kV OUTLETS.	are proposed.	
3	132 kV KAMTHADI	V ADI PUNE 15)	2 X 25 MVA, 132/22 kV T/F WITH BAYS	Existing transformer capacity available in S/S is,132/33 - 1 X 50 - 16 MVA load. To avoid loss	
	5/S (2014-15)		6 X 22 kV OUTLETS	any one transformer	
	132 kV ESSAR SANASWADI		2 X 25 MVA 132/22 kV T/F WITH BAYS		
4	EHV S/S (2014-15)	PUNE	6 X 22 kV OUTLETS	To reduce loading of 132 kV Sanaswadi S/S	
	UPGRADATION OF 110/11 kV TO 132/33 kV LEVEL (2014-15)				

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	110 kV PANDHAR -		2 X 25 MVA, 132-110/33 kV T/F WITH BAYS	New voltage level introduced
	PUR S/S (2014-15)		33 kV OUTLETS - 8 NOS	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE			
			YEAR 2014-15 TO 2018-19	
			PUNE EHV CONSTRUCTION COM (O&M	
			<u>NEW SCHEMES: 2015-19</u>	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV WATWATE S/S (2015-16)	PUNE	LILO ON ONE CKT OF 220 KV SOLAPUR (PG) BHALAWANI D/C LINE (PROPOSED) (D/C ON <u>M/C) - 2.0 KM</u> 132 KV D/C LINE TO 132 KV MANDRUP S/S - <u>23.5 KM</u> .	220 KV watwate s/s is proposed to reduce loading of 33 kv level from 132 KV Puluj and 132 KV Mandrup s/s. Also this will reduce
	0,0 (2010 10)		2 X 100 MVA 220/132 KV ICT WITH BAYS 2 X 50 MVA 220/33 KV T/F WITH BAYS 33 KV OUTLETS - 8 NOS.	loading of 220 kv Bale s/s.
2	132 KV NIMBONI S/S (2015-16)	SOLAPUR	LILO OF 132 kV PANDHARPUR MANGAL - WEDHA LINE AT NIMBONI - 22 KM 2 X 25 MVA, 132/33 kV T/F 33 kV OUTLETS - 6 NO'S	Presently 33 kV supply to Nimboni area is being fed from 132 kV Mangalwedha S/S . To reduce loading and length of 33 kV feeder this S/S is proposed.
3	132 KV KAVTHE YAMAI S/S (2015-16)	PUNE	LILO ON ONE CKT OF 132 KV D/C LINE FROM 220 KV KATHAPUR - PIMPALGAON AT KAVTHE YAMAI - 16 KM 2 X 25 MVA 132/ 33 KV T/F WITH BAYS 33 KV OUTLETS - 4 NOS.	132 KV Kavthe Yamai S/S is proposed to meet upcoming load in Shirur Taluka and to have redundancy to 33 KV level of 132 KV Shirur s/s.
4	220 kV MALIKPETH (2016-17)	SOLAPUR	LILO ON ONE CKT OF PROPOSED 220 KV SOLAPUR (LAMBOTI) - KARKAMB DC LINE AT MALIKPETH WITH BAYS - 05 KM LILO ON EXISTING 132 KV MOHOL - PULUJ LINE AT 220 KV MALIKPETH - 15 KM 2 X 100 MVA, 220/132 KV ICT WITH BAYS 2 X 25 MVA, 132/33 KV TF WITH BAYS 33 KV OUTLETS- 06 NO'S	Presently 33 kV supply to Malikpeth area is being fed from 132 kV Mohol S/S . To reduce loading and length of 33 kV feeder this S/S is proposed.
5	220 kV CHAKAN -II S/S. (2016-17)	PUNE	220 kV MC LINE FROM COMMON POINT OF 132 kV CHINCHWAD - CHAKAN PHASE - II S/S - 11 KM. (2 CKTS WILL BE CHARGED ON 220 kV AND 2 CKTS ON 132 kV) 2 X 100 MVA 220/132 kV ICT 2 X 50 MVA 220/22 kV T/F 22 kV OUTLET - 12 NO'S,	To meet upcoming load of MSEDCL in Chakan MIDC area.
6	220 kV BALEWADI S/S (2016-17)	PUNE	LILO ON 220 kV CHINCHWAD - PARVATI CKT a) 220 KV MC LINE ON MC TOWER BY CONVERTING EXISTING 132 KV RAHATANI VARASGAON LINE (HORIZONTAL TOWERS) NEAR 220 KV BLUE RIDGE S/S UPTO BY PASS (2 CKTS WILL BE COMMISSIONED ON 220 KV AND 2 CKTS ON 132 KV) - 3 KMS b) 220 KV DC CABLE FROM BYPASS TO 220 KV BALEWADI S/S - 3 KMS 2 X 50 MVA 220/22 kV 22 kV OUTLET - 8 NO'S,	To reduce loading of existing 220 kV Hinjewadi, 132 kV NCL and Rahatani S/s
7	220kV RETWADI S/S (2016-17)	PUNE	LILO ON BOTH CKTS (ON MC TOWERS) OF 220 kV LONIKAND BABLESHWAR DC LINE AT <u>RETWADL - 25 KMS</u> 2 X 50 MVA, 220/33 kV ICT WITH BAYS	220 kV Retwadi S/S is considered to cater the upcoming SEZ load of 500 MW of Pune region.
8	220 kV MUKHAI S/S (2017-18)	PUNE	LILO ON 220 kV BABHALESHWAR - RANJANGAON LINE AT 220 kV MUKHAI – 2 <u>KMS</u> 2 X 50 MVA 220/33-22 kV T/F WITH BAYS 33 & 22 kV OUTLETS - 8 NO'S	For diversion of load of 400 kV Lonikand - I (220/22 kV T/F), 220 kV Ranjangaon and 132 kV Sanaswadi and reduction of length of 22 kV lines this S/S is proposed as per requirement of MSEDCL.
9	220 kV KONDHWA (2017-18)	PUNE	LILO ON 220 kV CHINCHWAD - THEUR LINE AT KONDHWA - 1 KM 2 X 50 MVA,220/22 kV T/F 22 kV OUTLETS - 12 NO'S	Presently 22 kV supply to Kondwa area is being fed from 220 kV Phursungi and 220 kV Parvati S/S. To reduce loading of existing S/S and to meet upcoming load this S/S is proposed.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 PUNE EHV CONSTRUCTION CUM (0&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
			220 kV SCDC LINE FROM 400 kV LAMBOTI -35 KMS	
10	220 kV VAIRAG	SOLAPUR	220 kV SCDC LINE FROM 220 kV PARANDA - 40 KM (2018-19)	Presently 33 kV supply to Vairag area is being fed from 220 kV Barshi S/S . To reduce loading and length of 33 kV feeder this S/S is
	(2017-18)		2 X 25 MVA 220/33 kV T/F WITH BAYS.	proposed.
			33 kV OUTLET - 6 NO'S	
	220 kV EON	V EON RADI PUNE 7-18)	220 kV LILO ON THEUR - MAGARPATTA LINE FOR EON KHARADI - 8 KM	Presently 22 kV supply to Kharadi area is being fed from 132 kV KHaradi S/S. To reduce
11	KHARADI (2017-18)		2 X 50 MVA, 220/22 kV T/F	loading of existing S/S and to meet upcoming
	()		22 kV OUTLET - 6 NO'S	load this S/S is proposed.
132 KV	132 KV		LILO ON 132 KV PHURSUNGI - RAHATANE LINE - 10 KM	Presently 22 kV supply to Bibvewadi area is being fed from 220 kV Phursungi and 220 kV
12	BIBVEWADI S/S (2018-19)	PUNE	2 X 50 MVA, 132/22 KV T/FS WITH BAYS	Parvati S/S. To reduce loading of existing S/S and to meet upcoming load this S/S is
3/3 (2010-19)	2010-19)	22 KV OUTLET - 12 NOS,	proposed.	

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV LINK LINE (2015-16)	PUNE	SECOND CKT STRINGING OF JEUR - KARJAT LINE - 42 KM	To provide uninterrupted power supply.
2	132 kV LINK LINE (2015-16)	PUNE	132 kV YAWAT - THEUR SCDC LINE - 23 KM	132 kV Yawat S/S is fed from 132 kV Theur S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	132 kV LINK LINE (2015-16)	PUNE	132 KV FROM 220 KV RANJANGAON - KURULI - SCDC LINE (PARTLY ON DC AT RANJANGAON END) - 20 KM	132 kV Kuruli S/S is connected with 132 kV Ranjangaon S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
4	132 kV LINK LINE (2016-17)	PUNE	132 KV FROM 220 KV RANJANGAON - KURULI - SCDC LINE (PARTLY ON DC AT RANJANGAON END) - 26 KM	132 kV Shirur S/S is fed from132 kV Supa S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
5	132 kV LINK LINE (2016-17)	SOLAPUR	2ND CIRCUIT STRINGING FROM 220 KV JEUR -PAREWADI LINE - 22 KM	132 kV Parewadi S/S is fed from 132 kV Jeur S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2015-16)	SOLAPUR	220 kV D/C LINE FROM 400 kV LAMBOTI TO 220 kV KARKAMB - 50 KM	To cater additional load on the S/S

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
			PUNE EHV CONSTRUCTION CUM (O&N	I) ZONE	
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
2	220 kV LINK LINE (2015-16)	PUNE	220 KV D/C LINE FROM 400 KV PUNE (PG) – 220 KV CHAKAN S/S - 20 KMS 220 KV D/C LINK 400 KV PUNE (PG) - HINJEWADI A) STRINGING OF TWO CKTS (DC ON MC) FROM 400 KV PUNE (PG) NEAR 220 KV URSE -S/S - 16 KMS B) SEPERATE 220 kV D/C LINE TO BE CONSTRUCTED FROM POINT NEAR URSE TO APTA LINE -11 . KM C) CONVERSION OF S/C OF 220 kV CHINCHWAD - APTA LINE TO M/C UPTO THE POINT NEAR CHINCHWAD S/S 20 KM (16 KM REGULAR BASE & 4 KM NARROW BASE TOWERS) D) CONVERSION OF S/C OF 220 KV CHINCHWAD - KANDALGAON LINE TO M/C LINE FROM POINT NEAR CHINCHWAD S/S TO LILO POINT OF 220 KV HINJEWADI MIDC PHASE - II S/S. (NARROW BASE TOWERS) - 8	Remaining scope of 400 kV Pune PG. Pune- PGCIL is constructed by PGCIL and will facilitate additional infeed to pune circle	
3	132 kV LINK LINE (2015-16)	PUNE	KM CONVERSION OF EXISTING 132 kV CHINCHWAD - RAHATANI SC LINE TO DC USING SAME ROW - 6.0 KMS WITH BAYS	To reduce load of existing Chinchwad Rahatani line	
4	132 kV LINK LINE (2015-16)	PUNE	132 kV NCL (PUNE) - KOTHRUD SCDC LINE - 6.4 KMS WITH BAYS	Since the existing 132 kV NCL-Rahatani S/C line is critically loaded to an extent of 75 MW. Hence it is suggested to add proposed line to reduce the loading of existing line and to meet additional load growth and contingency.	
5	132 kV LINK LINES (2016-17)	PUNE	132 kV CABLE FROM 220 kV MAGARPATTA TO RASTAPETH - 12 KM	System strengthening	
6	220 kV LINK LINE (2017-18)	SOLAPUR	220 kV D/C LINE FROM 400 kV SOLAPUR (PG) - 220 kV SOLAPUR (PARTLY ON M/C) - 40 KM	System strengthening	
7	132 kV LINK LINES (2017-18)	PUNE	132 kV SCDC DAUND - SHRIGONDA SCDC LINE -10 KM	System strengthening	
8	132 kV LINK LINE (2017-18)	PUNE	CONVERSION OF EXISTING 132 kV CHINCHWAD - MARKAL SC TO DC LINE USING SAME ROW - 29 KMS WITH BAYS	Since the existing 132 kV Theur - Kharadi S/C line is getting loaded to an extent of 34 MW. It is anticipated the load in Pune district will reach to critical value by the year 2011-12. Hence it is suggested to add proposed line to meet additional load growth.	
9	UP - GRADATION OF 100 kV GANESH - KHIND - KHOPOLI D/C TO 132 kV (2017-18)	PUNE	UPGRADATION OF 100 kV LINE CHINCHWAD - KHOPOLI TO 132 kV - 50 CKM.	Strengtening the supply network. Work of upgradation from Chinchwad to Ganeshkhind is completed.	
		ADDITIONAL	LINK LINES FOR NEW S/S TO HAVE ALTERNA	TE SOURCE (2015-19)	
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV LINK LINE (2015-16)	PUNE	220 kV LONIKAND - II - THEUR D/C LINE WITH BAYS - 18 KM	System strengthening. Remaining scope of Lonikand - II S/S	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
			PUNE EHV CONSTRUCTION CUM (O&N	I) ZONE	
SR NO	SR NO LINK LINE DISTRICT TOTAL SCOPE OF WORK REMARKS				
2	400kV LINK LINE (2017-18)	PUNE	LILO OF 400 kV PARLI (PG) - PUNE (PG) D/C LINE AT LONIKAND - II S/S - 30 KM	System strengthining. Remaining scope of Lonikand - II S/S	
3	132 kV LINK LINE (2017-18)	PUNE	LILO OF 132 kV THEUR - SANASWADI S/C LINE AND 132 kV THEUR - MARKAL S/C LINE TO 400 kV LONIKAND - II S/S ON M/C TOWERS - 5 KMS	To have alternate source to 132 kV Sanaswadi S/S.	

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE T/F IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV SERUM INSTITUTE PU S/S (2015-16)	PLINE	1 X 25 MVA , 220/22 kV T/F WITH BAYS	To cater additional load in this area new T/F
1		TONE	6 X 22 kV OUTLETS.	are proposed.

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV PIRANGUT S/S (2015-16)	PUNE	1 X 25 MVA, 220/22 kV T/F WITH BAYS.	Existing Transformer capacity available is 2 X 50 MVA. And the load reached is 38 MVA.To avoid loss of supply in case of outages or interruptions on transformer.
2	132 kV PHURSUNGI S/S (2015-16)	PUNE	1 X 25 MVA 132/22 kV OUTLETS WITH BAYS	At present 2 X 50 MVA transformers is loaded to the extend of 60 MVA.Xmer is proposed for redundancy
3	220kV TEMBHURNI (2016-17)	SOLAPUR	1 X 50 MVA , 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 25 MVA and load is 40 MVA.Replacement of both 25 MVA xmers by 50 MVA is considered. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load.
4	132 kV INDAPUR S/S (2016-17)	PUNE	1 X 25 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 25 MVA and load is 19 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load

AUGMENTATION OF S/S BY REPLACEMENT OF ICT/T/F (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV PANDHAR- PUR S/S (2015-16)	SOLAPUR	1 X (200-100) MVA, 220/132 kV WITH BAYS	Existing transformer capacity available in S/S is, 220/132 - 1 X 200 MVA &1 x 100 - load reach is 48 MW & 70 MW respectively. To have redundancy replacement of 100 MVA ICT is proposed.
2	220 kV PANDHAR - PUR S/S (2015-16)	SOLAPUR	1 X (100-50) MVA, 220/33-33 kV TF WITH BAYS	Existing capacity is 2x50 MVA 220/33 kV Xmers. One replacement is considered in 2014 15 year and load reached is 84 MVA

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19		
			PUNE EHV CONSTRUCTION CUM (O&N	I) ZONE	
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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
3	220 kV TEMBHURNI S/S (2015-16)	PUNE	1 X (50-25) MVA, 220/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 25 and 1 X 50 (2014-15) MVA and the load reached is 40 MVA The transformer is replaced to meet anticipated load growth.	
4	220 kV PHURSUNGI S/S (2015-16)	PUNE	1 X (100-50) MVA, 220/22-22 kV TF WITH BAYS	Existing capacity is 2x50 MVA 220/22 kV Xmers. One replacement is considered in 2014 15 year and load reached is 80 MVA	
5	132kV RAHATANI (2015-16)	PUNE	1 X (50- 25) MVA, 132/22 kV T/F WITH BAYS	To meet upcoming load of MSEDCL	
6	132kV BAWADA (2016-17)	PUNE	1 X (50-25) MVA, 132/33 kV T/F WITH BAYS	To meet upcoming load of MSEDCL	
		<u>ICT/ T/F</u>	PROPOSED TO INTRODUCE 132 kV AND 33 kV	/ <u>LEVEL (2015-19)</u>	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	400 kV HINJEWADI GIS S/S	PUNE	CREATION OF 33 kV LEVEL 220/33-33 kV 2 X 100 MVA XMER 33 kV OUTLETS - 6 NOS	220 kV Hinjewadi II S/S 30 MVA load needs to be diverted and for upcoming load in MIDC phase III in near future.	
2	(2015-16) 400 kV LONIKAND-II S/S (2017-18)	PUNE	2 X100 MVA, 220/132 kV ICTS WITH 2 BAYS	In order to reduce 132 kV loading of Pune ring main (132 kV theur S/S) system.Length of 132 kV line will be reduced	
3	220 kV FLAGSHIP S/S (2017-18)	PUNE	1 X 100 MVA, 220/132 kV ICT WITH BAYS	In order to reduce 132 kV loading of Pune ring main system i.e from 220 KV Chincwad S/S	

KARAD EHV CONSTRUCTION CUM O&M ZONE

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE
YEAR 2014-15 TO 2018-19

KARAD EHV CONSTRUCTION CUM (O&M) ZONE

ONGOING SCHEMES: 2014-15

SR NO NAME OF S/S DISTRICT TOTAL SCOPE OF WORK REMARKS 1 220 kV MIDC LONAND S/S (2014-15) LILO ON 220 kV KANDALGAON - LONAND SC LINE AT 220 kV LONAND MIDC S/S - 4 KM LILO ON 220 kV KANDALGAON - LONAND S/S - 4 KM Lonand MIDC - 220 kV S/S is considered to meet the load growth in Lonand area and load requirement of MIDC					
1 220 kV MIDC LILO ON 220 kV KANDALGAON - LONAND SC LILO ON 220 kV LONAND MIDC S/S - 4 KM 1 LONAND S/S SATARA LILO OF 132 kV LONAND MIDC - 10 KM Lonand MIDC - 220 kV S/S is considered to meet the load growth in Lonand area and load requirement of MIDC 2 X 100, 220/132 kV ICT LILO OF 132 kV LONAND MIDC - 10 KM Lonand MIDC - 220 kV S/S is considered to meet the load growth in Lonand area and load requirement of MIDC	SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
I LONAND S/S SATARA LILO OF 132 kV LONAND - VEER LINE AT 220 kV LONAND MIDC - 10 KM meet the load growth in Lonand area and load requirement of MIDC		220 kV MIDC		LILO ON 220 kV KANDALGAON - LONAND SC LINE AT 220 kV LONAND MIDC S/S - 4 KM	I opand MIDC - 220 kV/S/S is considered to
2 X 100, 220/132 kV ICT	1	LONAND S/S (2014-15)	SATARA	LILO OF 132 kV LONAND - VEER LINE AT 220 kV LONAND MIDC - 10 KM	meet the load growth in Lonand area and load
		(2014-10)		2 X 100, 220/132 kV ICT	requirement of hite o
				33 kV OUTLETS - 12 NOS	

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2014-15)	SANGLI	220 kV MHAISAL - JATH D/C LINE - 70 KMS WITH BAYS (COMMISSIONED)	Remaining scope of 220 kV Jath
2	220 kV LINK LINE (2014-15)	KOLHAPUR	LILO OF ONE CKT OF 220 kV KOLHAPUR - SAWANTWADI D/C LINE AT MUDHALTITTA - 10 KM	Remaining scope of 220 KV Mudhaltitta s/s.
3	132 kV LINK LINE (2014-15)	SATARA	132 kV SCDC LINE FROM 220 kV OGALEWADI S/S - 110 kV MAYNI S/S - 40 KM	110 kV Mayani S/S is fed from 220 kV Ogalewadi S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
4	132 kV LINK LINE (2014-15)	SANGLI	132 kV DC DC LINE FROM 220 kV JATH TO 132 kV JATH ALONGWITH 2 NOS. OF 132 kV BAYS AT OLD JATH S/S - 0.5 KM	Remaining scope of 220 kV/ lath
5	132 kV LINK LINE (2014 15)	SANGLI	STRINGING OF 2ND CIRCUIT FROM PROPOSED 220 KV JATH TO 132 kV SANKH S/S - 40 KM	
6	132 kV LINK LINE (2014-15)	SATARA	2ND CIRCUIT STRINGING OF 132 kV SCDC LINE FROM SATARA MIDC- SATARA ROAD - 15 KM	110 kV satara road S/Stn is fed from 110kV satara MIDC S/S with S/C line .Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line.
7	132 kV LINK LINE (2014-15)	SANGLI	2ND CKT STRINGING OF 132 kV SCDC LINE FROM 220 kV PETH - SHIRALA - BAMBAVADE 36 KM (PARTIALLY COMMISSIONED) BALANCE 12 KM.	To have alternate source to Bambavade S/S
8	132 kV LINK LINE (2014-15)	SATARA	2ND CKT STRINGING OF 132 kV SCDC LINE FROM 220 kV LONAND - WAI - 47 KM (PARTIAL WORK IS COMPLETED BY CO GEN DEVELOPER- BALANCE WORK - 8 KM IS PENDING)	Presently 132 kV Wai S/S is being fed through SCDC line from 220 kV Lonanad S/S. Work of 2nd ckt stringing from Co gen plant to 132 kV Wai S/S is completed by the developer. However balance work from 220 kV Lonand S/S to Tap point is to be done.
9	132 kV LINK LINES (2014-15)	SINDHUDURG	2ND CKT STRINGING OF 132 kV KANKAWALI KUDAL SCDC LINE - 30 KM	To meet upcoming load in Kudal area and to have alternate source this line is proposed .

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2014-15)	KOLHAPUR	2ND CKT STRINGING OF 220 kV SCDC LINE FROM 220 kV MIRAJ - ICHALKARANJI LINE - 30 KM (GIS BAY AT 220 kV MIRAJ AND REGULAR BAY AT 220 kV ICHALKARANJI.)	Since the existing 220 kV Ichalkaranji-Mudshingi S/C line is loaded. Hence it is suggested to add proposed line to reduce the loading of existing line and to meet additional load growth and contingency.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

KARAD EHV CONSTRUCTION CUM (O&M) ZONE

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2014-15)

NIL

AUGMENTATION OF S/S BY ADDITION OF T/F (2014-15)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
	220 kV		1 X 100 MVA , 220/132 kV ICT	
1	PHALTAN	SATARA	1 X 50 MVA, 220/33 kV T/F	Remaining scope of Phaltan MIDC S/S.
	(2014-15)		33 kV BAYS - 6 NOS	
	220 kV		1 X 100 MVA , 220/132 kV ICT	
2	MUDHAL-	KOLHAPUR	1 X 50 MVA, 220/33 kV T/F	Remaining scope of Mudhaltitta S/S.
	(2014-15)		33 kV BAYS - 6 NOS	
3	220 kV ONI S/S (2014-15)	RATNAGIRI	1 X 25 MVA, 220/33 kV T/F WITH BAYS (33 KV OUTLETS NOT REQUIRED)	For redundancy additional T/F is proposed.
	220 kV		1 x 50 MVA, 220/33 kV T/F WITH BAYS.	For redundancy additional T/F is proposed. Max
4	(2014-15)	KOLHAPUR	4 x 33 kV OUTLETS	load reached is 40 MVA
5	220 kV FIVE		1 X 50 MVA, 220/33 kV T/F WITH BAYS	To meet future demand in MIDC area new T/F is
5	S/S (2014-15)	ROLINI OR	6 X 33 kV OUTLETS.	proposed.
6	220 kV KHARE- PATAN S/S (2014-15)	SINDHUDURG	1 X 25 MVA , 132/33 kV T/F WITH BAYS (NO SPACE FOR 33 KV OUTLETS)	To avoid loss of supply in case of outages or interruptions on any one T/F
7	132 kV SATARA	ςλτάρα	1 X 25 MVA, 132-110/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 25 MVA 132/33 kV. The transformers are
1	ROAD S/S (2014-15)	SATARA	2 X 33 kV OUTLETS.	proposed for replacement to meet anticipated load growth.
8	132 kV DAHIWADI S/S (2014-15)	SATARA	1 X 25 MVA , 132/33 kV T/F WITH BAYS	To provide redundancy
0	132 kV	CATADA	1 X 25 MVA, 132/22 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 50, 132/22 kV . To avoid the loss of supply
9	(2014-15)	SATARA	4 X 22 kV OUTLETS	in case of outages or interruptions of transformers
10	110 kV SAVLAJ S/S (2014-15)	SANGLI	1 X 25 MVA , 110/33 kV T/F WITH BAYS (COMMISSIONED)	To provide redundancy
11	110 kV ARAVALI S/S	RATNAGIRI	1 x 25 MVA, 132-110/33 kV T/F WITH BAYS	For redundancy additional T/F is proposed.
	(2014-15)	 	4 x 33 kV OUTLETS	
12	110 kV CHABUKHEDI S/S (2014-15)	KOLHAPUR	1 X 25 MVA, 132-110/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S 110/33 - 1 X 25 MVA Therefore for redundancy purposes another T/F is required

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF ICT/XMER (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV PETH S/S (2014-15)	SANGLI	1 X 50 MVA 220/33 kV XMER WITH BAYS	Existing xmer capacity is 2 X 50 MVA and load reached is 48 MVA.
2	220 kV KARAD - I (OGLEWADI) (2014-15)	KARAD	1 X 50 MVA, 132-110/33 kV T/F WITH BAYS	Presently 1 X 50 MVA 220/33 kV and 1 X 25 MVA 132-110/33 kV xmer is available and max load reached is 53 MVA. Therefore to meet the upcoming load this xmer is required.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 KARAD EHV CONSTRUCTION CUM (0&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
3	132 kV SATARA MIDC S/S (2014-15)	SATARA	1 X 50 MVA, 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 x 50, 132/33 kV - 58 MW Considering the maximum load reach on the transformer, in event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.
4	132 kV DAHIWADI S/S (2014-15)	SATARA	1 X 25 MVA , 132/22 kV T/F WITH BAYS	Existing xmer capacity is 1 X 50 and 1 x 25 MVA 132/22 kV and load reached is 29 MVA.

	AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2014-15)					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	220 kV DASTURI S/S (2014-15)	RATNAGIRI	1 X (50-25) , 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 x 50 & 1x 25 MVA. And the load reached is 40 MVA The transformer is replaced to meet anticipated load growth.		
2	220 kV LOTE PARSHURAM S/S (2014-15)	RATNAGIRI	1 X (50-25) , 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 X 50 & 1 X 25 MVA. And the load reached is 40 MVA The transformer is replaced to meet anticipated load growth.		
3	220 kV MUMEWADI S/S (2014-15)	KOLHAPUR	1 X (50-25) MVA 220/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA & 1 X 25 MVA. And the load reached is 69 MVA The transformer is replaced to meet anticipated load growth.		
4	132 kV WAI S/S (2014-15)	SATARA	2 X (50- 25) MVA,132/33-22 kV T/F WITH BAYS.	Existing Transformer capacity avaible is 1 X 25 MVA 132/22 kV and 1 X 25 MVA 132/33 kV . To avoid loss of supply in case of outages or interruptions on transformer.		
5	132 kV TALEBAZAR S/S (2014-15)	SINDHUDURG	1 X (25-12.5) MVA 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 25 and 1 X 12.5 MVA 132/33 kV.The load reached is 12 MVA The transformer is replaced to meet anticipated load growth.		
6	110 kV ICHALKA- RANJI - I S/S (2014-15)	KOLHAPUR	1 X (50-25) MVA, 132-110/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA 132-110/33 kV and 1 X 25 MVA 110/33 kV. And the load reached is 95 MVA The transformer is replaced to meet anticipated load growth.		
7	110 kV ATIT S/S (2014-15)	SATARA	1 X (50-25) MVA 132-110/33 kV T/F WITH BAYS.	To met upcoming demand in Atit area.		
8	110 kV SHIROLI S/S (2014-15)	KOLHAPUR	1 X (50-25) MVA 132-110/33 kV T/F WITH BAYS. (33 kV OUTLETS NOT REQUIRED)	To cater upcoming load of MSEDCL		

ICT PROPOSED TO INTRODUCE 132 LEVEL (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV KAGAL (5 STAR MIDC) (2014-15)	KOLHAPUR	1X 100 MVA, 220/132-110 kV ICT WITH BAYS	To introduce 132 kV Level to feed the nearby area.

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
		<u> </u>	CARAD EHV CONSTRUCTION COM (08			
			<u>NEW SCHEMES: 2015-19</u>			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	132 kV CHIMAN - GAON S/S (2015-16)	SATARA	LILO OF 132 kV SATARA ROAD - SATARA MIDC SCDC LINE - 7 KMS 2 X 25 MVA, 132-110/33 kV XMER 33 kV OUTLETS - 8 NOS	132 kV Chimangaon S/S is proposed to meet upcoming load requirement.		
2	400 kV ALKUD S/S (2016-17)	SANGLI	LILO OF BOTH CKT OF 400 kV SOUTH SOLAPUR (PG) - KOLHAPUR DC LINE AT 400 <u>kV ALKUD - 15 KM</u> LILO OF ONE CKT OF 220 kV VITA MHAISHAL <u>DC LINE - 18 KM</u> LILO OF ONE CKT OF 220 kV MHAISHAL - JATH LINE - 23 KM 2 X 500 MVA 400/220 kV ICT 1 X 167 MVA , 400/220 kV SPARE ICT	Strengthining of existing network and evacuation of Wind power in Sangli District 400 kV S/S is proposed.		
3	220 kV KESURDI MIDC S/S (2016-17)	SATARA	LILO ON 220 KV LONAND - KANDALGAON SCDC LINE - 5 KMS LILO ON 132 KV BHATGHAR - SHIRWAL SCDC LINE - 6 KMS 2 X 100 MVA, 220/132 KV XMERS WITH BAYS 2 X 50 MVA, 220/33 KV XMERS WITH BAYS 33 KV OUTLETS - 12 NOS	Kesurdi MIDC - 220 kV S/S is considered to meet the load requirement of MIDC		
4	400 kV KESURDI S/S (2017-18)	SATARA	CONVERSION OF EXISTING 400 kV KARAD - LONIKAND S/C LINE TO D/C USING SAME ROW - 165 KM. LILO ON ONE CIRCUIT OF 400 kV KARAD - LONIKAND LINE AT 400 kV KESURDI S/S. 8 KM. DC ON MC TOWERS LILO OF 220 kV KANDALGAON - LONAND LINE AT 400 kV KESURDI S/S - 4 KM WITH BAYS THIRD AND FOURTH CIRCUIT OF MC LINE UPTO 220 KV LONAND MIDC - 4.0 KM DC ON MC TOWERS UPTO LILO POINT OF SONA ALLOY FROM 400 kV KESURDI S/S - 2.0 KM WITH BAYS D/C ON DC FROM LILO POINT OF SONA ALLOYTO LILO OF 220 kV BARAMATI - LONAND LINE -6 KM WITH BAYS 220 kV DC LINE FROM 400 kV KESURDI - 220 KV KESURDI - 20 KMS 400/220 kV , 2 X 500 MVA ICT'S WITH BAYS 400/220 kV , 1 X 167 MVA 1 PHASE ICT SPARE	Kesurdi 400 kV S/S is proposed for evacuation of power from M/s Finolex and strenghtning of 220 kV network, upcoming load in Satara District and to improve voltage profile of the area.		
5	220 kV SANGLI S/S (2017-18)	SANGLI	LILO ON 220 kV KADEGAON - MIRAJ S/C LINE - 15 KM (EXISTING 220 kV KARAD - MIRAJ S/C LINE) LILO ON 220 kV MIRAJ - TILWANI LINE AT 220 <u>kV SANGLI - 35 KM</u> LILO OF 110 kV VISHRAMBAG - ASHTA LINE <u>AT 220 kV SANGLI S/S -10 KM</u> 2 X 100 MVA 220/132 -110 kV ICT'S WITH <u>BAYS</u> 2 X 50 MVA, 220/33 kV T/FS WITH BAYS 12 X 33 kV OUTLETS	To reduce loading of 220 kV Miraj and 110 kV Vishrambag S/S and meet the upcoming load.		
6	132 kV SHIRADWAD S/S (2017-18)	KOLHA PUR	132 kV D/C LINE FROM 220 kV 5 STAR MIDC (KAGAL) TO SHIRADWAD S/S - 22 KM 2 X 50 MVA , 132/33 kV TF 33 kV OUTL FT - 08 NOS	To reduce loading of 110 kV Ichalkaranji S/S and meet the upcoming load.		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 KARAD EHV CONSTRUCTION CUM (O&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
7	132KV	CATADA	LILO ON ONE CKT OF 132 KV DAHIWADI - AUNDH LINE AT MHASWAD S/S WITH BAYS - 10 KM	To radius loading of Disbanchi and Mayoni O/a		
	(2018-19)	SATAKA	2 X 25 MVA, 132 -110/33 KV T/FS WITH BAYS	To reduce loading of Dignanchi and Mayani S/S.		
			33 KV OUTLETS - 8 NOS.			

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2015-16)	RATNAGIRI	LILO ON 2ND CKT OF 220 kV PEDAMBE - KANDALGAON D/C LINE AT LOTE PARASHURAM S/S - 0.5 KMS	To meet upcoming load in Lote Parshuram MIDC area.
2	220 kV LINK LINE (2015-16)	KOLHAPUR	220 kV LILO ON 2ND CKT OF HALKARNI - PHONDA LINE FOR TILLARI - 2 KM WITH BAYS	220 kV Phonda S/S is fed from 400kV Talandge S/S with S/c line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	132 kV LINK LINES (2015-16)	SATARA	132 kV SCDC LINE FROM 220 kV LONAND MIDC - SHIRWAL - 27 KM	For redundancy this line is proposed.
4	132 kV LINK LINE (2015-16)	SANGLI	CONVERSION OF EXISTING TAP (SCSC) OF 110 kV VISHRAMBAG TO BORGAON S/C LINE AT ASHTA TO 132 kV LILO ON 132 kV D/C TOWERS USING SAME ROW - 2 KM.	For stregthening of existing n/w in view of upcoming 220 kV Sangli S/S.
5	132 kV LINK LINE (2015-16)	SATARA	132 kV SATARA (MIDC) - AUNDH SCDC LINE - 60 KM	132 kV Aundh S/S is fed from 132 kV Dahiwadi S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
6	132 kV LINK LINE (2015-16)	SINDHUDURG	132 kV D/C LINE FROM 220 kV SAWANTWADI TO 132 kV KUDAL S/S - 25 KM	To have alternate source from Sawantwadi it is necessary to add proposed line
7	132 kV LINK LINES (2016-17)	SANGLI/ KOLHAPUR	CONVERSION OF EXISTING 110 kV LINE TO 132 kV DC LINE FROM 220 kV MIRAJ - JAYSINGPUR USING SAME ROW - 16 KM	To meet upcoming load in Jaysingpur area this line is proposed.
8	132 kV LINK LINE (2016-17)	KOLHAPUR	220 kV (TILWANI) ICHALKARANJI S/S - 132 kV KURUNDWAD S/S DC LINE - 25 KM	110 kV Kurundwad S/S is fed from 220 kV Miraj S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
9	132 kV LINK LINE (2016-17)	SANGLI	132 KV KAVATHE MAHAKAL - SAVALAJ SCDC LINE - 25 KM	To have alternate source for 132 kV Sawlaj and 110 kV Tasgaon from 220 kV Jath S/S it is necessary to add proposed line
10	132 kV LINK LINE (2016-17)	KOLHAPUR	132 kV SCDC LINE FROM 220 kV KAGAL S/S (5 STAR MIDC.) - 110 kV GOKULSHIRGAON - 15 KM	110 kV Gokul Shirgaon S/S is fed from 220 kV Mudshingi S/S with S/C line. Hence to provide uninterrupted supply during planned outages and to meet upcoming load in MIDC area, it is necessary to add proposed line
11	132 kV LINK LINES (2017-18)	SATARA	2ND CIRCUIT STRINGING OF 132 kV SCDC LINE FROM 132 kV KALE (T) - WARNA - 20 KM	Strengthening of network for evacuation of wind power in Karad Taluka.
12	132 kV LINK LINES (2017-18)	KOLHAPUR	CONVERSION OF EXISTING 132 kV KALE(T) 220 kV WATHAR LINE TO DC USING SAME ROW - 35 KM	Strengthening of network for evacuation of wind power in Karad Taluka
13	132 kV LINK LINES (2017-18)	KOLHAPUR	132 kV D/C LINE FROM 220 kV KOLHAPUR - 110 kV PUIKHADI (USING SAME ROW) 8 KM	To meet upcoming load in Kolhapur City it is necessary to add proposed line.
14	132 kV LINK LINES (2018-19)	SATARA	2ND CIRCUIT STRINGING FROM 132 kV SCDC LINE FROM 132 kV AUNDH - DAHIWADI - 30 KM	Strengthening of network for evacuation of wind power in Dahiwadi and Aundha area.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 KARAD EHV CONSTRUCTION CUM (0&M) ZONE

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

SR	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2015-16)	SATARA	220 kV KARAD - KOYNA (KDPH) SCDC LINE - 49 KM WITH BAYS	For evacuation of additional generartion of KDPH
2	132 kV LINK LINE (2015-16)	SANGLI	LILO OF 132 kV SCDC OGALEWADI - MAYANI LINE AT 220 kV KADEGAON (WANGI) S/S - 20 KM	System strengthining & redundancy this line is proposed.
3	132 kV LINK LINE (2015-16)	SATARA	LILO OF 132 kV LONAND - PHALTAN LINE AT PHALTAN MIDC S/S - 5 KM	Remaining scope of 220 kV Phaltan MIDC S/S.
4	132 kV LINK LINE (2015-16)	SANGLI	132 kV SCDC LINE FROM 220 kV KADEGAON - KIRLOSKARWADI S/S - 20 KM	Remaining scope of 220 kV Kadegaon S/S.
5	132 kV LINK LINE (2016-17)	SANGLI	132 kV DC LINE FROM 220 kV JATH - KAVATHE MAHNKAL USING SAME ROW - 35 KM	110 kV Kavathe Mahankal S/S is fed from 220 kV Miraj S/S with S/c line. Hence to provide uninterrupted supply during planned outages and for evacuation of Wind power in Kavathe Mahankal Taluka, it is necessary to add proposed line
6	132 kV LINK LINE (2017-18)	KOLHAPUR	LILO ON 110 kV CHAMBUKHADI - KALE LINE FOR BAMBVADE - 25 KM	System strengthining & redundancy this line is proposed.
7	132 kV LINK LINE (2017-18)	KOLHAPUR	LILO OF 110 kV KOTHALI - RADHA NAGARI LINE AT 220 kV MUDALTHITTA (BIDRI) S/S - 12 KMS	Remaining scope of 220 kV Mudalthitta (Bidri) S/S.
8	132 kV LINK LINE (2017-18)	SATARA	132 kV SCDC LINE FROM 220 kV OGALEWADI - TEMBU S/S - 20 KM	System strengthining & redundancy this line is proposed.
9	132 kV LINK LINE (2017-18)	SANGLI	132 kV SCDC LINE FROM 220 kV PETH TO 110 kV BORGAON - 25 KM.	System strengthining & redundancy this line is proposed

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2015-19)

NIL

AUGMENTATION OF S/S BY ADDITION OF T/F (2015-19)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV KAGAL (5 STAR MIDC) (2015-16)	KOLHAPUR	1 X 100 MVA, 220/132-110 kV ICT WITH BAYS	To have redundancy.

AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV ICHALKA- RANJI - II (TILAWANI) S/S (2015-16)	KOLHAPUR	1 X (100-50) MVA, 220/33-33 kV T/F WITH BAYS	To cater upcoming load of MSEDCL

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	YEAR 2014-15 TO 2018-19				
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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
2	220 kV HALKARNI S/S (2015-16)	KOLHAPUR	1 X (50-25) MVA 220/33 kV T/F WITH BAYS.	To cater upcoming load of MSEDCL. The work of replacement of T/F is to be done by wind Developer.	
3	220 kV Karad - I (Oglewaadi) (2015-16)	KARAD	1 X (50-25) MVA, 132-110/33 kV T/F	Presently 1 X 25 MVA 132-110/33 kV xmer is available therefore to meet the upcoming load this xmer is required. Also a 50 MVA xmer is proposed in 2014-15	
4	220 kV ICHALKA- RANJI - II (TILAWANI) S/S (2016-17)	KOLHAPUR	1 X (100-50) MVA, 220/33-33 kV T/F WITH BAYS	To cater upcoming load of MSEDCL	
5	220 kV HALKARNI S/S (2016-17)	KOLHAPUR	1 X (50-25) MVA 220/33 kV T/F WITH BAYS.	To cater upcoming load of MSEDCL. The work of replacement of T/F is to be done by wind Developer.	
6	220 kV MIRAJ S/S (2018-19)	SANGLI	1 X (200-100) MVA, 220/132-110 kV ICTS WITH BAYS	Presently 2X 200 MVA & 1x 100 MVA 220/132- 110 kV xmer is available. Max. load reached is 198 MW.therefore to meet the upcoming load this ICT is required.	
	AUGMENTATION OF S'S BY ADDITION TO REDUCE LOADING OF ICT/TF (2015-19)				

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV N- KOYNA S/S (2016-17)	RATNAGIRI	1 X 500 MVA, 400/220 kV ICT WITH BAYS	Existing transformer capacity available in S/s is,400/220 kV, 2 X 315 MVA and the load reached is 473 MVA Considering the maximum load reach on the transformer, in event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.

ICT PROPOSED TO INTRODUCE NEW LEVEL (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV	SANGU	2 X 25 MVA, 220/33 kV T/FS WITH BAYS	To reduce loading of 220 kV Miraj & 110 kV
1	(2015-16)	GANGLI	33 kV OUTLETS - 6 NOS	Vishrambag S/S.
2	220 kV SAWANT- WADI S/S (2016-17)	SINDHUDURG	2 X 100 MVA , 220/132 kV ICT WITH BAYS	To introduce 132 kV Level to feed the nearby area.

UPGRADATION OF 110 kV SUBSTATIONS TO 132 kV (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	110 kV 1 TEMBU (2017-18)	SATARA	2 X 25 MVA 132-110/33 kV T/F WITH BAYS.	New voltage level introduced. 132 kV SCDC line from 220 kV Oglewadi - 110 kV Tembu is
			33 kV OUTLETS - 6 NOS.	Considered in link line during year 2016-17. Therefore not taken in abstract
2	110 kV BORGAON (2017-18)	SANGLI	2 X 25 MVA 132-110/33 kV T/F WTH BAYS.	New voltage level introduced. 132 kV SCDC line from 220 kV Peth- 110 kV Borgaon is considered in link line during year 2016-17 Therefore not taken in abstract
	110 kV 3 RETHARE (2018-19)	10 kV	2 X 25 MVA 132-110/33 kV T/F WITH BAYS.	New voltage level introduced. Upgradation of
3		SATARA	33 KV OUTLETS - 6 NOS.	kV Rethare is considered in link line during year 2017-18 Therefore not taken in abstract

NASIK EHV CONSTRUCTION CUM O&M ZONE

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NASHIK EHV CONSTRUCTION CUM (O&M) ZONE

ONGOING SCHEMES: 2014-15

NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
220 kV		LILO OF 220 kV DHULE - MALEGAON LINE AT 220 kV SAYANE - 2 KMS	220 kV Sayne is considered for reducing the
(2014-15)	INAOHIK	2 X 25 MVA, 220/33 kV T/F WITH BAYS	upcoming load in the area.
, ,		33 kV OUTLETS - 8 NOS	
132 kV	2 kV RGAON A'NAGAR 014-15)	132 kV D/C LINE FROM 220 kV ALEPHATA - GHARGAON - 34 KM	132 kV Ghargaon S/S is considered in year 2014-15 for reducing the loading of 132 kV
GHARGAON S/S (2014-15)		2 X 25 MVA, 132/33 kV T/F WITH BAYS	Rahuri S/S & 220 kV Bhenda S/S & to meet the
0/0 (2014 13)		33 kV OUTLETS- 8 NOS	increased load in the area.
100 kV/		132 kV D/C LINE FROM 220 kV SATANA TO	
	NIAGHIK	TAHARABAD - 25 KM	To reduce loading of 220 kV Satana and 132 k
S/S (201/-15)	NASHIN	2 X 25 MVA 132/33 kV T/F	Nampur, 132 kV Taharabad S/S is proposed.
0/0 (2014-10)		33 kV OUTLETS - 6 NOS.	
	NAME OF S/S 220 kV SAYANE S/S (2014-15) 132 kV GHARGAON S/S (2014-15) 132 kV TAHARABAD S/S (2014-15)	NAME OF S/SDISTRICT220 kV SAYANE S/S (2014-15)NASHIK132 kV GHARGAON S/S (2014-15)A'NAGAR132 kV TAHARABAD S/S (2014-15)NASHIK	NAME OF S/SDISTRICTTOTAL SCOPE OF WORK220 kV SAYANE S/S (2014-15)NASHIKLILO OF 220 kV DHULE - MALEGAON LINE AT 220 kV SAYANE - 2 KMS132 kV GHARGAON S/S (2014-15)A'NAGAR132 kV D/C LINE FROM 220 kV ALEPHATA - GHARGAON - 34 KM132 kV TAHARABAD S/S (2014-15)A'NAGAR132 kV D/C LINE FROM 220 kV ALEPHATA - GHARGAON - 34 KM132 kV TAHARABAD S/S (2014-15)NASHIK132 kV D/C LINE FROM 220 kV ALEPHATA - GHARGAON - 34 KM132 kV TAHARABAD S/S (2014-15)NASHIK132 kV D/C LINE FROM 220 kV SATANA TO TAHARABAD - 25 KM 33 kV OUTLETS - 6 NOS.

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 KV LINK LINE (2014-15)	A'NAGAR	132 kV SCDC LINE FROM KOPERGAON TO YEOLA S/S - 25 KM	Remaining scope of 220 kV Kopergaon S/s.
2	132 kV LINK LINE (2014-15)	NASHIK	132 kV SCDC LINE FROM 220/132 kV DONDAICHA S/S - 50 KMS WITH BAYS	132 kV Shirpur S/S is fed from 132 kV Nardane S/S with S/c line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV LINK LINE (2014-15)	NASHIK	220 kV_NASHIK (EKLAHARE) - PIMPALGAON D/C LINE - 44 KM	Remaining scope of 220 kV Pimpalgaon Ranwad S/S
2	220 KV LINK LINE (2014-15)	NASHIK	220 kV MALEGAON - KALWAN D/C LINE - 25 KMS WITH BAYS	
3	132 kV LINK LINE (2014-15)		LILO ON 132 KV KALWAN - SATANA SCDC LINE AT 220 KV KALWAN S/S - 2 KM	Remaining scope of 220 kV Kalwan II S/S
4	132 kV LINK LINE (2014-15)	A'NAGAR	132 kV SCDC LINE FROM SHEVGAON S/S - GHODEGAON - 37 KM	Remaining scope of 132 kV Ghodegaon S/S

UPGRADATION OF EXISTING LINES (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV EKLAHARE (OCR) - TAKLI LINE - 11.5 KMS	System strengthening.
2	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV EKLAHARE (GCR) - AMBAD LINE - 19 KMS	System strengthening.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NASHIK EHV CONSTRUCTION CUM (O&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
3	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV EKLAHARE (OCR) - SATPUR - AMBAD - 26 KMS	System strengthening.
4	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV AMBAD - M&M - SATPUR MIDC LINE - 8.4 KMS	System strengthening.
5	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV LINE FROM 220 kV TAKLI - MHASRUAL - SATPUR MIDC MIDC - 46 KMS	System strengthening.
6	132 kV LINK LINES (2014-15)	NASHIK	REPLACEMENT OF CONDUCTOR OF EXISTING 132 kV LINE FROM 220 kV RAYMONDS - AMBAD MIDC - 24 KMS	System strengthening.

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE ICT/TF IS AVAILABLE (2014-15)

SR	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV SATANA S/S (2014-15)	NASHIK	1 X 200 MVA, 220/132 kV ICT WITH BAYS	To have redundancy	
	220 kV		1 X 50 MVA 220/33 kV T/F WITH BAYS.		
2	2	DONDAICHA S/S (2014-15)	DHULE	4 X 33 kV OUTLETS.	To have redundancy
0	220 kV		1 X 50 MVA, 220/33 kV T/F WITH BAYS.	To be seen as done does not	
3	(2014-15)	(2014-15)	2 X 33 kV OUTLETS.	To have redundancy	
4	220 kV KALWAN II S/S (2014-15)	NASHIK	1 X 50 MVA, 220/33 kV T/FS WITH BAYS	To have redundancy	

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV SATPUR S/S (2014-15)	NASHIK	1 X 50 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA. And the load reached is 50.57 MVA Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
2	132 kV RANWAD S/S (2014-15)	NASHIK	1 X 50 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 64.64 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
3	132 kV CHOPDA S/S (2014-15)	JALGAON	1 X 50 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 72 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE
YEAR 2014-15 TO 2018-19
NASHIK FHV CONSTRUCTION CUM (0&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
4	132 kV NEW JALGAON MIDC S/S (2014-15)	JALGAON	1 X 50 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 78 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
5	132 kV TAKALI S/S (2014-15)	NASHIK	1 X 50 MVA, 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 1 X 50 and 1 X 25 MVA and load is 59 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
6	132 kV PACHORA S/S (2014-15)	JALGAON	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 66 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	

	AUGMENTATION	OF S/S BY REPL	ACEMENT OF	TRANSFORMER	(2014-15)
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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV AMALNER S/S (2014-15)	DHULE	1 X (200 -100) MVA, 220/132 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 100 MVA 220/132 kV Xmer and load is 99 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
2	220 kV DHULE S/S (2014-15)	DHULE	1 X (50 -25) MVA, 220/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 25 MVA and load is 28 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
3	132 kV SANGAMNER S/S (2014-15)	NASHIK	1 X (50 -25) MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 x 50 & 1 X 25 MVA and load is 38 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
4	132 kV RAMACHE PIMPLUS S/S (2014-15)	NASHIK	1 X (50 -25) MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 25 MVA and load is 42 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
5	132 kV MHASRUL S/S (2014-15)	NASHIK	1 X (50-25) MVA, 132/33 kV WITH BAYS	Existing transformer capacity is 2 X 25 MVA 132/33 kV and load reached is 40 MVA

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

NASHIK EHV CONSTRUCTION CUM (O&M) ZONE

CREATION OF NEW 33 kV LEVEL (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV PIMPALGAON	NASHIK	2 X 50 MVA, 220/33 kV T/F WITH BAYS	Creation of new 33 kV level
	(RANWAD) (2014-15)		33 kV OUTLETS - 8 NOS.	
2	220 kV	NASHIK	1 X 50 MVA 220/33 kV T/F WITH BAYS	Creation of new 33 kV level
2	S/S (2014-15)	N/OFIII	33 kV OUTLETS : 6 NOS.	
3	220 kV		2 X 25 MVA 220/33 kV T/F WITH BAYS	Creation of new 33 kV level
5	(2014-15)	DHOLL	33 kV OUTLETS : 8 NOS.	
	132 kV Varangaon	NASHIK	1 X 25 MVA,132/33 kV TF'S WITH BAYS	Creation of new 33 kV/ level
7	S/S (2014-15)	NAOHIN	33 kV OUTLETS - 4 NOS	

NEW SCHEMES: 2015-19

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 KV KANASHI (2015-16)	NASIK	132 KV D/C LINE FROM 220 KV KALWAN TO KANASHI - 25 KM. 2 X 50 MVA 132/33 KV T/F WITH BAYS 33 KV OUTLETS - 4 NOS.	To meet upcoming demand in Nandurbar district.
2	132 kV SAMSHER - PUR S/S (2015- 16)	NANDURBAR	LILO ON 132 kV TALODA - SHAHADA LINE AT SAMMSHERPUR -13 KMS 2 X 25 MVA, 132/33 kV XMERS 33 kV OUTLETS - 8 NOS.	To meet upcoming demand in Nandurbar district.
3	132 kV RAJUR S/S (2016-17)	A'NAGAR	LILO ON 132 kV AKOLE - K.P. WIND FARM LINE AT RAJUR - 18 KMS 2 X 25 MVA, 132/33 kV XMERS 33 kV OUTLETS - 6 NOS.	To reduce loading of 132 kV Akole and meet upcoming load 132 kV Rajur S/S is proposed.
4	132 kV VADJIRE S/S (2016-17)	A'NAGAR	132 kV D/C LINE SUPA - VADJIRE - 25 KM 2 X 25 MVA, 132/33 kV T/FS WITH BAYS 8 X 33 kV OUTLETS	To reduce loading of 132 kV Supa and 132 kV Kedgaon S/S and to meet upcoming load 132 kV Vadjire S/S is proposed.
5	132 kV BHUSAWAL S/S (2016-17)	JALGAON	LILO OF 132 kV DEEPNAGAR - PACHORA S/C LINE AT BHUSAWAL - 0.5 KM 2 X 50 MVA 132/33 kV T/F. 33 kV OUTLETS - 10 NOS.	To meet upcoming load of MSEDCL.
6	132 KV BORIS S/S (2016-17)	DHULE	LILO ON ONE CKT OF 132 KV DHULE -DONDAICHA D/C LINE AT 132 KV BORIS (FROM LOCATION NO 114) - 8.0 KM. 2 X 25 MVA 132/33 KV T/F WITH BAYS 33 KV OUTLETS - 5 NOS	To meet upcoming load of MSEDCL and reduce load of Dhule S/s.
7	132 KV ERANDOL S/S (2016-17)	JALGAON	132 KV SCDC LINE FROM 220 KV BHAMBORI S/S WITH BAYS - 30.0 KM 132 KV SCDC LINE FROM 132 KV DHARANGAON S/S WITH BAYS - 20.0 KM (2018-19) 2 X 25 MVA 132/33 KV T/F. 33 KV OUTLETS - 6 NOS.	To meet upcoming load of MSEDCL and reduce load of Dharangaon S/s.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19	
		N/	ASHIK EHV CONSTRUCTION CUM (08	&M) ZONE
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
			LILO OF 220 KV DEEPNAGAR - AMALNER D/C LINE AT DHANORA – 12.0 KM	
8	220 KV DHANORA S/S (2017-18)	JALGAON	LILO ON EXISTING 132 KV YAWAL – CHOPDA LINE AT 220 KV DHANORA S/S – <u>3.0 KMs.</u>	To meet upcoming load of MSEDCL and reduce load of Yawal S/s.
			2 X 100 MVA 220/132 KV ICT WITH BAYS 2 X 50 MVA 220/33 KV T/f WITH BAYS 33 KV OUTLETS - 8 NOS.	
			220 KV DC LINE FROM 400 KV BHUSAWAL (Rep) to 220 KV VIRODA - 25 KMS(CONSIDERED IN BHUSAWAL (REP) EVACUATION SCHEME.)	
			132 KV VIRODA - YAWAL D/C LINE - 30 KM	
9	220 KV VIRODA S/S (2018-19)	NASIK	132 KV VIRODA - SAWADA M/C LINE - 10 KM (OUT OF 4 CKTS TWO CIRCUITS TO SAWADA AND TWO CIRCUITS TO BE CONNECTED TO SAWADA - NIMBHORA LINE)	To meet upcoming load of MSEDCL and to reduce the loading of 132 kV Deepnagar S/s. Also to reduce length of 132 kv Sauda - Yawal and Nimbhora - Yawal lines
			132 KV D/C LINE FROM SAWDA TO NIMBHORA - 16 KM (BEYOND 18-19) 132 KV SCDC LINE FROM NIMBHORA TO	
			RAVER - 20 KM (BEYOND 2018-19)	
			2 X 200 MVA, 220/132 KV ICTS WITH BAYS	
			2 X 50 MVA 220/33 KV T/F WITH BAYS 33 KV OUTLETS -12 NOS.	
10	132KV KARKEE S/S (2018-19)	JALGAON	132 KV DC LINE FROM 132 KV MUKTAINAGAR TO KARKEE - 20 KM 2 X 25 MVA.132/33KV TF WITH BAYS	To meet upcoming load of MSEDCL and reduce load of Muktai nagar S/s.
			33 KV OUTLETS - 4 NOS	

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2015-16)	DHULE	2ND CKT STRINGING OF 132 kV TALODA - SHAHADA LINE - 27 KM	132 kV Taloda S/S is fed from 220/132 kV Shahada S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
2	132 kV LINK LINE (2016-17)	NASHIK	2ND CKT STRINGING OF 132 kV NAMPUR - MALEGAON SCDC LINE- 30 KM	132 kV Nampur S/S is fed from 220/132 kV Malegaon S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	132 kV LINK LINE (2016-17)	JALGAON	2ND CKT STRINGING OF 132 kV PAROLA - AMALNER SCDC LINE - 17 KM	To meet upcoming load of MSEDCL.
4	132 kV LINK LINE (2016-17)	NANDURBAR	2ND CKT STRINGING OF 132 KV NANDURBAR- VISARWADI SCDC LINE - 44 KMS.	To meet upcoming load of MSEDCL.
5	132 kV LINK LINE (2018-19)	A'NAGAR	2ND CIRCUIT STRINGING OF 132 kV SHEVGAON - GHODEGAON SCDC LINE - 37 KMS.	132 kV Ghodegaon S/S is fed from132 kV Shevgaon S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
	ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT I OAD SHEDDING AND TO ENSURE RELIABILITY					
			AND QUALITY OF SUPPLY (2015-19	2		
SR		DISTRICT		DEMARKS		
NO	NAME OF 5/5	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	220 kV LINK LINE (2015-16)	NASHIK	220 kV DHULE - MALEGAON D/C LINE - 40 KMS	Since the existing 220 kV Dhule-Malegaon S/C line is loaded to an extent of 162 MW during Non-Coinsident peak condition. It is anticipated the load will reach to about critical value . Hence it is necessary to propose additional line to meet additional load growth and contingency.		
2	220 kV LINK LINE (2015-16)	DHULE	LILO ON 220 KV MALEGAON - GANGAPUR S/C LINE AT 220 KV SAKRI - 45 KMS.	Remaining scope of 220 kV Sakri (Shivaji Nagar) S/S		
3	132 kV LINK LINE (2015- 16)	NASHIK	LILO OF 132 kV RAYMONDS - ADGAON LINE AT 132 kV MHASARUL S/S- 10 KM.	This line is proposed to strngthen the 132 kV network nearby nashik.		
4	132 kV LINK LINE (2015-16)	NASHIK	2ND CKT STRINGING OF 132 kV MANMAD - YEOLA SCDC LINE- 25 KM	To meet upcoming load of MSEDCL.		
5	132 kV LINK LINE (2015-16)	A'NAGAR	CONVERSION OF TAP TO LILO ON 132 kV BABHALESHWAR - AHMEDNAGAR MIDC SC LINE FOR RAHURI S/S -1.5 KMS.	Scince the existing 132 kV Babhaleshwar- Rahuri s/c line is loaded tp an extent of 59 mw during Non- Coinsident peak condition. It is anticipeted the load will reach to about critical value . Hence it is necessary to propose additional line to meet additional load growth and contigency.		
6	132 kV LINK LINE (2015-16)	NASHIK	LILO ON 132 kV OZAR - 132 kV KALWAN SC LINE AT 220 kV PIMPALGAON S/S- 8 KM	Remaining scope of 220 kV Pimpalgaon Ranwad S/S		
7	220 KV LINK LINE (2016-17)	JALGAON	220 KV DC LINE FROM 400 KV DEEPNAGAR (BHUSAWAL III) - KHADKA (BHUSAWAL II) - 10 KMS	Remaining scope of 400 kv deepnagar s/s		
8	220 kV LINK LINE (2016-17)	DHULE	220 KV SAKRI (SHIVAJINAGAR) - DHULE D/C LINE USING AL 59 CONDUCTOR - 60 KM (approx)	Remaining scope of 220 kV Sakri (Shivaji Nagar) S/S		
9	132 kV LINK LINE (2016-17)	A'NAGAR	132 kV DC LINE FROM 220 kV AHMEDNAGAR -SUPA (USING SAME ROW) - 24 KMS.	To cater the upcoming load on 132 kV Supa and proposed 132 kV Vadjire S/S.		
10	132 kV LINK LINE (2016-17)	A'NAGAR	SECOND CIRCUIT STRINGING OF 132 kV BHENDA -SHEVGAON SCDC LINE - 26 KMS.	To cater the upcoming load of in Shevgaon area.		
11	132 kV LINK LINE (2016-17)	A'NAGAR	SECOND CIRCUIT STRINGING OF 132 kV SHEVGAON - PATHARDI SCDC LINE - 23 KMS.	To cater the upcoming load of in Pathardi area.		
12	132 kV LINK LINE (2016-17)	NASHIK	132 kV SCDC LINE FROM 220 kV PIMPALGAON - 132 kV RANVAD S/S - 17 KMS	Remaining scope of 220 kV Pimpalgaon Ranwad S/S		
13	220 kV LINK LINE (2017-18)	JALGAON	LILO OF ONE CKT OF 220 kV DEEPNAGAR KHADKA D/C LINE AT CHALISGAON - 124 KM WITH BAYS	Since the existing 200 kV Bhusawal - Chalisgaon D/C line is loaded to an extent of 126.5 (EACH) MW. It is anticipated the load will reach to about critical value Hence it is necessary to propose additional line to meet additional load growth and contingency.		
14	132 kV LINK LINE (2017-18)	A'NAGAR	132 kV DC LINE BABHALESHWAR - RAHURI - AHMEDNAGAR MIDC (USING SAME ROW) - 57 KMS.	To cater the load of both (MIDC and Rahuri S/S)from either 220 kV Ahmednagar or 220 kV Babhleshwar at a time.		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NASHIK EHV CONSTRUCTION CUM (O&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
15	132 kV LINK LINE (2017-18)	DHULE	LILO OF ONE CKT OF 132 kV SHAHADA - TALODA DC LINE AT NANDURBAR - 22 KMS.	For System Strengthening.
16	132 kV LINK LINE (2017-18)	A'NAGAR	132 kV SINNER - SANGAMNER SCDC LINE - 32 KM	132 kV Sangamner S/S is fed from 220kV Babhaleshwar S/S with S/C line.To have redundancy for Sangamner & Akole S/S this line is proposed

STRENGTHENING FOR EVACUATION ARRANGEMENT (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV LINK LINE (2016-17)	NANDURBAR	2ND CKT STRINGING OF 220 kV GANGAPUR-VALVE - JAMDE - 30 KMS.	Strengthening for wind power evacuation.	
2	132 kV LINK LINE (2016-17)	A'NAGAR	132 kV DC LINE FROM 220 kV AHMEDNAGAR TO 132 kV AHMEDNAGAR MIDC - 15 KMS.	Strengthening for wind power evacuation.	

AUGMENTATION OF S/S BY ADDITION OF T/F (2015-19)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE ICT/XMER IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV BHUSAWAL S/S (2015-16)	JALGAON	1 X 315 MVA, 400/220 kV ICT WITH BAYS	To have redundancy
2	220 kV SHAHADA S/S (2015-16)	NANDURBAR	1 X 100 MVA, 220/132 kV ICT WITH BAY	To have redundancy
3	220 kV RAYMONDS S/S (2015-16)	NASHIK	1 X 50 MVA 220/33 kV T/F WITH BAYS	To have redundancy
4	220 kV AMALNER S/S (2015-16)	DHULE	2 X 25 MVA 220/33 kV T/F WITH BAYS	To have redundancy
5	220KV BHOSE (BELWANDI) (2016-17)	A'NAGAR	1 X 50 MVA 220/33 KV WITH BAYS	To have redundancy
6	220 KV CHALISGAON (2016-17)	JALGAON	1 X 25 MVA 220/33 KV WITH BAYS	To have redundancy

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV SHIRPUR S/S (2015-16)	NANDURBAR	1 X 50 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 61 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
	NASHIK EHV CONSTRUCTION CUM (O&M) ZONE				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
2	132 KV SINNAR (MALEGAON) S/S (2015-16)	NASIK	1 X 50 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 66 MVA. Considerin the maximum load reached on the transformer in the event of interruptions / outage on any one of the transformer other transformer should take care of existing load	
3	132 KV OZAR S/S (2015-16)	NASIK	2 X 25 MVA , 132/33 kV T/F WITH BAYS.	To eliminate 11 KV level.	
4	132 kV AHMED NAGAR MIDC S/S (2015-16)	A'NAGAR	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 56 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
5	132 kV AKOLE S/S (2015-16)	A'NAGAR	1 X 25 MVA, 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 58 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
6	132 kV DHULE- I S/S (2015-16)	DHULE	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is68 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load.	
7	132 kV TALODA S/S (2015-16)	NANDURBAR	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1X 50 & 1 X 25MVA and load is 39 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
8	132 KV NEWASA S/S (2015-16)	A'NAGAR	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2X 50 MVA and load is 55 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
9	132 kV YAVAL S/S (2015-16)	JALGAON	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 43 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
10	132 kV SHRIGONDA S/S (2015-16)	A'NAGAR	1 X 25 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA . Considering the maximum load 59.46 MVA,reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load.	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE			
			YEAR 2014-15 TO 2018-19	
		NA	SHIK EHV CONSTRUCTION CUM (O8	&M) ZONE
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SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
11	132 KV DHARAN- GAON S/S (2015-16)	JALGAON	1 X 25 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 49 MVA. Considerin the maximum load reached on the transformer in the event of interruptions / outage on any one of the transformer other transformer should take care of existing load
12	220 kV SHAHADA S/S (2016-17)	NANDURBAR	1 X 50 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 85 MVA. Considerin the maximum load reached on the transformer in the event of interruptions / outage on any one of the transformer other transformer should take care of existing load
13	132 KV VARANGAON (2016-17)	JALGAON	2 X 25 MVA , 132/33 kV T/F WITH BAYS.	To eliminate 11 KV level.
14	132 KV SUPA S/S (2016-17)	A'NAGAR	1 X 25 MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 49 MVA. Considerin the maximum load reached on the transformer in the event of interruptions / outage on any one of the transformer other transformer should take care of existing load

	AUGMENTATION OF S/S BY REPLACEMENT OF TRANSFORMER (2015-19)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV BHENDA S/S. (2015-16)	A'NAGAR	1 X (200-100) MVA, 220/132 kV T/F WITH BAYS	To cater the increasing load in nearby area	
2	220 kV AMALNER S/S (2015-16)	DHULE	1 X (200 -100) MVA, 220/132 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 100 MVA 220/132 kV Xmer and load is 99 MVA. One replacement is considered in 2014- 15Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
3	132 kV IGATPURI S/S (2015-16)	NASHIK	1 X (50 -25) MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 50 MVA and 1 X 25 MVA and load is 37 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
4	132 kV NAMPUR S/S (2015-16).	NASHIK	1 X (50-25) MVA, 132/33 kV T/F .	Existing transformer capacity available in S/S is 1 X 50 MVA and 1 X 25 MVA and load is 38 MVA. The transformer is replaced to meet anticipated load growth.	
5	132 kV RAMACHE PIMPLUS S/S (2015-16)	NASHIK	1 X (50 -25) MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 25 MVA and load is 42 MVA.One replacement is proposed in 2014-15 Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	

		STU T	RANSMISSION PLAN FOR MAHARAS	SHTRA STATE
		N/	YEAR 2014-15 TO 2018-19	۶M) 70NF
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
6	132 kV MHASRUL S/S (2015-16)	NASHIK	1 X (50-25) MVA, 132/33 kV	Existing transformer capacity is 2 X 25 MVA 132/33 kV and load reached is 40 MVA.(50-25) MVA T/f considered in 2014-15
7	132 KV PACHORA (2015-16)	JALGAON	1 X (50 -20) 132/33 kV T/F	Existing transformer capacity available in S/S is 2 X 25 MVA load is 44 MVA. The transformer is replaced to meet anticipated load growth.
8	400 kV BABHALESHW AR S/S (2017- 18)	A'NAGAR	1 X (500 -315) MVA 400/220 kV ICT	To meet upcoming load.
9	220 kV BHAMBORI S/S (2017-18)	JALGAON	1 X (50-25) MVA, 220/33 kV T/F	To meet additional demand of MSEDCL.
10	132 kV SAVDA S/S (2017- 18)	JALGAON	1 X (50 -20) 132/33 kV T/F	Existing transformer capacity available in S/S is 2 X 50 MVA and 1 X 20 MVA and load is 40 MVA. The transformer is replaced to meet anticipated load growth.
11	220 KV EKLAHRE GCR (2018-19)	NASIK	1 X (200-150) 220/132 KV ICT	Existing ICT capacity available in S/S is 2 X 200 AND 1X150 MVA load is 286 MVA. The transformer is replaced to meet anticipated load growth.
12	220 kV BHAMBORI S/S (2018-19)	JALGAON	1 X (50-25) MVA, 220/33 kV T/F	To meet additional demand of MSEDCL.
			CREATION OF NEW LEVEL (2015-15	<u>9)</u>
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
	220 KV BHOSE		1 X 50 MVA 220/33 KV WITH BAYS	
1	(BELWANDI) 2015-16	A'NAGAR	33 KV OUTLETS WITH BAYS- 6 NOS	To cater load of MSEDCL
	220 KV		1 X 25 MVA 220/33 KV WITH BAYS	
2	(2015-16)	JALGAUN	33 KV OUTLETS WITH BAYS- 2 NOS	

AURANGABAD EHV CONSTRUCTION CUM O&M ZONE

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	STU FIVE YEAR TRANSMISSION PLAN FOR THE YEAR 2014-15 TO 2018-19					
	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
		AUR	ANGABAD EHV CONSTRUCTION CUM	(O&M) ZONE		
			ONGOING SCHEMES: 2014-15			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	400 kV NANDED S/S (2014-15)	NANDED	LILO ON 400 kV CHANDRAPUR - PARLI S/C LINE AT NANDED - 40 KM LILO ON ONE CIRCUIT OF 400 kV CHANDRAPUR - PARLI D/C LINE AT NANDED - 44 KM (2015-16) 220 kV D/C LINE TO 220 kV NANDED (WAGHALA) S/S - 10 KMS WITH BAYS 2 X 500 MVA, 400/220 kV ICTS WITH BAYS AND 1 X 167 SINGLE PHASE SPARE ICT	To improve the voltage profile and to meet the upcoming load.		
2	400 kV AURANGA- BAD - II S/S (THAPTI TANDA) (2014-15)	A'BAD	LILO ON ONE CKT OF 400 KV DEEPNAGAR - AURANGABAD I DC QUAD LINE AT AURANGABAD II - 78 KMS LILO ON 220 KV CHITEGAON - SHENDRA D/C LINE AT AURANGABAD - JI - 15 KMS 2 X 500 MVA, 400/220 KV ICT'S WITH BAYS 1 X 167 MVA , 400/ 220 KV 1 PHASE ICT SPARE	To reduce overloading of 400 kV Aurangabad S/S and evacuation of power from 765 kV Aurangabad (MSETCL) and 765 kV Aurangabad (PGCIL) new 220 kV S/S is proposed.		
3	220 kV PHULAMBRI S/S (2014-15)	A'BAD	LILO OF ONE CIRCUIT OF 220 kV SAWANGI - BHOKARDAN D/C LINE AT PHULAMBRI - 6 KMS WITH BAYS LILO ON 132 KV PADEGAON - SILLOD LINE AT PHULAMBRI - 10 KMS (2017-18) LILO ON 132 KV SAWANGI - PISHOR LINE AT 220 KV PHULAMBRI - 10 KMS (2017-18) 2 X 100 MVA 220/132 KV ICT WITH BAYS (2017-18) 2 X 50 MVA, 220/33 kV T/FS WITH BAYS 12 X 33 kV OUTLETS	To improve the voltage profile and to meet the upcoming load.		
4	220 kV BHOKAR S/S (2014-15)	NANDED	220 kV D/C LINE FROM 400 kV NANDED - 40 KM 132 kV BHOKAR - TAMASA SCDC LINE - 16 KM 132 kV BHOKAR - HIMAYATNAGAR SCDC LINE 30 KM (2016-17) 2 X 100 MVA, 220/132 kV ICTS 2 X 25 kV CUTL ETS	Presently 132 kV Himayatnagar & 132 kV Kinwat S/S are fed through 220 kV Pusad S/S. To reduce lengths and loading of 132 kV lines and for redundancy 220 kV S/S at Bhokar is proposed. By the commissioning of this S/S, voltage profile of Parli as well as Amravati Circle will improve.		

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

8 X 33 kV OUTLETS

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2014-15)	A'BAD	LILO OF ONE CKT OF 220 kV PADEGAON - SAWANGI D/C LINE AT 400 kV WALUJ - 20 KMS.	To have additional source to 220 kV Padegaon and 220 kV Sawangi substations.
2	220 kV LINK LINE (2014-15)	A'BAD	2ND CKT STRINGING OF 220 kV PADEGAON - SAWANGI - 12 KMS	To have additional source to 220 kV Padegaon and 220 kV Sawangi substations.
3	132 kV LINK LINE (2014-15)	A'BAD	CONVERSION OF EXISTING 132 kV SAWANGI - PISHORE SC LINE TO D/C ON M/C UPTO LILO POINT - 30 KMS.	132 kV Pishor S/S is fed from 132 kV Padegaon S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
4	132 kV LINK LINE (2014-15)	LATUR	132 kV AHMEDPUR - CHAKUR SCDC LINE - 22 KM	132 kV Chakur S/S is Tapped on 132 kV Harangul-Udgir S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19		
		AUR	ANGABAD EHV CONSTRUCTION CUM	(O&M) ZONE	
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
5	132 kV LINK LINE (2014-15)	LATUR	CONVERSION OF TAP TO LILO FOR KILLARI S/S 2.0 KM.	Presently 132 kV Killari S/S is being fed through Tap on 132 kV Ujani -Omarga line. To have alternate source conversion of Tap to LILO is proposed.	
6	132 kV LINK LINE (2014-15)	A'BAD	132 kV D/C LINE FROM GARWARE (EHV CONSUMER) TO BAJAJ (EHV CONSUMER) - 3.0 KMS	To have 2nd source to 132 kV Waluj S/S	

AUGMENTATION OF S/S BY ADDITION OF T/F (2014-15)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE T/F OR ICT IS AVAILABLE (2014-15)

SR	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV KINWAT S/S		1 X 25 MVA, 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is
	(2014-15)	NANDED	33 kV OUTLETS - 4 NOS	transformer load could not be managed
2	132 kV KILLARLS/S	LATUR	1 X 25 MVA, 132/33 kV T/F WITH BAYS	To avoid loss of supply in case of outages or
-	(2014-15)	Extron	33 kV OUTLETS - 4 NOS	interruptions on any one transformer
3	132 kV KUNDAL -		1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing Transformer capacity avaible is 1 X 25 MVA. And the load reached is 16 MVA. To
5	WADI S/S (2014-15)	ADI S/S NANDED 2014-15)	4 X 33 kV BAYS	avoid loss of supply in case of outages or interruptions on transformer.

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV HARANGUL S/S (2014-15)	LATUR	1 X 200 MVA, 220/132 kV ICT WITH BAYS	The existing xmer capacity available is 220/132 kV, 2 X 200 MVA and the load reached is 214 MVA. To avoid loss of supply in case of outages or interruptions on any one xmer additional xmer is proposed.
2	220 kV OSMANABAD S/S (2014-15)	OSMANABAD	1 X 50 MVA , 220/33 kV T/F WITH BAYS.	Existing xmer capacity available in S/S is 2 X 50 MVA. And the load reached is 49 MVA Considerig the maximum load reached on the xmerin the event of interruptions/outage on any one of the xmer other xmershould take care of existing load.
3	132 kV WALUJ S/S (2014-15)	A'BAD	1 X 25 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 70 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth
4	132 kV AMBAD (JALNA) S/S (2014-15)	JALNA	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing xmer capacity available in S/S is 1 X 25 & 1 X 50 MVA and load is 48 MVA. Considerig the maximum load reached on the xmerin the event of interruptions/outage on any one of the xmer other xmershould take care of existing load.
5	132 kV ASHTI (BEED) S/S (2014-15)	BEED	1 X 25 MVA, 132/33 kV T/F WITH BAYS.	Existing xmer capacity available in S/S is, 2 X 50 MVA and load is 72 MVA. Considering the maximum load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

AURANGABAD EHV CONSTRUCTION CUM (O&M) ZONE

AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV RENAPUR S/S (2014-15)	LATUR	2 X (50- 25) MVA, 132/33 kV T/F WITH BAYS.	To meet upcoming demand of MSEDCL.
2	132 kV AUSA S/S (2014-15)	LATUR	1 X (50-25) MVA, 132/33 kV T/F WITH BAYS.	The transformer is replaced to meet anticipated load growth
3	132 kV UJANI S/S (2014-15)	LATUR	1 X (50-25) MVA , 132/33 kV T/F WITH BAYS	The transformer is replaced to meet anticipated load growth
4	132 kV KALAMB S/S (2014-15)	OSMANABAD	1 X (50-25) MVA, 132/33 kV T/F WITH BAYS.	To meet upcoming demand of MSEDCL.

CREATION OF NEW LEVEL AT EXISTING SUBSTATION (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV SHENDRA S/S (2014-15)	A'BAD	2 X 100 MVA, 220/132 kV ICTS WITH BAYS 2 X 132 kV BAYS	Creation of new 132 kV level to strengthen EHV network.
2	220 kV BEED S/S (2014-15)	BEED	2 X 25 MVA, 220/33 kV T/F WITH BAYS. 4 X 33 kV OUTLETS	Creation of new 33kV level to meet the anticipated load growth.

NEW SCHEMES: 2015-19

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1			220 kV D/C LINE FROM 220 kV JALNA MIDC (NAGEWADI) - 220 kV PARTUR S/S - 50 KM	
	132 kV D/C INTERCONNECTION BETW 220 kV PARTUR - 132 kV PARTUR - 5.0	132 kV D/C INTERCONNECTION BETWEEN 220 kV PARTUR - 132 kV PARTUR - 5.0 KM.		
	220 kV PARTUR S/S (2015-16)	JALNA	REORIENTATION OF EXISTING 132 kV PARTUR - MANTHA LINE AT 220 kV PARTUR - 5.0 KM (2017-18)	New substation is proposed to cater existing and upcoming load.
			132 kV SCDC LINE FROM 220 kV PARTUR - GHANSAWANGI - 25 KMS (2017-18).	
			2 X 100 MVA, 220/132 kV ICTS 2 X 50 MVA 220/33 kV TFS	
			220 kV D/C LINE FROM 400 kV AURANGABAD - II TO JALNA MIDC (NAGEWADI) - 45 KMS. (2016-17)	
	220 kV JALNA		LILO ON ONE CIRCUIT OF 220 kV D/C WALUJ - JALNA LINE AT 220 kV JALNA MIDC (NAGEWADI) - 15 KM	
2	MIDC (NAGEWADI) S/S (2015-16)	MIDC IAGEWADI) JALNA S/S (2015-16)	LILO ON 132 kV JALNA (OLD) - PARTUR AND JALNA - JAFRABAD ON M/C TOWERS AT 220 kV JALNA MIDC(NAGEWADI) - 15 KMS	To improve the voltage profile and to meet the upcoming load.
	(201010)		LILO ON ONE CKT OF 132 kV JALNA (OLD) - RAJUR D/C LINE AT 220 kV JALNA MIDC (NAGEWADI) - 5 KMS (2017-18)	
			2 X 200 MVA 220/132 kV ICT	
			2 X 50 MVA 220/33 kV 1/F 33 kV OUTLETS - 12 NOS.	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19						
		AUR/	ANGABAD EHV CONSTRUCTION CUM	(O&M) ZONE			
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SK NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
	132 kV		LILO ON 132 kV AHMEDNAGAR - ASHTI LINE - 10 KM	Presently 33 kV supply to Dhanora area is being fed from 132 kV Ashti (Beed) S/S. To reduce			
3	3 DHANORA	BEED	2 X 25 MVA, 132/33 kV, T/F	loading and length of 33 kV feeder and as per			
	S/S (2015-10)		33 kV OUTLETS - 6 NOS	Dhanora S/S is proposed.			
			220 kV D/C LINE (PARTLY ON M/C) FROM				
	220 kV		400 kV NANDED - KRISHNOOR - 8.5 KMS	4			
4	KRISHNOOR	NANDED	KMS	Krishnoor is considered to cater the increasing			
	S/S (2016-17)		2 X 100 MVA, 220/132 kV ICTS	loads in Nanded District.			
			2 X 50 MVA, 220/33 kV T/FS				
			12 X 33 kV OUTLETS				
			RAYS - 32 CKT KMS				
				1			
	220 kV		LILO ON 132 kV NARSI - DEGLOOR SCDC AT 220 kV NARSI S/S - 7 KM (COMMISSIONED)	220 kV Narsi is considered to meet the			
5	NARSI - II S/S	NANDED	132 kV LINE FROM 220 kV NARSI MUKHED	constructing this station, the voltage profile			
	(2016-17)		S/C - 30 KM (2017-18)	improves.			
				!			
			2 X 100 MVA, 220/132 kV ICTS	1			
			2 X 50 MVA, 220/33 kV T/FS	1			
			8 X 33 kV OUTLETS	[]			
	132 kV		132 kV HINGOLI - SHENGAON D/C LINE				
6	SENGAON	PARBHANI	FROM 220 KV HINGOLI 5/S - 30 KMS	Sengaon-132 kV S/S is considered to meet the			
	S/S (2016-17)		8 X 33 kV OUTLETS				
	122 kV		132 kV LILO ON 132 kV PARLI - PARBHANI				
7		PARBHANI	LINE - 6 KMS	To reduce length and loading of 33 kV line from			
· ·	S/S (2016-17)		2 X 25 MVA, 132/33 kV XMER	132 kV Parbhani S/S			
			33 KV OUTLETS - 4 NOS.	Presently 33 kV supply to Pathra area is being			
	132 kV		AT PATHRA - 5 KM.	fed from 132 kV Kalamb S/S. To reduce loading			
Ø	2016-17)	BEED	2 X 25 MVA 132/33 kV T/F	requirement of MSEDCL new 132 kV Pathra			
	· · ·		33 kV OUTLET 4 NOS.	S/S is proposed.			
	220 kV MANJAR-		LILO ON ONE CIRCUIT OF 220 kV BEED- PATODA DC LINE- 5 K.M	Presently 33 kV supply to Manjarsumba area is being fed from 132 kV Beed S/S. To reduce			
9	SUMBA S/S	DEED	2 X 25 MVA 220/33 kV T/F.	the requirement of MSEDCL new 132 kV			
	(2017-18)		6 X 33 kV OUTLETS	Manjarsumba S/S is proposed.			
			LILO OF 132 kV PARBHANI - PARTUR SC	Presently 33 kV supply to Shelu area is being			
10	132 kV SELU	PARBHANI	LINE AT 132 kV SHELU - 3.0 KM.	fed from 132 kV Pathri S/S. To reduce loading			
	S/S (2017-18)		2 X 25 MVA 132/33 KV TFS	and length of 33 kV feeders new 132 kV Snew			
	1		220 kV D/C LINE HARANGUL - VALANDI - 60				
			KM				
	000 141		132 kV SCDC LINE TO NILANGA S/S-15 KM	Presently 33 kV supply to Valandi area is being			
11			132 kV SCDC LINE TO UDGIR S/S (PARTLY	fed from 132 KV Udgir and initialitya 5/5. 10			
	(2018-19)	LATON	<u>ON M/C) - 20 KM</u>	as per the requirement of MSEDCL new 220 kV			
	(,		2 X100 MVA, 220/132 kV ICTS WITH BAYS	Valandi S/S is proposed.			
			2 X 50 MVA, 220/33 kV T/FS WITH BAYS	1 · · ·			
	<u> </u>		33 kV BAYS - 6 NOS.	1			
	132 kV		GHANSAWANGI S/S - 15 KMS	To reduce loading of 132 kV Ghanasawangi			
12	TIRTHPURI	JALNA	2 X 25 MVA. 132/33 kV XMER	S/S			
	S/S (2018-19)		33 kV OUTLETS - 4 NOS				

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 AURANGABAD EHV CONSTRUCTION CUM (O&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
13	132 kV DAMBRI (RAMNAGAR) S/S (2018-19)	JALNA	LILO OF 132 kV JALNA (OLD) - PARTUR LINE - 12 KMS 2 X 25 MVA, 132/33 kV XMERS 33 kV OUTLETS - 4 NOS	To reduce loading of 132 kV Jalna I (Kanhaiya nagar) S/S
14	132 KV MAHUR S/S (2018-19)	NANDED	132 KV GUNJ - MAHUR SCDC LINE - 25 KM 132 KV KINVAT- MAHUR SCDC LINE - 45 KM (Beyond 2018-19) 2 X 25 MVA.132/33 KV T/F 33 KV QUTL FT- 04 NOS	To reduce the loading of Kinwat S/s and to meet upcoming load of MSEDCL.

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR		DISTRICT	TOTAL SCOPE OF WORK	DEMARKS
NO		DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2015-16)	OSMANABAD	LILO ON 132 kV NALDURG - UJANI S/C LINE AT 220 kV TULAJAPUR S/S - 15 KM	To have alternate source and to reduce loading of 220 kV Solapur - II (Bale) S/S. (Remaining scope of 220 kV Tulajapur S/S.)
2	132 kV LINK LINE (2015-16)	NANDED / YAVATMAL	132 KV HIMAYATNAGAR - UMARKHED LINE 2ND CKT STRINGING - 29 KM	132 kV Himayatnagar S/S is fed from 132 kV Umarkhed S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	132 kV LINK LINE (2015-16)	LATUR	2ND CKT STRINGING OF LILO POINT (HARANGUL-UJANI) TO AUSA S/S - 0.5 KM	132 kV Ausa S/S is Tapped on 132 kV Harngul- Ujani S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
4	220 kV LINK LINE (2016-17)	OSMANABAD	220 kV D/C LINE (PARTIALLY ON M/C) FROM 400 kV LAMBOTI - TULJAPUR. WITH BAYS - 40 KM.	To reduce overloading of 220 kV Parli - Solapur line.
5	132 kV LINK LINE (2017-18)	A'BAD	SECOND CKT STRINGING OF 132 kV SCDC LINE FROM 220 kV SHENDRA - DOELAI - 20 KMS.STRINGING OF SECOND CIRCUIT UPTO LILO POINT OF 220 kV WALUJ TO JALNA LINE - 14 KMS.	It is anticipated the load will reach to about critical value in future. Hence it is necessary to propose additional line to meet additional load growth and contingency.
6	132 kV LINK LINE (2017-18)	BEED / PARBHANI	132 kV MAJALGAON - PATHRI SCDC LINE - 35 KM	To provide additional source to 132 kV Majalgaon as well as 132 kV Pathri S/S. this line is proposed.
7	132 kV LINK LINE (2017-18)	NANDED	SECOND CKT STRINGING OF 132 kV NARSI- DEGLOOR SCDC LINE 18 KMS.	To have additional source to 132 kV Degloor substations.
8	132 kV LINK LINE (2017-18)	BEED	132 kV ASHTI - RAIMOHA SCDC LINE (PARTLY ON MC AT ASHTI END) - 40 KM.	Presently 132 kV Ashti S/S is being fed through 132 kV line from 220 kV Ahmednagar. To have alternate source this line is proposed.

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2015-16)	A'BAD	132 kV D/C LINE FROM 220 kV DEOGAON RANGARI TO 132 kV KANNAD - 35 KM (ONE CKT WILL BE CONNECTED TO 132 KV KANNAD AND ANOTHER TO 132 KV PISHOR PARTLY DC AND PARTLY SCDC)	Remaining scope of 220 kV Deogaon Rangari S/s

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19					
		AUR	ANGABAD EHV CONSTRUCTION CUM	(O&M) ZONE		
		I				
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
2	220 kV LINK LINE (2016-17)	BEED / LATUR	220 kV DC LINE FROM GIRAVALI TO MURUD AND LILO ON ONE CKT AT 220 kV HARANGUL - 50 KM	For system strengthening		
3	132 kV LINK LINE (2016-17)	BEED	132 kV BEED - GEORAI LINE 2ND CKT STRINGING - 36 KM	Since the existing 132 kV Beed - Georai line is loaded to an extent of 120 MW during Non- Coinsident peak condition. It is anticipated the load will reach to about critical value in future. Hence it is necessary to propose additional line to meet additional load growth and contingency.		
4	132 kV LINK LINE (2016-17)	A'BAD	132 kV SCDC LINE FROM MAHAKAL - GHANSAWANGI - 20 KM	It is anticipated the load will reach to about critical value in future. Hence it is neceS/Sary to propose additional line to meet additional load growth and contingency.		
5	132 kV LINK LINE (2016-17)	A'BAD	132 kV GANGAPUR - DEOGAON RANGARI D/C LINE - 40 KM	Remaining scope of 220 kV Deogaon Rangari S/s		
6	400 kV LINK LINE (2017-18)	A'BAD	LILO ON ONE CKT OF 400 kV DC BHUSAWAL - III (DEEPNAGAR) - AURANGABAD - I AT AURANGABAD - II - 78 KM	Remaining scope of 400 kV Aurangabad II (Thapti Tanda) S/S		
7	132 kV LINK LINE (2017-18)	A'BAD	132 kV VAIJAPUR - DEOGAON - RANGARI SCDC LINE - 35 KM	Remaining scope of 220 kV Deogaon Rangari S/s		
8	132 kV LINK LINE (2018-19)	BEED	132 kV MAJALGAON - GEORAI SCDC LINE - 25 KM.	To have additional source to 132 kV Georai S/S.		

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2017-18)	A'BAD	LILO OF 132 kV HARSOOL - KHULTABAD AT 220 kV SAVANGI WITH BAYS - 15 KM	To reduce line loading of 220 kV D/C line from 400 kV Waluj - Padegaon.
2	132 kV LINK LINE (2018-19)	BEED	132 kV KHARDA - ASHTI D/C LINE (PARTLY ON M/C) - 35 KM.	Alternate source to Ashti S/S as well as strengthening for wind power evauation.
3	132 kV LINK LINE (2018-19)	BEED/ PARBHANI	132 kV PANGRI - SONPETH D/C LINE - 15 KMS	Alternate source for proposed 132 kV Pangri S/S

AUGMENTATION OF S/S BY ADDITION OF T/F (2015-19)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE ICT IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV PARLI GCR S/S (2015-16)	BEED	1 X 100 MVA 220/132 KV ICT WITH BAYS	For redundancy purpose
STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				

YEAR 2014-15 TO 2018-19				
AUDANCABAD EUV CONSTRUCTION CUM (08M) ZONE				

AURANGABAD EHV CONSTRUCTION CUM (O&M) ZONE

	AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2015-19)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	400 kV WALUJ S/S (2015-16)	PARBHANI	1 X 50 MVA 220/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 68 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth	
2	220 kV CHITEGAON S/S (2015-16)	A'BAD	1 X 100 MVA, 220/132 kV ICT WITH BAYS (COMMISSIONED)	The existing transformer capacity available is 220/132 kV, 2 X 100 MVA and the load reached is 114 MVA.To avoid loss of supply in case of outages or interruptions on any one transformer additional transformer is proposed.	
3	220 kV PARBHANI S/S (2015-16)	PARBHANI	1 X 100 MVA 220/132kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 200 MVA and load is 226 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth	
4	132 kV HARSOOL S/S (2015-16)	A'BAD	1 X 50 MVA, 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 55.57 MVA. Considering thr maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
5	132 kV CHIKHAL THANA S/S (2015-16)	A'BAD	1 X 50 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 60 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth	
6	132 kV AHMADPUR S/S (2015-16)	LATUR	1 X 50 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 72 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth	
7	132 kV SATARA DEOLAI S/S (2015-16)	A'BAD	1 X 25 MVA 132/33 kV WITH BAYS	Existing Xmer capacity vailable is 2 X 50 MVA and maximum load reached is 37 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
8	132 KV AKHADA BALAPUR S/S (2015-16)	HINGOLI	1 X 25 MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 30 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
		AUR	ANGABAD EHV CONSTRUCTION CUM	(O&M) ZONE	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
9	132 KV PURNA S/S (2015-16)	PARBHANI	1 X 25 MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 30 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
10	132 KV BASMAT S/S (2015-16)	HINGOLI	1 X 25 MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 25 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
11	132 KV UMRI S/S (2015-16)	NANDED	1 X 25 MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 34 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
12	132 kV ELICHPUR S/S (2015-16)	A'BAD	1 X 25 MVA, 132/33 kV XMER WITH BAYS	The existing transformer capacity available is 2 X 25 MVA 132/33 KV and the load reached is 40 MVA.To avoid loss of supply in case of outages or interruptions on any one transformer additional transformer is proposed.	
13	132 kV KURUNDA S/S (2017-18)	HINGOLI	1 X 25 MVA , 132/33 kV T/F WITH BAYS	Existing transformer capacity available in S/S is 2 X 50 MVA and load is 44 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load growth	

AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV JALNA S/S (2015-16)	JALNA	1 X (100-50) MVA , 220/33 kV T/F	Existing Xmer capacity is 3 X 50 220/33 kV and load is 136 MVA
2	132 kV PATHRI S/S (2015-16)	PARBHANI	2 X (50-25) MVA, 132/33 kV T/F WITH BAYS	To meet upcoming load nearby Pathri, replacement of existing T/F is proposed.
3	132 kV PURNA S/S (2015-16)	PARBHANI	2 X (50-25) MVA, 132/33 kV T/F WITH BAYS	To meet upcoming load nearby Purna, replacement of existing T/F is proposed.
4	132 kV DEOLAI S/S (2015-16)	AURANGABAD	1 X (50-25) MVA, 132/33 kV T/F WITH BAYS	To meet upcoming load nearby Deolai replacement of existing T/F is proposed.
5	132 kV LATUR (K) S/S (2015-16)	LATUR	1 X (50- 25) MVA, 132/33 kV T/F WITH BAYS.	Existing xmer capacity available in S/S is 1 X 25 & 1 X 50 MVA and load is 33 MVA. Considering the maximum load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
SR	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
NO 6	132 kV UDGIR S/S (2015-16)	LATUR	1 X (50-25) MVA , 132/33 kV T/F WITH BAYS.	Existing transformer capacity available in S/S is 1 X 50MVA, 1 X 25 MVA and load is 47 MVA. The transformer is replaced to meet anticipated load growth	
7	132 KV ARDHAPUR S/S (2015-16)	NANDED	1 X (50-25) MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 37 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
8	132 KV AUSA S/S (2015-16)	NANDED	1 X (50-25) MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 1 X 50 and 1 X 25 MVA and maximum load reached is 31 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
9	132 KV PARLI S/S (2015-16)	NANDED	1 X (50-25) MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 1 X 50 and 1 X 25 MVA and maximum load reached is 43 MVA. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
10	132 kV KANNAD S/S (2015-16)	AURANGABAD	X (25-12.5) MVA , 132/33 kV T/F WITH BAYS	Existing xmer capacity available in S/S is 1 X 50,1 X 25 & 1 X 12.5 MVA and load is 39 MVA. Considering the maximum load reached on the xmer in the event of interruptions/outage on any one of the xmer other xmer should take care of existing load growth	
11	400 kV AURANGA BAD S/S (2016-17)	A'BAD	1 X (500-315) MVA, 400/220 kV ICT WITH BAYS	The existing transformer capacity available is 400/220 kV, 2X315 MVA and the laod reached is 510 MVA.The transformer is replaced to meet the anticipated load growth.	
12	132 KV ARDHAPUR S/S (2016-17)	NANDED	1 X (50-25) MVA 132/33 KV WITH BAYS	Existing Xmer capacity vailable is 2 X 25 MVA and maximum load reached is 37 MVA. (1 X (50-25) MVA considered in 2015-16. Considering the maximum load reached on the transformer in the event of interruptions/outage on any one of the transformer other transformer should take care of existing load	
	CREATION OF NEW 132 KV LEVEL AT EXISTING SUBSTATION (2015-19)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
	220 kV		2 X 50 MVA 220/33 kV T/F WITH BAYS	To meet upcoming demand in Parbhani area	
1	РАКВНАМІ S/S (2015-16)	PAKBHANI	33 kV OUTLETS - 6 NOS.	T/F is proposed.	

AMRAVATI EHV CONSTRUCTION CUM O&M ZONE

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 AMRAVATI EHV CONSTRUCTION CUM (0&M) ZONE

	ONGOING SCHEMES: 2014-15						
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
	220 kV		LILO ON 220 kV AMRAVATI - BADNERA SCDC LINE AT NANDGAON PETH - 10 KMS WITH BAYS				
1	NANDGAON PETH S/S (2014-15)	AMRAVATI	2nd CKT STRINGING OF 220 kV AMARAVATI BADNERA - 30 KM WITH BAYS	220 kV Amravati - MIDC S/S is considered for Amravati industrial load.			
	, , , , , , , , , , , , , , , , , , ,		2 X 50 MVA, 220/33 kV T/FS WITH BAYS 12 X 33 kV OUTLETS				
2	132 kV DEOLGAON		132 kV DUSARBID - DEOLGAON RAJA D/C LINE - 20 KM WITH BAYS	To reduce loading of 132 kV Dusarbhid S/S,			
2	RAJA S/S (2014-15)	DULDANA	2 X 25 MVA, 132/33 kV T/FS WITH BAYS 33 kV OUTLETS - 8 NOS	new S/S is proposed			

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV LINK LINE (2014-15)	AMRAVATI	220 kV KALMESHWAR - WARUD DC LINE - 70 KM WITH BAYS	Remaining scope of 220 kV Warud - II S/s
2	132 kV LINK LINE (2014-15)	AKOLA	TAP TO LILO ARRANGEMENT AT 132 kV GORAKSHAN ROAD AKOLA - 15 KM.	To have alternate source at 132 kV Gorakshan Road, Akola S/S & thereby avoiding interruptions in Akola City.
3	132 kV LINK LINE (2014-15)	AKOLA	132 kV MURTIZAPUR D/C LINE FROM 220 kV APATAPA S/STN (AKOLA) - 45 KM WITH BAYS (ONE CKT ALREADY COMMISSIONED)	Remaining scope of 132 kV Murtizapur S/s

STRENGTHENING FOR EVACUATION ARRANGEMENT (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2014-15)	AKOLA	REORIENTATION OF 132 kV LINES AT 220 kV BALAPUR (MIDC) - 30 KM WITH BAYS	Remaining scope from 220 kV Balapur MIDC S/S (Paras Evacuation)

AUGMENTATION OF S/S BY ADDITION OF T/F (2014-15)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV AKOLA S/S		3 X 105 MVA , 400/220 kV ICT WITH BAYS	To avoid loss of supply in case of outages or
-	(2014-15)		220 kV BAYS - 3 NOS.	interruption on any one transformer
2	132 kV HIVERKHED S/S (2014-15)	2 kV RKHED /S AKOLA 4-15)	1 X 25 MVA, 132/33 kV T/F WITH BAY	Existing Transformer capacity avaible is 1 X 25 MVA. & load reached is 7 MVA To avoid
2			4 X 33 kV OUTLETS	loss of supply in case of outages or interruptions on transformer.
3	132 kV TIWSA S/S (2014-15)	2 kV TIWSA S/S AMRAVATI (2014-15)	1 X 25 MVA, 132/33 kV T/F WITH BAY	Existing Transformer capacity avaible is 1 X 25 MVA.& load reached is 17.8 MVA To avoid
			4 X 33 kV OUTLETS	loss of supply in case of outages or interruptions on transformer.

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19		
		AMI	RAVATI EHV CONSTRUCTION CUM (O	&M) ZONE	
	AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 kV APATAPA S/S (2014-15)	AKOLA	1 X 100 ,220/132 kV ICT WITH BAYS	Presently installed capacity is 1 X 200 and 1 x 150 MVA, 220/132 kV xmer and load is 218 MVA load in case of failure of.xmer , other cannot bear the existing as well as forthcoming load. As such replacement of xmer is proposed	

	AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2014-15)					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	220 kV PUSAD S/S (2014-15)	YAVATMAL	1 X (200-100) , 220/132 kV XMER	Various new 132 kV EHV S/S's are proposed in Yavatmal district.Hence, existing 2 Nos 100 MVA ICT's are insufficient to cater future load.Also, space is not available for additional ICT.Hence augmentation by 200 MVA is preferable instead of additional ICT.		
2	220 kV APATAPA S/S (2014-15)	AKOLA	1 X (50-25) , 132/33 kV XMER	Presently installed capacity of 220 kV Dhamangaon is 2 X 25 MVA, 220/33 kV xmer 30 MVA load in case of failure of.xmer , other cannot bear the existing as well as forthcoming load. As such replacement of xmer is proposed		
3	220 kV AMRAVATI S/S (2014-15)	AMRAVATI	REP.2X25 MVA, 132/66 kV T/FS BY 2X50 MVA 132/33 kV	To Eliminate 66 kV Level		
4	132 kV DARWHA S/S (2014-15)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	Existing transformer capacity available in S/S is 2X 25 MVA and load is 29 MVA.The transformer is replaced to meet anticipated load growth		
5	132 kV ANJANGAON S/S (2014-15)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Existing installed capacity is 2 x 25 MVA and Max load reached is 18.3 MVA To cater upcoming load & for redundancy.		
6	132 kV WARUD S/S (2014-15)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Existing installed capacity is 2 x 25 MVA and Max load reached is 27 MVA To cater upcoming load & for redundancy.		
7	132 kV UMARKHED S/S (2014-15)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	Existing installed capacity is 2 x 25 MVA and Max load reached is 28 MVA To cater upcoming load & for redundancy.		
8	132 kV DIGRAS S/S (2014-15)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	Existing installed capacity is 2 x 25 MVA and Max load reached is 22 MVA To cater upcoming load & for redundancy.		
9	132 kV ACHALPUR S/S (2014-15)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Existing installed capacity is 2 x 25 MVA and Max load reached is 18 MVA To cater upcoming load & for redundancy.		
	<u>NEW SCHEMES: 2015-19</u>					

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
	220 kV NANDGAON DETH		220 kV D/C LINE FROM 220 kV NANDGAON PETH (WIP) S/S - 15 KMS	To meet uncoming load of Taxtile Park this
1	(TEXTILE	AMRAVATI	2 X 50 MVA 220/33 kV XMERS	S/S is proposed.
	(2015-16)		33 kV OUTLETS - 12 NOS	

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
	YEAR 2014-15 TO 2018-19 AMRAVATI EHV CONSTRUCTION CUM (O&M) ZONE					
		AM	RAVATI EHV CONSTRUCTION CUM (C	e&M) ZONE		
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
	132 kV YAVATMAI		220 kV YAVATMAL - 132 kV YAVATMAL MIDC D/C LINE - 13 KM WITH BAYS	132 kV Yavatamal MIDC S/S is considered for		
2	MIDC S/S	YAVATMAL	2 X 25 MVA, 132/33 kV T/FS WITH BAYS	the up coming Industrial load .		
	(2015-16)		33 kV OUTLETS - 8 NOS			
3	132 kV DHARNI S/S	AMRAVATI	132 kV NEPANAGAR (M.P) - DHARNI SCDC INTERSTATE LINE - 55 KM (APPROX), WITH BAYS AT BOTH ENDS.	New substation is proposed to improve quality		
	(2015-16)		2 X 25 MVA, 132/33 kV, T/F WITH BAYS. 33 kV BAYS - 6 NOS	or supply and voltage prome.		
	132 kV ARNI		LILO ON ONE CKT OF 132 kV GHATODI- DIGRAS DCDC LINE-22 KM	New substation is proposed to improve quality		
4	4 132 kV ARNI S/S (2015-16)	YAVATMAL	2 X 25 MVA, 132/33 kV, T/F WITH BAYS.	of supply and voltage profile.		
			33 kV BAYS - 6 NOS			
			220 kV D/C LINE FROM 220 kV AKOLA - 45 KMS WITH BAYS			
	220 kV ANJANGAON II S/S (2016-17)	i kV IGAON S/S 6-17)	LILO ON 132 KV AKOT - 132 KV ANJANGAON S/S AT 220 KV ANJANGAON NEW S/S - 14 KM WITH BAYS	Presently 132 kV Chandur Bazaar, 132 kV		
5			LILO ON 132 kV ACHALPUR - 132 kV ANJANGAON S/S FOR 220 kV ANJANGAON S/S - 9 KM WITH BAYS	Achalpur & 132 kV Anjangaon S/S are fed from 220 kV Amravati S/S.To reduce length and loading of 132 kV line, 220 kV S/S at		
			132 kV SCDC LINE TO DARYAPUR S/S - 30 KM WITH BAYS (WORK COMPLETED ON 25- 04-2011)	commissioning of this S/S, voltage profile of Amaravati Circle will improve.		
			1 X 100 MVA, 220/132 kV ICTS WITH BAYS			
			2 X 50 MVA, 220/33 kV T/FS WITH BAYS 12 X 33 kV OUTLETS			
			220 kV BALAPUR - MALEGAON D/C LINE - 52 KM WITH BAYS	Presently 132 kV Malegaon, 132 kV Mehkar & 132 kV Patur S/S are fed through 132 kV		
6	220 kV MALEGAON II S/S (2016-17)	WASHIM	132 kV REORIENTATION FROM OLD 132 kV TO PROPOSED 220 kV MALEGAON S/STN - 20 KM	Paras Generation.To reduce lengths and loading of 132 kV lines 220 kV S/S at Malegaon is proposed By the commissioning		
			2 X 100 MVA, 220/132 kV ICTS WITH BAYS	will improve.		
7	132 kV S/S AT JALGAON -	BULDANA	132 kV FROM 220 kV BALAPUR - JALGAON JAMOD D/C LINE - 60 KM WITH BAYS	New substation is proposed to improve quality		
	(2016-17)		2 X 25 MVA, 132/33 kV T/FS WITH BAYS 33 kV OUTLETS - 8 NOS	of supply and voltage profile.		
	132 kV		LILO OF 132 kV AKOLA - AKOLA MIDC LINE			
8	BARSHI-TAKLI S/S	AKOLA	AT BARSHI TAKLI - 10 KMS.	New substation is proposed to improve quality		
	(2016-17)		33 kV OUTLETS - 08 NOS			
<u> </u>			LILO ON 132 kV UMERKHED -	1		
	132 kV		HIMAYATNAGAR LINE AT PROPOSED 132	Now substation is proposed to improve any lite		
9	DHANKI S/S	YAVATMAL		of supply and voltage profile.		
	(2017-18)		2 A 25 MVA, 132/33 KV XMERS WITH BAYS			
1	ı i		1 33 KV OUTLETS - 4 NOS	1		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

AMRAVATI EHV CONSTRUCTION CUM (O&M) ZONE

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2016-17)	AKOLA	132 kV DC LINE FROM 132 kV MURTIZAPUR - RAILWAY TSS - 15 KM	System Strengthining.
2	132 kV LINK LINE (2017-18)	YAVATMAL	132 kV SCDC LINE FROM GHATODI TO GUNJ - 15 KMS.	To have additional source for Gunj and mahur (proposed) substations this line is proposed.
3	132 kV LINK LINE (2017-18)	AMRAVATI / AKOLA	132 kV DCDC LINE FROM 220 kV BADNERA - 132 kV MURTIZAPUR S/S - 45 KMS	To have additional source
4	132 kV LINK LINE (2017-18)	AMARAVATI	LILO OF ONE CKT OF 132 kV LALKHEDI - DURGWADA DCDC LINE AT 220 kV BADNERA S/S - 40 KM	To have additional source
5	132 kV LINK LINE (2017-18)	YAVATMAL	132 kV SCDC LINE FROM 132 kV YAVATMAL - DARVA - 40 KM	System Strengthening.
6	132 kV LINK LINE (2017-18)	WASHIM	132 kV SCDC LINE FROM MALEGAON - II TO PATUR - 25 KM	Remaining scope from 220 kV Malegaon S/S. (Paras Evacuation)
7	132 kV LINK LINE (2017-18)	AMARAVATI	132 kV D/C LINE FROM 220 KV WARUD TO WARUD - I S/S - 5 KM WITH BAYS	Remaining scope from 220 kV Warud S/S .

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2015-16)	WARDHA	132 kV SCDC LINE FROM 220 kV WANI - PANDHARKAWADA - 30 KM WITH BAYS	Since the existing 220 kV Wardha - I - Yavatmal S/C line is critically loaded to an extent of 263 MW. Hence it is suggested to add proposed line to reduce the loading of existing line and to meet additional load growth and contingency.
2	132 kV LINK LINE (2015-16)	BULDHANA	2ND CIRCUIT STRINGING OF 132 kV CHIKHALI - DHAD LINE - 22 KM	132 kV Dhad S/S is fed from 132 kV Chikhali S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	220 kV LINK LINE (2017-18)	YAVATMAL	LILO ON ONE CIRCUIT OF 220 kV WARDHA(PG)-GHATODI LINE AT 220 YEOTMAL S/S 11 K.Ms (10 K.Ms O/H LINE AND 1 K.M UNDER GROUND CABLE)	To reduce loading of existing 220 Kv Wardha- Yeotmal line.
4	220 kV LINK LINE (2018-19)	HINGOLI	SECOND CIRCUIT STRINGING OF 220 kV SCDC LINE FROM GHATODI - HINGOLI - 85 KM WITH BAYS	Additional Line is considered to strengthen the Network
5	132 kV LINK LINE (2018-19)	BULDANA / JALNA	132 kV DUSARBID - MANTHA SCDC LINE - 36 KM	To provide uninterrupted supply during planned outages it is necessary to add proposed line

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

AMRAVATI EHV CONSTRUCTION CUM (O&M) ZONE

STRENGTHENING FOR EVACUATION ARRANGEMENT (2015-19)

	-		-	
SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2016-17)	CHANDRA - PUR / YAVATMAL	220 kV D/C LINE FROM 400 kV WARORA (NEW) - WANI - 35 KM.	To have evacuation facility at Warora S/S
2	220 kV LINK LINE (2017-18)	YAVATMAL	220 kV WANI - YAVATMAL SCDC LINE - 35 KM.	To have evacuation facility at Warora S/S

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV LINK LINE (2015-16)	HINGOLI	220 kV SCDC LINE FROM GHATODI - HINGOLI - 85 KM WITH BAYS	Additional Line is considered to strengthen the Network
2	132 kV LINK LINE (2017-18)	AKOLA	132 kV SCDC LINE FROM 132 kV MURTIZAPUR - KARANJA - 35 KM	Additional Line is considered to strengthen the Network
3	132 kV LINK LINE (2017-18)	BULDHANA	132 kV SCDC LINE FROM 132 kV DEOLGAON RAJA - DHAD - 50 KM	Additional Line is considered to strengthen the Network

AUGMENTATION OF S/S BY ADDITION OF T/F (2015-19)

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV YAVATMAL S/S (2015-16)	YAVATMAL	1 X 100 MVA, 220/132 kV ICTS WITH BAYS	This ICT is proposed as redundancy for existing 1 X 100 MVA 220/132 kV ICT. After replacement of 220/66 kV T/F this ICT will be established.
2	132 KV DARYAPUR S/S (2015-16)	AMRAVATI	1 X 25 MVA 132/33 KV XMER WITH BAYS	For redundancy purpose new xmer is proposed
3	220 kV ANJANGAON S/S (2017-18)	AMRAVATI	1 X 100 MVA, 220/132 kV ICTS WITH BAYS	This ICT is proposed as redundancy for 1 X 100 MVA 220/132 kV ICT (WIP).
	220 kV WANI		1 X 100 MVA , 220/132 kV XMER WITH BAYS	
4	S/S (2017-18)	YAVATMAL	2 X 33 kV OUTLETS	For redundancy purpose new ICT is proposed
	220 kV		1 X 100 MVA, 220/132 kV ICTS WITH BAYS	
5	BADNERA S/S (2018-19)	S/S AMRAVATI)	132 kV BAYS - 2 NOS	For redundancy purpose new ICT is proposed

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 AMRAVATI EHV CONSTRUCTION CUM (0&M) ZONE

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220 KV CHIKHALI S/S (2015-16)	BULDHANA	1 X 100 MVA 220/132 KV ICT WITH BAYS	Existing xmer capacity available in S/S is 2X200 MVA. Considering the max load reached on the xmers is 220 MVA .In the event of interruptions/outage on any one of the xmer other xmer should take care of existing load	
2	220 KV YAVATMAL S/S (2015-16)	YAVATMAL	1 X 50 MVA 220/33 KV XMER WITH BAYS	Presently installed capacity is 2 X 50 MVA, 220/33 kV xmer and load is 75 MVA load in case of failure of.xmer, other cannot bear the existing as well as forthcoming load. As such replacement of xmer is proposed	
3	132 KV AKOLA MIDC S/S (2015-16)	AKOLA	1 X 50 MVA 132/33 KV XMER WITH BAYS	Existing xmer capacity available in S/S is 2X50 MVA. Considering the maximum load reached on the xmers is 64 MVA .In the event of interruptions/outage on any one of the xmer other xmer should take care of existing load	
4	132 KV LALKHEDI S/S (2015-16)	AMRAVATI	1 X 25 MVA 132/33 KV XMER WITH BAYS	Existing capacity available in S/S is 2X25 MVA. Considering the max load reached on the xmers is27 MVA .In the event of interruptions/outage on any one of the xmer other xmer should take care of existing load	

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2015-19)

AUGMENTATION OF S/S BY REPLACEMENT OF T/F/ICT (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV PUSAD S/S (2015-16)	YAVATMAL	1 X (200-100) , 220/132 kV XMER.	Various new 132 kV EHV S/S are proposed in Yavatmal district.Hence, existing 2 No's.of 100 MVA ICT's are insufficient to cater future load.Also, space is not available for additional ICT.Hence augmentation by 200 MVA is preferable instead of additional ICT.
2	220 kV WANI S/S (2015-16)	YAVATMAL	1 X (50-25) MVA , 220/33 kV XMER.	Max load reached is 12.4 and 10.29 MVA To cater upcoming load & for redundancy.
3	220 kV APATAPA S/S (2015-16)	AKOLA	1 X (50-25) , 132/33 kV XMER.	To cater upcoming load & for redundancy. (19 MVA and 16 MVA are the present max load conditions)
4	132 kV CHANDUR BAZAR (2015-16)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Max load reached is 18.4 MVA and 10.8 MVA To cater upcoming load & for redundancy.
5	132 kV DARWHA S/S (2015-16)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	Max load reached is 16.6 MVA and 14.3 MVA. To cater upcoming load & for redundancy.
6	132 kV ANJANGAON S/S (2015-16)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Max load reached is 18.3 MVA and 16.9 MVA To cater upcoming load & for redundancy.
7	132 kV WARUD S/S (2015-16)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	Max load reached is 14.1 MVA for both To cater upcoming load & for redundancy.

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE			
		AMI	RAVATI EHV CONSTRUCTION CUM (O	&M) ZONE
SR				
NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
8	132 kV UMARKHED S/S (2015-16)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	To cater upcoming load & for redundacy.
9	132 KV DUSARBID S/S (2015-16)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 35 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
10	132 KV RISOD S/S (2015-16)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 29 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
11	132 KV MOTALA S/S (2015-16)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 28 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
12	132 kV MORSHI S/S (2015-16)	AMRAVATI	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA. Considering the maximum load reached on the transformers are 12.27 & 12.27 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load
13	132 kV DIGRAS S/S (2015-16)	YAVATMAL	1 X (50-25) , 132/33 kV XMER.	In case of failure of 25 MVA T/F other cannot bear the existing as well as forthcoming load. Although space is available for additional T/F, augmentation by 50 MVA is preferable instead of additional T/F for redundancy point of view.
14	132 kV ACHALPUR S/S (2015-16)	AMRAVATI	1 X (50-25) , 132/33 kV XMER.	In case of failure of 25 MVA T/F other cannot bear the existing as well as forthcoming load.Although space is available for additional T/F, augmentation by 50 MVA is preferable instead of additional T/F for redundancy point of view.
15	220 kV DHAMAN- GAON S/S (2016-17)	AMRAVATI	1 X (50-25) , 220/33 kV XMER	Presently installed capacity of 220 kV Dhamangaon is 2 X 25 MVA, 220/33 kV xmer 11.8 MVA load in case of failure of.xmer , other cannot bear the existing as well as forthcoming load. As such replacement of xmer is proposed
16	132 KV MOTALA S/S (2016-17)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 28 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 1 X (50-25) is considered in 2015-16

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
	YEAR 2014-15 TO 2018-19				
		AMI	RAVATI EHV CONSTRUCTION CUM (C	J&M) ZONE	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
17	132 kV MORSHI S/S (2016-17)	AMRAVATI	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA. Considering the maximum load reached on the transformers are 12.27 & 12.27 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load. 1 X (50-25) is considered in 2015-16	
18	132 kV CHANDUR BAZAR S/S (2016-17)	AMRAVATI	1 X (50-25) MVA, 132/33 kV XMER	Existing transformer capacity available in S/S is 2 x 25 MVA 132/33 kV.The maximum load reached on the transformers are 18.4 MVA & 10.8 MVA respectively . In event of interruption/outage on any one of the transformer other transformer should take care of existing load so as to avoid load shedding.	
19	132 kV MEHKAR S/S (2016-17)	BULDANA	1 X (50-25) MVA , 132/33 kV XMER.	Existing transformer capacity available in S/S is 1 X 50 MVA, 1 X 25 MVA and load is 40 MVA.The transformer is replaced to meet anticipated load growth.	
20	132 KV DUSARBID S/S (2016-17)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 35 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 1 X (50-25) is considered in 2015-16	
21	132 KV RISOD S/S (2016-17)	BULDHANA	1 X (50-25) , 132/33 kV XMER	Existing transformer capacity available in S/S is 2X25 MVA Considering the maximum load reached on the transformers is 29 MVA .In the event of interruptions/outage on any one of the transformer other transformer should take care of existing load 1 X (50-25) is considered in 2015-16	
22	220 kV DHAMAN - GAON S/S (2017-18)	AMRAVATI	1 X (50-25) , 220/33 kV XMER.	In case of failure of 25 MVA T/F other cannot bear the existing as well as forthcoming load. Therefore replacement of one xmer is proposed during 2016-17.	
	CREATION OF NEW LEVEL IN EXISTING S/S (2015-19)				

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV WANI S/S YAVA (2015-16)		1 X 100 MVA , 220/132 kV XMER WITH BAYS	To create 132 kV level
		TAVATIVIAL	2 X 132 kV OUTLETS	
2	220 kV BADNERA S/S (2017-18)	220 kV DNERA S/S AMRAVATI 2017-18)	1 X 100 MVA, 220/132 kV ICTS WITH BAYS	New level is created for additional source to 132 kV murtizapur and nearby proposed S/S.
			132 kV BAYS - 2 NOS	

NAGPUR EHV CONSTRUCTION CUM O&M ZONE

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NAGPUR EHV CONSTRUCTION CUM (0&M) ZONE

	ONGOING SCHEMES: 2014-15					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	220 kV BALLARSHAH S/S (2014-15)	C'PUR	220 kV CHANDRAPUR MIDC - BALLARSHSH D/C LINE - 20 KM. 2 X 25 MVA, 220/33 kV T/FS WITH BAYS 33 kV OUTLETS - 8 NOS	Elimination of 66 kV S/S.		
2	132 kV JAM S/S (2014-15)	WARDHA	132 kV DC LINE FROM 220 kV HINGANGHAT <u>S/S - 12 KM</u> <u>2 X 25 MVA. 132/33 kV T/F. WITH BAYS</u> 8 X 33 kV OUTLETS	Voltage improvement & load catering		

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2014-15)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2014-15)	NAGPUR	2nd CKT STRINGING OF 132 kV KALMESHWAR - SAONER LINE - 49 KM	132 kV Saoner S/S is fed from 132 kV Kalameshwar S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
2	132 kV LINK LINE (2014-15)	NAGPUR	2nd CKT STRINGING OF 132 kV KATOL - SAONER SCDC LINE - 30 KM.	132 kV Saoner S/S is fed from 132 kV Kalameshwar S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line for the connectivity at 220 kV Katol S/S
3	132 kV LINK LINE (2014-15)	C'PUR	132 kV SINDEWAHI - BRAHMAPURI SCDC LINE - 50 KM WITH BAYS	132 kV Sindewahi S/S is fed from 132 kV Mul S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
4	132 kV LINK LINE (2014-15)	WARDHA	132 kV SCDC LINE FROM WARDHA-II (BHUGAON) - SELOO - 18 KM WITH BAYS	Remaining scope of 132 kV Seloo s/s.

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
220kV WARDH/ 1 (DUNOA)	220kV WARDHA II (BHUGAON)	WARDHA	1 X 100 MVA, 220/132 kV ICT WITH BAYS	The existing transformer capacity available is 220/132 kV,1 X 100 MVA and the laod reached is 20 MVA.To avoid loss of supply in case of
	S/S (2014-15)		132 kV BAYS - 2 NOS.	outages or interruptions on any one ICT additional ICT is proposed.
2	220 kV MIDC BUTTIBORI NAGPUR S/S (2014-15)		1 X 100 MVA, 220/132 kV ICT WITH BAYS	Existing Xmer capacity available is 1 X 100 MVA 220/132 kV xmer and load reached is 73 MVA
220 k 3 HINGANC S/S (2014	220 kV HINGANGHAT	WARDHA	1 X 50 MVA, 220/33 kV XMER WITH BAYS.	The existing transformer capacity available is 220/33 kV, 2 X 25 MVA and the laod reached is 41 MVA.To avoid loss of supply in case of
	S/S (2014-15)		4 X 33 kV OUTLETS	outages or interruptions on one Xmer additional Xmer 220/33 kV 1 X 50 MVA is proposed.
F	132 kV		1 X 25 MVA, 132/33 kV XMER WITH BAYS.	Existing Transformer capacity available is 1 X 25 MVA. & load reach is 17 MVA.To avoid loss of
5	S/S (2014-15)	CFUR	4 X 33 kV OUTLETS	supply in case of outages or interruptions on transformer.
6	132 kV ASHTI		1 X 25 MVA, 132/33 kV XMER WITH BAYS.	Existing Transformer capacity available is 1 X 20 MVA & load reach is 5 MVA.To avoid loss of
6 GADCH S/S (201	S/S (2014-15)	GADONINOLI	4 X 33 kV OUTLETS	supply in case of outages or interruptions on transformer.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

NAGPUR EHV CONSTRUCTION CUM (O&M) ZONE

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF TRANSFORMER (2014-15)

NIL

AUGMENTATION OF S/S BY REPLACEMENT OF XMER (2014-15) SR NAME OF S/S DISTRICT TOTAL SCOPE OF WORK REMARKS NO Existing Transformer capacity available is 220 kV 220/132 kV, 1 X 200 MVA and 1 X 100 MVA and KANHAN S/S NAGPUR 1 1 X (200-100) ,220/132 kV ICT load will reach 160 MVA. The transformer is (2014-15) replaced to meet the anticipated load growth. 220 kV 1X (200-100) MVA 220/132 kV XMER WITH Existing transformer capacity is1 X 200 and 1 X KAULEWADA BHANDARA 2 BAYS 100 MVA and load reached is 117 MVA S/S (2014-15) 220 kV CHANDRA -1X (100-50) MVA 220/33-33 kV XMER WITH Existing transformer capacity is 2 X 50 MVA and 3 C'PUR PUR MIDC S/S BAYS load reached is 52 MVA (2014-15) 220 kV 1 X (100-50) MVA 220/33-33 kV XMER WITH Existing transformer capacity is 2 X 50 MVA and WARORA S/S C'PUR 4 BAYS load reached is 26 MVA (2014-15) 66 kV LEVEL ELIMINATION (2014-15) SR NAME OF S/S DISTRICT TOTAL SCOPE OF WORK REMARKS NO 400 kV PUR S/S (2014 CHANDRAPUR REPLACEMENT OF 1 X 50 MVA 220/66 kV 1 Elimination of 66 kV level XMER BY 1 X 50 MVA 220/33 kV 15) 220 kV PUR S/S (2014 REPLACEMENT OF 1 X 50 MVA 220/66 kV 2 Elimination of 66 kV level XMER BY 1 X 50 MVA 220/33 kV 15) 2 X 25 MVA . 132/66 kV XMER BY 2 X 25. 132 kV MADGI GONDIA 132/33 kV 4 X 33 kV OUTLETS To eliminate 66 kV level 3 S/S (2014-15) To eliminate 66 kV Sewagram S/S, a new 33 kV 66 kV S/S with 2 X 10 MVA Xmer and 33 kV line from SEVAGRAM 4 WARDHA 66/11 kV 2 X10 MVA 220 kV Wardha S/S is to be established by S/S Discom.After completing this work 66 kV (2014-15)Sewagram S/S will be obsolete. To eliminate 66 kV Nanduri S/S, new 33 kV S/S alongwith 3 X 10 MVA Xmer and 33 kV line from 66 kV 220 kV Hinganghat substation is to be 5 NANDURI S/S WARDHA 2 X 10 MVA 66/33kV, 1 X 5 MVA 66/11 kV established by Discom at Nanduri.After (2014-15) compltion of above said work 66 kV Nanduri S/S will be obsolete. To eliminate 66 kV sonegaon S/S, new 33 kV S/S alongwith 2 X 5 MVA Xmer and 33 kV line 66 kV SONEGAON from 220 kV Hinganghat S/S is to be established WARDHA 6 2 X 5 MVA 66/11 kV by Discom at sonegaon after completion of S/S above said work 66 kV Sonegaon S/S will be (2014-15)obsolete. To eliminate 66 kV Pulgaon S/S a new 33 kV S/S with 2 X 10 MVA Xmer and 33 kV line from 132 66 kV 7 PULGAON S/S WARDHA kV Pulgaon S/S (Commissioned during 2011-12) 66/33 kV 1 X 5 MVA, 66/11 kV 2 X 5 MVA

(2014-15)

is to be established by DISCOM.After completing

this work 66 kV Pulgaon S/S will be obsolete.

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
		•	YEAR 2014-15 TO 2018-19		
		N	AGPUR EHV CONSTRUCTION CUM (O	&M) ZONE	
SR		DISTRICT		DEMARKS	
NO	NAME OF 5/5	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
8	66 kV HINGANGHAT S/S (2014-15)	WARDHA	2 X 10 MVA 66/11 kV, 1 X 5 MVA 66/11 kV	220/33 kV Hinganghat S/S is in existence. I o eliminate 66 kV Hinganghat S/S, new 33 kV S/S with 3 X 10 MVA Xmer alongwith 33 kV line from 220 kV Hinganhat S/S is to be established by discom.	
9	66/11 kV SELDOH S/S (2014-15)	WARDHA	2 X 5 MVA 66/11 kV	To eliminate 66 kV Seldoh S/S new 33 /11 kV S/S alongwith 2 X 5 MVA Xmer and 33 kV line from 132 kV Seloo S/S. is to be established by Discom at Seldoh after complition of above said work 66 kV Seldoh S/S will be obsolete.	
10	66 kV SELOO S/S (2014-15)	WARDHA	1 X 10 MVA 66/11 kV	66 kV consumer M/s.NOBLE EX is connected to 66 kV seloo S/S.To eliminate 66 kV Seloo S/S new 33 kV S/S alongwith 2 X 5 MVA Xmer and 33 kV line from 132 kV seloo S/S is to be established by Discom at Seloo. After completion of said work 66 kV seloo S/S will be obsolete.	
11	66 kV WARDHA -I S/S (2014-15)	WARDHA	66/11 kV, 3 X 10 MVA	To eliminate 66/11 kV Xmers at Wardha - I S/S new 33 kV S/S alongwith 3 X 10 MVA Xmer and 33 kV line from 220 kV Wardha - II (Bhugaon)S/S is to be established by Discom at Wardha. After completion of above said work 66/11 kV Xmers at Wardha - I S/S will be obsolete.	
12	220/66 kV WARDHA -I S/S (2014-15)	WARDHA	0HA 220/33 kV, 1 X 50 MVA After completing all the works at Sr.No. 2x50 MVA 220/66 kV Xmer at 220 kV will be obsolete.And 1X 50MVA,220/33 be commissioned		
13	(2014-13) To 66 kV S 13 BHANDAK S/S C'PUR (2014-15) 66/11 kV 1 X 10 MVA, 1 X 5 MVA		To eliminate 66 kV Bhandak S/S new 33 /11 kV S/S alongwith 2 X 10 MVA Xmer and 33 kV line from 220 kV Chandrapur MIDC S/S is to be established by Discom at Bhandak after complition of above said work 66/11 kV S/S will be obsolete.		
14	66 kV GHUGHUS S/S (2014-15)	C'PUR	66/11 kV 1 X 5 MVA, 1 X 3 MVA	66kV Ghuggus S/S is feeding to 66 kV consumers. (1 - 66 kV WCL Majri 2 - 66 kV LLoyd metal). 66 kV Ghughus S/S can be eliminated only after connecting these 66 kV consumers on 220/33/11 kV.Further new 33 kV S/S alongwith 2 X 10 MVA Xmer and 33 kV line from 220 kV Chandrapur MIDC S/S to be established by Discom at Ghughus after completion of above said work 66/11 kV Xmers at Ghughus S/S will be obsolete.	
15	66 kV CHANDRA- PUR MIDC S/S (2014-15)	C'PUR	(66/11 kV, 2 X 5 MVA)	To eliminate 66 kV Chandrapur MIDC new 33 kV S/S alongwith 2 X 10 MVA Xmer and 33 kV line from 220 kV Chandrapur MIDC S/S to be established by Discom at chandrapur MIDC after complition of above said work 66 kV S/S at Chandrapur MIDC will be obsolete.	
10	220/66 kV		220/66 kV 2 X 50 MVA,	After getting the work at Sr.No. 10 to 13 220/66	
16	(2014-15)	CPUR	66/11, 1 X 10 MVA	kV Xmer at Warora will be obsolete.	
17	66 kV SHASTRI- NAGAR S/S (2014-15)	C'PUR	66/33 kV, 2 X 10 MVA, 66/11 kV, 2 X 10 MVA	To eliminate 66 kV shastrinagar S/S new 33/11 kV S/S alongwith 3 X 10 MVA Xmer and 33 kV line from 220 kV SICOM S/S is to be established by Discom at Shastrinagar. After completion of above said work 66 kV Shastrinagar S/S will be obsolete.	

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
		N	YEAR 2014-15 TO 2018-19			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
18	66/11 kV CHANDRA- PUR TPS S/S (2014-15)	C'PUR	66/11 kV 2 X 10MVA	To eliminate 66 kV Chandrapur TPS S/S., new 33 /11 kV S/S alongwith 2 X 10 MVA Xmer and 33 kV line from 220 kV Chandrapur MIDC S/S is to be established by Discom at Chandrapur TPS after completion of above said work 66 kV Chandrapur TPS S/S will be obsolete. After getting work at Sr.No. 14 & 15 the 66 kV Chandrapur TPS S/S will be obsolete.		
19	66 kV TUMSAR S/S (2014-15)	BHANDARA	66/11 kV 2 X 5 MVA and 66/33 kV 1 X 5 MVA,1 X 3 MVA	To eliminate 66 kV Tumsar S/S, new 33/11 kV S/S alongwith 2 X 10 MVA Xmer and 33 kV line from 132 kV Tumsar S/S is to be established by DISCOM at Tumsar. After complition of above said work 66/11 kV Tumsar S/S will be obsolete.		
20	66 kV MORGAON ARJUNI S/S (2014-15)	BHANDARA	66/33 kV, 1 X 5MVA, 66/11 2 X 5MVA	.To eliminate 66/11 kV at 66 kV Morgaon Arjuni new 33 /11 kV S/S alongwith 2 X 5 MVA Xmer and 33 kV line from 132 kV Morgaon Arjuni S/S is to be established by Discom at Morgaon Arjuni after completion of above said work 66/11 kV S/S will be obsolete.		
21	132 kV MADGI S/S (2014-15)	GONDIA	132/66 kV 2 X 25 MVA	After getting the above work the 132/66 kV 2 X 25MVA Xmer at 132 kV Madgi S/S will be obsolete.		
22	66/11kV SAHULI S/S (2014-15)	NAGPUR	66/11 kV, 2 X 10 MVA	To eliminate 66 kV Sahuli S/S. new 33 /11kV S/S alongwith 2x10 MVA Xmer and 33 kV line from 132 kV Sahuli S/S is to be established by Discom at Sahuli. After complition of above said work 66/11kV S/S will be obsolete.		
23	132 kV PARDI S/S (2014-15)	NAGPUR	132/66 kV , 2 X 50 MVA	After getting above work done at Sr.No. A the 2 X 50 MVA 132/66 kV Xmer at Pardi will become obsolete.		
			NEW SCHEMES: 2015-19			
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	India Color District Instruction NAGPUR A) 220/132/33 kV S/S WITH 2 X 50 MVA, 220/33 kV T/F AT UPPALWADI B) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, 2 X 50 MVA, 220/33 kV T/F AT 220 kV NEW PARDI C) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, 2 X 50 MVA, 220/33 kV T/F AT 220 kV NAGPUR C) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, 1 X 50 MVA, 220/33 kV T/F AT 220/132 kV ICT, 1 X 50 MVA, 220/33 kV T/F AT S/S (2015-16) D) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, AT BUTIBORI II S/S (2015-16) NAGPUR D) 220/132/33 kV T/F AT BUTIBORI II S/S (2015-16) E) 2 X 50MVA, 220/33 kV T/F AT BUTIBORI III S/S (2015-16) 220 kV E) 2 X 50MVA, 220/33 kV T/F AT BUTIBORI III S/S (2015-16) 220 kV E) 2 X 50MVA, 220/33 kV T/F AT BUTIBORI III S/S (2015-16) 220 kV LINK LINES CONNECTING THE SUBSTATIONS ON NAGPUR RING MAIN, viz. i) 220 kV WADI - MANKAPUR M/C LINE (USING SAME ROW) O/H - 8 KM & U/G - 0.5 KM		 A) 220/132/33 kV S/S WITH 2 X 50 MVA, 220/33 kV T/F AT UPPALWADI B) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, 2 X 50 MVA, 220/33 kV T/F AT MANKAPUR C) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT, 1 X 50 MVA, 220/33 kV T/F AT NEW PARDI D) 220/132/33 kV S/S WITH 2 X 100 MVA, 220/132 kV ICT AT BUTIBORI II E) 2 X 50MVA, 220/33 kV T/F AT BUTIBORI III 220 kV LINK LINES CONNECTING THE SUBSTATIONS ON NAGPUR RING MAIN, viz. i) 220 kV KHAPARKHEDA - UPPALWADI D/C LINE O/H - 12 KM & U/G - 0.5 KM ii) 220 kV UPPALWADI - MANKAPUR M/C LINE (USING SAME ROW) O/H - 8 KM & U/G - 2.5 KM 	220 kV Uppalwadi, Mankapur, New Pardi, New Buttibori S/S are considered to meet the load growth and to improve the voltage profile in Nagpur circle.		
	<u> </u>		1	125 P a g		

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19 NAGPUR EHV CONSTRUCTION CUM (0.8M) ZONE						
	NAGPUR EHV CONSTRUCTION CUM (O&M) ZONE						
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
	NAGPUR RING MAIN 220 kV NEW PARDI S/S (2015-16) 220 kV MANKAPUR S/S (2015-16) 220 kV BUTTIBORI II S/S (2015-16) 220 kV UPPALWADI S/S (2015-16)	NAGPUR	 iii) 220 kV UPPALWADI - PARDI M/C LINE (USING SAME ROW) O/H - 13.5 KM & U/G - 0.5 KM iv) 220 kV NEW PARDI -BUTTIBORI III D/C LINE 1) M/C LINE FROM PARDI TO LOC NO 68 OF EX 132 kV LINE 21 KM - (2016-17) 2) ONLY STRINGING 132 kV FROM LOC NO 68 TO 47 ON M/C TOWER - 6 KM (2016-17) 3) D/C LINE FROM LOC NO 68 OF EX. 132 kV LINE TO BUTIBORI III - 14.5 KM & U/G - 0.5 KM (PARDI END) (2016-17) v) 220 kV OLD BUTTIBORI - BUTTIBORI III WITH ORIENTATION NEAR OLD BUTTIBORI II D/C ON M/C LINE - 1.5 KM vi) 220 kV BUTTIBORI II- BUTTIBORI III DC LINE - 2 KM ONLY STRINGING ON M/C TOWERS OF 220 kV KORADI - BUTTIBORI 38 KM & U/G - 0.5 KM (M/C NEAR A'ZARI END) FOR 220 kV BUTTIBORI - AMBAZARI 220 kV AMBAZARI - MANKAPUR M/C LINE O/H - 13 KM & U/G - 3.5 KM i) LILO ON 220 kV KANHAN - UMRED AT PARDI S/S O/H : 7 KM U/G : 4 KM REORIENTATION OF 132 kV LINES AT BUTTIBORI - I BY LILO ON 132 kV KHAPRI - BUTTIBORI I ING I 12 KV LINES AT BUTTIBORI LINE - 5 KMS (OH - 3.5 KMS, UG - 1.5 KMS) ii) 220 kV MAPATION OF 132 kV LINES AT MANKAPUR , PARDI AND UPPALWADI. OH LINE 2 KMS U/G CABLE 0.2 KM AT EACH S/S (2017-18) LILO OF 132 kV KHAPRI - BUTTIBORI III - 1 KM iii) REORIENTATION OF 132 kV LINES AT MANKAPUR , PARDI AND UPPALWADI. OH LINE 2 KMS U/G CABLE 0.2 KM AT EACH S/S (2017-18) LILO OF 132 kV KHAPRI - BUTTIBORI I LINES AT BUTTIBORI - II - 5 KM WITH O/H & U/G CABLE AS PER SITE CONDITIONS 132 kV LINES (2017-18) 33 kV OUTLETS - 12 NOS EACH AT UPPALWADI, MANKAPUR, NEW BUTTIBORI & NEW PARDI 	220 kV Uppalwadi, Mankapur, New Pardi, New Buttibori S/S are considered to meet the load growth and to improve the voltage profile in Nagpur circle.			
5	132 kV JAT- TIRODI GIS S/S (2015-16)	NAGPUR	132 kV DCDC LINE ON EXISTING 220 kV TOWERS FROM 220/132 kV PARDI S/S - 3 KMS 132 kV SC LINE FROM 220 kV PARDI (PROPOSED) S/S 132 kV CABLE LAYING WORK FOR 132 kV PARDI JAT TARODI DC LINE AT PARDI END (0.1 KM CKT 1 & 0.2 KM CKT II) - 0.3 KMS 132 kV CABLE LAYING WORK FOR 132 kV PARDI JAT TARODI DC LINE FROM WATHODA END - 5.5 KMS 2 X 25 MVA 132/33 kV T/ES WITH BAYS	Jat Tirodi - 132 kV S/S is considered for strengthning the Nagpur ring main.			

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NAGPUR FHV CONSTRUCTION CUM (0&M) ZONE

SR NO	SR NAME OF S/S DISTRICT		TOTAL SCOPE OF WORK	REMARKS	
6	220 kV KATOL II S/S (2016- 17)	NAGPUR	220 kV KALMESHWAR - KATOL DC LINE - 40 KM WITH BAYS 132 kV D/C INTERLINK BETWEEN KATOL I TO KATOL II - 10 KM WITH BAYS LILO OF ONE CKT OF132 kV KATOL - SAONER DC LINE AT 220 kV KATOL 10 KM (2017-18) 2 X 100 MVA, 220/132 kV ICT WITH BAYS 132 kV BAYS - 4 NOS	Present recorded peak load on Katol - 132 kV, Warud - 132 kV S/S is 50 MW and 40 MW. It is anticipated the load will reach to about 130 MW. Hence it is necessary to go in for 220 kV sub- station at Katol. By the commissioning of this substation, voltage profile will improve to 0.95 pu from 0.92 pu.	
7	132 kV MORGAON ARJUNI S/S (2016-17)		132 kV LAKAHNDUR - MORGAON ARJUNI D/C LINE - 20 KMS 2 X 25 MVA 132/33 kV T/FS WITH BAYS 4 X 33 kV OUTLETS	Morgaon Arjuni is upgraded to 132 kV S/S to reduce the eliminate 66 kV network in Nagpur circle.	
8	132 kV ALLAPALLI (2017-18)	GADCHIROLI	132 kV ASHTI - ALAPPALI D/C LINE - 35 KM 2 X 25 MVA, 132/33 kV T/FS WITH BAYS 33 kV OUTLETS - 6 NOS	Allapali - 132 kV S/S is considered to cater increasing loads in Chandrapur circle and to eliminate 66 kV level.	
9	132 kV GIS LENDRA S/S (2017-18)	NAGPUR	132 kV LILO ON MANKAPUR - HINGNA - I AT LENDRA - 16 CKM (O/H : 7 CKM & U/G : 9 <u>CKM</u>) LILO ON 132 kV AMBAZARI - HINGNA - I AT LENDRA S/S - 16 CKM (OH - 7 CKM & U/G : <u>9 CKM</u>) 2 X 50 MVA 132/33 kV T/FS WITH BAYS 12 X 33 kV OUTLETS.	Voltage improvement and load catering.	
10	132 kV SIRONCHA (2017-18)	GADCHIROLI	132 kV DC LINE FROM 132 kV ALLAPALLY TO SIRONCHA - 90 KMS 2 X 25 MVA, 132/66/33 kV XMER 33 kV OUTLETS - 6 NOS	Elimination of 66 kV S/S.	
11	132 KV CHIMUR S/S (2018-19)	CHANDRAPU R	132 KV DC LINE FROM SINDHEWAHI - 132 KV CHIMUR -40 KM 2 X 25 MVA, 132/33 KV, T/F WITH BAYS. 33 KV OUTLETS - 4 NOS.	Chimur 132 KV s/s is proposed to meet upcoming load.	

ADDITIONAL LINK LINES (2015-19)

ADDITIONAL LINK LINES FOR S/S WHERE ONLY SINGLE CKT AND SINGLE SOURCE IS AVAILABLE (2015-19)

SR NO	LINK LINE	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	132 kV LINK LINE (2015-16)	NAGPUR	132 kV KALMESHWAR - HINGANA - I - HINGANA - II D/C LINE - 25 KM WITH BAYS	For Strengthing of Nagpur Ring Main
2	132 kV LINK LINE (2015-16)	AMARAVTI	132 KATOL - WARUD SCDC LINE - 76 KM WITH BAYS	132 kV Katol S/S is fed from 132 kV Kalmeshwar S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line
3	132 kV LINK LINE (2015-16)	WARDHA	132 kV DEOLI - WARDHA - II SCDC LINE - 28 KM (ONLY STRINGING)	132 kV Deoli S/S is fed from 132 kV Wardha-II S/S with S/C line. Hence to provide uninterrupted supply during planned outages it is necessary to add proposed line

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

NIL

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2015-19)

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 NAGPUR EHV CONSTRUCTION CUM (0&M) ZONE

AUGMENTATION OF S/S BY ADDITION WHERE ONLY SINGLE TRANSFORMER IS AVAILABLE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV WARDHA II (BHUGAON)S/ S (2015-16)	WARDHA	1 X 100 MVA 220/132 KV ICT WITH BAYS	For redundancy purpose
2	220kV GADCHAN- DUR S/S (2015-16)	C'PUR	1 X 50 MVA, 220/33 kV XMER WITH BAYS	To have redundancy in case other xmer fails
			33 kV OUTLETS - 4 NOS.	
3	220 kV HINGANGHAT S/S (2015-16)	WARDHA	1 X 50 MVA 220/33 kV XMER WITH BAYS	Existing xmer capacity is 132/33 kV 50 MVA and load reached is 30 MW
4	220 KV BHANDARA S/S (2015-16)	BHANDARA	1 X 25 MVA 220/33 KV XMER	For redundancy purpose

AUGMENTATION OF S/S BY ADDITION TO REDUCE LOADING OF ICT/XMER (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV KORADI S/S (2015-16)	NAGPUR	1 X 500 MVA, 400/220 kV ICT WITH BAYS	Existing Transformer capacity available is 400/220 kV, 1 X 300 & 1 X 315 MVA and load reached is 485 MVA.The transformer is replaced to meet the anticipated load growth. 1 X (500- 300) MVA is considered in 2018-19
2	132 kV DEOLI S/S (2015-16)	WARDHA	1 X 25 MVA 132/33 KV XMER WITH BAYS	Existing Xmer capacity available is 2 X 25 132/33 kV xmer and load reached is 32 MVA
3	132 TALEGAON S/ (2015-16)	WARDHA	1 X 25 MVA 132/33 KV XMER WITH BAYS	Existing Xmer capacity available is 2 X 25 132/33 kV xmer and load reached is 27 MVA
4	132 KV AMGAON S/S (2015-16)	BHANDARA	1 X 25 MVA 132/33 KV XMER WITH BAYS	Existing Xmer capacity available is 2 X 25 132/33 kV xmer and load reached is 30 MVA
5	132 KV AMBHORA S/S (2015-16)	NAGPUR	1 X 25 MVA 132/33 KV XMER WITH BAYS	Existing Xmer capacity available is 2 X 25 MVA 132/33 kV xmer and load reached is 36 MVA
6	220 KV KALMESH - WAR S/S (2016-17)	NAGPUR	1 X 200 MVA 220/132 KV ICT WITH BAYS	Existing ICT capacity available is 2 X 200 MVA 220/132 kV ICT and load reached is 190 MVA
7	220 kV SICOM (2017-18)	C'PUR	1 X 50 MVA, 220/33 kV XMER WITH BAYS.	To reduce loading of xmer
8	220 kV WARDHA - I (2017-18)	WARDHA	1 X 50 MVA, 220/33 kV XMER WITH BAYS	To reduce loading of xmer

AUGMENTATION OF S/S BY REPLACEMENT OF XMER (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 kV HINGANGHAT S/S (2015-16)	WARDHA	1 X (200-80) MVA 220/132 kV XMER WITH BAYS	Existing transformer capacity is 1 X 100 and 1 X 80 MVA and load reached is 43 MVA
2	220 kV MIDC S/S (2015-16)	C'PUR	1 X (100-50) MVA 220/33-33 kV XMER WITH BAYS	Existing transformer capacity is 2 X 50 MVA and load reached is 52 MVA. One replacement is proposed in 2014-15
3	220 kV WARORA S/S (2015-16)	C'PUR	1 X (100-50) MVA 220/33-33 kV XMER WITH BAYS	Existing transformer capacity is 2 X 50 MVA and load reached is 26 MVA.One replacement is proposed in 2014-15

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19		
	NAGPUR EHV CONSTRUCTION CUM (O&M) ZONE				
			1	r	
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
4	132 KV BESA S/S (2015-16)	NAGPUR	1 X (50-25) MVA 132/33 KV XMER WITH BAYS	Existing Xmer capacity available is 1 X 50 and 2 X 25 MVA 132/33 kV xmer and load reached is 50 MVA	
5	400 kV KORADI S/S (2018-19)	NAGPUR	1 X (500-300) MVA, 400/220 kV ICT WITH BAYS	Existing Transformer capacity available is 400/220 kV, 1 X 300 & 1 X 315 MVA and load reached is 485 MVA.The transformer is replaced to meet the anticipated load growth.	

INFORMATION ON PROPOSED LINE AND BUS REACTORS

Proposed Bus Reactors							
		Phase-I					
Sr. No.	Bus Name	Voltage (kV)	Proposed Bus Reactors (MVAR)				
1	Warora (2013-14)	400	1 x 125				
2	Solapur (2013-14)	400	1 x 125				
3	Kolhapur (2013-14)	400	1 x 125				
4	Nanded (2013-14)	400	1 x 125				
5	Akola-I (2013-14)	400	1 x 125				
Phase-II On No. Proposed Bus Reactors							
	Bus Hame	Voltage (itv)	(MVAR)				
6	Chandrapur-II	400	1 x 125				
7	Koradi-II	400	1 x 125				
8	Khaparkheda	400	1 x 125				
9	Bhusawal-II	400	1 x 125				
10	Karad	400	1 x 125				
11	Lonikand-II	400	1 x 125				
12	Chakan	400	1 x 125				
13	Kudus	400	1 x 125				
14	Hinjewadi	400	1 x 125				
15	Alkud	400	1 x 125				
16	Nasik	400	1 x 125				
17	Kesurdi	400	1 x 125				
	Total		2125				
Phase-III							
Sr. No.	Bus Name	Voltage (kV)	Proposed Bus Reactors (MVAR)				
1	Aurangabad III	765	1 x 125				
2	Dondaicha	400	1 x 125				
3	Malegaon	400	1 x 125				
4	Nandgaonpeth	220	1 x 125				
5	Bhusawal	400	1 x 125 (Replaced Generation)				

Proposed Line Reactors for the Year 2014-15

Sr. No.	Name of the Line	No. of Circuits	Line Length	Proposed Line Reactors (MVAR)		
			(KIII)	From Bus	To Bus	
1	400 kV Babhaleshwar - Kudus	4	220	2 x 80	2 x 80	
	Total				320	

Shifting of Line Reactors for the Year 2013-14

1	LILO on 400 kV Chandrapur - Parli S/c at 400 kV Nanded S/s	Shifting of 1 x 50 MVAR Line reactor from Parli end to Nanded end on 400 kV Chandrapur - Nanded line
2	LILO on one ckt of 400 kV Chandrapur - Parli D/c line at 400 kV Nanded S/s	Shifting of 1 x 50 MVAR Line reactor from Parli end to Nanded end on 400 kV Chandrapur - Nanded line
3	LILO on one cuit of 400 kV Chandrapur - Parli D/C at 400 kV Chandrapur-II S/s	Shifting of 21 x 50 MVAR Line reactor from Chandrapur - I end to Chandrapur -II end on 400 kV Chandrapur - Parli line
4	LILO second circuit of 400 kV Chandrapur - Parli S/c at 400 kV Chandrapur-II S/s	Shifting of 1 x 50 MVAR Line reactor from Chandrapur - I end to Chandrapur -II end on 400 kV Chandrapur - Parli line
5	Lilo on 400 kV Parli - Lonikhand -I circuit at 400 kV Lonikhand -II S/s.	Shifting of 1 x 50 MVAR Line reactor from Lonikhand -I end to Lonikhand -II end on 400 kV Parli- Ionikhand line
6	Lilo on 400 kV Parli - Lonikhand -II circuit at 400 kV Lonikhand -II S/s.	Shifting of 1 x 50 MVAR Line reactor from Lonikhand -I end to Lonikhand -II end on 400 kV Parli- lonikhand line

Replacement of Line Reactors for the Year 2014-15

1	Replacement of Line reactor of 400 kV Koradi - Bhusawal D/c Ine at Bhusawal end	Replacement of 50 MVAR reactor with 80 MVAR reactor, as the existing reactors have completed 30 years of life. The technical life of these reactors is over.
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PLAN FOR THE YEAR 2014-15 TO 2018-19

TATA POWER (TPCL)

TEC							
	Valleval	AB31KA					Tetal
Sr. NO.	tion	2014-15	2015-16	2016-17	2017-18	2018-19	Iotai
1	765 KV	0	0	0	0	0	0
2	100 KV	0	1	0	0	2	3
2	220 KV	0	2	1	0	2	5
3	122 KV	0	0	0	0	0	0
5	110-100 KV	2	0	1	0	2	5
τοταί	110-100 100	2	3	2	0	7	J 14
Transmission	n Lines (Ckt K	(M)	5	2	v	,	14
TI 1 - Transm	ission Lines f	or New Sub-S	tation				
1	765 KV		0	0	0	0	0
2	400 KV	0	46	0	0	234	280
3	220 KV	0	8	10	0	181	199
4	132 KV	0	0	0	0	0	0
5	110-100 KV	17	0	4	0	54	75
	110-100100	17	54	14	0	469	554
TI2 - Transm	ission Lines f	or S/S where	only Single Sc	urce & Single	cktis availah	405	554
1	765 KV					0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	0	0	0	0
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
	110-100 100	0	0	0	0	0	0
TL3 - Transm	ission Lines t	o ensure Reli:	ability	Ŭ	v	v	•
1	765 KV			0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	07	0	16	10	0	132
4	132 KV	0	0	0	0	0	0
5	110-100 KV	28	0	0	- 14	0	14
	110-10010	125	0	16	5	0	146
TI 4 - Transm	ission Lines t	o have Altern	ate Source				
1	765 KV			0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	13	46	0	59
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	4	0	4
TOTAL (TL4)	110 100 10	0	0	13	50	0	63
TL5 - Transm	ission Lines f	or Strengthen	ing of Evacua	tion		•	
1	765 KV		0	0	0	0	0
2	400 KV	0	0	0	0	193	193
3	220 KV	0	0	0	0	0	0
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
	110 100 10	0	0	0	0	193	193
TOTAL EHV	INES (TL1+T	2+TL3+TL4+	TL 5) (KM)			100	
1	765 KV	0	0	0	0	0	0
2	400 KV	0	46	0	0	427	473
3	220 KV	97	8	39	65	181	390
4	132 KV	0	0	0	0	0	0
5	110-100 KV	45	0	4	-10	54	93
	HVINES		, , , , , , , , , , , , , , , , , , ,		Sec. 10	54	
(TL1+TI 2+T	L3+TL4+TI5)	142	54	43	55	662	956
(K	(M)						

TE	TECHNICAL ABSTRACT TATA POWER COMPANY LIMITED						TED
Sr. No.	Vol Level	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Capacity Ac	dition (MVA)						
TF1 - Capac	ity addition by	New Sub-Sta	tion				
1	765 KV	0	0	0	0	0	0
2	400 KV	0	1000	0	0	2500	3500
4	220/33 KV	0	1250	250	0	750	2250
5	132/33 KV	0	0	0	0	0	0
6	110-100 KV	625	0	250	0	500	1375
TOTAL (TF	1)	625	2250	500	0	3750	7125
TF2 - Capac	ity addition by	Augmentatio	n by Addition	of Transforme	r		
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
4	220/33 KV	250	0	1000	0	250	1500
5	132 KV	0	0	0	0	0	0
6	110-100 KV	240	270	375	90	250	1225
TOTAL (TF2	2)	490	270	1375	90	500	2725
TF3 - Capac	ity addition by	Augmentatio	n by Replacen	nent of Transfe	ormer		
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
4	220/33 KV	0	0	60	0	0	60
5	132 KV	0	0	0	0	0	0
6	110-100 KV	120	35	235	0	0	390
TOTAL (TF:	3)	120	35	295	0	0	450
TOTAL CAP	ACITY ADDITIO	ON (TF1+TF2+	TF3) (MVA)				
1	765 KV	0	0	0	0	0	0
2	400 KV	0	1000	0	0	2500	3500
4	220/33 KV	250	1250	1310	0	1000	3810
5	132 KV	0	0	0	0	0	0
6	110-100 KV	985	305	860	90	750	2990
TOTAL CAPACITY ADDITION (TF1+TF2+TF3)		1235	2555	2170	90	4250	10300
(MVA)							

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED

ONGOING SCHEMES (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	110 KV HDIL Kurla (2014-15)	Mumbai 12968	 a) 110 kV DC line from Dharavi R/S - 6.5 kM (overhead DC line from Dharavi R/S to Mithi river using same ROW - 2.5 kms and 110kV 1600 sqmm D/C cable system from Mithi river to HDIL, Kurla - 4 km) b) 2 X 125 MVA ,110/33 KV Transformers c) 5 X 110kV GIS bays d) 23 X 33kV GIS bays 	To cater increased load demand near Kurla area and 110kV infeeds from Dharavi. MERC Approved.
2	110 kV BKC (2014-15)	Mumbai 25000	 a) 110 kV DC line from Dharavi S/S - 2 Km (1600 sqmm power cable) b) 2 X 125 MVA 110/33/22 kV power transformers c) 1X125 MVA 110/33/11 KV Power transformer d) 8 X110KV GIS bays. e) 25 X 33 kV GIS bays f) Construction of 110 kV GIS Bldg. 	The existing 22 kV network is inadequate to meet the additional load in BKC area. The proposal will meet the additional requirement in BKC area. MERC Approved.

ADDITIONAL LINK LINES TO MEET DEMAND, ENSURE RELIABILITY AND QUALITY OF SUPPLY (2014-15)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220kV BackBay (2014-15)	Mumbai/ 33100	a) 220 KV Trombay Backbay line -17 Kms (OH -1 km and UG 16 kM)	Strengthning of South Mumbai system &To meet N-1 criteria. To improve reliability. To meet additional load. The existing cable rated for 860 Amp cannot meet the load. Proposal will reduce the overloading of Carnac R/S and thus release the capacity for Carnac local load growth. Proposal will also make sure availability of alternate supply due to ring system. The scheme is ongoing. MERC Approved.
2	220 KV Trombay Dharavi Salsette Line (2014-15)	Mumbai/ 27276	 a) 220 kV DC line from Tromaby to Dharavi to Salsette - 40 Kms b) 1 X 220 kV GIS bays at Dharavi and 2 X 220 kV GIS bays at Salsette c) 3 X 220kV AIS bays at Trombay 	For evacuating power from Trombay Generating station during N-1 condition of lines and other system disturbances For Improving reliability by minimising dependance on 100 KV during N-1 conditions. The scheme is ongoing.The schemes are 80% completed. MERC Approved.
3	110kV Khopoli (2014-15)	Mumbai 1732	a) 2nd circuit of Khopoli Bhivpuri line - 28 kM (MOOSE Conductor) along with bays	Khopoli Mankhurd part ROW is proposed to be used for bringing the 400 kV line to Mumbai. In view of this, there will be a constraint for evacuating power generated at Khopoli during establishment of the 400 kV line. Hence, it is proposed to develop the second Khopoli Bhivpuri line to enable evacuation of power from Khopoli. MERC Approved

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED

	AUGMENTATION OF S/S BY ADDITION OF T/F (2014-15)				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS	
1	220kV BackBay (2014-15)	Mumbai/ 33100	a) 1X 250 MVA 220/110/33 KV ICT b) 11 X 110 kV GIS bays	Strengthning of South Mumbai system &To meet N-1 criteria.To improve reliability.To meet additional load.The existing cable rated for 860 Amp cannot meet the load.Proposal will reduce the overloading of Carnac R/S and thus release the capacity for Carnac local load growth.Proposal will also make sure availability of alternate supply due to ring system.The scheme is ongoing. MERC Approved.	
<u>NEW SCHEMES (2015-19)</u>					
SR	NAME OF				

NC	S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 kV Vikhroli (2015-16)	Mumbai/ 123277	a) 400 KV Kharghar-Vikhroli DC line - 23.1 kM b) 2 x 500 MVA, 400/220/33 kV power transformers c) 2 x 250 MVA, 220/110/33 kV ICTs d) 15 X 400 kV GIS bays e) 22 X 220 kV GIS bays f) 23 X 33 kV GIS bays g) Construction of 400kVGIS Bldgs	To increase power input to Mumbai from Natonal Power Grid. The proposal will bring reliable and cheap power to Mumbai to mitigate the shortage face today. MERC Approved.
2	220 kV Chunabhatti (2015-16)	Mumbai 12643	a) LILO of one ckt of existing 220 KV Bhira-Dharavi DC line 1.0 kM Moose Conductor b) 2 X 250 MVA 220/110/33 kV ICT c) 9 X 220 kV GIS bays d) 10X110 KV GIS bays e) 17 X 33 kV GIS bays f) Construction of GIS Bldg	 The load growth of about 5% to 6% is expected due to rehabilitation of Dharavi slums. The existing Tata Power's R/S capacity at Matunga (W) will be inadequate to meet the additional load growth. Hence it is proposed to construct a new station at Chunabhatti to meet the requirements of distribution licencees (33 kV outlets).
3	220 KV Antop Hill Wadala (2015-16)	Mumbai 10373	 a) LILO of one ckt of 220 kV Trombay - Dharavi DC existing line - 1.5 Km b) LILO of 2nd ckt of 220 kV Trombay - Dharavi DC existing line - 1.5 Km (2017-18) c) 2 X 125 MVA, 220/33 kV power transformers d) 6 X 220 kV GIS bays e) 17 X 33 kV GIS bays f) Construction of GIS Bldg. 	To cater increase demand of commercial and residential load in Wadala area. MERC Approved.
4	220 KV Bombay Dyeing, Wadala (2016-17)	Mumbai 13082	a) LILO of one ckt of existing 220kV Trombay -Chunabhatti DC Line - 5.0 kM b) 2 X 125 MVA ,220/33 KV Transformers c) 7 X 220kV GIS bays d) 23 X 33kV GIS bays	To meet increased load demand in Wadala area due to development of commercial & residential complexes in Bombay Dyeing, Wadala area. It will reduce load on Dharavi Receiving Station.
5	110 KV Chembur tapping Structure/Tro mbay Colony S/S (2016- 17)	Mumbai 7440	a) LILO of existing 110kV Lodhivali-Chembur SC lines at Tata Trombay Colony- 2 km (2X0.15 ACSR WOLF) b) 2 X 125 MVA 110/33 KV Transformers c) 7 X 110kV GIS bays d) 24 X 33kV GIS bays	A new Receiving Station at Tata Trombay Colony to meet the increased load demand expected from BPCL and SRA schemes. In addition, the load of Monorail project and load growth of nearby area will be supplied from this Station. The land for 110 kV GIS is already available at our Trombay Colony Existing 110 kV Lines will be utilize. MERC Approved

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

	STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
6	400 kV Marve S/S (2018-19)	Mumbai	a) 400 kV DC line from Kudus - Marve - 50 kM b)3 X 500 MVA 400/220/33 kV ICT c) 8 X 400 kV GIS bays d) 10 X 220 kV GIS bays e) 23 X 33 kV bays	To get more power input from MSETCL 400 kV Kudus S/S and to meet the load requirement of entire north west Mumbai area. The proposal will bring in bulk power efficiently and adequately		
7	400/220/110 kV Receiving Station Sewri (2018-19)	Mumbai	a) 400 KV D/C DehrandSewri Over Head+ U/G line - 57 kM b) 220 KV D/C UranSewri (U/G)-22 KM c) 400 KV D/C Sewri-Hajiali Line - 10 km. d) LILO 220 KV Tr-Car 5&6 at Sewri GIS-1 kM e) LILO 220 KV Trombay Backbay at Sewri - 1 kM f) 220 KV D/C Sewri-Mahalaxmi (U/G)-10 KM g) 220 kV D/C Sewri-Parel (U/G) lines -5 KM h) 220 kV D/C Sewri-Parel (U/G) lines -5 KM h) 220 kV D/C Sewri-Antop-Hill (U/G) lines - 8 kM i) 220 kV D/C Sewri-Versova D/C U/G Cables - 25 kM j) 2 x 500 MVA, 400/220/33 kV power transformers. k) 7 x 400 kV GIS bays. m)7 x 110 kV GIS bays. n) 23 x 33 kV GIS bays. o) Construction of 400/220/33 kV GIS Bldgs.	To meet the Bulk Power demand of South & South-West , Central Mumbai like Worli, Malbar Hill , upto Girgaon, North-West Mumbai- Versova/Malad To form a 400 KV & 220 KV Ring system increase thereby increasing stability & reliability of system. Establishing three over head lines for carnac & Backbay thereby establisshing reliability of supply to Carnac.		
8	220 KV Dahisar (East) (2018-19)	Mumbai 20000	a) 220 kV SC line from Tata Borivli -5 kM (1200 sqmm cable) b) 220 kV DC line from R - Infra Mira Road - 8 KM (1200 sqmm cable) MVA 220/33 KV power transformers d) 7 X 220 KV GIS e) 23 X 33 KV GIS bays	To meet load growth in North Mumbai and to distribute bulk power brought into Mumbai Grid		
9	220 KV Vikhroli (West) S/S (2018-19)	Mumbai 10000	a) 220 KV D/C line from Vikhroli (East) to Vikhroli (West)- 4 KM. (1200 sqmm UG cable) b) 2 x 125 MVA, 220/33 kV Power transformers c) 7 x 220 kV GIS bays d) 23 x 33 kV GIS bays e)Construction of GIS Bldg	To meet load growth arising out of development of Godrej property in Vikhroli (West) and additional loads in that area.		
10	220kV Mira Road (West) (2018-19)	Mumbai	a) 220 KV D/C from R Infra Mira Road S/S - 4 Km (1200sqmm UG cable) b) 2 X 125 MVA, 220/33 kV Power transformers.(One in future) c) 7 X 220 kV GIS bays d) 23 X 33 kV GIS bays. c) Construction of 220/33 kV GIS Bldg. f) Purchase of land at Mira Road (West)	To meet the growing load of Mira Road (West) area. Mira Road (West) area is served by Tata Power's Borivli (East) Station at 22 kV. The load growth about 10%. The existing network inadequate. Proposal will efficiently and adequately meet the load.		
11	110 KV Worli S/S (2018-19)	Mumbai 13869	a) 110kV SC line from Dharavi S/S - 12 kM (1600sqmm Cable) b) 110kV SC line from Mahalaxmi S/S- 12kM (1600sqmm Cable) c) 2 X 125 MVA ,110/33 KV Transformers d) 7 X 110 Kv GIS e) 23 X 33 KV GIS bays	To meet increased load demand in Worli area. Expected loads in due to development of commercial & residential complexes in Bombay Dyeing, Worli area. MERC Approved.		
12	110 KV Wadala Truck Terminal S/S (2018-19)	Mumbai 13082	a) 110 kV DC line from Tata Chunabhatti - 15 KM (1600 sqmm cable) b) 2 X 125 MVA ,110/33 KV Transformers c) 7 X 110kV GIS bays d) 23 X 33kV GIS bays	To meet increased load demand in Wadala area due to development of commercial & residential complexes in Wadala Truck Terminal area. It will reduce load on Dharavi Receiving Station.		

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED

ADDITIONAL LINK LINES FOR NEW S/S TO HAVE ALTERNATE SOURCE (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV Salsette (2016-17)	Mumbai 26242	a) 220 KV Kalwa - Salsette line - 13 kms (OH - 8 Km using same ROW , UG -5 kM) along with bays b) Replacement of existing conductors of 220kV Kalwa Salsette 3rd & 4th ckts by high ampacity conductors - 8 kM	To meet increased Mumbai demand reliably. The existing 220kV Kalwa-Salsette lines have reached full capacity and tripping any one line jeopardises system stability. MERC Approved.
2	220 KV Versova (2017-18)	Mumbai 60400	a)220 kV SC line from Saki (T) -Versova (T) -10km (1200sqmm cable) b) 220 KV D/C line from Marve to Versova - 14 kM (O/H TWIN MOOSE) + UG (1200 sqmm cable)	In order to provide reliable power supply and meet the short term and long term needs of North West Mumbai consumers, it is proposed to have a 220 kV cable network between Saki & Versova as an alternate feed to Versova Receiving and thus forming ring in North West Mumbai.Importing power from Marve to Mumbai to meet growing demand of Mumbai
3	220 KV Sahar (2017-18)	Mumbai	a) 220 KV S/C line from Vikhroli to Sahar S/S - 8 kM (1200 Sq mm cable)	To form a 220 KV ring to ensure reliability to North -West Mumbai
4	110kV Powai (2017- 18)	Mumbai 18064	a) 110kV SC from Saki S/S - 4kM (1600 sqmm cable) along with bays.	To cater to this growth in Powai area and to reduce loading on Saki S/S and Vikhroli S/S

ADDITIONAL LINK LINES TO MEET DEMAND, ENSURE RELIABILITY AND QUALITY OF SUPPLY (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220kV Trombay Genarating Station (2016-17)	Mumbai 10000	a) Provision of Two Nos of 220 kV phase shifting transformer, between MSETCL Trombay and Tata Trombay. b) LILO of one 220 kV Line - 1.0 kM MOOSE ACSR.	To enable bulk power to be brought into the Mumbai grid and to cater to the electrical demand of developing Mumbai specially South and North Mumbai.This will reduce the loading on Kalwa Salsette and BO-BO Lines. This is necessary as there are no permissions to set up new generating plants in Mumbai.
2	220 KV Dharavi (2017-18)	Mumbai	a) Converting the existing 110 KV Salsette Dharavi line into 220 KV line - 18.6 kMs	Estblish one more 220 KV source to Dharavi thereby relieving Trombay-Dharavi lines particularli when Bhira generation is zero
3	220kV Carnac (2017-18)	Mumbai	110 kV SC line from Backbay to Carnac - 5 KM	Existing 110 KV cables (Two Circuits) forming south Mumbai Ring are not having sufficient capacity to cater Carnac load from Back bay during Trombay-Carnac-5 & 6 tripping

TRANSMISSION LINES FOR EVACUATION OF POWER FROM GENERATING STATIONS (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	400 KV Dehrand (2018-19)	Mumbai 23290	a) 400 kv DC line from Dehrand to Nagothane - 45 kMs along with bays b) 400 kV DC line from Dehrand to Vikhroli - 51.3 kM	It is proposed to evacuate power generated from the proposed Dehrand Generating station to PGCIL, MSETCL network double circuit transmission line between Dehrand and Vikhroli is to be established to bring bulk input power to Mumbai. MERC Approved.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19

STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED

AUGMENTATION OF S/S BY ADDITION OF ICT/T/F (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	110kV Parel (2016-17)	Mumbai 2400	a) 1 X 125 MVA, 110 / 33 kV transformer b) 1 x 110kV bays c) 12 x 33 kV bays	To cater rapid increase in load due to development in residential and commercial complexes coming up in the Parel area.MERC Approved.
2	110kV BKC (2016- 17)	Mumbai 1700	1 X 110/33/11 KV, 125 MVA xmer along with 13 x 33 kV bavs	To cater to load growth in BKC area
3	110kV Powai (2017- 18)	Mumbai 18064	a) 1X90 MVA, 110kV/33kV transformer b) 11 x 33 kV Bays	To cater to this growth in Powai area and to reduce loading on Saki S/S and Vikhroli S/S
4	220kV Backbay (2018-19)	Mumbai 1200	a) 1X125 MVA, 110kV/33kV transformer with bays	To cater load growth in South Mumbai
5	220KV Saki (2018-19)	Mumbai 1200	a) 1 X 125 MVA Transformer 110/33 KV b) 12 x 33 kV GIS Bavs	To have sufficient firm capacity on 33 kV and to cater load growth.
6	220kV Borivli (2018-19)	Mumbai 2200	a) 1 X 250 MVA, 220/110/33KV ICT. b) 1 X 220 kV GIS bay c) 1 X 110 kV Hybrid switchgear bay	To meet Borivli area load growth & future load growth due to to rapid developmental activities in the near future To improve the reliability & to cater the additional loads of Malad & Versova additional input is required at Borivli

AUGMENTATION OF S/S BY REPLACEMENT OF T/F (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220kV Borivli (2014-15)	Mumbai/ 1811	a) 2 X (90-30) MVA, 110/33 KV xmer with Bays b) 24 x 33 KV bays	Replacement of old with new transformers of higher capacity. One xmer is replaced and One is in progress. MERC Approved.
2	220kV Mahalaxmi (2015-16)	Mumbai 3262	a) 1 x (125-90) MVA 110/33 kV Transformer with bays	Transformer 1 & 2 are more than 40 years old and required to be replaced as per MERC policy.
3	220kV Carnac (2016-17)	Mumbai 2800	a)1 X (125-90) MVA, 110/33/22 kV transformer	After changing over of BEST feeders, only Central Railway and BPT feeders will remain on 22 kV, hence the installed capacity of 165 MVA on 22 kV will not be required. Moreover the transformer#4 is more than 40 yrs old and needs replacement.
4	220kV Dharavi (2016-17)	Mumbai 6083	Replacement of 4x 60 MVA and 1 x 75 MVA 220/22 kV Transformers by 3 X125 MVA 220/33-22 KV Transformers	60MVA trf are 40 years old and 75 MVA trf is more than 25 years old.Hence , they are replqced by 3 nos 220/33-22 KV 125 MVA Transformers along with 3 nos 220 KV GIS Bays MERC Approved.
5	110kV BKC (2016- 17)	Mumbai 1700	1 x (125-75) MVA 100/33kV along with bays.	To cater toload growth in BKC area
6	110kV Saki (2016-17)	Mumbai	3 x (125-75) MVA 110/22 kV transformers with bays	Transformers are more than 35 years old. Hence they are required to be replaced.

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE YEAR 2014-15 TO 2018-19 STU TRANSMISSION PLAN FOR TATA POWER COMPANY LIMITED

UPGRADATION OF 110 KV SUBSTATIONS (GIS) & ADDITIONAL FEEDER OUTLETS (2015-19)

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS				
1	220kV Backbay (2014-15)	Mumbai 1087	Augmentation of 33KV outlets- 12 no.s	To cater future load growth, MERC Approved.				
2	110kV Malad (2014-15)	Mumbai 799	Additional 33 kv outlets - 12 no.s	To cater future load growth. MERC Approved				
3	220 KV Versova (2016-17)	Mumbai 31386	a) 220KV D/C line from 220KV RInfra Versova S/S to 220KV TPC Versova -3 Km (1200sqmm cable) b) 2 X 250 MVA 220KV /110 kV/ 33 KV ICT, c) 7 X 220 kV GIS bays d) 21 X 33KV GIS Bays e) Procurement of Adjacent Land near existing 110KV versova S/S	400 KV Vikhroli Receiving Station will provide interconnection to PGCIL network and to MSETCL Network and also to the proposed 400 kV Receiving Station at Marve to enable bulk power to be brought into Mumbai grid for catering to the increasing demand in Mumbai area. Further, this load will be distributed through proposed Versova 220 kV & Dahisar 220 kV Receiving Stations. Standing Committee on Mumbai Metropolitan region had recommended to interconnect Rinfra Versova R/S to Tata Power-Versova at 220 kV level. This scheme proposes to interconnect Receiving stations at 220 kV level.				
4	220 KV Parel (2016-17)	Mumbai	a) 220 KV D/C line from Sewri - 4 KM. (1200sqmm UG cable) b) 2 X 250 MVA, 220/110/33 kV ICT c) 7 X 220 kV GIS. d) 3 X 110 kV GIS bays. e) 15 x 110 kV GIS Bays f) 23 X 33 kV GIS bays. g)Construction of GIS Bldg h) New plot to be procured.	 a) To upgrade existing 110 kV station to 220 kV for handling bulk power and increasing reliability. b)Conversion of outdoor AIS to indoor GIS for increase in reliability. This will free the space for 250 MVA ICT c) The fault levels are high , new bus will have 50 KA breakers d) Ensure reliability of supply during monsson due to GIS e) Reduce O & M cost 				
5	220kV Borivali (2018-19)	Mumbai 646	33kV GIS AT BORIVLI (Additional) - 10 no.s	To cater future load growth, Additions and augmentation in 22 KV & 33 KV Network.				
	CONVERSION OF EXISTING AIS TO GIS							
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS				
1	110 KV Mankhurd (2014-15)	Mumbai 7746	a) 2 X 90MVA, 110kV/33kV Transformers (additional) b) 2 X 30MVA, 110kV/22kV Transformers (additional) c)110kV GIS Building with 11 no.s of bays	Since 110kV outlets are not available at Mankhurd sub station to feed the proposed load of Central Railways. BARC & Metro Rail, it is necessary to review the available resources to meet the increased load demand at Mankhurd. MERC Approved				
	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE							
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		ST	U TRANSMISSION PLAN FOR TATA POWER CO					
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS				
2	110 KV Versova (2015-16)	Mumbai 10184	a) 2 X, 90 MVA, 110/33KV Transformer (additional) b) 11 X 110KV GIS Bays. c) 14 X 33KV GIS bays	Load growth in this area is around 10% per annum due to rapid developmental activities and is expected to continue in the near future. In view of this, present firm capacity of 90 MVA needs to be increased to 180 MVA . In addition, the transformers at Versova do not have HT breakers. To cater to all these requirements 110 kV GIS is proposed at Versova Receiving Station. MERC Approved.				
3	110 kV Vikhroli (2015-16)	Mumbai 10055	a) 1 X 90 MVA 110/33 kV Transformer b) 19 X 110 kV GIS Bays c) 34 X 33 kV GIS bays d) Construction of building for 110 kV GIS.	It is proposed to interconnect this 400 kV Receiving Station with existing 110 kV network by taking 110 kV inputs to the existing Vikhroli Receiving Station. To facilitate this, the 110 kV outdoor switchyard will be converted to GIS. All the interconnection of the 400 kV Vikhroli Receiving Station at 110 kV will be done through this GIS.				
4	110 kV Dharavi (2015-16)	Mumbai 19254	a) 41 X 110 kV GIS bays. b) 50 x 36 kV GIS Bays c) Construction of GIS Bldg.	There are 110 kV feeds to Railway. Proposed BKC and HDIL will also be fed by Dharavi on 110 kV level. There is no space to accommodate additional outlets on 100 kV outdoor switchyard. Further, there were instances of failure of components of outdoor switchyard due to high concentration of load. Due to the criticality of this station any failure of equipment will lead to a major shutdown. Hence, it is proposed to convert this 110 kV existing outdoor switchyard to GIS.				
5	110kV Carnac (2015-16)	Mumbai 5344	a)11 X 110 kV GIS bays.	Since this station feeds vital installations like Navy, BPT, Mantralaya etc. this station is very critical. Due to the criticality of this station any failure of equipment will lead to a major shutdown. Further, there are intelligence reports of security threat to this important installation. Hence, it is proposed to convert this 110 kV existing outdoor switchyard to indoor GIS for operational flexibility, Safety and Security.The released space will be utilized for future power transformers				
6	110 kV Saki (2016-17)	Mumbai 6303	a) 1 X 125 MVA 110/33 KV Transformer (additional) b) 20 X 110 KV GIS c) 12 X 33 KV GIS d) Construction of GIS Bldg.	After Commissioning of 250 MVA ICTs, which will be connecting 220 kV Source to existing 110 kV switchyard, to facilitate this, the existing outdoor switchyard needs to be converted into GIS. This will release the space which will be utilized for third ICT.				
7	110kV Trombay (2017-18)	Mumbai	a) 16 x 110kV bays b) 26 x 22kV Bays c) Construction of GIS Building	To improve reliability of a system as a result of GIS. To reduce meintenance cost.				
8	110 KV Malad (2018-19)	Mumbai 4400	a) 11 X 110 kV GIS bays. b) Construction of 110 KV GIS Bldg.	To improve the reliability of the supply and providing spare bays for bringing in additional inputs it is proposed to convert the existing 100 kV outdoor switchyard to GIS				



RELIANCE INFRASTRUCTURE LIMITED (RIL)

	TECHNICAL ABSTRACT R INFRA						
Sr. No.	Vol Level	2014-15	2015-16	2016-17	2017-18	2018-19	Total
New	Sub-Station						
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	1	0	3	4
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC (SVC Based) - (Actual Proposed 2019-20, subject to land allotment at Aarev)	0	0	0	0	0	0
5	TOTAL	0	0	1	0	3	4
Trans	mission Lines (Ckt KM)		<u> </u>		<u> </u>	5	
TL1 -	Transmission Lines for New Sub	-Station					
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	3	3
3	220 KV	0	0	54	0	21	75
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC Cable 120Kms Route length (240 Ckt Kms + 1 Spare Cable of 120Kms)	0	0	0	0	0	0
		0	0	54	0	24	78
TL2 -	Transmission Lines for S/S when	e only Single So	ource & Single	ckt is available		27	10
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	0	0	0	0
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC CABLE	0	0	0	0	0	0
	TOTAL (TL2)	0	0	0	0	0	0
TL3 -	Transmission Lines to ensure Re	liability					
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	3	0	0	0	3
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC CABLE	0	0	0	0	0	0
	TOTAL (TL3)	0	3	0	0	0	3
TL4 -	Transmission Lines to have Alter	nate Source					
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	0	0	0	0
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC CABLE	0	0	0	0	0	0
TIC	TOTAL (TL4)		0	0	0	0	0
1120-	Transmission Lines for Strengthe	ening of Evacua		0	0	0	0
0	100 KV	0		0	0	0	0
2	400 KV	0		0	0	0	0
3	132 KV	0	0	0	0	0	0
4	110 100 KV	0	0	0	0	0	0
6		0	0	0	0	0	0
0		0	0	0	0	0	0
TOTA	L EHV LINES (TL1+TI 2+TI 3+TI 4	+TL5) (CKT KM	S)	U	U	U	U
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	3	3
3	220 KV	0	3	54	0	21	78
4	132 KV	0	0	0	0	0	0
5	110-100 KV	0	0	0	0	0	0
6	HVDC CABLE	0	ő	Ő	0	0	0
	TOTAL EHV LINES	0	3	54	0	24	81

STU FIVE YEAR TRANSMISSION PLAN FOR T	THE YEAR 2014-15 TO 2018-19
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1	TECHNICAL ABSTRACT R INFRA						
Sr. No.	Vol Level	2014-15	2015-16	2016-17	2017-18	2018-19	Total
Capa	city Addition (MVA)	an a		8	35 - X		
TF1 -	Capacity addition by New Sub-S	tation			50 X		8
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220/132 KV	0	0	250	0	1000	1250
4	220/33 KV	0	0	0	0	0	0
5	132/33 KV	0	0	0	0	0	0
6	110-100 KV	0	0	0	0	0	0
7	HVDC	0	0	0	0	0	0
TOTA	AL (TF1)	0	0	250	0	1000	1250
TF2 -	Capacity addition by Augmentat	ion by Addition	of Transformer	Š			
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	0	0	0	0
4	220/33 KV	0	0	0	0	0	0
5	132 KV	0	0	0	0	0	0
6	110-100 KV	0	0	0	0	0	0
7	HVDC CABLE	0	0	0	0	0	0
TOT	AL (TF2)	0	0	0	0	0	0
TF3 -	Capacity addition by Augmentat	ion by Replacen	nent of Transfor	rmer			
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	0	0	0	0
4	220/33 KV	0	0	0	0	0	0
5	132 KV	0	0	0	0	0	0
6	110-100 KV	0	0	0	0	0	0
7	HVDC CABLE	0	0	0	0	0	0
TOT	AL (TF3)	0	0	0	0	0	0
TOTA	AL CAPACITY ADDITION (TF1+TF	2+TF3) (MVA)			•		
1	765 KV	0	0	0	0	0	0
2	400 KV	0	0	0	0	0	0
3	220 KV	0	0	250	0	1000	1250
4	220/33 KV	0	0	0	0	0	0
5	132 KV	0	0	0	0	0	0
6	110-100 KV	0	0	0	0	0	0
7	HVDC CABLE	0	0	0	0	0	0
1	TOTAL CAPACITY ADDITION	0	0	250	0	1000	1250

Considering the huge quantum of work the scheme is to be strated earlier and will be completed by 2019-20 .Hence HVDC stations, Transformation capcity and ckt Km of HVDC cable is not considered in the abstract of the plan

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19						
	STU TRANSMISSION PLAN FOR RELIANCE INFRASTRUCTURE LIMITED						
			<u>NEW SCHEMES (2015-19)</u>				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	220/33 kV GOLIBAR (BKC) GIS S/S (2016-17)	MUMBAI	1) 220KV AAREY - GOLIBAR (BKC) D/C LINE (CABLE) - 11KMS 1) 2X125MVA, 220/33 KV T/F WITH 220 KV GIS BAYS 2) 220 KV GIS BAYS AT GOLIBAR 3) 220 KV GIS BAYS AT AAREY 4) 26 X 33 KV GIS BAYS	Purpose: To meet the increamental requirement of existing Consumers & to meet the Outlet requirement of TSU for the new Consumers around the area of BKC area, Santacruz (E) & Khar (E).			
2	220/33 KV NAGARI NIWARA S/S Stage I - 2016-17 Stage II- 2018-19	MUMBAI	1) LILO OF BOTH CIRCUITS 220 KV BORIVEL IMSETCL)-AAREY LINE AT NAGRI NIWARA S/S- 1.0 KMS WITH BAYS AT BOTH ENDS(2018-19) 2) 220 KV BORIVEL IMSETCL) - AAREY D/C LINE -15K.M 3) 3X 125MVA, 220/33 KV T/F WITH 220 KV GIS BAYS) (2018-19) 2) 220 KV GIS BAYS AT MSETCL BORIVALI 3) 220 KV GIS BAYS AT MAGARI NIWARA 4) 220 KV GIS BAYS AT AAREY 5) 39 X 33 KV GIS BAYS	The project is scheduled to be commissioned in 2 phases Stage-I 220 kV cable line between Aarey - MSETCL Borivali Stage-II Construction of 220 kV EHV sub- station at Nagari Niwara Purp ose: Reduce losses & enhance reliability, relieve Aarey Borivali Lines & create corridor for wheeling Power,fullfillment of TSU outlet requirments in Goregaon (E), Malad and filmcity area.			
3	220/33 kV AIRPORT GIS S/S (2018-19)	MUMBAI	1) LILO OF BOTH CIRCUITS 220KV AAREY- GOLIBAR (BKC) LINE AT AIRPORT WITH 220KV D/C LINE (CABLE) - 1.0 KMS WITH BAYS AT BOTH ENDS. 1) 2X125MVA, 220/33 KV T/F WITH 220 KV GIS BAYS 2) 220 KV GIS BAYS AT AIRPORT 3) 26 X 33 KV GIS BAYS	Purpose: To meet the load requirements of Airport and its vicinity. Connectivity for Airport EHV station from Aarey EHV station.			
4	220/33 kV DAHISAR HOUSING GIS S/S (2018-19)	MUMBAI	1) 220 KV GODBANDAR - DAHISAR DC LINE (CABLE) - 6.5 KM 1) 3X125MVA,220/33 KV T/F WITH 220 KV GIS BAYS 2) 220 KV GIS BAYS AT GHODBUNDER 3) 220 KV GIS BAYS AT DAHISAR HOUSING 5) 39 X 33 KV GIS BAYS	Purpose: To meet the furture growth & to meet transformation redundancy at Ghodbunder. Reduce losses & enhance reliability.			
5	2 X 500 MW HVDC (VSC BASE) SCHEME A) HVDC NAGOTHANE S/S B) HVDC AAREY S/S (2019-20) - Subject to allotment of land at Aarey	MUMBAI / RAIGAD	1) +/- 320 KV HVDC CABLE FROM NAGOTHANE - AAREY - 2 NO CABLE FOR EACH POLE AND 1 NO AS SPARE - 120 KMS 2) 400 KV D/C LINE FROM NAGOTHANE (MSETCL S/S) - R INFRA NAGOTHANE - 1 KM 3) 2 X 400kV GIS BAYS AT 400kV NAGOTHANE (MSETCL S/S) 4) 400/320 kV HVDC - IGBT VSC BASED CONVERTER TRANSFORMERS AT R INFRA - NAGOTHANE 5) 320/220 kV HVDC - IGBT VSC BASED CONVERTER TRANSFORMERS AT R INFRA - NAGOTHANE 5) 320/220 kV HVDC - IGBT VSC BASED CONVERTER TRANSFORMERS AT R INFRA - AAREY 6) LILO OF ONE CIRCUIT OF 400 KV DHABOL NAGOTHANE (MSETCL) LINE AT R INFRA 400 KV NAGOTHANE - 0.5 KM 7) 220kV LINK LINE FROM PROPOSED GIS HVDC S/S (R INFRA) AAREY TO EXISTING HVAC 220 KV AAREY - 1 KM	Considering the huge quantum of work the scheme is to be strated earlier and will be completed by 2019-20. Hence HVDC stations, Transformation capcity and ckt Km of HVDC cable is not considered in the abstract of the plan Purpose: i) To bring bulk power into Mumbai city to meet the load requirement. ii) To bring uninterrupted, quality power to Mumbai system. iii) Enhance reliability & operational flexibility and stability of grid by strengthening existing without affecting the short circuit level. network. iv) Required MVAR support to the network. In-principle approval by MERC to DPR received on 10th April 2014. (Timelines is subject to allotment of land at Aarey Milk colony from GoM).			

STU TRANSMISSION PLAN FOR MAHARASHTRA STATE

YEAR 2014-15 TO 2018-19

STU TRANSMISSION PLAN FOR RELIANCE INFRASTRUCTURE LIMITED

ADDITIONAL LINK LINES TO MEET DEMAND WITHOUT LOAD SHEDDING AND TO ENSURE RELIABILITY & QUALITY OF SUPPLY

SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS
1	220 KV D/C CABLES BETWEEN 220 KV RINFRA SAKI AND 220 KV TPC SAKI EHV S/S. (2015 - 16)	MUMBAI	220 KV D/C CABLE BETWEEN TPC SAKI - R INFRA SAKI - 1.5 KMS ALONG WITH 2 NO OF GIS BAYS AT TPC END (TO BE PROVIDED BY TPC)	Purpose: i) Interconnection of the two EHV S/S for network strengthening. ii) Additional connectivity to both RInfra Saki & TPC Saki EHV S/S. iii) Reduction in loading of Aarey - TPC Borivali & MSETCL Borivali - TPC Borivali lines. iv) To relieve the existing system from critical loading, particularly in peak conditions before any further network augmentation takes place.



SINNAR POWER TRANSMISSION COMPANY LTD. (SPTCL)

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE					
			YEAR 2014-15 TO 2018-19			
		SIN	NAR POWER TRANSMISSION COMP	PANY LIMITED		
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS		
1	400 KV SINNAR IPP S/S (2014-15)	A'NAGAR	400 KV D/C QUAD MOOSE TRANSMISSION LINE FROM SINNER TPP - EXISTING MSETCL BABLESHAWAR S/S WITH BAYS AT BOTH ENDS - 56 KMS	Evacuation of power 1350 MW (5 X 270 MW) From Sinnar IPP PHASE - I		
			1 x 80 MVAR BUS REACTOR			

NETWORK DIAGRAM INDICATING TRANSMISSION SYSTEM OF SPTCL



Not to scale

SPTCL Transmission system:

AMRAVATI POWER TRANSMISSION COMPANY LTD. (APTCL)

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE							
	YEAR 2014-15 TO 2018-19							
		AMRA	VATI POWER TRANSMISSION COMP	ANY LIMITED				
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS				
1	400 KV AMRAVATI IPP S/S (2014-15)	AKOLA	400 KV D/C QUAD MOOSE TRANSMISSION LINE FROM AMRAVATI TPP - AKOLA - II S/S WITH BAYS AT BOTH ENDS - 104 KMS (2015- 16) LILO OF 400 KV AKOLA - KORADI LINE AT AMRAVATI TPP WITH BAYS AT BOTH ENDS - T KMS	EVACUATION OF POWER 1350 MW (5 X 270 MW) FROM AMRAVATI IPP PHASE - I				

NETWORK DIAGRAM INDICATING TRANSMISSION SYSTEM OF APTCL



Not to scale

APTCL Transmission system:

ADANI POWER MAHARASHTRA LIMITED (APML)

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE						
	YEAR 2014-15 TO 2018-19						
	ADANI POWER TRANSMISSION COMPANY LIMITED						
SR NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK	REMARKS			
1	400 KV TIRODA SWITCHING (2014-15)	GONDIA	400 KV TIRODA - 400 KV WARORA SWITCHING STATION DC LINE WITH QUAD CONDUCTOR - 240 KM (COMMISSIONED ON 26.08.2012) 2 X 80 MVAR 400 KV BUS REACTOR AT TIRODA S/S (1 1/2 BREAKER SYSTEM)	For evacuation of IPP 3 x 660 MW Generation			



Legend:-

	400kV System
- m	Bus Reactor

Adani Power Maharashtra Lim	ite (A	PML)
		⊴∳
חד∟E:: System Configuration Diag	ram	Scale NTS
DRAWING NO ::	Rev.	Sheet
APML/SCD/01	1	1

MAHARASHTRA EASTERN GRID POWER TRANSMISSION COMPANY LTD. (MEGPTCL)

	STU TRANSMISSION PLAN FOR MAHARASHTRA STATE				
			YEAR 2014-15 TO 2018-19		
	MAH	IARASHTRA	EASTERN GRID POWER TRANSMISSION COMPANY LIMITED		
SR		· · · · · · · · · · · · · · · · · · ·			
NO	NAME OF S/S	DISTRICT	TOTAL SCOPE OF WORK		
1	765 KV TIRODA SWITCHING (2014-15)	GONDIA	1 X 1500 MVA (3X500 MVA 1 PH UNIT), 1 X 500 MVA SPARE UNIT , 765/400 KV ICT'S WITH BAYS 765 KV TIRODA - AKOLA - II 2 X SC LINE - 500 KM WITH BAYS 2 X 240 MVAR , 765 KV SWITCHABLE LINE REACTORS (6X80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO SPARE1 X 80MVAR. 1 X 240 MVAR BUS REACTOR AT TIRODA SS WITH 1 X 80 MVAR AS SPARE		
	ļ!	ļļ	765 KV SPARE LINE BAYS		
			1 X 1500 MVA (3 X 500MVA 1PH UNIT),1 X 500 MVA SPARE UNIT, 765/400 KV ICT's WITH BAYS		
			2 X 765 KV AKOLA - II - AURANGABAD - III (MSETCL) S/C LINE - 240 KM WITH BAYS		
2	765 KV AKOLA - II S/S (2015-16)	AKOLA	400 KV AKOLA - II - AKOLA - I D/C QUAD. LINE - 30 KMS WITH BAYS (2016-17) 2 X 240 MVAR , 765 KV SWITCHABLE LINE REACTORS (6 X 80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO. SPARE1 X 80 MVAR.) FOR KORADLILDC LINE 2 X 240 MVAR , 765 KV FIXED LINE REACTORS (6 X 80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO. SPARE1 X 80 MVAR.) FOR AURANGABAD III DC LINE 1 X 240 MVAR , 765 KV SWITCHABLE BUS REACTORS (3 X 80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO. SPARE1 X 80 MVAR.)		
			2 X 1500MVA (6 X 500 MVA 1PH UNIT) WITH 1 X 500 MVA SPARE UNIT ,765/400 KV ICT's		
3	765 KV KORADI - III S/S (2015-16)	II NAGPUR	WITH BAYS 400 KV DC LINE TO KORADI II (MSETCL) (ONLY BAYS WILL BE PROVIDED BY MEGPTCL) LILO OF BOTH S/C 765 KV TIRODA - AKOLA II LINES AT KORADI - III S/S - 25 KMS 4 X 240 MVAR , 765 KV SWITCHABLE LINE REACTORS (12 X 80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO. SPARE 2 X 80 MVAR.) FOR TIRODA AND AKOLA LINES		
	(2010-10)		1 X 240 MVAR , 765 KV SWITCHABLE BUS REACTORS (3 X 80 MVAR 1 PH UNITS FOR		
			765 KV SPARE LINE BAYS - 2 NOS		
	 		400 KV SPARE LINE BAYS - 2 NOS		
	765 KV A'BAD		2 X 240 MVAR , 765 KV FIXED LINE REACTORS (6 X 80 MVAR 1 PH UNITS FOR BOTH LINES WITH ONE NO. SPARE 1 X 80 MVAR.)		
4	(2015-16)	AURANGABAD	1 X 240 MVAR BUS REACTORS AT AURANGABAD III (MSETCL) WITH 1 X 80 MVAR AS		
	<u> </u>	Ĺ	2 NOS 765 KV LINE BAYS FOR AKOLA - II - AURNAGABAD - III (MSETCL)		
			LINE REACTORS		
SR NO	FROM BUS (MVAR)	TO BUS (MVAR)	LINE		
1	2X240	2X240	765 KV TIRODA - KORADI DC LINE		
2	2X240 2X240	2X240 2X240	765 KV. KORADI - AKOLA DC LINE 765 KV. AKOLA - AURANGABAD DC LINE		
		<u> </u>	BUS REACTORS		
SR			2/2		
NO					
2	1X2 1X2	240	765 KV KORADI		
3	1X2	240	765 KV. AKOLA		
4	1X2	240	765 KV AURANGABAD (MSETCL)		



STU FIVE YEAR TRANSMISSION P	LAN FOR THE YEAR 2014-15 TO 2018-1
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TECHNICAL ABSTRACT (MAHARASHTRA)								
Sr. No.	2014-15	2015-16	2016-17	2017-18	2018-19	Total		
New Sub-Station								
MSETCL	24	24	25	21	17	111		
ΤΑΤΑ	2	3	2	0	7	14		
R-INFRA	0	0	1	0	3	4		
APML	0	0	0	0	0	0		
APTCL	1	0	0	0	0	1		
SPTCL	1	0	0	0	0	1		
MEGPTCL	1	3	0	0	0	4		
TOTAL	29	30	28	21	27	135		
Transmission Lines (Ckt. KM)								
TOTAL EHV LI	NES (KM)							
MSETCL	2053	3428	3095	3730	2510	14816		
ΤΑΤΑ	142	54	43	55	662	956		
R-INFRA	0	3	54	0	24	81		
APML	0	0	0	0	0	0		
APTCL	14	208	0	0	0	222		
SPTCL	112	0	0	0	0	112		
MEGPTCL	1000	580	60	0	0	1640		
TOTAL	3321	4273	3252	3785	3196	17827		
Capacity Addit	ion (MVA)		-	-	-			
TOTAL CAPACITY ADDITION								
MSETCL	13656	8703	6900	5900	5285	40444		
ΤΑΤΑ	1235	2555	2170	90	4250	10300		
R-INFRA	0	0	250	0	1000	1250		
APML	0	0	0	0	0	0		
APTCL	0	0	0	0	0	0		
SPTCL	0	0	0	0	0	0		
MEGPTCL	1500	4500	0	0	0	6000		
TOTAL	16391	15758	9320	5990	10535	57994		

LIST OF EHV SUBSTATIONS KEPT ON HOLD FOR CONSIDERATION BEYOND

Sr No	Name of substation	District	Zone	Remarks
1	132 KV Sahuli	Bhandara		
2	132 KVTumsar	Bhandara	Nagpur	
3	132 KV Bhuyar	Chandrapur		
4	132 KV Asegaon	Amravati		
5	132 KV Karajgaon	Amravati	Amravati	
6	220 KV Pachod	Aurangabad		
7	132 KV Gajgaon	Aurangabad		
8	220 KV Jalkot	Latur		
9	132 KV Panchincholi	Latur	Aurongohod	
10	132 KV Kondjigad	Osmanabad	Aurangabau	
11	132 KV Sarola	Beed		
12	220 KV Sinnar	Nasik		
13	132 KV Shrirampur	Ahmednagar		
14	132 KV Mendhavane	Ahmednagar	NT	
15	132 KV Mehunbare	Jalgaon	INASIK	
16	132 KV Kothali	Jalgaon		
17	400 KV Ambernath	Thane		
18	220 KV Boisar MIDC	Thane		
19	220 KV Vashi	Thane	Vashi	
20	220 KV Bhivandi- IV	Thane		
21	220 KV Rajgurunagar	Pune	Duno	
22	132 KV Khanapur	Pune	ruite	
23	220 KV Kharsundi	Sangli	Karad	
24	132 KV Pokharni	Osmanabad	Aurangabad	Evacuation of solar generation of MSPGCL.

2014-15 TO 2018-19

THANK YOU