

Best case

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submitted 8/9/15.



Agility      Care  
Ethics  
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**Case 182 of 2014**

**- Comprehensive Network Rollout Plan**

08.09.2015

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**Mumbai Suburban Area**

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## Mumbai Suburban Area – Network Components



Network Components	Realistic Scenario		Optimistic Scenario	
	Network Projected	Capex Projected (Rs. Crore)	Network Projected	Capex Projected (Rs. Crore)
	d	f=d*e	a	c=a*b
DSS of 20 MVA	8	102	10	127
DSS of 40 MVA	4	102	5	127
33 kV Cable Network (km)	120	89	150	111
11 kV Cable Network (km)	256	211	320	264
CSS - 0.5 / 1 MVA	364	163	455	204
Additional Transformer for CSS	233	28	291	35
LT Cable Network (km)	320	117	399	146
<b>Total</b>		<b>811</b>		<b>1014</b>

## Mumbai Suburban Area – Network Components Phasing



Network Components	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	Total
Number of DSS of 20 MVA	1 to 2	1	1	1	1 to 2	1	2	8 to 10
Number of DSS of 40 MVA	0	1	0 to 1	1	0 to 1	1	1	4 to 5
33 kV Cable Network (km)	10	20	10 to 15	25 to 40	10 to 15	20 to 25	25	120 to 150
11 kV Cable Network (km)	20 to 40	40 to 42	30 to 60	40 to 44	40 to 48	40	46	256 to 320
Number of CSS - 0.5 MVA	29 to 40	30	30 to 40	30 to 50	40 to 60	40 to 70	40	239 to 330
Number of CSS - 1 MVA or more	16	17	17	18	19	20	18	125
Additional Transformer for CSS	30	32	30 to 35	32 to 40	30 to 48	32 to 51	47 to 55	233 to 291
LT Cable Network (km)	40 to 45	43	40 to 52	62	42 to 72	48 to 81	45	320 to 399



## Mumbai Suburban Area – Network Capex Phasing



Network Components	Rs. Crore							Total
	Year 1	Year 2	Year 3	Year 4	Year 5	Year 6	Year 7	
DSS of 20 MVA	13 to 25	13	13	13	13 to 25	13	25	102 to 127
DSS of 40 MVA	0	25	0 to 25	25	0 to 25	25	25	102 to 127
33 kV Cable Network	7	15	7 to 11	19 to 30	7 to 11	15 to 19	19	89 to 111
11 kV Cable Network	16 to 33	33 to 35	25 to 49	33 to 36	33 to 40	33	38	211 to 264
Consumer Substation (CSS) - 0.5 MVA	11 to 16	12	12 to 16	12 to 20	16 to 24	16 to 28	16	94 to 130
Consumer Substation (CSS) - 1 MVA or more	9	10	10	11	11	12	11	74
Additonal Transformer for CSS	4	4	4 to 4	4 to 5	4 to 6	4 to 6	6 to 7	28 to 35
LT Cable Network	15 to 16	16	15 to 19	23	15 to 26	18 to 29	16	117 to 146
Capex in Mumbai Suburbs (Rounded Values)	80 to 110	130	80 to 150	140 to 160	100 to 140	130 to 160	160	820 to 1010



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**Comprehensive Network Rollout  
Plan for entire Licence Area**

# Network Rollout Plan-Mumbai City Area



City Area

Network Components	Realistic Scenario			Optimistic Scenario			Earlier Submission	Capex
	Network Projected	Unit price	Capex Projected (Rs. Crore)	Network Projected	Unit price	Capex Projected (Rs. Crore)		
	d	e	f=d*e	a	b	c=a*b		
DSS of 20 MVA							3	102
DSS of 40 MVA	9	0	229	10	0	254	2	76
33 kV Cable Network (km)	90	0	67	100	0	74	70	82
11 kV Cable Network (km)	288	0	237	320	0	264	112	185
CSS - 0.5 / 1 MVA	365		215	409		241	159	38
LT Cable Network (km)	499	0	182	499	0	182	109	52
Additional CSS			0			0		4
<b>Total</b>			<b>930</b>			<b>1015</b>		<b>537</b>

# Network Rollout Plan-Mumbai Suburban Area



Mumbai Suburbs

Network Components	Realistic Scenario			Optimistic Scenario			Earlier Submission	Capex
	Network Projected	Unit price	Capex Projected (Rs. Crore)	Network Projected	Unit price	Capex Projected (Rs. Crore)		
	d	e	f=d*e	a	b	c=a*b		
DSS of 20 MVA	8		102	10		127	3	114
DSS of 40 MVA	4	0	102	5	0	127	8	51
33 kV Cable Network (km)	120	0	89	150	0	111	150	82
11 kV Cable Network (km)	256	0	211	320	0	264	320	171
CSS - 0.5 / 1 MVA	364		163	455		204	581	259
Additional Transformer for CSS	233		28	291		35		31
LT Cable Network (km)	320	0	117	399	0	146	399	134
<b>Total</b>			<b>811</b>			<b>1014</b>		<b>843</b>

# Comprehensive Network Rollout Plan – Licence Area

Network Components	Realistic Scenario			Optimistic Scenario			Earlier Submission	
	Network Projected	Unit price	Capex Projected (Rs. Crore)	Network Projected	Unit price	Capex Projected (Rs. Crore)	Total	Capex
	d	e	f=d*e	a	b	c=a*b		
DSS of 20 MVA	8	13	102	10	13	127	6	216
DSS of 40 MVA	13	25	331	15	25	381	10	127
33 kV Cable Network (km)	210	1	156	250	1	186	220	163
11 kV Cable Network (km)	544	1	448	640	1	527	432	356
CSS - 0.5 / 1 MVA	729	0	378	864	0	445	740	297
Additional Transformer for CSS	233	0	28	291	0	35		35
LT Cable Network (km)	819	0	299	898	0	328	508	186
<b>Total</b>			<b>1741</b>			<b>2029</b>		<b>1380</b>

