

Agility
Care
Excellence
Integrity
Trust
Collaboration
Respect



Tata Power-Distribution: Application for Distribution License Case No 90 of 2014- Technical Validation Session No 2

23rd April 2014



Agility Care
Excellence Integrity
Trust Collaboration Respect

Direction of the Hon'ble Commission
during TVS held on 17.04.2014

Direction – TVS dated 17.04.2014

1. Tata Power to present the Change in their Demography of consumers over the past few years
2. Tata Power to provide details of Consumer Mix expected by Tata Power-D in the future
3. Tata Power to substantiate the Network Readiness to serve the above consumer mix.
4. Any other suggestions and views from Tata Power

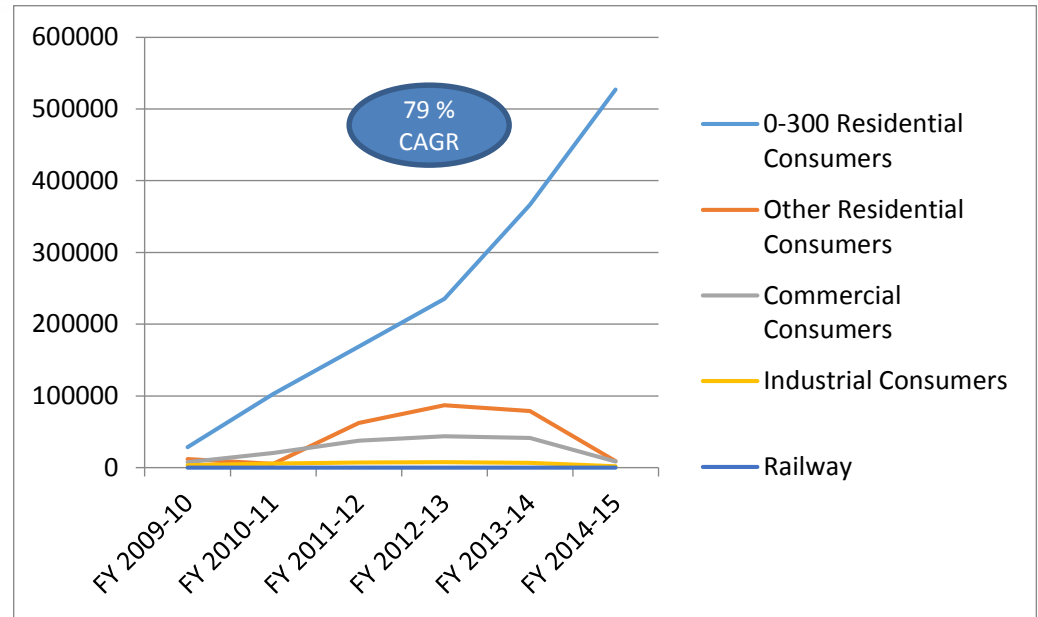
Agility
Care
Ethics
Safety Diligence
Respect

Change in Consumer Demography of Tata Power (Past)

Change in Consumer Demography of Tata Power

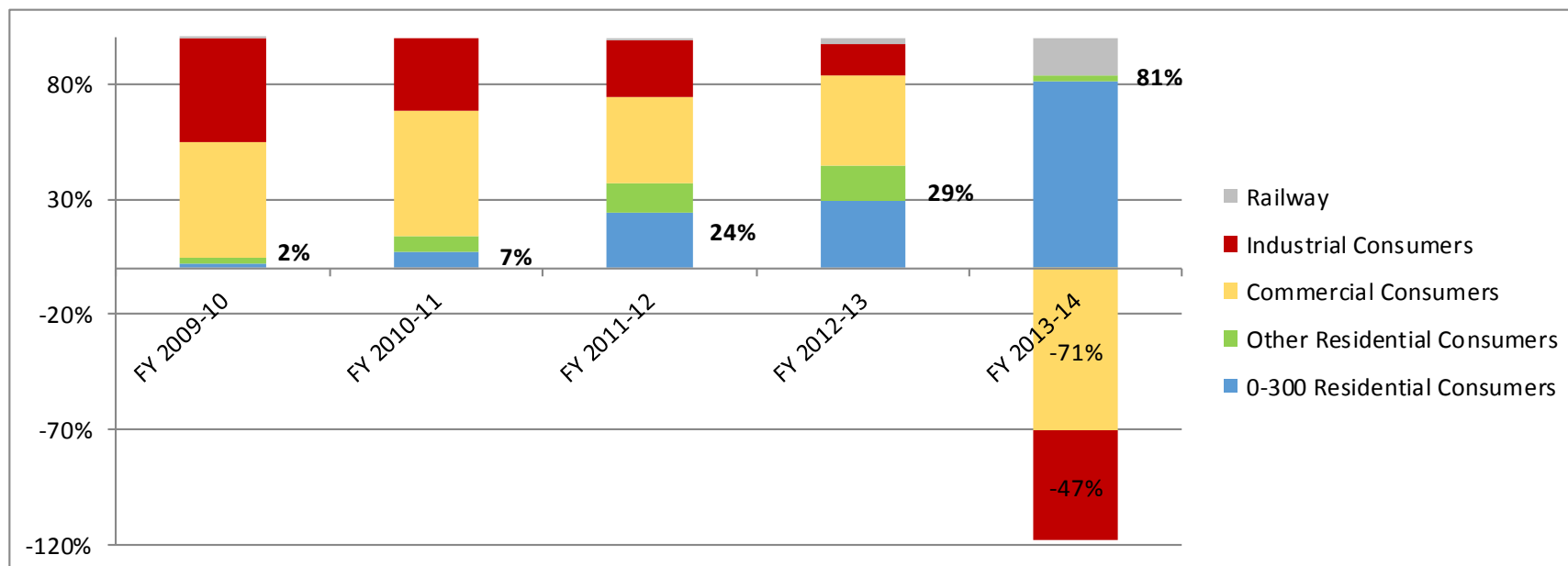


➤ Share of 0-300 residential consumers in Tata Power's consumer mix has increased at a CAGR of 79% from FY 2009-10 and is the largest contributor to the growth of Tata Power-D's consumer base



Consumer Mix	FY 2009-10	FY 2010-11	FY 2011-12	FY 2012-13	FY 2013-14	FY 2014-15 - Est.
Number of Consumers						
0-300 Residential Consumers	28297	102619	168860	235116	366236	527236
Other Residential Consumers	12038	5207	62321	86741	78786	9008
Commercial Consumers	7639	20492	37519	43802	41272	8553
Industrial Consumers	3194	5665	7146	7422	6475	1743
Railway	1	1	1	1	1	1
Total	51169	133984	275847	373082	492770	546541

Change in Consumer Demography – Year wise incremental Sales Mix



Incremental Sales

Consumer Category	FY 2008-09	FY 2009-10		FY 2010-11		FY 2011-12		FY 2012-13		FY 2013-14	
		MUs	%	MUs	%	MUs	%	MUs	%	MUs	%
0-300 Residential Consumers	46.68	11.93	2%	118.19	7%	340.69	24%	215.38	29%	210.35	81%
Other Residential Consumers	32.41	12.31	2%	112.15	7%	182.51	13%	119.37	16%	6.99	3%
Commercial Consumers	557.96	256.37	50%	935.85	55%	543.76	38%	291.38	39%	(182.80)	-71%
Industrial Consumers	714.11	232.47	45%	545.79	32%	357.14	25%	100.65	13%	(122.48)	-47%
Railway	823.80	0.12	0%	(2.79)	0%	9.64	1%	22.15	3%	41.48	16%

- Incremental Sales is the change in sales as compared to the previous year

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Consumer Mix expected in the Business Plan

Expected Consumer Mix in 5 years



Expected Consumer Mix Details

Lakhs

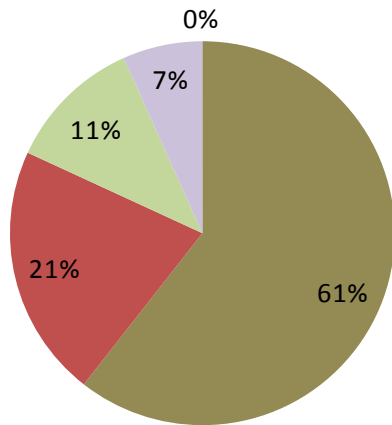
Consumer	Residential Consumers		Commercial	Industrial	Total
	0-300	Others			
Existing Consumers	3.55	0.78	0.41	0.06	4.81
New Consumers Mumbai Suburbs	7.38	0.08	-0.31	-0.04	7.11
New Consumers South Mumbai	0.69	0.10	0.29	0.01	1.09
Estimated Consumers	11.61	0.97	0.39	0.03	13.01

Based on present tariff trend

Conclusion – Change in Consumer Mix over the period

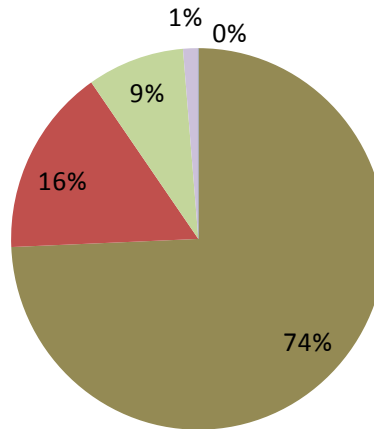


Consumer Mix - FY 2008-09



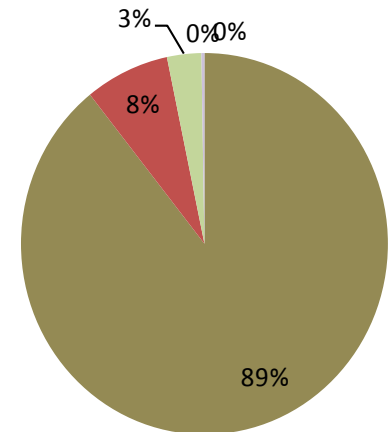
- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

Consumer Mix - FY 2013-14



- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

Consumer Mix - FY 2018-19

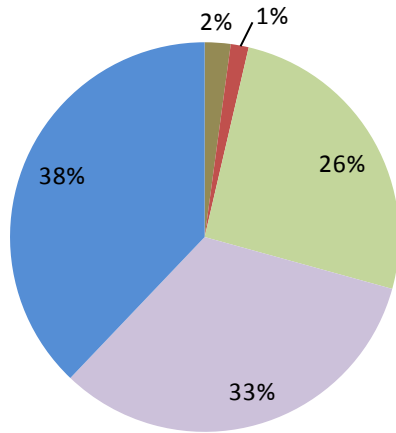


- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

Conclusion – Change in Sales Mix over the period

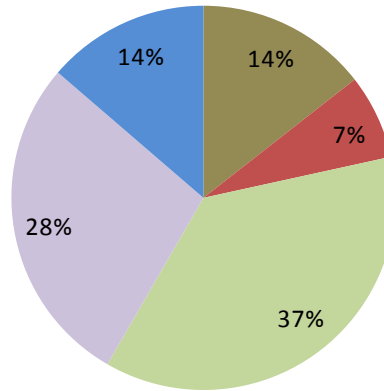


Sales Mix - FY 2008-09



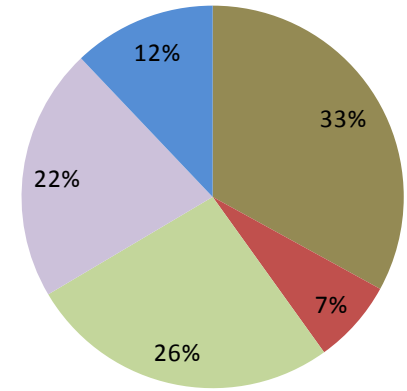
- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

Sales Mix - FY 2013-14



- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

Sales Mix - FY 2018-19

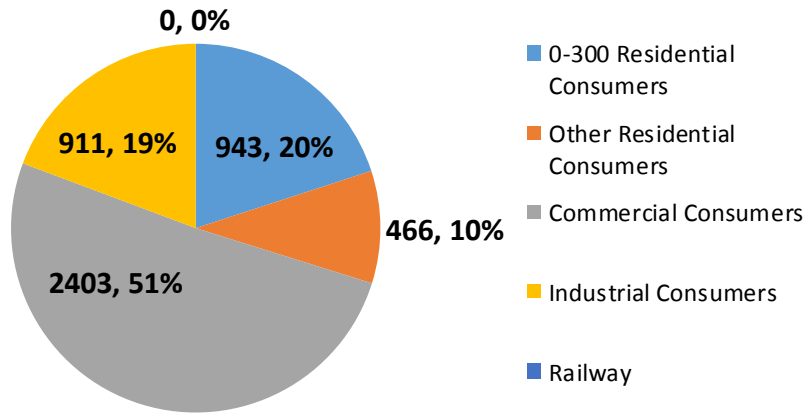


- 0-300 Residential Consumers
- Other Residential Consumers
- Commercial Consumers
- Industrial Consumers
- Railway

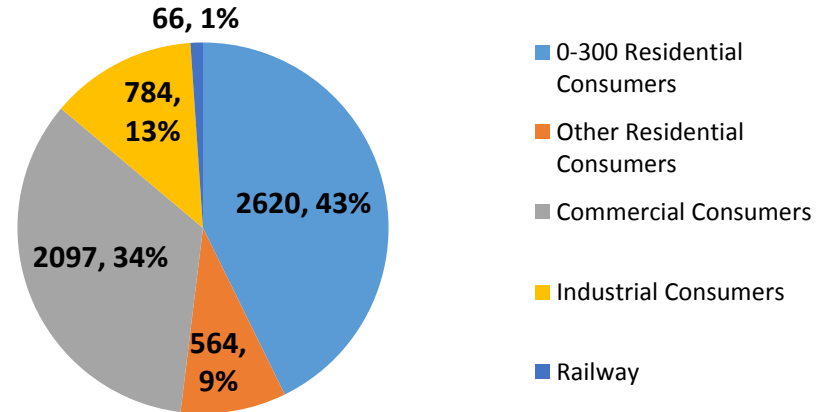
Change in Sales Mix – without Legacy Bulk Sales



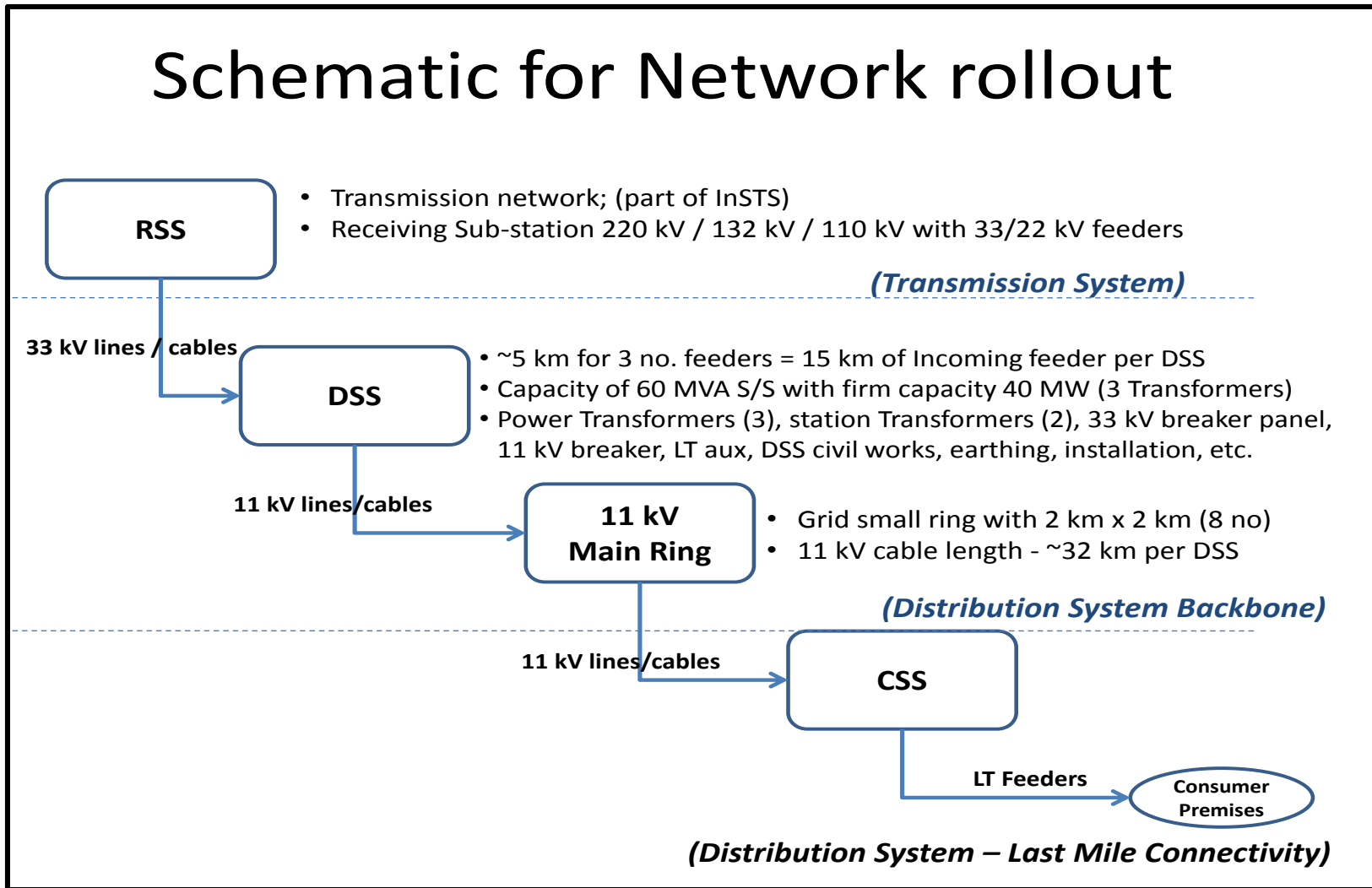
FY 2013-14 (w/o Legacy Sales)



FY 2018-19 (w/o Legacy Sales)



Schematic for Network rollout



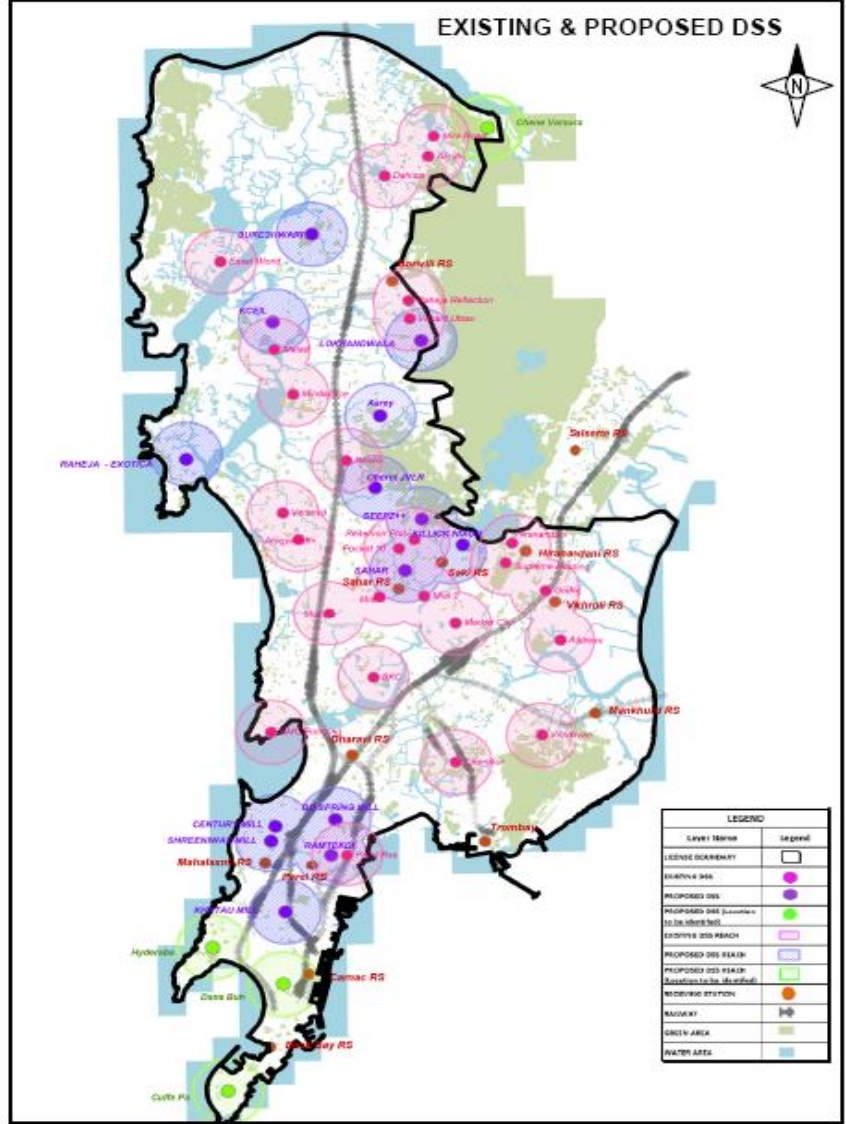
Distribution License: Network Rollout



Particulars (DSS)	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Total	Beyond FY 2018-19	Grand Total
South Mumbai		1	2	1	1	5	6	11
North Mumbai	4	2	2	1	2	11	7	18
Chene Versova				1		1	0	1
Total	4	3	4	3	3	17	13	30

Note: For North Mumbai the DSS addition is likely to be enhanced to 2 after due diligence in FY 2017-18

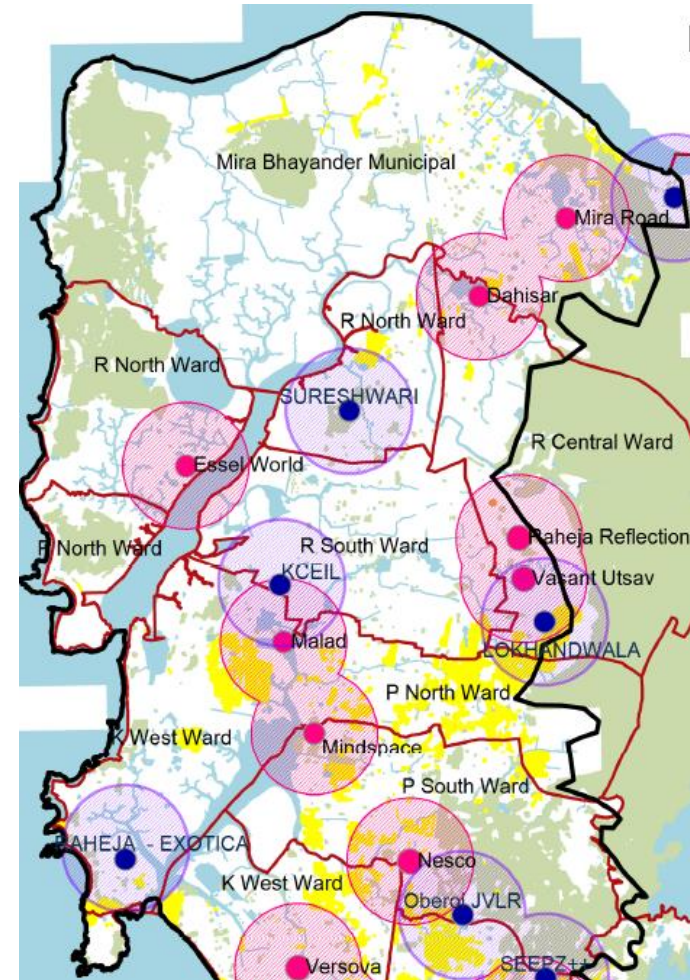
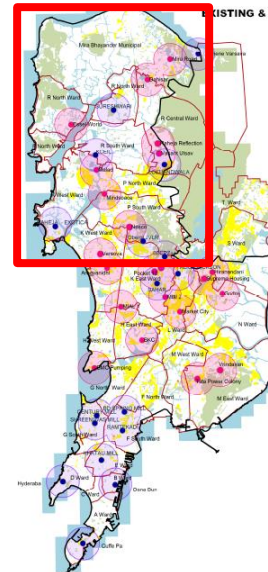
- The DSS shown in the figures are places where land has been identified.



Network Potential to cater to Consumers by FY 2018-19 – Northern Suburbs



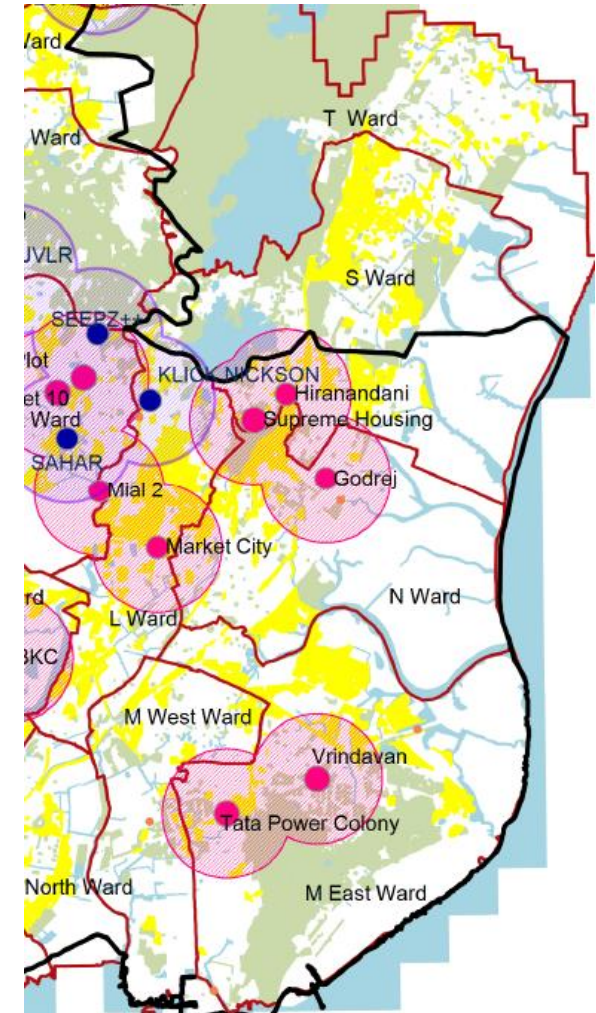
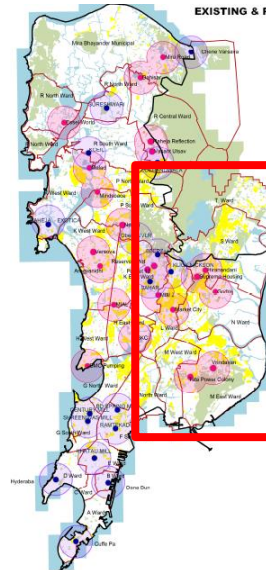
Ward	Installed Capacity (MVA)	Available Capacity for meeting the load of prospective consumers(MVA)	Potential Consumers
Mira Bhayander	55	51	72963
P North	68	55	78346
R Central	81	69	99137
R North	31	31	44251



Network Potential to cater to Consumers by FY 2018-19 – Central Suburbs



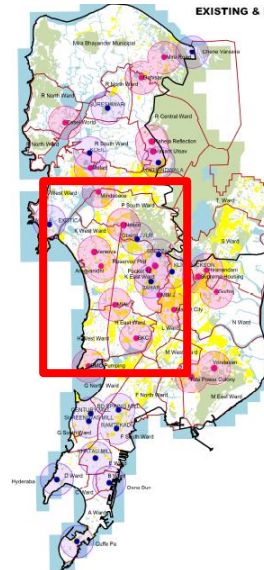
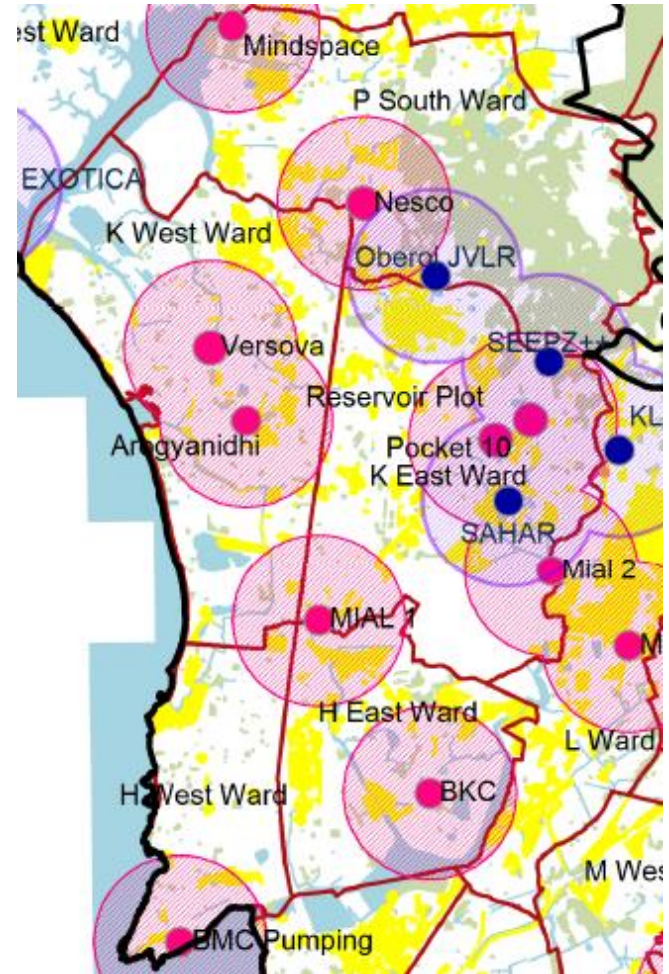
Ward	Installed Capacity (MVA)	Available Capacity for meeting the load of prospective consumers(MVA)	Potential Consumers
L	74	60	85511
M East	21	18	26024
M West	3	3	3951
N	51	48	69170



Network Potential to cater to Consumers by FY 2018-19 – Central & Western Suburbs



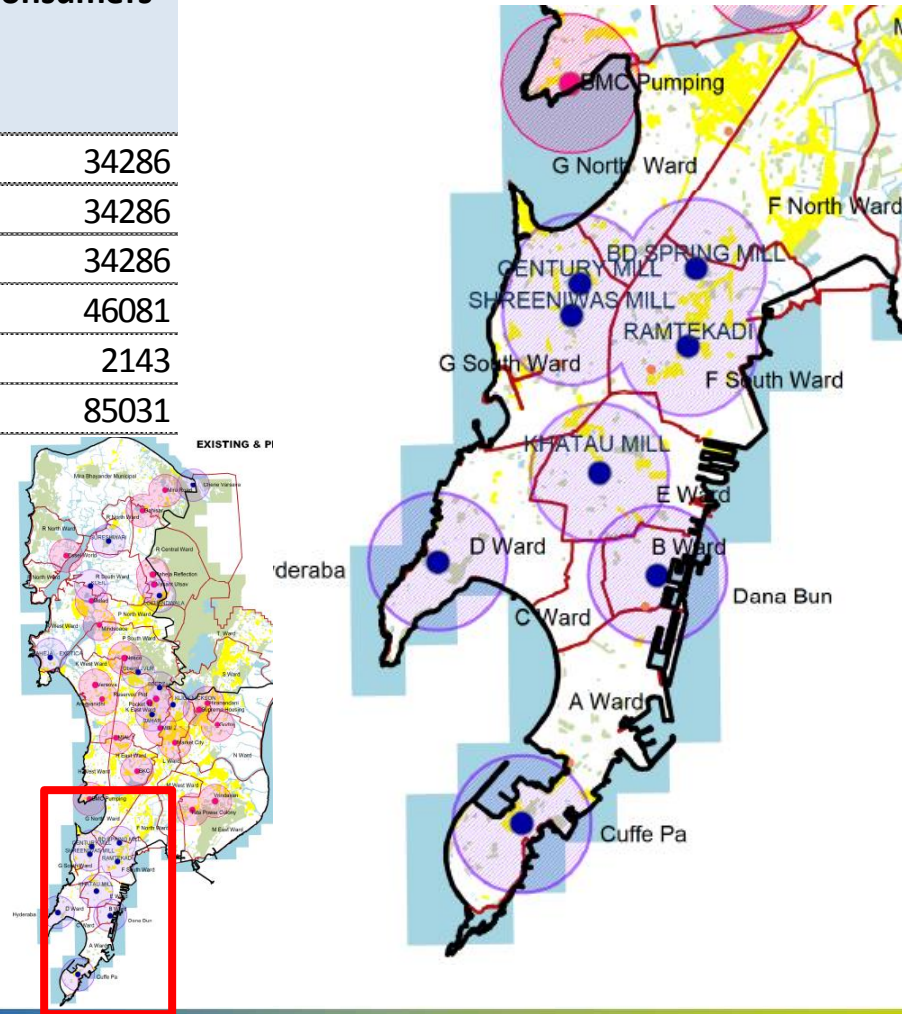
Ward	Installed Capacity (MVA)	Available Capacity for meeting the load of prospective consumers(MVA)	Potential Consumers
H East	36	31	43857
H West	3	3	3816
K East	175	146	208336
K West	71	64	91227



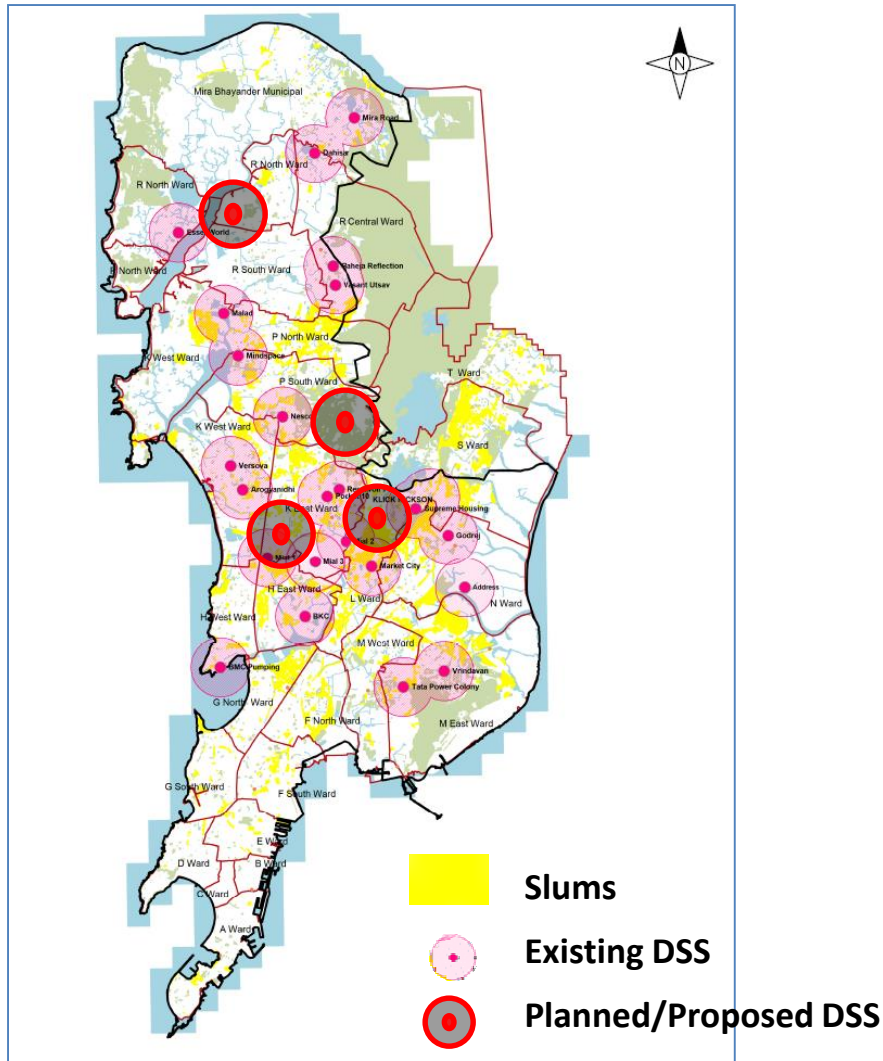
Network Potential to cater to Consumers by FY 2018-19 – South Mumbai



Ward	Installed Capacity (MVA)	Available Capacity for meeting the load of prospective consumers(MVA)	Potential Consumers
A	24	24	34286
B	24	24	34286
D	24	24	34286
E	33	32	46081
F North	2	2	2143
F South	61	60	85031

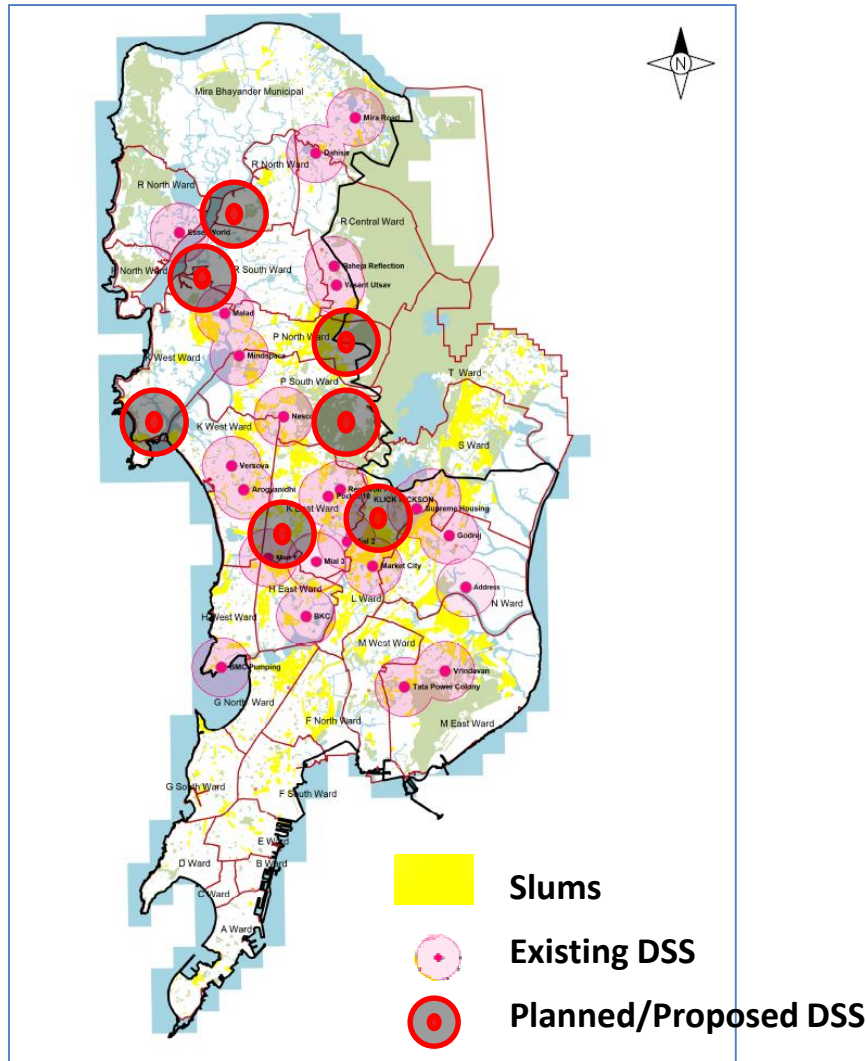


Additions in FY 2014-15



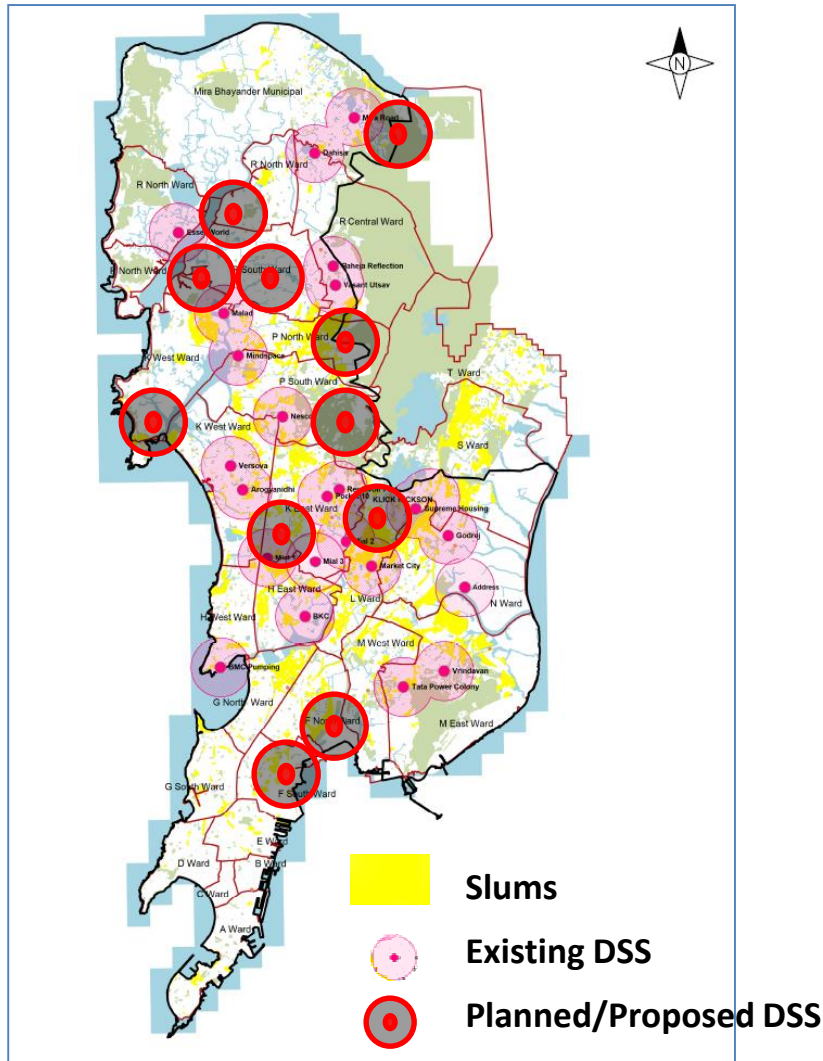
	EXISTING DSS	FY 15
1	MIRA	
2	DAHISAR	
3	ESSELWORLD	
4	VASANT UTSAV	
5	MALAD	
6	MINDSPACE	
7	VERSOVA	
8	RESERVIOR PLOT	
9	POCKET 10	
10	HIRANANDANI	
11	SUPREME	
12	GODREJ	
13	AIRPORT 1	
14	AIRPORT 2	
15	AIRPORT 3	
16	BKC	
17	BANDRA PUMPING	
18	VRINDAVAN	
19	MARKET CITY	
20	ARYOGANIDHI	
21	CHEMBUR –RCF	
22	RAHEJA REFLECTION	
23	NESCO	
24	ADDRESS	
25	AKRUTI	
26	KILLICK NIXON	
27	PAREL	
28		OBERIO JVLR
29		SURESHWARI
30		SEEPZ ++
31		DSS 4

Additions in FY 2015-16



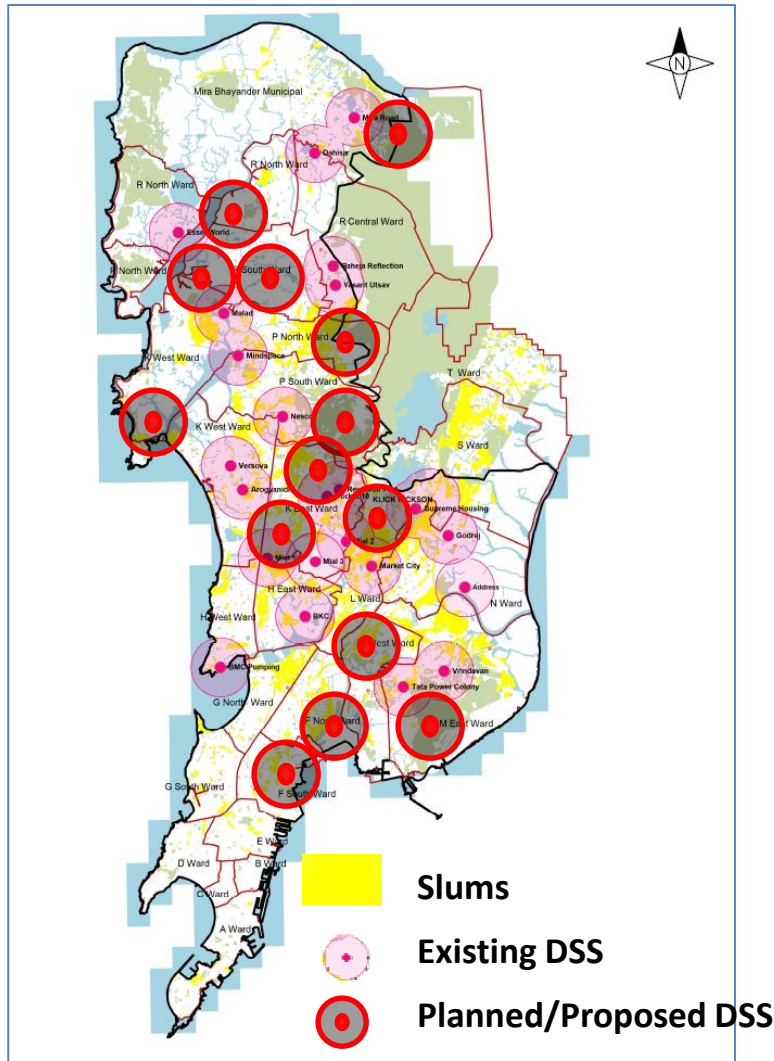
	EXISTING DSS	FY 15	FY 16
1	MIRA		
2	DAHISAR		
3	ESSELWORLD		
4	VASANT UTSAV		
5	MALAD		
6	MINDSPACE		
7	VERSOVA		
8	RESERVIOR PLOT		
9	POCKET 10		
10	HIRANANDANI		
11	SUPREME		
12	GODREJ		
13	AIRPORT 1		
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21	CHEMBUR –RCF		
22	RAHEJA REFLECTION		
23	NESCO		
24	ADDRESS		
25	AKRUTI		
26	KILLICK NIXON		
27	PAREL		
28		OBERIO JVLR	
29		SURESHWARI	
30		SEEPZ ++	
31		DSS 4	
32			LOKHANDWALA
33			RAHEJA EXOTICA
34			KCEIL

Additions in FY 2016-17



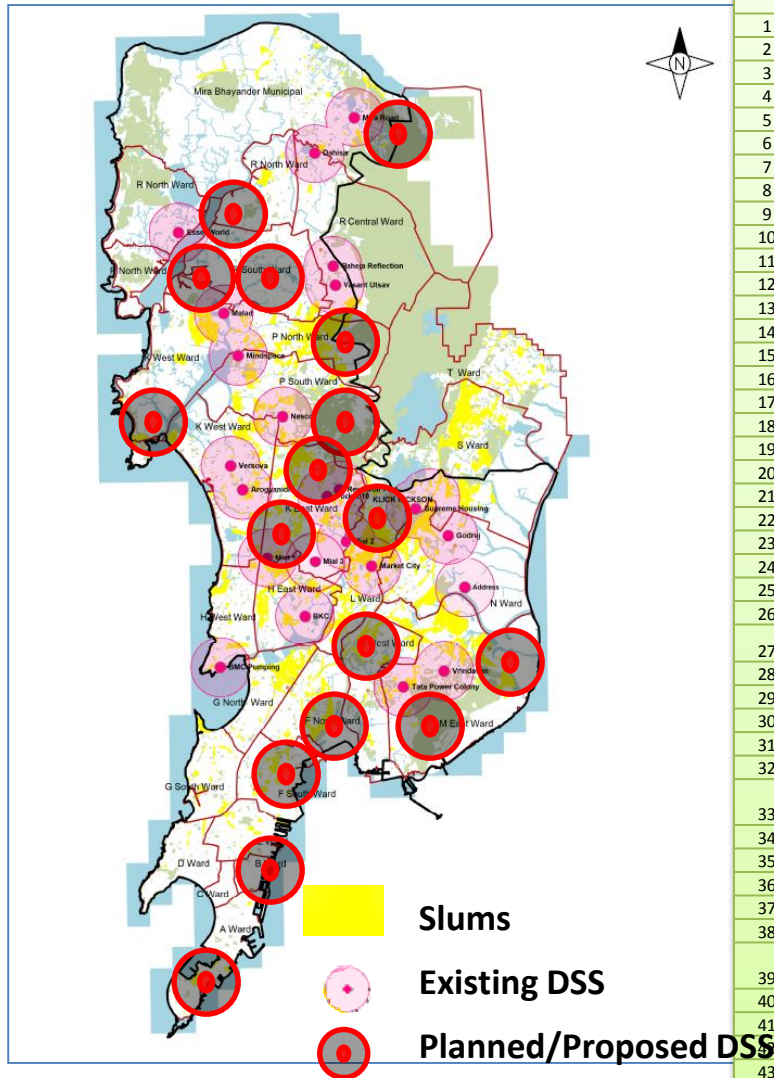
	EXISTING DSS	FY 15	FY 16	FY 17
1	MIRA			
2	DAHISAR			
3	ESSELWORLD			
4	VASANT UTSAV			
5	MALAD			
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30		SEEPZ ++		
31		DSS 4		
32			LOKHANDWALA	
33			RAHEJA EXOTICA	
34			KCEIL	
35				RAMTEKDI
36				CHENE VARSAVE
37				BOMBAY DYEING
38				WADALA
				ESIC

Additions in FY 2017-18



	EXISTING DSS	FY 15	FY 16	FY 17	FY 18
1	MIRA				
2	DAHISAR				
3	ESSELWORLD				
4	VASANT UTSAV				
5	MALAD				
6	MINDSPACE				
7	VERSOVA				
8	RESERVIOR PLOT				
9	POCKET 10				
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12	GODREJ				
13	AIRPORT 1				
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30		SEEPZ ++			
31		DSS 4			
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33			RAHEJA EXOTICA		
34			KCEIL		
35				RAMTEKDI	
36				CHENE VARSAVE	
37				BOMBAY DYEING	
38				WADALA	
39				ESIC	
40					CHEMBUR TAPPING STRUCTURE
41					HDIL
					TCS BANAYAN

Additions in FY 2018-19



	EXISTING DSS	FY 15	FY 16	FY 17	FY 18	FY 19
1	MIRA					
2	DAHISAR					
3	ESSELWORLD					
4	VASANT UTSAV					
5	MALAD					
6	MINDSPACE					
7	VERSOVA					
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35			KCEIL			
36				RAMTEKDI		
37				CHENE VARSAVE		
38				BOMBAY DYEING WADALA		
39				ESIC		
40					CHEMBUR TAPPING STRUCTURE	
41					HDIL	
42					TCS BANAYAN	
43						CUFFE PARADE
44						DANA BUNDER
						MANKHURD

Network Potential to cater to Consumers by FY



2018-19

Ward	Potential Consumers	Higher proportion of Slums
A	0.34	
B	0.34	
D	0.34	
E	0.46	
F North	0.02	Slum
F South	0.85	Slum
G North	0.09	Slum
G South	1.20	
H East	0.44	
H West	0.04	
K East	2.08	Slum
K West	0.91	Slum
L	0.86	Slum
M East	0.26	Slum
M West	0.04	Slum
Mira Bhayander	0.73	
N	0.69	Slum
P North	0.78	Slum
P South	1.47	Slum
R Central	0.99	
R North	0.44	
R South	0.71	
S	0.48	
Grand Total	14.58	
Grand Total - Slum Dominated	8.067	

Network capacity (potential consumers) = 14.58 Lakhs

Network capacity (potential consumers) in Slum dominated areas = 8.06 Lakhs

Expected additions

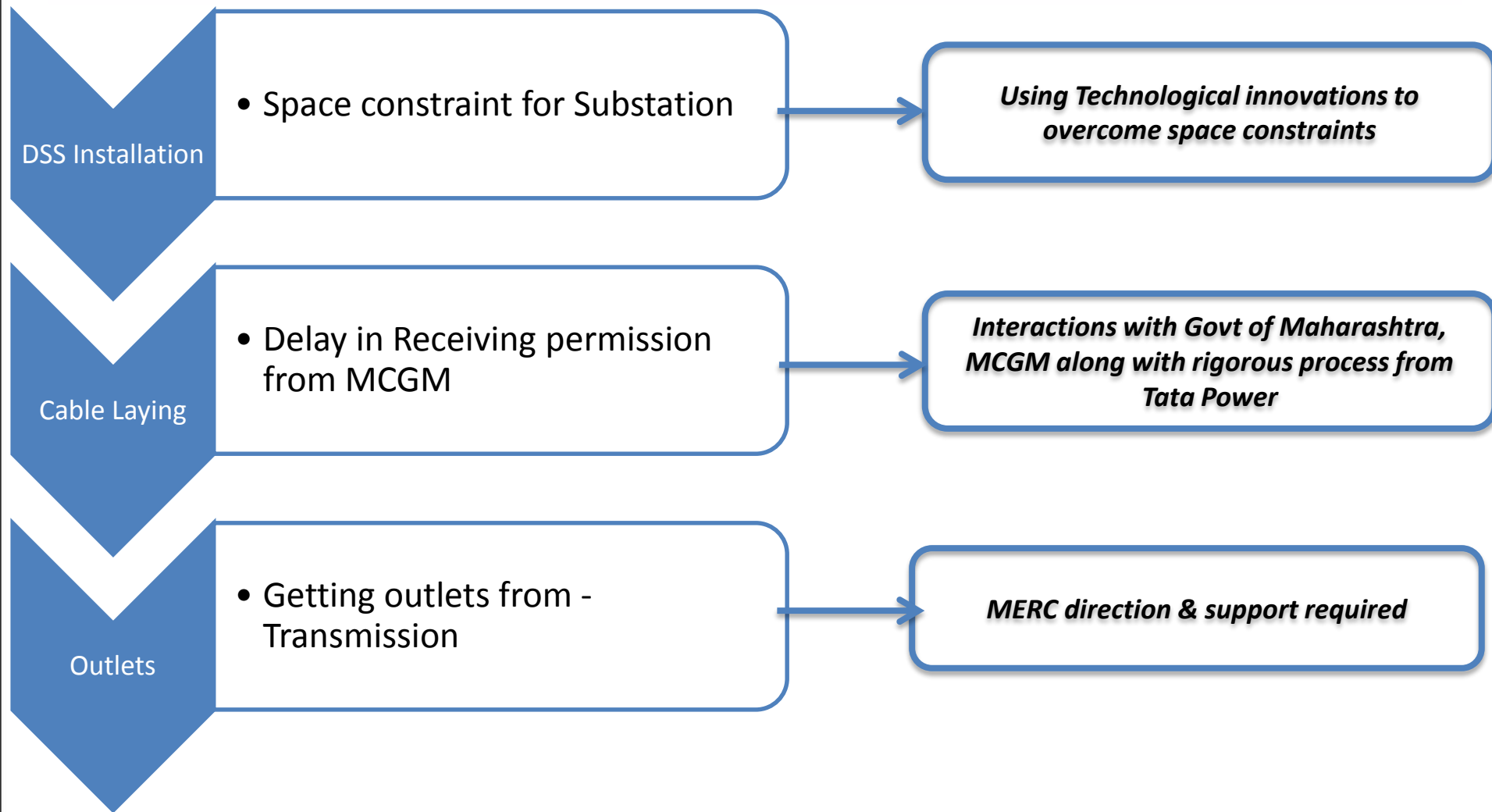
Particulars	FY 2014-15	FY 2015-16	FY 2016-17	FY 2017-18	FY 2018-19	Average
DSS (no.)	4	3	4	3	3	3
33 kV cable (km)	60	45	60	45	45	51
11 kV cable (km)	128	96	128	96	96	109
CSS (no.)	96	72	96	72	72	82
LT Feeder (km)	480	360	480	360	360	408

Tata Power has achieved the following in FY 2013-14

- Commissioned 6 DSS and 85 CSS
- Laid HT network of 266 kms and LT network of 336 kms

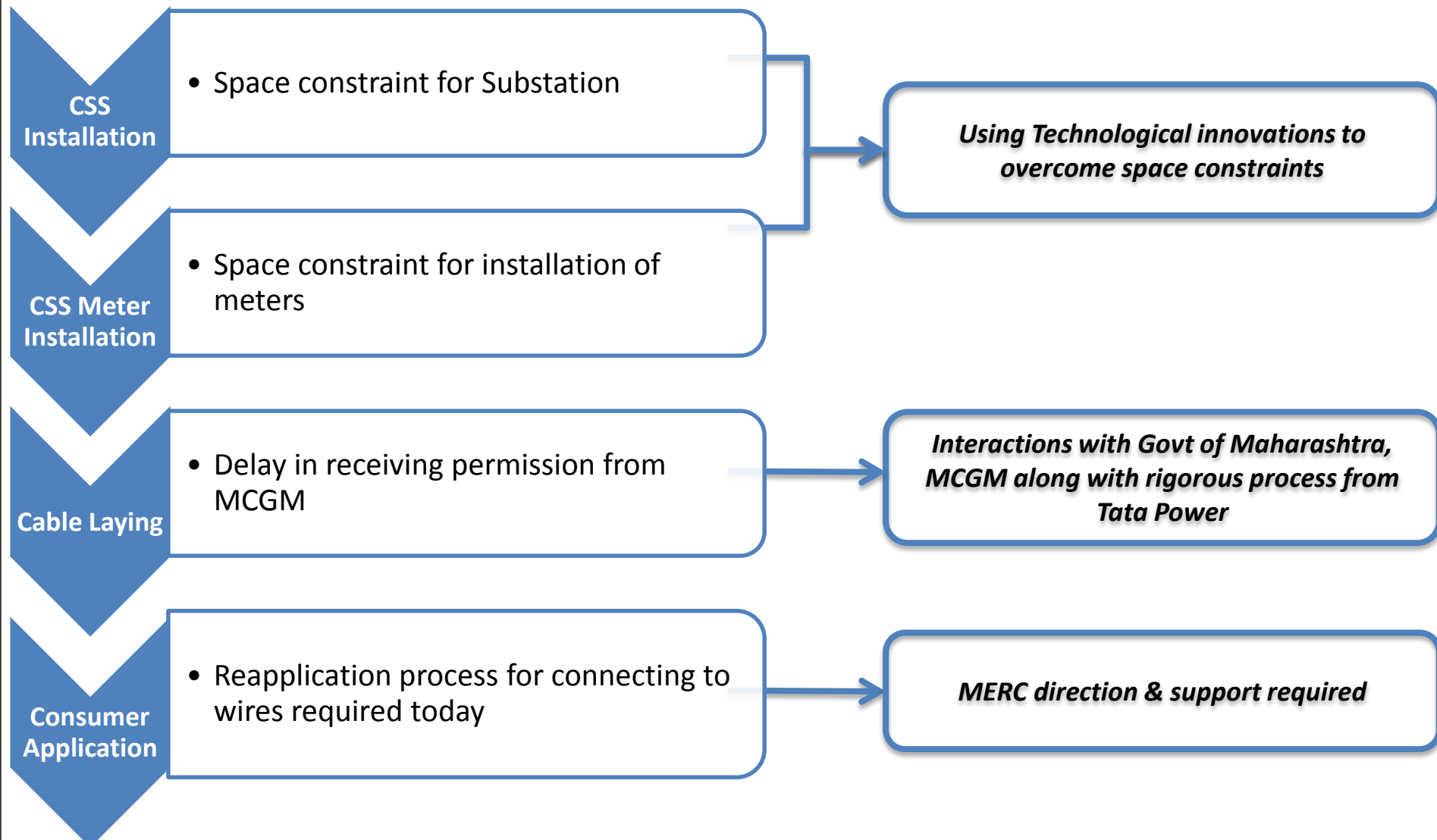
- Tata Power is creating capacity to serve more than 14 lakh consumers by FY 2018-19 which is about 1/3rd the current total consumer base of Mumbai.
- Out of 14 lakh potential consumer network capacity, more than 8 lakh network capacity would be around the slum dominated areas
- Tata Power proposes to have its backbone network spread across its entire license area.

Difficulties in laying backbone network



Difficulties in connecting new consumers to Tata

Power's wires



Space Constraints planned to be mitigated by technology interventions



Plan A <i>(Space available)</i>	Plan B <i>(Limited Space available)</i>	Plan C <i>(Space not available)</i>
DSS ➔		
<ul style="list-style-type: none"> • Conventional DSS 	<ul style="list-style-type: none"> • 3 tier DSS • E House 	<ul style="list-style-type: none"> • Inclusion of DSS in 25 year MCGM Development Plan and Procuring DSS space at market price
CSS		
<ul style="list-style-type: none"> • Conventional CSS 	<ul style="list-style-type: none"> • HVDS & Pole Mounted CSS 	<ul style="list-style-type: none"> • CSS over Public Spaces – Toilets, Parking, etc. • Underground CSS
Meter Installation		
<ul style="list-style-type: none"> • Meter Room 	<ul style="list-style-type: none"> • Weather Proof Meter Panel 	<ul style="list-style-type: none"> • Split Metering

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Difficulties in consumer acquisition
and assistance requested from MERC

Consumer Related

- No formal application required for existing Tata Power's consumers to shift to Tata Power's wires
- Waiver of Service Connection Charges for existing consumers to shift to Tata Power's wires – Tata Power has already filed an application with the Hon'ble Commission
- Enable Mumbai consumers across categories to exercise their choice of utility.

Transmission Outlets

- Augmentation of distribution network in Mumbai Suburbs requires feed from Transmission outlets. Tata Power is following up with STU and both transmission utilities.

DSS

- Tata Power has already requested MCGM ward officers to provide for DSS/CSS space over common public area like toilets, parking spaces, etc.
- Hon'ble Commission may also request MCGM to draft a policy for fixing charges to support such utilisation of public spaces

CSS

Lease Charges for spare capacity allocation of CSS may be determined for cross usage by any other utility. This will resolve the space constraints experienced for CSS

Cable Laying

- Separate cell of MCGM for permission for excavation

Thank You - Lighting up Lives!



TATA POWER

SAVE & BENEFIT
by shifting to
TATA POWER

Tata Power has laid an extensive network in the areas mentioned here under. All you have to do is to get your Society/ Building / Chawl/ SRA / Slum to identify space for meter panel fixing & enclosed private substation for enhanced reliability.

TATA POWER

टाटा पाँवरशी नाते जोडा
बचत करा व
नफा मिळवा

टाटा पाँवरने येथे खाली दिलेल्या क्षेत्रांमध्ये व्यापक नेटवर्क स्थापन केले आहे. फक्त तुमच्या सोसायटीने/बिल्डिंगने/चाळीने/झोपडपट्टी पुनर्वसन योजनेने/वस्तीने मीटर फिक्सिंगसाठी व अधिक भरवशाच्या वीज पुरवठ्यासाठी बँदिस्त खाजगी सब-स्टेशन उभारण्यासाठी जागा निश्चित करायची आहे.

Arogya Nidhi - K (W)	Dahisar - R (N)	Kurla LBS - L, N	Mira Bhayander - R (C), R (N)	Malad BMC Lagoon - P(N)	Vrindavan - N, M
Mindspace - P (S), P (N)	Saki - K (E), L	Trombay - M	Vasantotsav - T#, R (S), R (N)	Mankhurd Chembur - N	# - Part of the ward

Cluster Name - Municipal Ward No.

All Residential Consumers with an average monthly consumption of 300 units & below can avail of the **LOWEST TARIFF**.

Above identified space will be kept small & tidy.

Please write to switchover@tatapower.com / The Head - Customer Acquisition, Distribution Customer Services, Tata Power, Technopolis Knowledge Park, Mahakali Caves Road, Chakala, Andheri (E), Mumbai - 400 093 Or **CALL: 1-800-209-5161**

We will establish immediate contact and our engineers will visit your location for further steps required.

100 YEARS OF TRUST & ROBUST SERVICE

Lighting up Lives!

आरोग्य निधी - के (इन्क्यू)	दहिसर - आर (एन)	कुर्ला एनबीएस-एन, एन	मीरा भाईंदर - आर (सी), आर (एन)	मासाड बीएमसी लागून - पी (एन)	वृंदावन - एन, एम
माइंडस्पेस - पी (एस), पी (एन)	साकी - के (ई), एल	ट्रॉम्बे - एम	वसंतोत्सव - टी#, आर (एस), आर (एन)	मानखुर्द चेंबूर - एन	# - बॉर्डर भाग

क्लस्टरचे नाव - म्युनिसिपल वॉर्ड नंबर

सर्व निवासी ग्राहक, ज्यांचा सरासरी मासिक खप ३०० युनिट्स किंवा त्यापेक्षा कमी आहे, ते किमान वीज दराचा लाभ घेऊ शकतात.

सदर जागा छोटी व नीटनेटकी राखली जाईल.

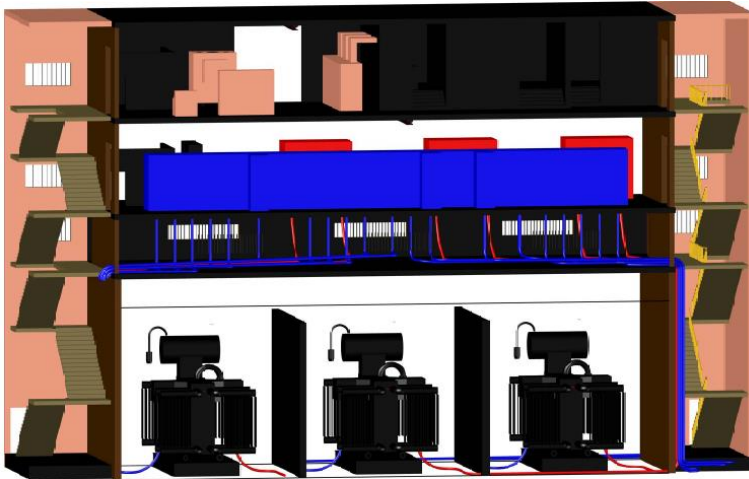
कृपया switchover@tatapower.com वर ई-मेल पाठवा/ किंवा प्रमुख - कस्टमर एक्विझिशन, डिस्ट्रीब्युशन कस्टमर सर्व्हिसेस, टाटा पाँवर, टेक्नोपोलिस नॉलेज पार्क, महाकाली केव्ज रोड, चकाला, अंधेरी (पूर्व), मुंबई-४०००९३ वर लिहून पाठवा किंवा कॉल करा - १-८००-२०९-५१६१

आम्ही तुमच्याशी तत्काळ संपर्क साधू आणि आमचे इंजिनियर्स पुढील आवश्यक कृतींकरिता तुमच्या भेटीस येतील.

१०० वर्षांपासून विश्वासाची आणि सुदृढ सेवा

Lighting up Lives!

3 – Tier DSS



E House



Bank of Distribution transformers on pole



HVDS



Technology Initiatives – Overcoming Meter Panel installation challenges

Spilt Metering



Meter to be installed DT



Display in Consumer Premises



Weather proof Panel

