ELECTRICAL LOAD CALCULATION - LANDCRAFT METRO HOMES AT MODINAGAR, GHAZIABAD

S.no	Description		No. of unit		Load per Unit				Total Load		
	Block A & B (S+12)		**Nos of Tower**			**=**	**2**				
1	3 BHK (TYPE - 5)		120	units	@	3.3	KW		=	390	KW
	(65.0 sq M @ 50 W/sqM =	3.25 KW)									
2	2 BHK (TYPE - 4)		144	units	@	2.8	KW		=	403	KW
	(56.0 sq M @ 50 W/sqM =	2.80 KW)									
	Block C (S+12)		**Nos of Tower**			**=**	**1**				
3	3 BHK (TYPE - 5)		60	units	@	3.3	KW		=	195	KW
	(65.0 sq M @ 50 W/sqM =	3.25 KW)									
4	2 BHK (TYPE - 4)		96	units	@	2.8	KW		=	269	KW
	(56.0 sq M @ 50 W/sqM =	2.80 KW)									
	Block D & J (S+12)		**Nos of Tower**			**=**	**2**				
5	2 BHK (TYPE - 3)		168	units	@	2.4	KW		=	395	KW
	(47.0 sq M @ 50 W/sqM =	2.35 KW)									
6	2 BHK (TYPE - 2)		96	units	@	2.1	KW		=	202	KW
	(42.0 sq M @ 50 W/sqM =	2.10 KW)									
7	1 BHK (TYPE - 1)		72	units	@	1.9	KW		=	137	KW
	(38.0 sq M @ 50 W/sqM =	1.90 KW)									
	Block E & H (S+12)		**Nos of Tower**			**=**	**2**				
8	1 BHK (TYPE - 1)		264	units	@	1.9	KW		=	502	KW
	(38.0 sq M @ 50 W/sqM =	1.90 KW)									
	Block F (S+13)		**Nos of Tower**			**=**	**1**				
9	2 BHK (TYPE - 3)		116	units	@	2.4	KW		=	273	KW
	(47.0 sq M @ 50 W/sqM =	2.35 KW)									
10	2 BHK (TYPE - 2)		52	units	@	2.1	KW		=	109	KW
	(42.0 sq M @ 50 W/sqM =	2.10 KW)									
	Block G (S+13)		**Nos of Tower**			**=**	**1**				
11	2 BHK (TYPE - 3)		113	units	@	2.4	KW		=	266	KW
	(47.0 sq M @ 50 W/sqM =	2.35 KW)									
12	2 BHK (TYPE - 2)		48	units	@	2.1	KW		=	101	KW
	(42.0 sq M @ 50 W/sqM =	2.10 KW)									

ELECTRICAL LOAD CALCULATION - LANDCRAFT METRO HOMES AT MODINAGAR, GHAZIABAD

S.no	Description	No. of unit		Load per Unit			Total Load		
	COMMON SERVICES - TOWERS								
	Block A & B (S+12)	**Nos of Tower**		**=**	**2**				
13	Elevators (13 Passenger) 1.0 mps	4	nos	@	7	KW	=	28	KW
14	Common Lights	2	towers	@	4	KW	=	8	KW
	Block C (S+12)	**Nos of Tower**		**=**	**1**				
15	Elevators (13 Passenger) 1.0 mps	2	nos	@	7	KW	=	14	KW
16	Common Lights	1	towers	@	4	KW	=	4	KW
	Block D & J (S+12)	**Nos of Tower**		**=**	**2**				
17	Elevators (13 Passenger) 1.0 mps	4	nos	@	7	KW	=	28	KW
18	Common Lights	2	towers	@	4	KW	=	8	KW
	Block E & H (S+12)	**Nos of Tower**		**=**	**2**				
19	Elevators (13 Passenger) 1.0 mps	4	nos	@	7	KW	=	28	KW
20	Common Lights	2	towers	@	4	KW	=	8	KW
	Block F (S+13)	**Nos of Tower**		**=**	**1**				
21	Elevators (13 Passenger) 1.0 mps	2	nos	@	7	KW	=	14	KW
22	Common Lights	1	towers	@	4	KW	=	4	KW
	Block G (S+13)	**Nos of Tower**		**=**	**1**				
23	Elevators (13 Passenger) 1.0 mps	2	nos	@	7	KW	=	14	KW
24	Common Lights	1	towers	@	4	KW	=	4	KW

ELECTRICAL LOAD CALCULATION - LANDCRAFT METRO HOMES AT MODINAGAR, GHAZIABAD

S.no	Description	No. of unit		Load per Unit				Total Load		
	COMMON SERVICES - General									
25	Water Supply / Tube wells	1	job	@	80	KW		=	80	KW
26	External / Gate / Landscape lighting							=	10	KW
27	Anganwadi							=	15	KW
28	Suvidhajanak Dukans & Kiosk							=	75	KW
29	Community							=	30	KW
30	School							=	125	KW
31	STP	1	job	@	60	KW		=	60	KW
32	Fire pumps (only jockey pumps have been considered)	2	nos	@	10	KW		=	20	KW
						Total Load		**=**	**3817**	**KW**
Calculation for Transformers										
						By taking Overall Diversity factor	**60**	**%**	**=>**	**2290**	**KW**
						By taking Power factor	**0.90**		**=>**	**2540**	**KVA**
Total Electrical Load = 2540 KVA											
Recommended Transformer @ 85% Loading = 2 nos. 1600 KVA each, 11/0.433 kV, Compact Substation											

ESSENTIAL ELECTRICAL LOAD CALCULATION - LANDCRAFT METRO HOMES AT MODINAGAR, GHAZIABAD											
S.no	**Description**	**No. of unit**			**Load per Unit**			**Total Load**			
	Sub Head (A) - Apartments										
	Block A & B (S+12)	**Nos of Tower**			**=**	**2**					
1	3 BHK (TYPE - 5)	120	units	@	1.00	KW		=	120	KW	
2	2 BHK (TYPE - 4)	144	units	@	1.00	KW		=	144	KW	
	Block C (S+12)	**Nos of Tower**			**=**	**1**					
3	3 BHK (TYPE - 5)	60	units	@	1.00	KW		=	60	KW	
4	2 BHK (TYPE - 4)	96	units	@	1.00	KW		=	96	KW	
	Block D & J (S+12)	**Nos of Tower**			**=**	**2**					
5	2 BHK (TYPE - 3)	168	units	@	1.00	KW		=	168	KW	
6	2 BHK (TYPE - 2)	96	units	@	1.00	KW		=	96	KW	
7	1 BHK (TYPE - 1)	72	units	@	1.00	KW		=	72	KW	
	Block E & H (S+12)	**Nos of Tower**			**=**	**2**					
8	1 BHK (TYPE - 1)	264	units	@	1.00	KW		=	264	KW	
	Block F (S+13)	**Nos of Tower**			**=**	**1**					
9	2 BHK (TYPE - 3)	116	units	@	1.00	KW		=	116	KW	
10	2 BHK (TYPE - 2)	52	units	@	1.00	KW		=	52	KW	
	Block G (S+13)	**Nos of Tower**			**=**	**1**					
11	2 BHK (TYPE - 3)	113	units	@	1.00	KW		=	113	KW	
12	2 BHK (TYPE - 2)	48	units	@	1.00	KW		=	48	KW	
					Total Load			**=**	**1349**	**KW**	
						By taking Overall Diversity factor	**90**	**%**	**=>**	**1214**	**KW**
						By taking Power factor	**0.80**		**=>**	**1518**	**KVA**
						Essential Load (A)	**=**		**1520**		**KVA**
	Sub Head (B) - (Common services)										
	COMMON SERVICES - TOWERS										
	Block A & B (S+12)	**Nos of Tower**			**=**	**2**					
13	Elevators (16 Passenger) 1.5 mps	4	nos	@	7	KW		=	28	KW	
14	Common Lights	2	towers	@	4	KW		=	8	KW	
	Block C (S+12)	**Nos of Tower**			**=**	**1**					
15	Elevators (16 Passenger) 1.5 mps	2	nos	@	7	KW		=	14	KW	
16	Common Lights	1	towers	@	4	KW		=	4	KW	

ESSENTIAL ELECTRICAL LOAD CALCULATION - LANDCRAFT METRO HOMES AT MODINAGAR, GHAZIABAD

S.no	Description	No. of unit		Load per Unit			Total Load		
	Block D & J (S+12)	**Nos of Tower**			**=**	**2**			
17	Elevators (16 Passenger) 1.5 mps	4	nos	@	7	KW	=	28	KW
18	Common Lights	2	towers	@	4	KW	=	8	KW
	Block E & H (S+12)	**Nos of Tower**			**=**	**2**			
19	Elevators (16 Passenger) 1.5 mps	4	nos	@	7	KW	=	28	KW
20	Common Lights	2	towers	@	4	KW	=	8	KW
	Block F (S+13)	**Nos of Tower**			**=**	**1**			
21	Elevators (16 Passenger) 1.5 mps	2	nos	@	7	KW	=	14	KW
22	Common Lights	1	towers	@	4	KW	=	4	KW
	Block G (S+13)	**Nos of Tower**			**=**	**1**			
23	Elevators (16 Passenger) 1.5 mps	2	nos	@	7	KW	=	14	KW
24	Common Lights	1	towers	@	4	KW	=	4	KW
	COMMON SERVICES - General								
25	Water Supply / Tube wells	1	job	@	80	KW	=	80	KW
26	External / Gate / Landscape lighting						=	10	KW
27	Anganwadi						=	15	KW
28	Suvidhajanak Dukans & Kiosk						=	75	KW
29	Community						=	30	KW
30	School						=	125	KW
31	STP	1	job	@	60	KW	=	60	KW
32	Fire pumps (only jockey pumps have been considered)	2	nos	@	10	KW	=	20	KW
						Total Load	**=**	**577**	**KW**
						By taking Overall Diversity factor	**60**	**%**	**=>**	**346**	**KW**
						By taking Power factor	**0.80**		**=>**	**430**	**KVA**
						Essential Load (B)	**=**	**430**			**KVA**
	Total Essential Load : (A + B)			**=**	**1950**	**KVA**					

Recommended DG Sets at 85% loading = 1 No. 1010 KVA, 1 No. 750 KVA & 1 No. 500 kVA, 415 Volts, Silent DG Set