

Annual Energy Calculation

Note 1: Plant Room Area / Services are not included since the energy use is negligible.

Note 2: Lift operating hour shall be reference to the lift traffic analysis.

Total Area 397

Clubhouse

Area 68,395 m²

Daily Operating Hour According to Table A9 BEC

	Hour			
Lighting		14.7		
Air Conditioning		16		
Lighting Calculation	BEC		Design	
LPD		13 w/m ²	13 w/m ²	(GYM)
Annual Consumption		4770.65 kWhr	4770.65 kWhr	
Air Conditioning	BEC		Design	
Cooling Loading		19.1	19.1	
Split AC COP		2.6	2.6	
Electrical Load(kW)		7.3	7.3	
Annual Consumption		42,902 kWhr	42,902 kWhr	
Annual Energy Consumption for Clubhouse		47,673 kWhr	47,673 kWhr	

Main Lift Lobby

Area 43,337 m²

	Hour			
Lighting		21.6		
Lift		2 (Round trip time = 60s, assume 5 time round trip per hour)		
MVAC		24		
Lighting Calculation	BEC		Design	
LPD		11 w/m ²	11 w/m ²	(Lobby)
Annual Consumption		3758 kWhr	3,758 kWhr	
Lift	BEC		Design	
Operating		11.1 kW	7.8 kW	
Annual Consumption		8103 kWhr	5,694 kWhr	
MVAC	BEC		Design	
Cooling Loading		4.3 kW	4.3 kW	
Split AC COP		2.6	2.6	
Electrical Load(kW)		1.7	1.7	
Annual Consumption		14,488 kWhr	14,488 kWhr	
Annual Energy Consumption for Main Lift Lobby		26,349.00 kWhr	23,940.00 kWhr	

Staircase

Area 144 m²

Lighting Calculation	BEC		Design	
LPD		7 w/m ²	7 w/m ²	(Staircase)
Annual Consumption		7947 kWhr	7,947 kWhr	

Floor Lobby

Area 122.5 m²

Lighting Calculation	BEC		Design	
LPD		11 w/m ²	11 w/m ²	(Lobby)
Annual Consumption		10624 kWhr	10,624 kWhr	

Refuse Room

Area 18.4 m²

Lighting Calculation	BEC		Design	
LPD		9 w/m ²	9 w/m ²	(Storage)
Annual Consumption		1306 kWhr	1,306 kWhr	

Total Building Energy Consumption		93,899 kWhr	91,490 kWhr	
		237 kWhr	231 kWhr	