

Example of Electrical Load Estimation (for total power supply capacity)

(For illustration only, data might not be practical.)

(1) Estimation of Electrical Loading

A. Landlord Services

1. Lifts & escalators	
- lifts (15 nos. x 50 kVA)	750 kVA
- escalators (10 nos. x 25 kVA)	250 kVA
2. Water services	
- include fresh water & flush water pumps, fire & sprinkler pumps, sump pumps, etc.	300 kVA
3. General lighting and power	
- plant rooms, lift lobbies, stairs, shopping arcades, refuse area, etc.	200 kVA
Sub-total	1500 kVA

Taking diversity of 0.95 → 1425 kVA
=====

B. A/C Chiller Plant

- assume 1.2 kVA/TR and diversity of 0.95:
2484 TR x 1.2 kVA/TR x 0.95 2832 kVA
=====

C. HVAC Equipment

- assume 0.6 kVA/TR and diversity of 0.8:
2484 TR x 0.6 kVA/TR x 0.8 1192 kVA
=====

D. Tenant Loads (O/I = office/industrial)

1. O/I Tower = 25425 sq.m x 0.16 kVA/sq.m	4068 kVA
2. Commercial Floors = 8096 sq.m x 0.1 kVA/sq.m	810 kVA
Sub-total	4878 kVA

E. Basement Carparks

- assume 0.02 kVA/sq.m:
3806 sq.m x 0.02 kVA/sq.m 76 kVA
=====

Summary:

	Loading	No. of Tx
A. Land Services	1425 kVA	1 Tx
B. A/C Chiller Plant	2832 kVA	2 Tx's
C. HVAC Equipment	1192 kVA)
D. Tenant Loads	4878 kVA) 4 Tx's
E. Basement Carparks	76 kVA)
Total maximum demand	10403 kVA	7 Tx's

