

Electrical and Mechanical Services Department

Technical Guidelines on Code of Practice for Building Energy Audit

2012 Edition

Addendum No. TG-EAC02 **(taking effect from 10 April 2015)**

Clause 4.1.2 of the above technical guidelines is revised as follows:

4.1.2 CBSI in Composite Building

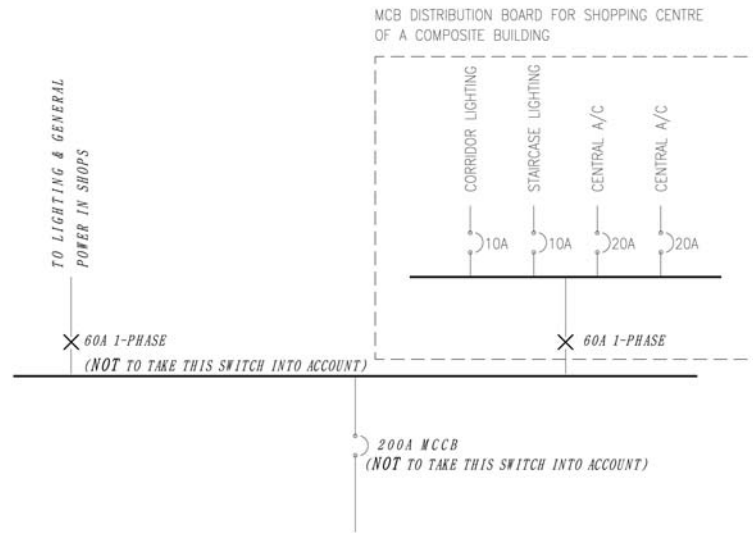
In the case of a composite building, pursuant to EAC clause 4.2, the energy audit requirement is applicable only to the CBSI solely serving the commercial portions of the building. It follows that the energy audit may exclude the CBSI serving both commercial portion and non-commercial portion (e.g. a lift serving both commercial storeys and residential storeys). However, for the case of a large central chilled/heated water plant serving both commercial and non-commercial portions (e.g. a plant serving both office portion and hotel portion), as a good practice, it is recommended to still include the plant in the energy audit if its cooling or heating rating is not less than 350 kW.

~~Pursuant to EAC clause 4.2, EMSD will consider case by case to grant exemption from the energy audit requirement for the CBSI solely serving the commercial portion of a composite building provided both conditions (a) and (b) specified in EAC clause 4.2 are met. (i.e. the total rating of the electricity supply to the relevant CBSI not exceeding 100A, 1-phase and the total internal floor area of the common areas in the commercial portions not exceeding 195m², including no common area).~~

The measurement of the total rating of the electricity supply to the CBSI solely serving the commercial portions mentioned in the preceding paragraph may be illustrated by the following example. Suppose that there is only a 1-phase 60A 4-way sub-main miniature circuit breaker (MCB) distribution board and all the four MCBs therein solely supplying electricity to the central lighting installation and air-conditioning installation serving the common corridors and toilets of a shopping center in a composite building. The ratings of the four MCBs in the distribution board are combination of 10A and 20A, 1-phase. The rating of the sub-main switch of the distribution board is 60A, 1-phase. Then, the total rating of all the relevant circuit protective devices should be equal to that of the sub-main switch (which is nearer the supply side), i.e. 60A, 1-phase, but not the sum of rating of all the four MCBs. Other circuit protective devices nearer the supply side but not solely supplying electricity to the said central building services installation are not required to be taken into account. Please refer to TG Figure 4.1.2(a). However, if one of the MCBs in the aforesaid distribution board does not supply electricity to the said central building services installation, the total rating of all the relevant circuit protective

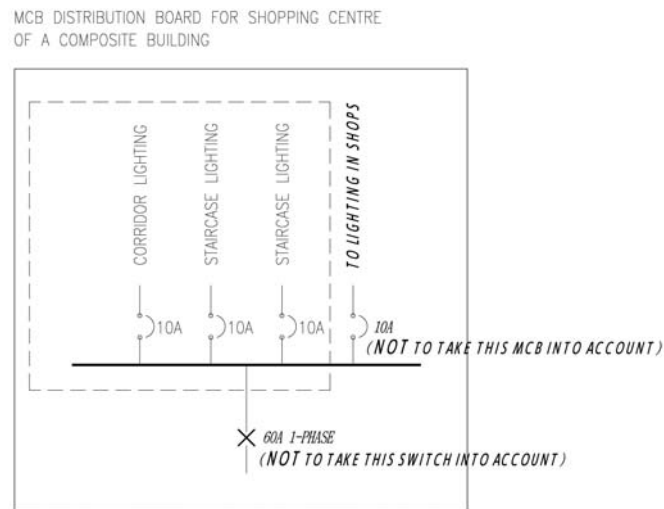
devices should be equal to the sum of rating of the other three MCBs but not the rating of the sub-main switch since it does not solely supply electricity to the said central building services installation. Please refer to TG Figure 4.1.2(b).

Figure 4.1.2 (a) : A MCB board solely supplying electricity to the CBSI solely serving a shopping center in a composite building



Total rating of the electricity supply to the CBSI
= Rating of the sub-main switch of the MCB board
= 60A, 1-phase

Figure 4.1.2 (b) : A MCB board not solely supplying electricity to the CBSI solely serving a shopping center in a composite building



Total rating of the electricity supply to the CBSI
 = Total rating of the three MCBs solely supplying electricity to the CBSI
 = 3 X 10A, 1-phase
 = 30A, 1-phase

Please also note that a 3-phase switch is regarded as equivalent to three identical 1-phase switches. For example, the total rating of a 3-phase 30A switch is equivalent to 3 X 30A or 90A, 1-phase.

There are also commercial-residential composite buildings with the OA (issued under Buildings Ordinance (Cap 123)) having no restriction on the usage of a floor or unit, which may be changed freely between commercial and non-commercial purpose, and thus allowing commercial and non-commercial units to co-exist on the same floor. Since there is no definite demarcation between the commercial and non-commercial portions, a CBSI that does not solely serve the commercial portions is not subject to the mandatory energy audit requirement.