

## HKGBC Retrofitting Hub

### List of Terminology

1.	COP <sub>CH</sub>	Coefficient of performance of chiller
2.	COP <sub>CHPRE</sub> , COP <sub>CHPOST</sub> COP <sub>CHSM</sub> , COP <sub>CHWN</sub>	Coefficient of performance of chiller before initiative implementation (PRE) Coefficient of performance of chiller after initiative implementation (POST) Coefficient of performance of chiller during summer (SM) i.e. MAY to OCT Coefficient of performance of chiller during winter (WN) i.e. DEC, JAN & FEB
3.	COPa <sub>SM</sub> , COPa <sub>WN</sub>	interpolation on Coefficient of performance of chiller by part load ratio during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
4.	COPb <sub>SM</sub> , COPb <sub>WN</sub>	interpolation on Coefficient of performance of chiller by condensing entering temperature during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
5.	TWCC <sub>SM</sub> , TWCC <sub>WN</sub>	Condensing entering temperature of water-cooled chiller (WCC) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
6.	TACC <sub>SM</sub> , TACC <sub>WN</sub>	Condensing entering temperature of air-cooled chiller (ACC) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
7.	OPHR <sub>yr</sub> OPHR <sub>PRE,yr</sub> OPHR <sub>POST,yr</sub>	Annual operating hours of equipment / system (hrs) Annual operating hours of equipment / system (hrs) before initiative implementation (PRE) Annual operating hours of equipment / system (hrs) after initiative implementation (POST)
8.	QBLDG	Annual average instantaneous building cooling load (kW)
9.	QBLDG <sub>PRE</sub> , QBLDG <sub>POST</sub>	Annual average instantaneous building cooling load (kW) before initiative implementation (PRE) and after initiative implementation (POST)
10.	TCHWS <sub>PRE</sub> , TCHWS <sub>POST</sub>	Chilled water supply temperature before initiative implementation (PRE) and after initiative implementation (POST)
11.	QCH <sub>SM</sub> , QCH <sub>WN</sub>	Rated cooling capacity (kW) of chiller during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
12.	COP <sub>CH100%</sub> , COP <sub>CH75%</sub> , COP <sub>CH38%</sub>	ARI Coefficient of performance of chiller at 100% load ARI Coefficient of performance of chiller at 75% load Mean ARI Coefficient of performance of chiller between 50% and 25% load
13.	kW <sub>CHWP<sub>SM</sub></sub> , kW <sub>CHWP<sub>WN</sub></sub>	Rated power (kW) of chilled water pump (CHWP) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
14.	kW <sub>CWP<sub>SM</sub></sub> , kW <sub>CWP<sub>WN</sub></sub>	Rated power (kW) of condensing water pump (CWP) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB

15.	$kW_{CT_{SM}}, kW_{CT_{WN}}$	Rated power (kW) of cooling tower (CT) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
16.	$\Sigma kW_{CHWP_{PRE}}, \Sigma kW_{CHWP_{POST}}$	Average power (kW) of chilled water pump (CHWP) before initiative implementation (PRE) and after initiative implementation (POST)
17.	$\Sigma kW_{CWP_{PRE}}, \Sigma kW_{CWP_{POST}}$	Average power (kW) of condensing water pump (CWP) before initiative implementation (PRE) and after initiative implementation (POST)
18.	$\Sigma kW_{CT_{PRE}}, \Sigma kW_{CT_{POST}}$	Average power (kW) of cooling tower (CT) before initiative implementation (PRE) and after initiative implementation (POST)
19.	$NCT_{SM}, NCT_{WN}$	Average Nos. of cooling tower (CT) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
20.	$NCH_{SM}, NCH_{WN}$	Average Nos. of chiller (CH) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
21.	$NCWP_{SM}, NCWP_{WN}$	Average Nos. of condensing water pump (CWP) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
22.	$NCHWP_{SM}, NCHWP_{WN}$	Average Nos. of chilled water pump (CHWP) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
23.	$LF_{SM}, LF_{WN}$	Average load factor of equipment during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
24.	$LF_{SM,PRE}, LF_{WN,PRE}$	Average load factor of equipment during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB before initiative implementation (PRE)
25.	$LF_{SM,POST}, LF_{WN,POST}$	Average load factor of equipment during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB after initiative implementation (POST)
26.	$TAPP,C_{PRE}, TAPP,C_{POST}$	Approach temperature of condenser of water-cooled chiller before initiative implementation (PRE) and after initiative implementation (POST)
27.	$NDCHWP_{SM}, NDCHWP_{WN}$	Average Nos. of de-centralised chilled water pump (DCHWP) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
28.	$kW_{DCHWP_{SM}}, kW_{DCHWP_{WN}}$	Rated power (kW) of de-centralised chilled water pump (DCHWP) during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
29.	$\Sigma kW_{DCHWP_{PRE}}, \Sigma kW_{DCHWP_{POST}}$	Average power (kW) of de-centralised chilled water pump (DCHWP) before initiative implementation (PRE) and after initiative implementation (POST)
30.	$NFCU_{SM}, NFCU_{WN}$	Average Nos. of fan coil unit (FCU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
31.	$kW_{FCU_{SM}}, kW_{FCU_{WN}}$	Rated power of fan coil unit (FCU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB

32.	$\Sigma kW_{FCU_{PRE}},$ $\Sigma kW_{FCU_{POST}}$	Average power (kW) of fan coil unit (FCU) before initiative implementation (PRE) and after initiative implementation (POST)
33.	$NAHU_{SM}, NAHU_{WN}$	Average Nos. of air handling unit (AHU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
34.	$kW_{AHU_{SM}}, kW_{AHU_{WN}}$	Rated power of air handling unit (AHU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
35.	$\Sigma kW_{AHU_{PRE}},$ $\Sigma kW_{AHU_{POST}}$	Average power (kW) of air handling unit (AHU) before initiative implementation (PRE) and after initiative implementation (POST)
36.	$NPAU_{SM}, NPAU_{WN}$	Average Nos. of primary air handling unit (PAU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
37.	$kW_{PAU_{SM}}, kW_{PAU_{WN}}$	Rated power of primary air handling unit (PAU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
38.	$\Sigma kW_{PAU_{PRE}},$ $\Sigma kW_{PAU_{POST}}$	Average power (kW) of primary air handling unit (PAU) before initiative implementation (PRE) and after initiative implementation (POST)
39.	$NDOAS_{SM}, NDOAS_{WN}$	Average Nos. of dedicated outdoor air unit (DOAS) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
40.	$kW_{DOAS_{SM}},$ $kW_{DOAS_{WN}}$	Rated power of dedicated outdoor air unit (DOAS) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
41.	$\Sigma kW_{DOAS_{PRE}},$ $\Sigma kW_{DOAS_{POST}}$	Average power (kW) of primary dedicated outdoor air unit (DOAS) before initiative implementation (PRE) and after initiative implementation (POST)
42.	$NDAHS_{SM}, NDAHS_{WN}$	Average Nos. of dedicated air handling system (DAHS) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
43.	$kW_{DAHS_{SM}},$ $kW_{DAHS_{WN}}$	Rated power of dedicated air handling system (DAHS) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
44.	$\Sigma kW_{DAHS_{PRE}},$ $\Sigma kW_{DAHS_{POST}}$	Average power (kW) of primary dedicated air handling system (DAHS) before initiative implementation (PRE) and after initiative implementation (POST)
45.	$NIECU_{SM}, NIECU_{WN}$	Average Nos. of indirect evaporative cooling unit (IECU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
46.	$kW_{IECU_{SM}}, kW_{IECU_{WN}}$	Rated power of indirect evaporative cooling unit (IECU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
47.	$\Sigma kW_{IECU_{PRE}},$ $\Sigma kW_{IECU_{POST}}$	Average power (kW) of indirect evaporative cooling unit (IECU) before initiative implementation (PRE) and after initiative implementation (POST)

48.	$Q_{BLDG_{RAD}}$	Annual average instantaneous building cooling load provided by radiant cooling system (RAD)
49.	$NSCU_{SM}, NSCU_{WN}$	Average Nos. of spot cooling unit (SCU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
50.	$kW_{SCU_{SM}}, kW_{SCU_{WN}}$	Rated power of spot cooling unit (SCU) in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
51.	$\Sigma kW_{SCU_{PRE}}, \Sigma kW_{SCU_{POST}}$	Average power (kW) of spot cooling unit (SCU) before initiative implementation (PRE) and after initiative implementation (POST)
52.	$\Delta P_{FLT_{PRE}}, \Delta P_{FLT_{POST}}$	Differential pressure drop of air filter ( $\Delta P_{FLT}$ ) in operation before initiative implementation (PRE) and after initiative implementation (POST)
53.	$\Delta P_{AHUF}$	Annual average of static pressure of air handling unit fan ( $\Delta P_{AHUF}$ )
54.	$LF_{AHU_{PRE}}, LF_{AHU_{POST}}$	Average load factor of air handling unit (AHU) before initiative implementation (PRE) and after initiative implementation (POST)
55.	$OPHR_{FC}$	Annual operating hours of free cooling equipment / system (hrs)
56.	$Q_{BLDG_{WN}}$	Annual average instantaneous building cooling load (kW) during winter (WN)
57.	$Q_{BLDG_{FC}}$	Annual average instantaneous building cooling load (kW) during free cooling (FC) operation
58.	$N_{MVF_i}$	Annual average Nos. of mechanical ventilation fan (MVF) of each carpark zone (i) in operation
59.	$kW_{MVF_i}$	Total rated power of mechanical ventilation fan (MVF) of each carpark zone (i)
60.	$IFA_i$	Internal floor area of carpark zone (i)
61.	$IFA_{CP}$	Internal floor area of carpark
62.	$N_{CRAC_{SM}}, N_{CRAC_{WN}}$	Average Nos. of computer room air conditioning (CRAC) unit in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
63.	$kW_{CRAC_{SM}}, kW_{CRAC_{WN}}$	Rated power of computer room air conditioning (CRAC) unit in operation during summer (SM) i.e. MAY to OCT and winter (WN) i.e. DEC, JAN & FEB
64.	$\Sigma kW_{CRAC_{PRE}}, \Sigma kW_{CRAC_{POST}}$	Average power (kW) of computer room air conditioning (CRAC) unit before initiative implementation (PRE) and after initiative implementation (POST)
65.	$N_{HVLFP_{PRE}}, N_{HVLFP_{POST}}$	Average Nos. of computer room air conditioning (CRAC) unit in operation before initiative implementation (PRE) and after initiative implementation (POST)
66.	$kW_{HVLFP_{PRE}}, kW_{HVLFP_{POST}}$	Rated power of computer room air conditioning (CRAC) unit in operation before initiative implementation (PRE) and after initiative implementation (POST)

67.	$\Sigma kW\_HVLPF_{PRE}, \Sigma kW\_HVLPF_{POST}$	Average power (kW) of computer room air conditioning (CRAC) unit before initiative implementation (PRE) and after initiative implementation (POST)
68.	$(L*W*H)_{PRE}, (L*W*H)_{POST}$	Length (L), width (W) and height (H) of space that required to cool / have air-conditioning before initiative implementation (PRE) and after initiative implementation (POST)
69.	$QOPAQUE_{PRE}, QOPAQUE_{POST}$	Overall thermal transfer value of opaque wall / roof before initiative implementation (PRE) and after initiative implementation (POST)
70.	$QFACADE_{PRE}, QFACADE_{POST}$	Overall thermal transfer value of curtain wall / skylight before initiative implementation (PRE) and after initiative implementation (POST)
71.	$QFACADE_{VENT,POST}$	Overall thermal transfer value of ventilated curtain wall / skylight after initiative implementation (POST)
72.	$QPIPE_{PRE}, QPPIP_{EPOST}$	thermal transfer value of pipeline before initiative implementation (PRE) and after initiative implementation (POST)
73.	$kW\_OPAQUE$	Annual average instantaneous power saving (kW) of opaque wall/roof
74.	$kW\_FACADE$	Annual average instantaneous power saving (kW) of opaque curtain wall / skylight
75.	$kW\_PIPE$	Annual average instantaneous power saving (kW) due to insulated / reflective coating on condensing pipeline installed at roof top
76.	$kW\_ECF$	Rated power of electronically commutated plug fan (ECF) (kW)
77.	$NECF$	Nos. of electronically commutated plug fan (ECF)
78.	$LF_{ECF}$	Annual average load factor of electronically commutated plug fan (ECF)
79.	$kW\_LGT_{PRE}, kW\_LGT_{POST}$	Rated power of lighting circuits or lamps (LGT) in operation before initiative implementation (PRE) and after initiative implementation (POST)
80.	$NLGT_{PRE}, NLGT_{POST}$	Annual average Nos. of lighting circuits or lamps in operation before initiative implementation (PRE) and after initiative implementation (POST)
81.	$LF_{PRE}, LF_{POST}$	Annual average load factor of equipment before initiative implementation (PRE) and after initiative implementation (POST)
82.	$LF_i$	Annual average load factor of lighting circuit or system within lighting zone (i)
83.	$LF_{CRAC}$	Annual average load factor of computer room air conditioning (CRAC) unit
84.	$IFA_{i,POST}$	Internal floor area of lighting zone (i) after initiative implementation (POST)
85.	$kW\_TL$	Rated power of task lighting (TL) (kW)
86.	$N_{TL}$	Annual average Nos. of task lighting (TL) in operation per day
87.	$LF_{TL}$	Annual average load factor of task lighting (TL)
88.	$OPHR_{OT,yr}$	Annual operating hours of task lighting (TL) (hrs)

89.	kW_LIFT	Average rated power of lifts (LIFT) per zone (kW)
90.	NLIFT	Annual average Nos. of lifts (AHU) per zone in operation
91.	LF <sub>LIFT</sub>	Annual average load factor of lifts (LIFT) per zone
92.	%REGEN	Amount of regeneration power per operating power of lift
93.	%SAVE	Amount of power saving per operating power of lift
94.	kW_IT <sub>PRE</sub> , kW_IT <sub>POST</sub>	Total rated power of I.T. equipment group (kW) before initiative implementation (PRE) and after initiative implementation (POST)
95.	NIT <sub>PRE</sub> , NIT <sub>POST</sub>	Annual average Nos. of I.T. equipment group before initiative implementation (PRE) and after initiative implementation (POST)
96.	LF <sub>IT,PRE</sub> , LF <sub>IT,POST</sub>	Annual average load factor of equipment/system before initiative implementation (PRE) and after initiative implementation (POST)
97.	kW_FD	Rated power of cold fan door (FD) in operation
98.	NFD	Annual average nos. of cold fan door (FD) in operation
99.	LF <sub>FD</sub>	Annual average load factor of cold fan door (FD)
100.	COP_AC <sub>POST</sub>	Coefficient of performance of air-conditioning (AC) unit after initiative implementation (POST)