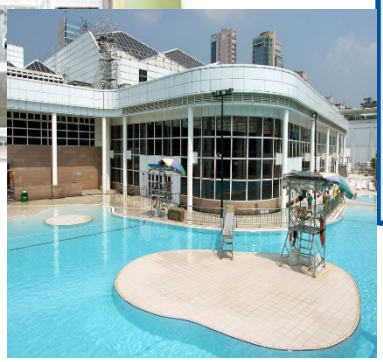
Retro-Commissioning (RCx) – Fact Sheet

Kowloon Park Swimming Pool & Sports Centre | FaS_003



Kowloon Park Swimming Pool & Sports Centre

Address: 22 Austin Road, Tsim Sha Tsui

User: Leisure and Cultural Services Department

O&M Team: EMSD/MunSD

~4% Building Electricity Saving

Background

Year of Completion: 1989

Normal Operating Hours: 06:00 - 22:00 (Swimming Pool) & 07:00 - 23:00 (Sports Centre)

Building Description: The building complex consists of swimming pool and sports centre. The swimming pool building has 4 indoor heated pools, including an Olympic sized 50m main pool, two 25-metre training pools and a 20m diving pool. The sports centre building includes multi-purpose main arena, secondary hall, dance room, fitness room, activities room and squash courts.

Air Cooled Chiller Capacity: 3 x 1100kW ACC (plus 2 x 350kW Heat Pump (HP))

Transformer Capacity: 3 x 1500 kVA

Energy Saving Opportunities in RCx

(1) **Adjustment of chiller operation schedule** Before RCx, the chiller plant operated from 05:30 to 23:00. It is recommended to adjust the chiller plant operation schedule to align with the opening schedule of the swimming pool and sports centre.

(2) **Adjustment of air handling unit (AHU)/ primary air unit (PAU) operation schedule** Before RCx, the operation of AHUs/PAUs occasionally exceeded the operating hours of the facility. It is recommended to adjust the AHUs / PAUs operation schedule to align with the operating hours.

(3) **Application of cleansing mode** Before RCx, there was no separate operation mode for cleansing period. The facility has scheduled a cleansing period every Thursday from 10:00 to 17:00. It is recommended to reduce the lighting during the cleansing period.

Energy Saving Opportunities in RCx (Cont'd)

(4) **Tuning of modulating control by adjusting chilled water control valve of PAU** Before RCx, the modulating control of control valve of PAU was not operated in good position. It is recommended to tune the modulating control to maintain appropriate off coil temperature of PAU.

(5) **Installing variable speed device (VSD) for hot water pump (HWP)** Before RCx, hot water system supplied for domestic hot water, space heating and swimming pool heating. The hot water demand varied between summer and winter seasons. It is recommended to install VSDs to HWPs to meet the variable demand in different seasons.

Energy Saving Opportunities (ESO) Summary

Energy Saving Opportunities (ESOs)	Action
Adjustment of chiller operation schedule	Adjust the chiller operation schedule based on operating hours of the facility
Adjustment of AHU/PAU operation schedule	Adjust the AHU/PAU operation schedule based on operating hours of the facility
Application of cleansing mode	Reduce lighting in operation during cleansing period
Tuning of modulating control of PAU	Tuning the modulating control by adjusting the chilled water control valve of PAU
Installing VSD for hot water pump	Reset pump speed periodically after installation of VSD