

# Building Performance with Engineering Excellence



CIBSE  
Hong Kong  
**AWARDS 2019**

**LIGHTING**

**WATER**

**OPERATION**

**ENERGY**

**INNOVATION**



Riding on the success of CIBSE Building Performance Awards (BPA)<sup>1</sup> in UK, this new Award programme on Building Services Engineering as pilot in Hong Kong context is initiated by CIBSE Hong Kong Branch.

In recognition of demonstrated engineering excellence in the built environment, the Awards can provide a new ground for encouraging projects in (a) building construction industry and (b) facility management industry. Most importantly, it would drive organizations and engineering professionals to collaborate and deliver the most appropriate and cost-effective solutions from design right through to installation and beyond with common goals to improve efficiency, quality, safety and reduce operating costs through more effective building services installation to the benefit of business and society.

CIBSE Hong Kong Awards 2019 is the only industry award that focus on actual, measured performance outcomes in built environment, and not just design intent or performance specifications. Entries are open to any organization within Hong Kong, that is responsible for the design, construction, installation, commissioning and operation of low energy buildings with high quality built environment.

The Awards remain true to our professional mission by free to enter, and by minimizing the burden of filling out

forms. We look forward to learning and sharing the success stories of the winners. More encouraging, we sincerely anticipate that winners of the Awards would equip their achievement to submit qualified entries to participate into the coming CIBSE Building Performance Awards in UK.

### Categories for Entry

- (a) **Project of the Year Award**  
( Winner Project )  
( Merit for Shortlisted Project(s) )
- **Public Use**
  - **Commercial/Industrial Building**
  - **Residential**

The Awards recognise the new building project that most effectively demonstrates achievement of high levels of user satisfaction and comfort and outstanding measured building performance, energy efficiency and reduced carbon emissions. Sub-categories in specific building usage are as follows.

Categories (Sector based)	Building Usage
Commercial / Industrial Project	Building that is mainly (a) used for offices, shops, entertainment facilities and etc.; and (b) used for the purpose of any trade, business or profession (including industrial use)
Residential Project	Building that is mainly used for residential purposes and includes public housing, hostels, hotel and staff quarters
Public Use Project	Building that is mainly used for general public purposes and includes functions managed by government / non-government organization, public utilities, public organization, quasi-government Corporation/ Public Institutions.

- (b) **Facilities Management Team Award**  
( Winner Project )  
( Merit for Shortlisted Project(s) )

Most facilities management teams work in a range of areas, combining resources and activities to deliver a safe, healthy and efficient work environment. This award recognises and celebrates the achievements of the facilities management (FM) team, whether in-house or outsourced, who delivers outstanding building performance from an individual building or a site with several buildings. This includes delivering the comfort levels and working conditions required by the users while demonstrating substantially reduced carbon emissions, energy, water consumption and effective waste management.

<sup>1</sup> The CIBSE Building Performance Awards, now in their twelfth year, recognise the people, products and projects that demonstrate engineering excellence in the built environment. ( <https://www.cibse.org/buildingperformance-awards/about> )

# CONTENTS



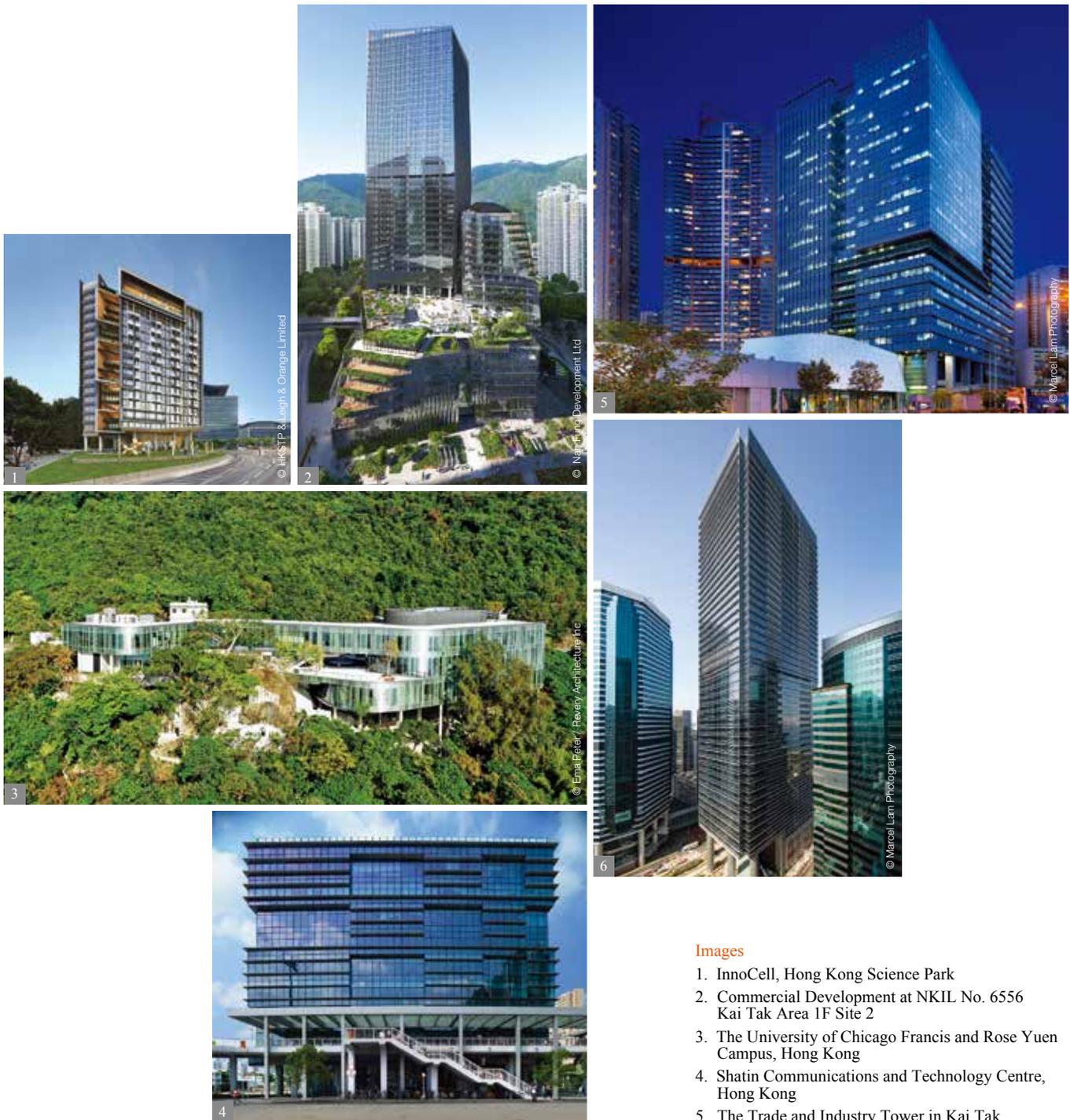
2	Perface
5	Message from CIBSE President 2019-20
7	Message from CIBSE Past President 2017-18
9	Inspiring The Industry By Exchanging Best Practice
11	The Awards Committee and Honorary Advisors
13	The Judges
14	<b>Winners</b>
15	Project of the Year – Public Use Building
17	Project of the Year – Commercial / Industrial Building

19	Project of the Year – Residential Building
21	Facility Management Team
23	<b>Merit Awards</b>
25	Project of the Year – Public Use Building
29	Project of the Year – Commercial / Industrial Building
33	Facility Management Team
43	Awards 2019 Launching and Judging Day
44	Sponsors for the CIBSE Hong Kong Awards 2019



## Efficient and elegant

Integrating expertise in mechanical, electrical and public health engineering, Arup creates, designs and implements systems that support buildings and create a delightful environment for the people who use them.



### Images

1. InnoCell, Hong Kong Science Park
2. Commercial Development at NKIL No. 6556 Kai Tak Area 1F Site 2
3. The University of Chicago Francis and Rose Yuen Campus, Hong Kong
4. Shatin Communications and Technology Centre, Hong Kong
5. The Trade and Industry Tower in Kai Tak Development Area, Hong Kong
6. One Taikoo Place, Hong Kong

# MESSAGE FROM CIBSE PRESIDENT 2019-2020

CIBSE, and its members, drive excellence in the building services industry and unlock economic, environment and social value in the built environment. With the objective in inspiring others to champion better performing buildings, CIBSE has targeted to grow the Building Performance Awards and Building Performance Conference and Exhibitions impact on improved performance of buildings. The BPA in UK showcase the highest achievements in building performance across the construction and property industry. These are the only awards in the built environment sector that are judged on actual, in-use performance rather than projections or designed performance. The CIBSE Building Performance Awards (BPA) has its 12<sup>th</sup> year in UK this year. The BPA 2020 focus on all aspects of a project, product or innovation, looking for the delivery of safe, healthy, functional and sustainable buildings which operate efficiently and meet users needs.



It is encouraging to see that the CIBSE Hong Kong Awards opens the regional way for multilateral interaction in promoting better building performance and encourages the members and Hong Kong industries to participate in CIBSE rewarding functions in the global network.

The CIBSE Hong Kong Awards 2019 has been promoting strength productive for the building services engineering professionals and the trade as well as collaboration with project teams. I believe in construction and engineering services industries in Hong Kong seeing the vision to lead, mission to achieve for outstanding building services design, practices and performance. All the winning entrants today demonstrated engineering excellence in their projects; either in the design and installations they have bought to green and health living or engineering services they have strategically implemented.

The winners of the Awards this year reinforce my belief that Hong Kong has a lot of potential and capability to excel in building performance and in building services industry.

My congratulations once again to the Awardees of the CIBSE Hong Kong Awards 2019. Many thanks to CIBSE Hong Kong Branch, the Steering and Organising Committees, the Honorary Advisors, the Judging Panel and all of our sponsorships for their support in making the Awards a rousing success.

**Lynne Jack**  
**CIBSE President (2019-2020)**



## Engineering with passion

ATAL Engineering Group (ATAL), founded in 1977, is a leading electrical & mechanical (E&M) engineering group in Hong Kong, serving customers in Greater China and around the world. We provide comprehensive and multi-disciplinary E&M engineering and technology services from design, manufacturing, installation, operation to maintenance. We endeavour to attain total customer satisfaction through engineering excellence, professionalism and quality service.

### Our Business Scope

- Building Services, Data Centre, Infrastructure & Healthcare Facilities Projects
- Environmental Engineering
- Information, Communications & Building Technologies
- Lifts & Escalators

**ATAL Engineering Group**

Tel: (852) 2561 8278 | Email: [info@atal.com](mailto:info@atal.com) | [www.atal.com](http://www.atal.com)

# MESSAGE FROM CIBSE PAST PRESIDENT 2017-2018

CIBSE believe and say in our Charter, 'we exist to support the Science, Art and Practice of building services engineering'. We can appreciate that the winning building projects and facility management projects of the CIBSE Building Performance Awards (BPA), have well illustrated their visionary objectives, effective building services design from planning and putting in operation, and achievable building performance with collaborative support from building owner/users. The BPA has been running in UK based industries and also welcoming overseas projects to participate as we treasure the aspiration of exchanging best practice among like-minded professionals worldwide.

Hong Kong has its defining accomplishment, industrial standard and practices in effective building services engineering design, high quality installations, well performed testing and commissioning, coordinated soft-landing process and high building performance.

With a good start, the CIBSE Hong Kong Branch has initiated to organise a dedicated award programme to suit the Hong Kong community on building performance, with aims that include promoting projects with better building performance in new buildings and facility management for existing buildings; promoting cross-disciplinary collaboration and adoption of effective building services engineering solutions in project delivery processes including planning and design, construction, facility and building performance management.

I anticipate that the CIBSE Hong Kong Awards 2019 can bring built environment professionals together to improve efficiency, quality and reduce operational costs through more effective building services to the benefit of businesses and society in Hong Kong.

I congratulate to the Awardees of the CIBSE Hong Kong Awards 2019 for having the skill and courage to make it this far and the winners for their fine works. No less important, I would like to extend my sincerest gratitude to the judging panel, steering committee and the organising committee for their hard work and the generous support to make the Awards so success to our profession.



**Peter Y WONG**  
**CIBSE Past President ( 2017-18 )**

# BELIMO ENERGY VALVE™

# BELIMO®

## Transparent energy monitoring with the Belimo Cloud.



BACnet



BELIMO CLOUD

5 YEAR WARRANTY

7 YEAR WARRANTY

The future begins now. With the integration of the Belimo Energy Valve™ into the Belimo Cloud the users create their own account to have full transparency about the energy consumption in the cooling/heating application – from everywhere and whenever they want.



### Delta-T Management

Build-in Power Control logic provides a linear heat transfer regardless of system temperature variations offering precise energy and maximizing system efficiency.



### Pressure-Independent Control

Reduce pumping and chiller operating costs by increasing chiller plant efficiency and eliminating coil overflow with the Metered Pressure Independent Flow control.



### Permanent Measurements

Provide accurate coil performance data, which can be used to verify system performance during commissioning.

# INSPIRING THE INDUSTRY BY EXCHANGING BEST PRACTICE

## **Congratulatory Message for CIBSE Hong Kong Awards 2019**

It gives me great pleasure to congratulate the CIBSE Hong Kong Branch for organizing the “CIBSE Hong Kong Awards 2019” especially on its 40th Anniversary. Even though this is the first time the Hong Kong Branch to organize its own building services awards in Hong Kong, overwhelming responses were received. Such success does not come naturally. It relates to the professional status that CIBSE has already embedded in the mind of the local building services engineers. Importantly, the experience sharing of “CIBSE Building Performance Awards” from CIBSE HQ makes Hong Kong Branch run it so smoothly.

As a professional body that supports “the Science, Art and Practice of building services engineering”, the winning projects of our CIBSE Hong Kong Awards demonstrate the art of building services engineering by bringing latest technologies to uplift the performance and efficiency of the building and creating an environment to experience sustainability and livability. They should be praised to inspire the industry by exchanging the best practices amongst like-minded professionals in this great and modern city.

I would like to acknowledge the efforts of all members of the Organizing Committee who contributed to the Awards and wish the CIBSE Hong Kong Branch will continue to shine in Hong Kong and around the globe.



**Dr. Raymond K.L. Chan**  
**Chair**  
**CIBSE Hong Kong Branch (2019-20)**



啟勝管理服務有限公司

KAI SHING MANAGEMENT SERVICES LIMITED



用心服務 做到最好  
We Serve You Best



# The Awards Committee and Honorary Advisors

## Steering Committee

Mr. Victor CHEUNG

Mr. Philip CHAN

Mr. Ronald CHIN

Mr. K Y LEUNG

Dr Raymond K L CHAN

Mr. Stanley CHOW

Chair

Deputy Chair

CIBSE Hong Kong Awards Secretariat

## Honorary Advisors

Mr. Peter Y WONG

Dr P L YUEN

Mr. P K KWOK

Mr. Thomas CHAN

## Organizing Committee

Mr. Stanley CHOW

Dr Raymond K L CHAN

Mr. Keith MA

Mr. Vincent MA

Mr. Peter LONG

Mr. Gary CHIANG

Mr. Chris KWAN

Mr. Alvin LO

Dr MY CHAN

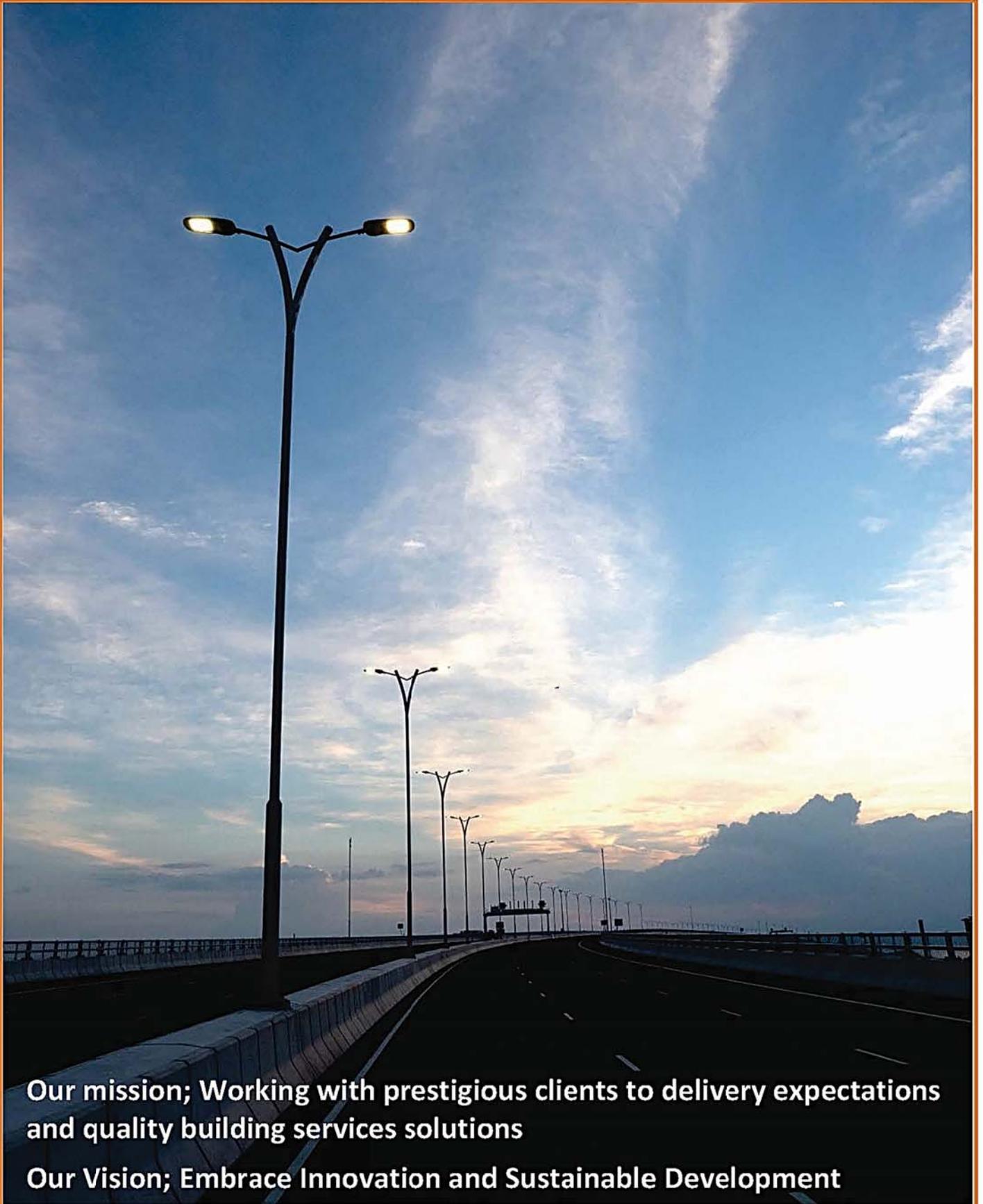
Ms. Joey MO

Dr Sam HUI

Mr. Franky SHUM

Ms. Mianne CHU

Chair



**Our mission; Working with prestigious clients to delivery expectations and quality building services solutions**

**Our Vision; Embrace Innovation and Sustainable Development**



嘉福機電工程有限公司  
**BYME Engineering (HK) Ltd.**

A member of the **Bouygues Construction group**

A subsidiary of **Dragages Hong Kong**



# THE JUDGES



◆ **Mr. Ronald CHIN**  
**Chair**  
Judging Panel  
CIBSE Hong Kong Awards 2019



◆ **Mrs. Sylvia LAM YU Ka-wai , JP**  
Director  
Architectural Services Department  
HKSAR Government



◆ **Mr. Alfred SIT Wing-hang, JP**  
Electrical and Mechanical Services  
Department  
HKSAR Government



◆ **Ir Edwin CHUNG**  
Vice President  
Hong Kong Institution of  
Engineers



◆ **Dr Raymond K L CHAN**  
Chair  
CIBSE Hong Kong Branch  
(2019- 2020)



◆ **Mr. Paul CHONG**  
President  
Hong Kong Federation of Electrical and  
Mechanical Contractors



◆ **Prof. LU Lin, Vivien**  
Department of Building Services  
Engineering  
Hong Kong Polytechnic University



## Winners

### **Project of the Year – Public Use Building**

The Trade and Industry Tower in Kai Tak Development Area

### **Project of the Year – Commercial / Industrial Building**

Sha Tin Communications and Technology Centre

### **Project of the Year – Residential Building**

Po Heung Estate (Po Heung Street, Tai Po)

### **Facility Management Team**

International Commerce Centre (ICC)

**WINNER:**



## The Trade and Industry Tower in Kai Tak Development Area

The Trade and Industry Tower (TI Tower) has demonstrated as a role model for a building complex comprises joint-user office towers and low-rise community hall in the Kai Tak Development Area featuring with the first-ever District Cooling System (DCS) connected in Hong Kong to serve building adopting centralized air-conditioning systems.

The project set several objectives to meet over 2,500 building occupants' needs for 12 government departments in respects of comfort, security, safety, indoor air quality and operational efficiency as well as sustainable development in reducing carbon emission and adopting renewable energy technologies.

To reduce building energy use, the TI Tower benefits from the centralized chilled water supply network from DCS. The recorded total annual energy consumption per construction floor areas (CFA) was 136.1kWh/m<sup>2</sup>/year in 2016-17, which excludes the electricity consumption by DCS but includes that for chilled water circulating pumps of the building. It achieved about a 10.53% energy consumption lower than the benchmarking figures for similar building types in Hong Kong. Several green and innovative building services engineering design and management measures were adopted.



BS Design Features	Major Installations
<b>Energy-Efficient Feature (EEFs)</b>	<ul style="list-style-type: none"> <li>a. Condensate recovery system, thermal wheel for PAUs</li> <li>b. Automatic Service-On-Demand control of escalators</li> <li>c. Lift re-regenerative braking</li> <li>d. Automatic lighting control system and task lighting system</li> <li>e. Variable Speed Drives (VSD) for fan motors and pump motors of all major BS/EM systems</li> <li>f. Heat pump for hot water supply to shower room in Community Hall</li> <li>g. Service-on-demand control of carpark ventilation fan</li> </ul>
<b>Renewable Energy Technologies (RET)</b>	<ul style="list-style-type: none"> <li>a. Photovoltaic panels at upper roof, BIPV panels at G/F entrance canopy and 1/F covered walkway. Total annual energy output is 33,792kWh which contributed 0.39% of the total electricity consumption in 2016-17</li> <li>b. Solar hot water supply system for shower room</li> <li>c. Sun-tracking solar tubes for Community Hall</li> <li>d. Sun pipes for carpark and some G/F office</li> </ul>
<b>Automatic System Control</b>	<ul style="list-style-type: none"> <li>a. Automatic control of office lighting by adoption of photo-sensors and occupancy sensors</li> <li>b. Automatic irrigation system based on weather conditions, pre-set timer and drip pipe system</li> </ul>
<b>Waste and Water Management</b>	<ul style="list-style-type: none"> <li>a. Rainwater harvesting system for use as irrigation water</li> <li>b. Automatic refuse collection system to facilitate collection of paper wastes for recycling and hygiene purpose.</li> </ul>



## The Trade and Industry Tower in Kai Tak Development Area

Commissioning plans and test scripts were well prepared and were held meetings with building services maintenance parties, such as Electrical and Mechanical Services Department (EMSD) to solve the problems encountered in maintenance handover. Besides, the facility management team and the maintenance agent had been given comprehensive trainings on the operation and maintenance of BS systems after the testing and commissioning.

The IT tower successfully maintains continuous evaluation of energy consumption through strategic metering, continuous monitoring and optimizing BS systems operation to perform. Through Post-occupation Evaluation approach, data collected from energy meters enable the building users and facility management team to carry out analytical tasks in the following aspects:-

- (a) consolidating energy bills from DCS meter in CCMS;
- (b) evaluation of CLP energy meter readings;
- (c) evaluation of energy consumption by floor and system type;
- (d) evaluation of DCS consumption profile;
- (e) electrical loading analysis of transformer;
- (f) evaluation of energy-efficient facilities;
- (g) evaluation of lighting profiles; and
- (h) electricity generated by PV panels.

**PROJECT ADDRESS:** No. 3 Concorde Road, Kai Tak Development Area

### **PROJECT TEAM:**

*Project Management:* Architectural Services Department

*Building Users:* 12 government departments

*Building Services Engineer:* Ove Arup & Partners Hong Kong Limited

*Architect:* Wong Tung & Partners Limited

*D&B Main Contractor:* Dragages Hong Kong Limited

*D&B Contractor (E&M):* REC Engineering Company Limited



# PROJECT OF THE YEAR - COMMERCIAL / INDUSTRIAL BUILDING

## WINNER:

### Sha Tin Communications and Technology Centre



香港賽馬會  
The Hong Kong Jockey Club

The Sha Tin Communication and Technology Centre (SCTC) is a new technology-focused office building of the Hong Kong Jockey Club for serving various key business operations including offices, 7 x 24 Telebet Centre and Server Rooms, Broadcasting Studio and Production, Race day dependent Broadcasting Centre, staff training and a centralized control centre.

Building performance of SCTC was strategically achieved with adopting and maintaining effective and specific engineering approaches.

In view of SCTC's special operation in different to other commercial office buildings in Hong Kong, energy simulation was performed at the onset of the project using IES Virtual Environment software conforming to ASHARE Standard 90.1-2007 for energy benchmarking with the actual performance. The recorded total annual energy consumption per covered floor areas was 997 MJ/m<sup>2</sup>/annum ( i.e. 276.91 kWh/m<sup>2</sup>/year)in 2018. It achieved about a 11% lower thanits baseline model.

The major saving is contributed by the HVAC system and adopted the following post-occupation energy saving measures and various energy efficient installations:-

BS Design Features	Major Installations
<b>Energy-Efficient Feature (EEFs)</b>	<ul style="list-style-type: none"> <li>a. Primary Chilled Water Pump Differential Pressure Setpoint Optimisation</li> <li>b. Chiller Staging Control Logic Optimisation</li> <li>c. Chilled Water Balancing and Air Balancing after completion of fitting-out projects</li> <li>d. Air Handling Unit Static Pressure Reset</li> <li>e. Automatic Condenser Tube Cleansing System</li> <li>f. Chilled Water Supply Temperature Reset</li> <li>g. Staff Canteen and Kitchen Fresh Air Optimisation</li> <li>h. Demand Control Ventilation Control with CO2 sensor</li> <li>i. High-efficiency Water Cooled Chillers with variable speed drive condensing water and chilled water pumps</li> <li>j. Motion Detect LED lighting, Occupancy and Daylight Sensors</li> </ul>
<b>Renewable Energy Technologies (RET)</b>	<ul style="list-style-type: none"> <li>a. Solar Hot Water Supply</li> </ul>



## Sha Tin Communications and Technology Centre

Intelligent building management system with over 100 custom built graphic display and more than 300 energy meters (electrical power analysers and chilled water energy meters) facilitate energy management, effective monitoring and control as well as system optimization.

Soft landing workshops were successfully conducted during construction phase to ensure handover and operation alignment, involving end users, contractors and consultants. Moreover, independent commissioning team was employed throughout the design to post-occupation phase so that MEP systems were designed properly and the building was commissioned fully to minimize any potential problem.

**PROJECT ADDRESS:** Sha Tin Racecourse, Sha Tin, New Territories

**PROJECT TEAM:**

**Project Management:** The Hong Kong Jockey Club

**Building Users:** The Hong Kong Jockey Club

**Building Services Engineer:** Ove Arup & Partners Hong Kong Ltd

**Architect:** Arquitectonica International Corporation / WCWP International Limited

**Main Contractor:** Hip Hing Construction Company Limited

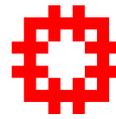
**Contractor (E&M):** ATAL Building Services Engineering Limited

**Facility Manager:** The Hong Kong Jockey Club



## WINNER:

### Po Heung Estate (Po Heung Street, Tai Po)



The Public Rental Housing (PRH) development at Po Heung Street consists of two 21-storey domestic blocks providing a total of 483 flats. There are retail shops, Early Education and Training Centre and a basement with 121 nos. of car parking space. Design Approaches to address Residents' Needs and Sustainability include:-

**Looking after Elderly Tenants** – “Universal design approach” to suit needs of different tenants even at old age or mobility limitation, e.g. large rocker switches, positioning switches and socket outlets at easily reachable locations, access with adequate width and passage, etc.

**Promoting Green Estate and Reducing Carbon Emission** – Carrying out “Carbon Emission Estimation” (CEE) to estimate the total carbon emissions for an estate over its entire expected life by benchmarking to a reference block type. The typical estimated reduction in carbon emission from the baseline figure is around 15% for the whole life cycle since 2011.

**Optimizing Environmental Performance of Estate** – Micro-climate studies have been conducted to optimize the use of natural resources such as natural ventilation and daylight. Design factors including visual impacts to surrounding, wind direction, sun path, noise mitigation measures, etc. have also been considered. Enlarged windows are provided in domestic flats, corridors and lobbies for better natural lightings and cross ventilation to enhance the living quality of residents.

**Energy Saving and Education** – The design complies with Building Energy Code (BEC) 2012. Various environmental measures in building designs and facilities are implemented to save energy. In addition, an Energy Information Display System is installed at each domestic block entrance lobby to educate and encourage residents to minimize their energy use by showing the energy usage data of the building and estate.

**Minimize Use of Resources and Wastage and Enhance Construction Efficiency** – Adoption of precast and prefabrication, such as volumetric precast bathrooms/

kitchen, semi-precast slab, precast-façade and dry-wall panels to reduce construction waste and material wastage, while enhanced building quality. Conceal conduits & fittings are installed in these components in factory.

Housing Authority (HA) sets an Energy Performance Indicator for reference in the design of public housing development. The target for communal areas adopted in the design stage for this project was 30 kWh/m<sup>2</sup>.



Energy Performance Indicator Target (design in 2013)	Block 1 (Po Hing House) (Actual)	Block 2 (Po Shun House) (Actual)
30 kWh/m <sup>2</sup> (108 MJ/m <sup>2</sup> )	23.64 kWh/m <sup>2</sup> (85.10 MJ/m <sup>2</sup> )	22.80 kWh/m <sup>2</sup> (82.08 MJ/m <sup>2</sup> )

## Po Heung Estate (Po Heung Street, Tai Po)

The design of E&M systems complies with BEC2012, and the actual designed indexes of some major installations are significantly lower than BEC requirements.

The building design and BS systems promoted energy saving and resident caring by adopting various design, some are unique in HA's projects



The project fulfilled the ISO50001 Energy Management System requirements to reduce energy use and consumption. Energy Baseline was set, and the Energy Performance Indicator for this project is 30 kWh/m<sup>2</sup> for communal areas facilities.

HA engaged independent term service providers to conduct Residents Surveys, survey on building services covered (i) any problems encountered in plumbing system (satisfaction level > 90%); (ii) adequacy and installed positions of electrical sockets (satisfaction level >80%); (iii) installed positions of light switches (satisfaction level around 90%); (iv) 2-level lighting system and sufficiency of lighting level (satisfaction level > 90%)

BS Design Features	Major Systems/Installations
<b>Lighting</b>	<ul style="list-style-type: none"> <li>a. Two-level lighting design for typical floor lift lobbies, corridors and staircases. (Normal lighting level 30 - 50 lux, Upper level 85 lux)</li> <li>b. Motion sensors at staircase and photo sensors near fenestrations at corridor/staircase/lift lobby and for daylight responsive control</li> <li>c. Low Lighting Power by adopting more natural light and energy efficiency design.</li> </ul>
<b>Lift</b>	<ul style="list-style-type: none"> <li>a. Using gearless lifts with VVVF drive, lift regenerative power facilities, and also minimum lift car decoration load to reduce the power rating and energy use.</li> <li>b. Uninterrupted Lift Supply – lift supply circuit is specifically designed with independent change-over supply from emergency generator, such that during the statutory Periodical Inspection, Testing and Commissioning, when the main switchboard or essential supply switchboard needs to be temporarily suspended, some of the lifts could still be operated to maintain service for residents.</li> </ul>
<b>Renewable Energy Technologies (RET)</b>	<ul style="list-style-type: none"> <li>a. Grid-connected photovoltaic (PV) panels are installed at roof, contributing to 3.8% of communal area electricity demand</li> </ul>



**PROJECT ADDRESS:** 1 Po Heung Street, Tai Po, New Territories

### PROJECT TEAM:

**Project Management:** Housing Authority

**Building Owner:** Housing Authority

**Building Services Engineer:** Housing Authority

**Brief Consultant:** Meinhardt (M&E) Limited

**Architect:** Housing Authority

**Main Contractor:** Hip Hing Construction Company Limited

**Contractor (E&M):** Lee Yu Kee Fire Protection Limited & Southa Technical Limited

**Facility Manager:** Housing Department & Modern Living Property Management Limited

# FACILITY MANAGEMENT TEAM AWARD

## WINNER:

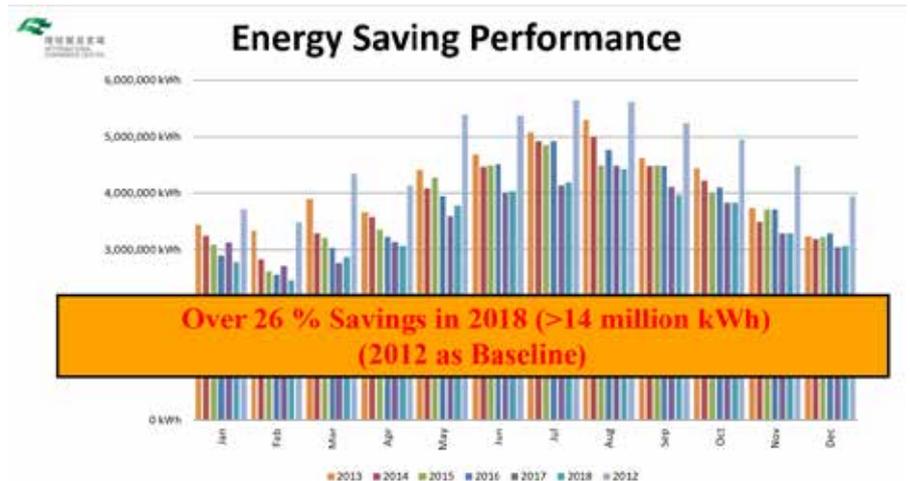
### International Commerce Centre



The 118-storey **International Commerce Centre (ICC)** is the Eleventh (11th) tallest building in the world and the tallest building in Hong Kong. It comprises offices, car parks, an observation deck, an upmarket dining floor and a hotel.

With 300,000m<sup>2</sup> of floor space, the building management team has incorporated the operation model : **S.M.A.R.T. Intelligence, Collaboration and Continuity** in operating ICC for achieving the goals on improving building performance including energy, waste, carbon emission, indoor environment quality and building services system ( i.e. air conditioning, lifts and electrical installation) , green management and smart building development for the past years. Having applied the ISO 50001: 2001 certified Energy Management System till now, using 2015 as baseline, over 4 million kWh energy saving, approximately 10% saving was achieved up to the year of 2018. From the base year (2012), over 26% of energy saving was achieved by the end of 2018.

Specifically for MVAC system, the ICC management team has collaborated with the Hong Kong Polytechnic University (HKPolyU) and adopted a building life cycle testing and commissioning (LCTC) approach to optimize the energy efficiency of chiller plant and air-side systems operation for achieving energy saving. Specific facilities management measures taken covering yearly energy audit, replacement works for achieving high energy efficiency and operational energy saving.



## International Commerce Centre

BS Design Features	Specific Facilities Management Measures
<b>MVAC Systems</b>	Smart Optimal Control of Central Cooling and Air Conditioning Strategies:- a. Revised Chiller Sequencing Control b. Optimized Design Configuration of Primary Chilled Water Pumps for Heat Exchangers c. Optimized Cooling Tower Control d. Optimized HX Control Logic e. Optimized Chilled Water Supply Temperature f. Optimized Fresh Air Control g. Tackled Deficit Flow Problem h. Optimized Control of Secondary Pumps for AHU i. Optimized Control of AHU Supply Air Static Pressure j. Further Improved Robust Chiller Sequencing Control
<b>Electrical System and Lighting</b>	Over the past years, over 90% of lamps in ICC are replaced by LED type lighting ( i.e. 35 W downlights to 15W LED lamp, 18W to 3W and 28W to 16W LED lamps with motion sensor control)
<b>Lift and Escalator Systems</b>	Optimized operation of lifts and escalators in terms of operation and numbers.

Strong collaboration with local universities enabled HKPolyU and ICC building management teams in conducting an exploratory study about energy optimization of central cooling and air conditioning system , and further using actual operation data , helping the teams to make informed choices about fine tuning and adjusting the operation parameters of equipment. Through big data collected through over 133,300 building management system points, artificial intelligence to analyse the data distribution pattern.

Staff are encouraged to propose energy efficient solutions, both practices and measures for ICC. Besides, 60 “Green Ambassadors” from frontline staff have been trained with green concepts, green measures, low carbon life etc.



**PROJECT ADDRESS:** No. 1, Austin Road West, Kowloon

**PROJECT TEAM:**

**Building Owner :** Sun Hung Kai Properties Limited, Hong Kong

**Building Services Engineer:** J. Roger Preston Limited, Hong Kong

**Architect:** Wong & Ouyang(HK) Limited

**Facility Manager:** Kai Shing Management Services Limited, Hong Kong





## Merit Awards

### **Project of the Year – Public Use Building**

Redevelopment of Fire & Ambulance Services Academy

### **Project of the Year – Commercial / Industrial Building**

Goldin Financial Global Centre

### **Facility Management Team**

InnoCentre

Metroplaza

Landmark North

Ultima

Millennium City 2

Grand Century Place

MOKO



THE HIP HING SPIRIT

Committed, Professional  
and United



協興  
HIP HING

新創建集團成員  
Member of NWS Holdings



COMMITTED, PROFESSIONAL AND UNITED

## Merit Award:

### Redevelopment of Fire & Ambulance Services Academy



建築署

Architectural Services Department

The **Fire & Ambulance Services Academy (FASA)** with 27 nos. of building services as a fire and ambulance depot and provides for fire and rescue training. It also enhances the capability of urban search, setting up simulator and storage of heavy-duty equipment for search and rescue training for fireman and ambulance man.

FASA is considered to be at the high end of the scale in terms of energy and water consumption in the planning stage. The Project set several objectives to meet the need to deliver their services and conduct their operations in an environmental friendly and responsible manner.

#### Energy Saving and Sustainable Design

**Objective** - allowing easy monitoring of performance (including energy performance) of the building services installations at any time and allowing comprehensive facilities for energy auditing.

**Resilient Design Objective** – Building Services installations have incorporated with standby facilities, dual supply, separate routing of services, etc. to allow for minimum interruption due to the failure of any part of the installation and to cater for quick recovery after emergency breakdown.

#### Environmental Responsible Design

**Objective** – the building services design has taken into the consideration of reducing environmental impact and social effect. Special focus is drawn to the design of the smoke extraction system of the Compartment Fire Behaviour Training (CFBT) Hangar and the Burn House where smoke can be generated during the fire training sessions.

#### Cold & Hot Water Supply Systems for

**Occupants** – FASA accommodates more than 700 people within the campus so the living, catering, training and recreation activities cannot be interrupted, and a proper design of cold and hot water supply is necessary.

To reduce building energy use and maximize natural ventilation and lighting, the FASA adopts several sustainable design features to reduce its carbon emission and environmental impact.

To assess the effectiveness of various energy saving measures in accordance with the design intents, the energy data collection and analysis were conducted after completion of testing and commissioning of all building services systems. The recorded total annual energy consumption per construction floor areas (CFA) was 151.1kWh/m<sup>2</sup>/year in the period of Sept 2016 – August 2017, it is about 6.6% lower than the benchmarking figures for similar building types (i.e. Educational and Residential) in Hong Kong.



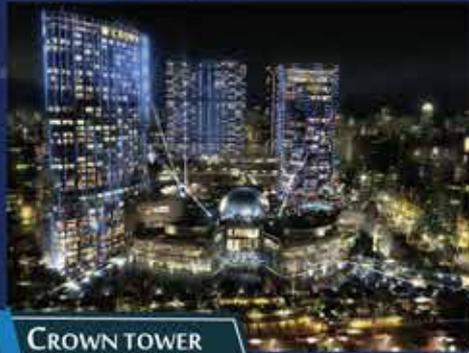


# SOUTHHA

南龍機電工程有限公司  
Technical Limited



**NORTH LANTAU  
HOSPITAL**



**CROWN TOWER  
CITY OF DREAMS**



**FESTIVAL WALK  
GLACIER**



**CUSTOMS HEADQUARTERS  
BUILDING**



**DIAMOND HILL  
COLUMBARIUM**



**PUBLIC HEALTH  
LABORATORY CENTRE**



**MEI TIN  
ESTATE**



**FIRE AND AMBULANCE  
SERVICES ACADEMY**



**WEST KOWLOON  
LAW COURTS BUILDING**



**TSING YI  
SPORTS CENTRE**

**Specialist Contractor for**

- ▶ HVAC
- ▶ Industrial Refrigeration
- ▶ Incinerator and Cremator
- ▶ Boiler and Steam Plant
- ▶ Plumbing and Drainage

- ▶ Electrical Installation
- ▶ Cold Store & Ice Rink
- ▶ Mechanical Plant
- ▶ Commercial Catering
- ▶ Environmental Engineering

- ▶ Fire Services Installation
- ▶ BMS & Security
- ▶ Energy Management
- ▶ Air Treatment
- ▶ Automatic Refuse Collection

香港柴灣嘉業街十二號百樂門大廈七樓

7/F Paramount Building, 12 Ka Yip Street, Chai Wan, Hong Kong

Tel: (852) 2963 7122 Fax: (852) 2963 7101 Email: main@southa.com Website: <http://www.southa.com>

## Redevelopment of Fire & Ambulance Services Academy

BS Design Features	Major Installations
<b>Energy-Efficient Feature (EEFs)</b>	a. Energy Recovery Systems - Condensate Recovery system, Thermal Wheel for PAUs, Lift Regenerative Braking b. Automatic Lighting Control System c. Energy efficient integrated packaged AHU d. Variable Speed Drives (VSD) for fan motors and pump motors of all major BS/EM systems e. Automatic On-Demand Control of Carpark Ventilation Fan f. High reflective lighting using nano-technology coating
<b>Renewable Energy Technologies (RET)</b>	a. Photovoltaic panels b. Solar Hot Water Supply System c. Wind Turbines d. Solar Powered light e. Earth Tubes f. Optical fibre daylighting (hybrid solar lighting)
<b>Automatic System Control</b>	a. Automatic control of office lighting by adoption of photo sensors and occupancy sensors b. Automatic irrigation system based on weather conditions and pre-set timer c. Timer controlled lightings in less occupied area including but not limited to landscape areas, green roof, plantrooms, green plaza etc.
<b>Waste and Water Management</b>	a. Rainwater harvesting system for conservation of irrigation water b. Training water recycling for flushing water use of the whole development

**PROJECT ADDRESS:** Area 78, Pak ShingKok, Tseung Kwan O

**PROJECT TEAM:**

**Project Management (D&B) :** Architectural Services Department

**Building User :** Fire Services Department

**Building Services Engineer:** Mott MacDonald HK Limited

**Architect:** Andrew Lee King Fun

**Structural Engineer:** Meinhardt HK Limited

**D&B Main Contractor:** China State Construction (HK) Limited

**D&B Contractor (E&M) :** China State Mechanical & Electrical Engineering Limited

Testing and Commissioning was proceeded with well coordination in testing procedure, schedule, commissioning, documentation as well as pre-inspection and pre-commissioning prior to actual testing. The project could successfully finish handover and soft landed to Fire Services Department and the maintenance parties.

The FASA successfully maintains continuous evaluation of energy consumption and performance of various building services systems through strategic metering, continuous monitoring and optimizing BS systems operation to perform. Through Post-occupation Evaluation approach, energy performance assessment on energy efficiency and saving by the new technologies adopted was conducted.

Cat. 1 Energy Management Opportunities (EMO) were identified and implemented to improve the building energy performance without causing adverse impacts on building operations.

- Fine-tuning the operation temperature of indoor unit to 22 °C in server room;
- Housekeeping by switching off the air-conditioning and lighting when not in use.



**Congratulations  
to All Winners of  
CIBSE Hong Kong  
Awards 2019**

**Project of the Year Awards  
Commercial/Industrial Building**

**Goldin Financial Global Centre  
Year of Completion : 2015**



**Proudly be part of... Supplied...  
Phenotherm<sup>®</sup> Class '0'  
Rigid Phenolic Foam Pipe Support,  
Pipe, Duct Support & Board Insulation  
For HVAC System**



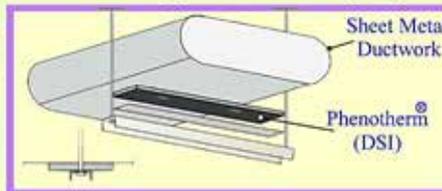
**Insulation Slab for Raised-floor**



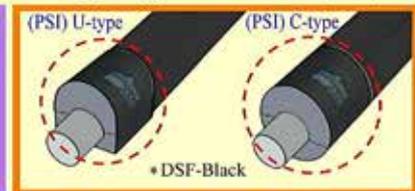
**Cutted 90° Pipe Elbow Insulation**



**Duct Support Insulation (DSI)**



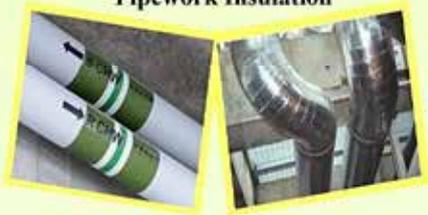
**Pipe Support Insulation (PSI)**



**Sheet Metal  
Ductwork Insulation**



**Chilled Water  
Pipework Insulation**



**PAL<sup>®</sup> Complete Accessories lead to a PERFECT INSULATION SYSTEM !**



**PAL<sup>®</sup>  
IA 911WB  
Class '0'  
Water Based  
Insulation Adhesive**



**PAL<sup>®</sup>  
IS 918WB  
Class '0'  
Water Based  
Industrial Sealant**



**PAL<sup>®</sup>  
TC-98  
Class '0'  
Butyl Tape**



**PAL<sup>®</sup>  
AT-38 Series  
Class '0'  
Alum. Foil Tape**

**Phenotherm<sup>®</sup> Rigid Phenolic Foam Insulation is the PROFESSIONAL'S CHOICE  
for Pipework & Ductwork in HVAC/R System**

- ★ Rigid insulation ensure the final performance, **NO COMPROMISE ON WALL THICKNESS** as other flexible insulation materials.
- ★ Pipe insulation **WALL THICKNESS IN SINGLE LAYER** from 15~150mm.
- ★ **NO AIR-GAP** after proper installation, insulation ID cut to top-fit pipe OD.
- ★ **PERFECT HARMONY** with pipe support in same materials.
- ★ **OPTIONAL SURFACE COLOUR** such as Aluminium, White or Black, can match colour with most of the insulation materials in market.
- ★ **EASY & FAST INSTALLATION (As Easy As ABC)**
  - Apply adhesive.
  - Snap-on Pipe Support/Pipe Insulation.
  - Seal with Aluminium Tape.

**EASY JOB**

**ADVANTAGE**  
Labour saving + Time saving  
= Money saving !

SOLE AGENT / STOCKIST :

**福隆(香港)有限公司  
Fook Loong (HK) Ltd.**  
香港九龍旺角塘尾道18號嘉禮大廈19字樓  
19/F, Skyline Tower, 18 Tong Mi Road, Kln., HONG KONG.  
Email : flhk@flhk.com.hk ☎ 2393-7773  
www.flhk.com.hk FAX : (852) 2390-6377

## Merit Award:

### Goldin Financial Global Centre



The **Goldin Financial Global Centre** serves as the new corporate headquarter building and was built with the following client visions:-

- A Commitment to improve people's living standards;
- An opportunity to change the world for the better: aesthetically, functionally and environmentally

The Project sets several objectives for building performance in built environment.

**Energy Saving** – Balance energy saving and daylight penetration. Curtain wall glasses were carefully selected to reduce building heat gain and keep daylight penetration with daylight factor of 2% in more than 90% of normally occupied spaces. Use of building services technologies to reduce energy consumption and sustainable development.

**Water Saving** – Reduce water consumption for hand wash, shower and flushing and minimize water wastage due to water leakage.

**Indoor Environmental Quality** – Fresh air provision could meet ASHARE 62.1 requirement. Thermal comfort with temperature control is maintained at +/- 1 °C. Lighting quality in normally occupied space e.g. office, plant rooms, carpark, and lobbies, etc. were designed to be in compliance with CIBSE lighting guide. Acoustics was also well designed with suitable reverberation time, background noise and minimal vibration level. The construction materials used was with low emission, and adequate fresh air was purged before handover. Indoor air pollutant levels meet HKIAQ scheme Good Class levels.

The recorded total annual energy consumption was 472.3MJ/m<sup>2</sup>/annum in the period of October 2017 – September 2018. To reduce carbon emission and achieve high energy efficiency, sustainable building services design and technologies were adopted.



BS Design Features	Major Installations
<b>MVAC System</b>	a. Central refrigeration plant for normal cooling comprises water cooled chillers, energy saving variable speed chilled water pumps and other energy saving equipment. b. Environmental friendly refrigerant (i.e. R134a or R407c) for the refrigerant plants of both normal cooling and essential cooling. c. Optimizing operation hours of mechanical ventilation system d. BMS control for VAV and other MVAC systems
<b>Electrical and Lighting System</b>	a. LED light in most of the public area b. Nano-coating lighting in tenant area to achieve energy saving and improve human comfort c. Capacitor bank and harmonic filter equipment to reduce the "noise" for improving power quality and achieving energy saving d. BMS control for all public lightings
<b>Lift and Escalator System</b>	a. Energy saving motor for the lifts and escalators b. LED lamp was applied inside all lift cars c. Lift regeneration system for lifts to regenerate new power and reduce power noise
<b>Water Conservation</b>	a. Adopt water leakage sensors b. Implementation of low flow rate facets c. Automatic toilet sensors
<b>Green Feature</b>	a. 128kW system capacity PV system b. Use high energy output power PV panel ( i.e. 327W PV panel ) c. High efficiency PV module

# CONGRATULATION OF CIBSE 41<sup>st</sup> ANNIVERSARY

*Improving IAQ, high efficiency & energy saving HVAC system*

**STERIL-AIRE®**

High-Output  
Germicidal UVC Solutions



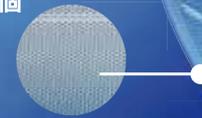
UVC for Air Conditioning System

	Effectively Improve Air Quality
	Perfect Energy Saving Solution

**SAMSUNG**

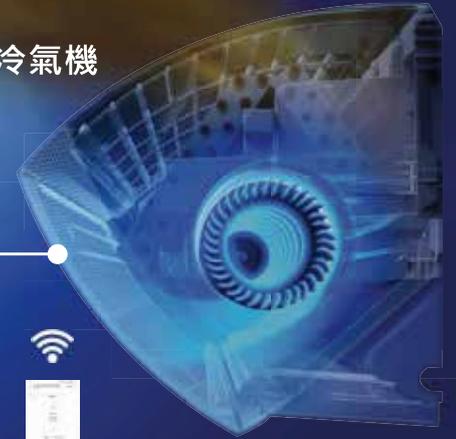
全球首創  
WindFree™ 無風冷氣機

21,000個  
微氣孔



智能控制無邊界

SAMSUNG  
SmartThings



**SAMSUNG**

FULL SERIES AIR CONDITIONER



Innovative Circular Cassette 360°  
delivers cool air evenly



SMART inverter air conditioner control available via  
Samsung SmartThings App

**C.J.Wishing International Ltd.**  
**惠生電業有限公司**

☎ Tel: (+852) 2318 0428 (Hong Kong Office)  
🌐 Website: [www.cjwish.com.hk](http://www.cjwish.com.hk)

📍 Address: Flat C & D, 6/F., Yeung Yiu Chung (No.8) Ind.Bldg., 20 Wang Hoi Road., Kowloon Bay, Kln., HK

**DAIWA-Wishing Engineering Ltd.**  
**大和(惠生)工程有限公司**

☎ Tel: (+852) 2187 3498 (Hong Kong Office)  
☎ Tel: (+853) 6646 0771 (Macau)

## Merit Award:

### Goldin Financial Global Centre

Testing and Commissioning was proceeded with checking from independent commissioning agent. Fully detailed commissioning reports with as built drawings were prepared and staff training was provided during handover. Temperature setting at different zones in tenant areas were well communicated and adjusted according to users' feedback collected in meetings with tenants before and after their moving-in.

Review on current energy saving potential was proceeded. Cat. 2 Energy Management Opportunity (EMO) of replacing T5 lamp by LED light strip in public area was further identified to improve the building energy performance.

**PROJECT ADDRESS:** Area 78, Pak ShingKok, Tseung Kwan O

#### **PROJECT TEAM:**

**Developer :** Goldin Financial Holdings Limited

**Project Management :** Goldin Properties (Construction Management) Limited

**Building Owner:** Smart Edge Limited

**Building User :** Tenants

**Building Services Engineer:** Meinhardt (M&E) Limited

**Brief Consultant :** Kohn Pedersen Fox Associates PC Architects and Planning Consultants

**Architect:** Ronald Lu & Partners (Hong Kong) Limited

**Main Contractor:** Hip Hing Construction Company Limited

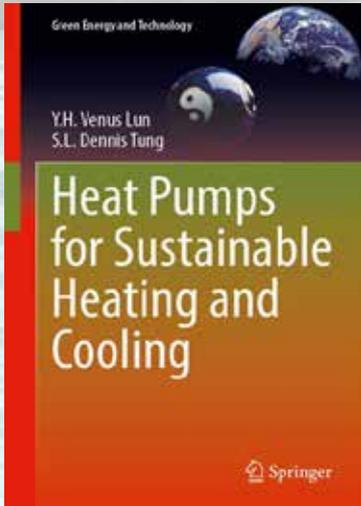
**Contractor (E&M) :** ATAL Engineering Limited

**Facility Manager :** Jones Lang Lasalle Management Services Limited



Award at the 2019 International Exhibition of Inventions of Geneva, Switzerland.

# Sustaine



**Air to Water Heat Pump**  
**Water to Water Heat Pump**  
**Swimming Pool Heat Pump**  
**Total Energy Heat Pump**  
**Desiccant Dehumidifier**  
**Energy Recovery Ventilator**  
**Customized HVAC Products**

Published by Sustaine  
 Dr Venus Lun & Dr Dennis Tung

- Schools**
- \* ISF Academy
  - \* Malvern College
  - \* Canadian International
  - \* French International
  - \* Diocesan Girl
  - \* Shrewsbury International
  - \* Hang Seng Management
  - \* TKO Fire Services Training

- Public Swimming Pool**
- Kennedy Town
  - Kwun Tong
  - Tung Chung
  - Tuen Mun (NW)

- Public Facility**
- Tsing Yi Sport Centre
  - Hong Kong Sport Institute
  - Yuen Long Library
  - Macpherson Indoor Stadium
  - Ko Shan Theatre
  - Shatin Sport Centre
  - TKO Sport Centre

- Sewage Plant**
- Sham Tseng
  - Stonecutter
  - Yuen Long

- Clubhouse**
- ◇ Leighton Hill
  - ◇ Pavilia Hill
  - ◇ TKO Plaza
  - ◇ Harbor One
  - ◇ Parc Inverness
  - ◇ Park Signature
  - ◇ Kai Tak 6541/6525/6527
  - ◇ Ho Man Tin 11227/11228
  - ◇ Shatin 56A/579
  - ◇ TMTL 423/453/543
  - ◇ Capri
  - ◇ Nova City
  - ◇ Lohas P6 & P8
  - ◇ Vineyard
  - ◇ Sky Park

- Hotels**
- ◇ Grand Hyatt
  - ◇ Ocean Park Marriot
  - ◇ Disney's Hollywood
  - ◇ Holiday Inn Express
  - ◇ Wharney Gaungdong
  - ◇ SJM Grand Lisboa
  - ◇ Shangri-La Hoi Nam
  - ◇ YMCA
  - ◇ Dorsett
  - ◇ Hotel COZI

## Sustainable Energy Ltd

Unit 301, Building 16W, Hong Kong Science Park, Hong Kong  
 Tel: +852-23708300 Fax: +852-23708994 Email: info@sustaine.com.hk Website: www.sustaine.com.hk

## Merit Award:

### InnoCentre

INNOCENTRE  
新智中心

HKSTP  
香港科技園

ISS  
FACILITY SERVICES

The **InnoCentre** is an integral part of Hong Kong Science and Technology Park's (HKSTP) ecosystem through clustering and promoting good design and design planning with innovations and technologies. In this six-storey building with two levels of basement car parks at Kowloon Tong, design-integrated with technology companies can be immersed in innovation culture and exchange their brilliant ideas as well as bring designs to life.

The facilities management team has strategies to increase the value of facilities and services provided through innovative measures with a **Smart Campus Platform** – Smart Mobility, Smart Living, Smart Environment and Smart People. Enhanced building performance in energy efficiency has been well achieved with the recorded total annual energy consumption of 74.04kWh/m<sup>2</sup>/annum in 2017 which is lower than the benchmark reference of 132kWh/m<sup>2</sup>/annum (i.e. private office, class E). To achieve high energy efficiency and continuous improvement on health, wellbeing and productivity of occupants, consecutive energy saving programs and technologies were adopted.

BS Design Features	Major Measures
<b>HVAC System</b>	a. Replaced control valve by pressure independent valve with smart actuator for chilled water circuits serving primary air unit (PAU). b. Replaced belt driven PAU by EC plug fan PAU c. Chiller water temperature reset for Winter time
<b>Electrical and Lighting System</b>	a. Retrofit lighting with LED light b. Use of motion sensor for lighting control
<b>Lift</b>	Rezoning passenger lifts for non-peak hour operation
<b>Daylight</b>	Installing Solar Control Window film



**PROJECT ADDRESS:** 72 Tat Chee Avenue, Kowloon Tong, Kowloon

**PROJECT TEAM:**

**Building Owner:** Hong Kong Science and Technology Park Corporation

**Facility Manager:** ISS East Point Property Management Limited

# FAIR-RACK FR Series Low Voltage Switchboard & Motor Control Centre

MODERN FACTORY FOR SWITCHBOARD MANUFACTURING  
**Set the Trend**

## FR Series



**TAKES POWER DISTRIBUTION TO NEXT LEVEL**  
Perfectly fit with Global Reputable Brand  
Power Distribution Equipment

ASTA Certified /  
Hong Kong SAR Government Approved List of  
Supplier & Specialist Contractor

### TECHNICAL DATA:

- In compliance with standards: IEC61439-2:2011
- Arc Fault Test comply to AS3439.1, IEC 61641:2008
- Power supply: upto 690V AC
- Degree of protection: IP41 (Standard), upto IP55
- Segregation: upto Form 4
- High quality epoxy powder surface coating
- Rated Current: upto 6300A
- Short circuit withstand strength:
  - 50kA 3 sec, 65kA 3 sec and 80kA 1 sec for different current rating
- Patent design busbar support



## Merit Award:

### Metroplaza

新都會廣場  
METRO-PLAZA



啟勝管理服務有限公司  
KAI SHING MANAGEMENT SERVICES LIMITED

**Metroplaza** is a commercial complex which comprises two office towers, a 6-storey shopping arcade and a 3-storey carpark in Kwai Chung with covered footbridge linked to MTR Kwai Fong Station. Facility management team aim to enhance building performance through continuous upgrading the property and services, space planning and design with strong awareness of environmental friendliness and corporate social responsibility. Latest technologies and innovative approaches such as Robotic, NB IoT, Smart Controls, System Automation are adopted, and the first public accessible organic farm was opened in 2018.

For energy efficiency with baseline year in Year 2007, the monthly review and monitoring on energy consumption profile indicated that the actual operating energy consumption in 2018 was 164 kWh/m<sup>2</sup>/annum, which is a 25.41% reduction comparing to the baseline figure. Indoor air quality has been well maintained at class of excellence for office tower common areas and class of good for shopping arcade common areas.

Metroplaza has co-operated with a power company to participate in a 9-days peak electricity record (kVA) forecast in meter-on-line program. It is to promote the use of 9-day forecast to reduce the maximum demand by behaviour change of end user, by instant response and carry out effective energy saving measures to reduce electricity consumption. By signing up various Green Charters, environmental awareness and green initiatives have been well promoted to occupants, visitors and facility management team staff as well as services partners.



BS Design Features	Major Measures
<b>HVAC System</b>	a. Chiller Operation Optimization Model b. Water-cooled reverse return chilled water supply to air-cooled chiller reverse supply chilled water in night mode operation
<b>Electrical and Lighting System</b>	a. Retrofitting downlight and neon light tube with LED light b. Use of sensor lighting control
<b>Renewable Energy Technologies (RET)</b>	a. Grid connected Solar Panel system b. Solar powered garden lights with mobile App control
<b>Daylight and Ventilation</b>	a. Thermo-senor and Wind-senor controlled solar blind at Atrium skylight



**PROJECT ADDRESS:** 223 Hing Fong Road, Kwai Fong, New Territories

**PROJECT TEAM:**

**Building Owner:** Sun Hung Kai Properties Limited, Hong Kong

**Facility Manager:** Kai Shing Management Services Limited, Hong Kong

# FACILITY MANAGEMENT TEAM

## Merit Award:

### Landmark North



啟勝管理服務有限公司  
KAI SHING MANAGEMENT SERVICES LIMITED

**Landmark North** in Sheung Shui is a commercial complex which comprises a 16-storey office tower, a 4-storey shopping arcade and a 3-level of basement carpark. To conserve the energy and water and achieve cost savings, facility management team has set work and building performance targets and achieved the following results:-

21% energy saving were achieved in 2018 as compared with consumption in base year from 2012. Two (2) Million kWh electricity consumption had been saved. Comparing to 2011 to 2017, 74.6% and 31.3% water saving for fresh water consumption and flush water consumption were recorded.

BS Design Features	Major Measures
<b>HVAC System</b>	<ul style="list-style-type: none"> <li>a. Upgrading Enhancement Programme ( 2010 – 2017)</li> <li>b. Replacement of aged chiller system and installation of night mode chiller system</li> <li>c. Use of Power Performance Optimizer (PPO) for Chiller Water Pumps</li> <li>d. Chiller plants in different capacity for allowing seasonal and demand conditional operation mode</li> </ul>
<b>Electrical and Lighting System</b>	<ul style="list-style-type: none"> <li>a. Retrofitting lighting with LED light</li> <li>b. Use of motion sensor for lighting control</li> <li>c. Rezoning and Rescheduling of operation hour of lighting</li> </ul>
<b>Lift and Escalator</b>	Installed variable frequency control system to existing escalators
<b>Renewable Energy Technologies (RET)</b>	Hybrid lighting system by vertical wind turbine and solar panels
<b>Water Conservation</b>	<ul style="list-style-type: none"> <li>a. Reuse of bleed-off water for flushing</li> <li>b. Rainwater Harvesting</li> <li>c. Infra-red sensor type water tap and water saving tap nozzles</li> </ul>



**PROJECT ADDRESS:** No.39,Lung Sum Avenue, Sheung Shui, New Territories

**PROJECT TEAM:**

**Building Owner :** Sun Hung Kai Properties Limited, Hong Kong

**Facility Manager:** Kai Shing Management Services Limited, Hong Kong

## Merit Award:

### Ultima



**Ultima** in Ho Man Tin has seven residential towers and seven houses which are lined up in a row with glass curtain walls, stone, aluminium alloy finishes and offering a total of 527 units. (No heading for below items or “Design objectives :

- 1) Improve occupant comfort
- 2) Lower energy costs
- 3) Applying smart and digital building management
- 4) Improve building performance, including energy, operation, security, comfort and efficiency
- 5) Reduce short- and long-term costs
- 6) Generate significantly higher user satisfaction rates
- 7) Keep using, refining and trying various technological and innovative management system
- 8) Create a smart building

The concepts of Smart Security, Smart IoT/ Apps, Smart Lighting and Smart Living have been applied and integrated with facility management that improves building performance, including energy, operation, security, occupants comfort and lower energy costs to the higher user satisfaction.

For this newly established residential property, electricity consumption has been closely monitored at the total 6,266,288kWh in 2018 through 3rd party energy audit. There was 3.4% energy saving compared to that in 2017.

BS Design Features	Major Measures
<b>Electrical and Lighting System</b>	a. Use of LED light in car park b. Lamps for idle parking space are dimmed to 30% c. Use of motion sensor with operating time control for lighting /downlight in common areas
<b>Renewable Energy Technologies (RET)</b>	a. Solar Mosquito Machine. b. Solar foot lamp with lux sensor



**PROJECT ADDRESS:** 23 , Fat Kwong Street, Homantin, Kowloon

**PROJECT TEAM:**

**Building Owner :** Sun Hung Kai Properties Limited, Hong Kong  
**Facility Manager:** Supreme Management Services Limited

## Merit Award:

### Millennium City 2



**Millennium City 2** is a commercial office complex of Millennium City as a landmark development in Kwun Tong and Eastern Kowloon. The facility management team has set environmental objectives and targets each year under the Environmental Management System (EMS). Replacement programme of aged chillers and lighting were implemented as the major improvement measures for enhancing energy efficiency, monitoring and control effectiveness and system reliability to the building.

Based on energy audit findings, the central A/C plant (water side) accounted for 60% of the total electricity consumption, which was the largest component of total electricity use in the building. All the aged air-cooled chillers were replaced by 3 nos. of water-cooled chillers with fresh water cooling tower and 1 no. of air-cooled chiller. With new Building Management System (BMS) connected monitoring and control, loading conditions and operational data of chiller plants could then be obtained for enabling remote control and so increased the overall productivity. Technical constraints such as limited plant space, meeting seasonal cooling demand and schedule of replacement works were overcome successfully. To reduce electricity consumption, replacement of lights in areas including external sign board, carpark, facility rooms, exit signs and common areas by LED lights were widely adopted.

To fulfil corporate social responsibility, the facility management team had launched a new activity 'Star Partnership Program' for building tenants to encourage switching off unnecessary lightings during non-office hours.

Compared with the total electricity consumption for 2013/14, that for 2014/15 was about 900,000kWh saving at 30% of the year.

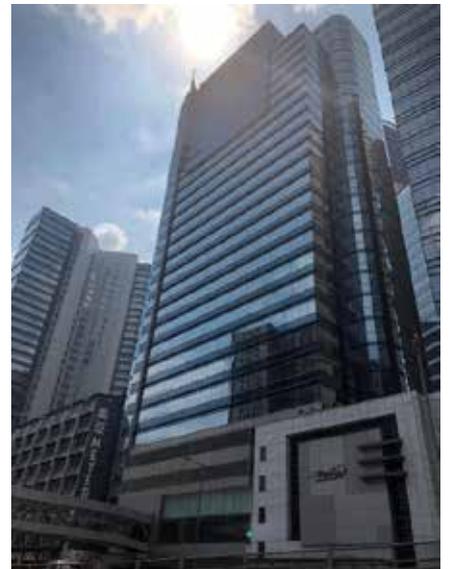


**PROJECT ADDRESS:** 378, Kwun Tong Road, Kwun Tong, Kowloon

#### **PROJECT TEAM:**

**Building Owner:** Sun Hung Kai Properties Limited, Hong Kong

**Facility Manager:** Kai Shing Management Services Limited, Hong Kong



## Merit Award:

### Grand Century Place

新世紀廣場  
GRAND CENTURY PLACE

 啟勝管理服務有限公司  
KAI SHING MANAGEMENT SERVICES LIMITED

**Grand Century Place** in Mongkok comprises 2 blocks of 11-storey office towers. The facility management team of office tower sets the building performance objectives and related strategies were established to achieve the goals – a low carbon, resource efficient, healthy and productive workplace.

Specific aspects include maintaining good indoor air quality, provision of greenery, replacement of chillers and lighting for energy saving as well as adoption of renewable energy application. Energy audit for their tenants has also been provided.

BS Design Features	Major Measures
<b>HVAC System</b>	a. Replacement of aged air-cooled chillers to water-cooled chiller with variable speed drive b. Building Management System (BMS) connected monitoring and control, loading conditions and operational data of chiller plants c. Replacement of PAU and provision of pressure independent valve with smart actuator d. Provision of High Pressure Water Mist Pre-cooling System to air-cooled chiller
<b>Electrical and Lighting System</b>	Retrofit of lighting with LED lights and occupancy sensor control in staircases
<b>Renewable Energy Technologies (RET)</b>	Hybrid renewable energy installations with Solar panels and wind turbines for outdoor lighting at chiller plant areas



**PROJECT ADDRESS:** Office Towers, 193, Prince Edward Road, Mongkok, Kowloon

**PROJECT TEAM:**

*Building Owner* : Sun Hung Kai Properties Limited, Hong Kong

*Facility Manager*: Kai Shing Management Services Limited, Hong Kong

Energy efficiency of chillers has been enhanced with part load COP at about 6.5. That resulted in annual energy saving of more than 1,500,000kWh. Variable speed drive has been installed for the cooling tower and it enabled part load operation of the cooling tower fan to save 104,000 kWh energy annually. With various energy saving measures, the overall electricity consumption reduce by 36% from 2014 to 2018.



Engineer Graduate Program is provided to nurture and aspiring both professional managerial and technical tenants in order to enhance the job knowledge of staff through training on plumbing and drainage system, energy saving, electrical and HVAC systems, fire services installations and maintenance, as well as technical visit.



# FACILITY MANAGEMENT TEAM

## Merit Award:

**MOKO**



**Moko** in Mongkok is a 6-level shopping arcade which has been renovated in 2015 and has its designated management office. It is linked to MTR Mong Kok East Station, bus interchange terminal and footbridge to Argyle Bridge. Facility management team aims to enhance building performance through putting continuous effort on environmental protection in a comprehensive and structured approach.

BS Design Features	Major Measures
<b>HVAC System</b>	<ul style="list-style-type: none"> <li>a. Replacement of aged air-cooled chillers to high energy efficient air-cooled chillers</li> <li>b. Variable frequency drive (VFD) and provision of pressure independent valve with smart actuator for AHU</li> <li>c. Provision of jet fans in footbridge for enhancing ventilation effectiveness</li> </ul>
<b>Electrical and Lighting System</b>	Retrofit of lighting with LED lights



Energy efficiency of chillers has been enhanced with part load COP at high level. That resulted in annual energy saving of more than 2,052,000kWh. With various energy saving measures, the annual electricity consumption reduced by 28%.



**PROJECT ADDRESS:** Shopping Arcade, 193, Prince Edward Road, Mongkok, Kowloon

**PROJECT TEAM:**

**Building Owner:** Sun Hung Kai Properties Limited, Hong Kong

**Facility Manager:** Kai Shing Management Services Limited, Hong Kong





A & R  
engineering co., ltd.

奇樂工程  
有限公司

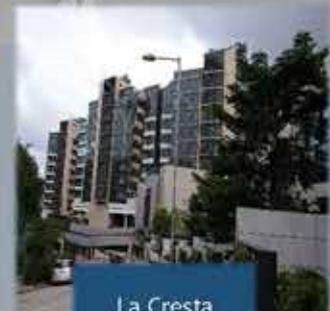
Building Services Contractor  
established for over 25  
years. Air-Conditioning  
Installation Group II  
Contractor for Public Works.



La Vetta



Page 148 Hotel



La Cresta



Tuen Mun ORI



Des Voeux Road West

Specializing in design, supply, installation,  
T&C, repair and maintenance of HVAC and  
Mechanical System.

## A & R Engineering Company Limited

Unit 1-2, 8/F., Block A, Po Yip Building, 62-70 Texaco Road, Tsuen Wan, N.T. Hong Kong

Tel: 2408 2960

Fax: 2408 2966

E-mail: [general@arengco.com.hk](mailto:general@arengco.com.hk)

For more information, please visit: [www.arengco.com.hk](http://www.arengco.com.hk)



# ENGINEERING FOR THE FUTURE

*with our expertise*



**CLYDEMAN ENGINEERING LIMITED**

UNIT 4, 5/F, TOWER 1, HARBOUR CENTRE,  
1 HOK CHEUNG ST., HUNG HOM, KLN, HK

TEL: (852) 2332 3591 FAX: (852) 2374 2166  
info@clydeman.com  
www.clydeman.com



**WINSTON** AIR CONDITIONING & ENGINEERING  
(HONG KONG) COMPANY LIMITED

UNIT 2B, 1/F, TOWER 1, HARBOUR CENTRE,  
1 HOK CHEUNG ST., HUNG HOM, KLN, HK

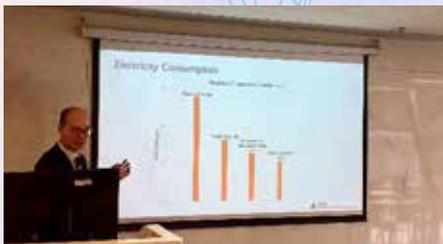
TEL: (852) 2764 1200 FAX: (852) 2764 0465  
www.winston-hk.com

# CIBSE HONG KONG AWARDS 2019 LAUNCHING AND JUDGING DAY

Launching cum BPA Winners Experience  
Sharing on 27 March 2019



Judging Day on 12 July 2019





# CIBSE Hong Kong AWARDS 2019

## Sponsors for the CIBSE Hong Kong Awards 2019

(in alphabetical order)

### PREMIUM SPONSORS

Arup

ATAL Engineering Group

A&R Engineering Company Limited

BYME Engineering (HK) Ltd.

Kai Shing Management Services Limited

Hip Hing Construction Co. Ltd.

### TABLE SPONSORS

Kai Shing Management Services Limited

ISS Facility Services Limited

The Hong Kong Jockey Club

### HALF-TABLE SPONSORS

Belimo Actuators Ltd

King-Tech Engineering Co. Limited

Smart Edge Limited

The Jardine Engineering Corporation Limited

WELCOME AIR-TECH Limited

### INDIVIDUAL SPONSORS

Gelec (HK) Limited

Smart Edge Limited

Sustain Energy Ltd.

### AWARD BROCHURE SPONSORS

Belimo Actuators Ltd.

C.J. Wishing International Ltd.

Fair-Rack Electrical Asia (HK) Ltd.

Fook Loong (HK) Ltd.

Southa Technical Limited

Sustain Energy Ltd.

Winston Air Conditioning & Engineering Company Limited