

### **Annex 3 – Sample of the Reply Slip**

<b>Retro-fitting Case Study Submission Form</b> Hong Kong Green Building Council Limited (HKGBC)	
<b>Information of Building</b>	
Building owner:	ABC Limited
Building name (optional):	ABC Building
Photo of the building (optional): (At least 300 dpi)	<b>*Please attach the photo as Annex</b>
Description of the building:	<ul style="list-style-type: none"> <li>• Grade A Commercial complex with 23 floors of offices , 4 floors shopping centre, 3 floors basement carpark</li> <li>• Fully air-conditioned with air-cooled central chilled water system, deferential pressure by-pass, constant speed pumps</li> <li>• Fan-coil unit for offices and shopping centre with pre-treated fresh air</li> <li>• Generator set lift</li> <li>• T-8 light tube</li> </ul>
<b>Information of Retro-fitting Project</b>	
Retro-fitted system(s) involved: (Please refer to Annex 1)	1. HVAC chilled water side and primarily fresh air system 2. Passenger and cargo lift 3. Lighting in common area
Retro-fitted initiative(s):	<p><b>HVAC Chilled water system:</b> Converted the chilled water system to variable flow system. All pumps fitted with variable speed drives and necessary controls to control the flowrate of the chilled water by differential temperature of chilled water supply and return header and override by pressure differential of the critical circuit point</p> <p><b>HVAC primary Fresh air system:</b> Converted the primary fresh air system to demand control. Fresh air flow rate on every floor is controlled by resetting the set point of a constant air value flow according to a carbon dioxide sensor. Speed of fresh air fan is controlled by a pressure sensor at the supply air duct</p> <p><b>Lift:</b> modernise the existing Generator set lift to VVF lift control</p> <p><b>Lighting:</b> replace all common area lighting to LED lighting panel</p>
Schematic diagram indicating the changes OR photos indicating the implementation (optional): (At least 300 dpi)	<b>* Please attach the diagram/photo as Annex</b>
Observed benefits other than energy saving:	<ul style="list-style-type: none"> <li>• Reduced maintenance resources in plant operations and future retro-commissioning and balancing</li> </ul>

	<ul style="list-style-type: none"> <li>• More information for plant monitoring and reporting</li> <li>• Smoother operation, shorter waiting time for passengers</li> <li>• Resolved the problem of sourcing lift spare parts</li> <li>• Better light quality</li> </ul>
General observations of the retro-fitting project:	<ul style="list-style-type: none"> <li>• HVAC system retro-fit have not affected the tenants</li> <li>• Standard retro-fitting initiatives with proven technologies and straight forward</li> <li>• Lift retro-fit requires shut down of lift services one by one. Some disturbance to tenants but manageable</li> <li>• Lightings for offices are replaced during weekends</li> <li>• Lightings for shopping centres are replaced area by area during non-business hours. Slightly affected on aesthetics of the mall during the retro-fit period. Posters advising customers of the enhancing project was posted. No complaints received.</li> <li>• Overall a well justified project with good outcomes with tangible and non-tangible benefits</li> </ul>
Name of consultant and contractors (optional):	
<b>Cost</b>	
Total cost:	HKD 6.8 million
Cost breakdown (optional):	Chilled water system HKD 300,000 Primary air system HKD 120,000 Lift modernization HKD 4,000,000 Lighting HKD 800,000
<b>Saving</b>	
Total savings/year:	HKD 580,000
Savings/year breakdown (optional):	Chilled water system: HKD 60,000 Payback: 5 yr Primary air system: HKD 40,000 Payback: 3 yr Lift modernization: HKD 80,000 Payback: 50 yr Lighting: HKD 400,000 Payback: 2 yr
Payback (optional):	11.7 yr
<b>Awards</b>	
Award(s) received by the project (if any):	Green Building Award Innovation and Technology Award
<b>Subsidy/ Funding</b>	

The project is supported by (if any):	Green Building Fund
<b>Contact Information</b>	
Contact person:	
Organisation:	
Position:	
Contact no.:	
E-mail:	

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