

PROJECT CLEAN AIR

Certification Scheme for Clean Air Charter

Final Report

For

Airport Authority Hong Kong (AA)



Prepared by



March 2014

1. INTRODUCTION

Airport Authority Hong Kong (AA) is a statutory body wholly owned by the Hong Kong SAR Government. Established in 1995, AA is responsible for the operation and development of Hong Kong International Airport (HKIA).

AA is governed by the Airport Authority Ordinance (Chapter 483, The Laws of Hong Kong) and its Board comprises a Chairman, CEO and between eight to 15 other members. Led by a management team comprising experts from different sectors, AA's 1,100 staff strives to reinforce HKIA's status as an international and regional aviation centre and an engine of economic growth for Hong Kong.

Based on the findings from the pre-audit questionnaire completed by AA in February 2014, it was determined that AA fits into Group C category of the certification scheme, showing that the organisation has comprehensive management systems and means in place to identify and verify the implementation of energy efficiency / emission reduction programmes that are in compliance with the requirements of the Clean Air Charter (CAC).

This report outlines the findings of the Business Environment Council Limited (BEC) from a walk through audit and interview with AA's representative, Mr. Chris Lee, Assistant Manager, Environment. The site visit was conducted in the AA office located at Chek Lap Kok by Ms. Annie Yeung on 7th March 2014. The purpose of this audit was to verify AA's commitments to the CAC.

2. OBSERVATIONS AND COMPLIANCE

Based on the site meeting, AA's programmes and practices on reducing air emissions were reviewed. In general, a systematic approach on addressing the CAC's commitments has been implemented as follows:

- AA demonstrates its overall environmental commitment through the Corporate Environmental Policy Statement, which adopts and encourages practices that prevent or minimise pollution and maximise energy and natural resource use efficiencies.
- The Environment Department is responsible for monitoring the real-time air emissions data obtained from AA's three air quality monitoring stations. The Technical Services Department is responsible for monitoring AA's energy consumption on a regular basis.
- AA Environmental Coordination Group, which is chaired by the Senior Manager, Environment and comprises representatives from different departments, coordinates and reviews the environmental initiatives and performance of AA, including energy performance and energy reduction measures implemented.
- The Executive Director, Corporate Development (EDCD) is responsible to review the overall environmental performance of the organisation.
- AA has established a Three-Year Environmental Plan which contains over 120 environmental initiatives executed by different departments, including carbon emissions, air quality and energy efficiency. Each responsible department will update the progress of the initiatives on a bi-monthly basis.

Regarding the six commitments of the CAC, the table below summarizes the achievements of AA:

Commitments	Actions done
1) Operate to a recognized world class standard, or the standards established by the Hong Kong / Guangdong governments on emissions of air pollutants, even if it is not a requirement to do so here. (Relevant to industrial operations, power plants and business with direct emissions)	<ul style="list-style-type: none"> ◆ In view of the main activities of AA, the direct gaseous emissions come mainly from diesel and petrol vehicles, and emergency generators. ◆ AA adheres to the HKSAR legal requirements such as the Air Pollution Control Ordinance (APCO) (Cap.311) and other air emissions-related legislations, for example, the Road Traffic Ordinance (Cap.374). ◆ AA has pledged to reduce HKIA's carbon emissions by 25% per workload unit by 2015 from 2008 levels.
2) Use continuous emissions monitors (CEMs) at significant sources, e.g. large and medium plants. (Relevant to large / medium industrial operations and power plants)	<ul style="list-style-type: none"> ◆ This commitment is confined to the industrial or power plants. Hence this is not applicable to AA. ◆ Though it is not required by law, AA continuously tracks outdoor air quality through its three air quality monitoring stations (two on the airport island and one on Sha Chau), and NO₂ sensors located at Terminal 1 and apron area.

Commitments	Actions done
	 <p><i>Air quality monitoring station on the airport island</i></p>
<p>3) Publish information on energy and fuel use, as well as total emissions of air pollutants annually and timely, if emissions are significant.</p>	<ul style="list-style-type: none"> <li>◆ The overall petrol and LPG consumptions in 2012/13 have dropped by 25.1% and 78.4% respectively when comparing with 2011/12. <li>◆ AA has monitored the energy consumption regularly and compared its energy performance with regard to previous years. The electricity consumption per passenger in 2012 was 4.93 kWh, which dropped by 4.5% when compared with 5.16 kWh per passenger in 2011. <li>◆ Energy consumption data are published on AA's Corporate Social Responsibility website and Sustainability Report.
<p>4) Undertake to adopt energy-efficient measures in their operations.</p>	<p>AA has implemented a number of electricity saving measures in its operations to reduce indirect emissions from local power plants, including:</p> <p><u>Energy Saving</u></p> <ul style="list-style-type: none"> <li>• AA has committed to replace more than 100,000 lighting applications in terminal buildings with LEDs by the end of 2014. The estimated energy saving is around 15 million kWh which equates to a reduction of 9,000 tonnes of CO₂ equivalent emissions per year.  <p><i>LEDs in the terminal building</i></p>

Commitments	Actions done
	<ul style="list-style-type: none"> • AA has integrated the chilled water systems in Terminal 1 / Ground Transportation Centre and Terminal 2 / HKIA Tower / Airport World Trade Centre to increase the energy efficiency of the cooling system since 2011. The estimated energy saving is around 5 million kWh per year. <div style="text-align: center;">  </div> <p style="text-align: center;"><i>Integrated chilled water systems at HKIA</i></p> <ul style="list-style-type: none"> • AA has installed motion sensors in 17 HKIA Tower meeting rooms. Besides, 80% of lights in open office areas in HKIA Tower are switched off during lunch period to save energy from unnecessary lighting. <p><u>Reduce Air Pollution</u></p> <ul style="list-style-type: none"> • AA has established a policy to ban the use of APUs within 2014 when the aircraft is at stand-by mode. • As of Dec 2013, AA has upgraded 136 fixed ground power (FGP) and 37 pre-conditioned air (PCA) system to facilitate the banning of auxiliary power units (APUs) usage. APUs are small jet engines in the tail of an aircraft that are used to deliver electrical power and air conditioning to the cabin while the aircraft is on the ground with the main engines are switched off.

Commitments	Actions done
	<div> </div> <div> <p><i>Fixed ground power (FGP) system in the airport</i></p> </div> <div> </div> <div> <p><i>Pre-conditioned air (PCA) system in the airport</i></p> </div> <ul style="list-style-type: none"> • AA is exploring reduced engine taxiing with Cathay Pacific and Dragonair. • AA has launched an Airside Saloon Electric Vehicles (EVs) Replacement Programme to encourage its business partners to replace their diesel saloon cars with EVs. AA has also established the policy to ban the use of non-EVs on the airside by 2017. <div> </div> <div> <p><i>AA's EV and EV charger</i></p> </div> <ul style="list-style-type: none"> • AA has required all new airside vehicles and ground support equipment (GSE) to be fuel-efficient, and making it a pre-requisite for the Airside Vehicle Licence (AVL) system. As of Dec 2013, there were 310 electric vehicles and electric GSE operating in the airport restricted area.

Commitments	Actions done
	<div> </div> <p><i>Enhanced use of Electric Ground Support Equipment (EGSE) in the restricted area of the airport</i></p> <ul style="list-style-type: none"> • To facilitate the use of EVs and E-GSE, over 90 EV chargers were installed as of Dec 2013. <div> </div> <p><i>EV chargers installed in the car park of HKIA Tower</i></p>
<p>5) Identify and encourage business-relevant measures to be taken on days when air pollution is high.</p>	<ul style="list-style-type: none"> ◆ AA has notified its staff via email on EPD's newly launched Air Quality Healthy Index (AQHI), including the scale and corresponding health risk categories.

Commitments	Actions done
6) Share air quality expertise in business with others.	<ul style="list-style-type: none"> ◆ AA has published its environmental efforts and achievements in the bi-monthly newsletter '<i>HKIA News</i>'. ◆ AA has participated and was recognised in a number of local environmental awards and competitions including: <ul style="list-style-type: none"> - Silver Award - Public Organisations and Utilities under the Sectoral Awards of the 2012 Hong Kong Awards for Environmental Excellence (HKAEE) - Gold Award in "Fuel Efficiency Percentage Improvement" and the Bronze Award in "Fuel Saving Percentage Improvement" of Corporate Green Driving Award Scheme 2012 organised by Friends of the Earth (HK) - First runner-up in the "Biggest Unit Saver Award (Company)" category in the Power Smart Energy Saving Contest 2013 held by Friends of the Earth (HK) - Energywi\$e Environmental Label and Carbon"Less" Certificate organised by Environmental Campaign Committee (ECC) - Green Office Awards Labelling Scheme (GOALS) initiated by the World Green Organisation. <div style="text-align: center;">  <p>Representative of AA receiving the Silver Award - Public Organisations and Utilities under the Sectoral Awards of the 2012 HKAEE.</p> </div>

Commitments	Actions done
	<ul style="list-style-type: none"> ◆ AA has also organised lunchtime environmental seminars, including on air quality and eco-driving practices, for its staff members. AA has also offered free transportation to encourage staff participation in off-site environmental activities. <div style="text-align: center;">  </div> <p style="text-align: center;">AA's lunchtime environmental seminars</p> <ul style="list-style-type: none"> ◆ AA has established Green Purchasing Policy which states its commitment to encourage its supply chain to reduce its environmental impacts, including local air pollution.

3. Conclusion

Airport Authority Hong Kong has demonstrated their commitments towards the Clean Air Charter's commitments and is recommended to be certified under the Clean Air Charter.