PROJECT CLEAN AIR

Certification Scheme for Clean Air Charter

Final Report

For

Hong Kong Airport Services Limited (HAS)

Hong Kong Airport Services Ltd

Prepared by

BUSINESS ENVIRONMENT COUNCIL 商界環保協會

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1. INTRODUCTION

Established in 1995, HAS is a wholly owned subsidiary of Cathay Pacific Airways Limited and is the largest ground handling operator at the Hong Kong International Airport, with operation of 24 hours a day and 7 days a week. With a workforce of over 3,000 employees, a fleet of over 2,800 ground support equipments and vehicles, HAS provides passenger and flight handling services such as aerobridge and passenger steps operation, aircraft loading and unloading, transportation and handling of baggage, cargo and mail, Unit Load Device storage, crew transportation services, ramp co-ordination, ticketing, flight despatch, load control planning and aircraft weight and balance for 37 international airlines including Cathay Pacific and Dragonair.

HAS employees are located in four major locations, one office premise in Cathay Pacific City, one in Dragonair House, one in SuperTerminal 1 and four premises within the passenger terminal building at the airport.

This report outlines the findings of Business Environment Council (BEC) from a walk through audit and interview with Mr Sunny Cheung, Assistant Manager Safety & Environment and Mr David Chung, Planning Officer of HAS.

From the pre-audit questionnaire completed by HAS, it was determined that HAS fits into Group C category of the certification scheme, showing that the organization 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 Clean Air Charter.

The site visit was conducted at HAS' operation units located at Hong Kong International Airport and led by Mr Benny Au and Ms Dorothy Lam on 27th November 2008. The purpose of this audit was to verify HAS' commitments to the Clean Air Charter.

2. OBSERVATIONS AND COMPLIANCE

Based on the site meeting, HAS' programmes and practices on reducing air emission were reviewed. In general, a systematic approach on addressing the Clean Air Charter's commitments has been implemented as follows:

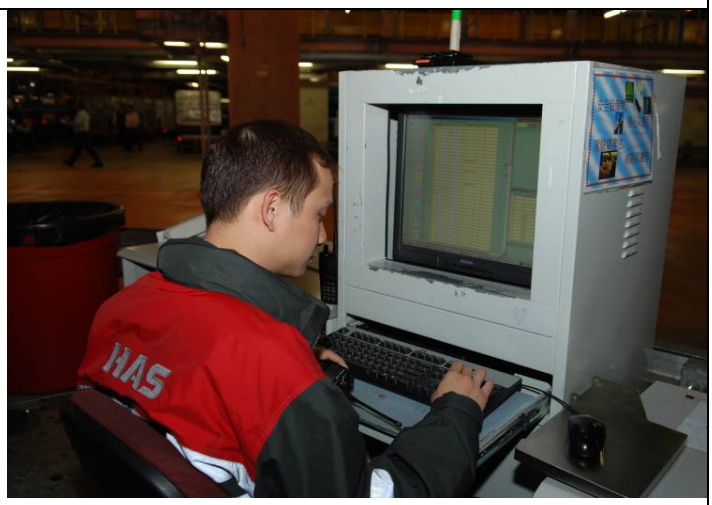
- HAS has established a Sustainable Development (SD) committee and Environmental committee with policies, objectives and action plans addressing green house gas (GHG) emission directly.
- Assistant Manager of Technical Support and Assistant Manager of Safety & Environment are responsible for air emission management.
- Assistant Manager of Safety & Environment is responsible for monitoring the total GHG emission and recording on a monthly basis while SD committee is responsible for reporting on the overall progress of the corporate emission programmes annually in Sustainable Development report.
- In Oct 2008, HAS started the certification process of ISO 9001, ISO 14001 and OHSAS 18001.
- For 2008, HAS has established target to reduce 5% GHG emission and energy consumption per Air Traffic Movement over last year.
- For 2009, GHG Emission Reduction Actions have been formulated with prior focus on the purchase of Euro IV standard fuel-efficient vehicles and ground support equipments as well as conducting comprehensive review of equipment replacement and maintenance program.
- Clean Air Charter and sustainable development is included in the 5-days induction training which will be provided to all new joiners.

Regarding the six commitments of the Clean Air Charter, the table below summarizes the achievements of HAS:

Commitment	**Action 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)	♦ HAS has Environmental Management Plan in place which governs the environmental impacts arising from the company's operation and complies with the requirements of HK Airport Authority. ♦ HAS follows the standards of European Union (EU) and Air Pollution Control (Vehicle Design Standards) (Emission) Regulations, set out by Transport Department.
2) Use continuous emissions monitors (CEMs) at significant sources, e.g. large and	♦ The main emission sources are from company vehicles and ground support equipments (GSE)

<table>
<tr><th>Commitment</th><th>Action done</th></tr>
<tr><td>medium plants. (Relevant to large / medium industrial operations and power plants)</td><td>♦ The major air pollutants generated are CO_2, SO_2, NOx and PM.
♦ As indicated by HAS, no continuous emissions monitor is required under the Air Pollution Control Ordinance, and therefore continuous emission monitoring is not applicable to the scope of HAS operation with regards to the CAC commitments.</td></tr>
<tr><td>3) Publish information on energy and fuel use, as well as total emissions of air pollutants annually and timely, if emissions are significant.</td><td>♦ HAS publishes energy consumption and greenhouse gas emission data, ozone depleting substances in its annual Sustainable Development Report, website and newsletter.
♦ HAS has benchmarked energy consumption with other companies in the aviation services industry within Swire Group and the result is published in Swire Pacific Sustainable Development Report.
♦ As provided by HAS, the total electricity use per Air Traffic Movements (ATM) handled by HAS in 2007 is 36.3 Kwh/ATM which is similar to 2006's figure (36.2 Kwh/ATM) despite of a 5.4% increase in total air traffic movements.
♦ Data comparison on Ozone Depleting Substances and Greenhouse Gas is summarized in the table below
<table><tr><th>Indicator</th><th>2006</th><th>2007</th><th>Comparison</th></tr><tr><td>Ozone Depleting Substances (Kg / ATM)</td><td>0.006 5703</td><td>0.005 98586</td><td>-8.9%</td></tr></table></td></tr>
<tr><td>4) Undertake to adopt energy-efficient measures in their operations.</td><td>In response to endorsing Clean Air Charter, HAS has implemented a number of energy-efficient measures in their operations to reduce emissions, including:
♦ Ground Support Equipment Replacement Program has been implementing since 2000. There were 2 major initiatives under this programme.
➢ Conveyor belts – Since 2001, 24 diesel conveyor belts have been replaced by electrical conveyor belts, which accounts for 50%, up to the year of 2007.</td></tr>
</table>

Commitment	Action done
	 ➢ Passenger Steps – Since 2002, HAS has replaced 50% of passenger steps from mobilized & diesel-powered to non-mobilized passenger steps to greatly reduce diesel consumption.  ➢ By 2007, all of the diesel pallet pushers have been replaced with electrical models. ♦ A new Task Assignment System at baggage area has been implemented since April 2008 to reduce the engine running hours and the number of ground support equipment trips by optimizing the tasks priority and staff deployment.

Commitment	Action done
	

- T10 or T8 fluorescent tubes in one of the offices located at the Passenger Terminal Building have been replaced with T5 by May 2006. This initiative has been budgeted to extend to other HAS' premises in the next two years.

- Since September 2008, HAS has started a pilot fuel-saving programme by installing force amplifiers in 2 of the 16-seaters crew buses to enhance fuel combustion and an increase of 18% in fuel efficiency (km/L) was recorded.

- Since July 1998, HAS has commissioned maintenance contractors to carry out comprehensive Vehicle Maintenance Programme to ensure proper

Commitment	Action done
	fuel efficiency and performance of the vehicles as well as ground support equipments, including daily inspection, schedule inspection, annual inspection and breakdown repair. ♦ HAS has been implementing the replacement program since 6 July 1998. In 2008, a total of 10 Euro III or Euro IV vehicles have been purchased to improve the fuel efficient. Over 51% of the entire vehicle fleet is using Euro III or better engines as to mitigate the environmental impacts.  ♦ Starting from March 2009, HAS carries out a 3-month trail on TREPEL Hybrid Tractor which is a diesel/electric tow tractor for operations in enclosed baggage area and airport apron, with less air pollution generated. 

Commitment	Action done
5) Identify and encourage business-relevant measures to be taken on days when air pollution is high.	♦ HAS will also commit to a continuous information awareness campaign for staff to use less energy on high API days. During high API days, a notice will be posted on the ENV board and intranet to encourage staff to take public transport and to use less electricity at home and at work.
6) Share air quality expertise in business with others.	♦ Environmental achievements are communicated with other companies through annual sustainable development report, website, newsletter and 'green' occasions. ♦ HAS also shares its environmental experiences with the other companies within Swire group in the group environmental committee meeting regularly. ♦ Environmental guidance note is provided to business partners acknowledging HAS' environmental and sustainable development policy as well as stating HAS' environmental requirements. ♦ Questionnaires are distributed to suppliers and contractors to encourage implementation of similar sustainable development policies.

3. CONCLUSION

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