

PROJECT CLEAN AIR

Certification Scheme for Clean Air Charter

Final Report

For

Cathay Pacific Catering Services (H.K.) Ltd.



Prepared by



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1. INTRODUCTION

Cathay Pacific Catering Services (H.K.) Ltd. (CPCS) provides flight catering to 39 international airlines in Hong Kong, is a wholly owned subsidiary of Cathay Pacific Airways and also a Swire Group member. CPCS is one of the most technologically advanced inflight catering facilities in the world. Its automated storage and retrieval system can accommodate up to 2,600 pallets or 12,000 equipment bins. CPCS produced a total of 25.0 million meals and handled 63,000 flights in 2012, representing 63% share of the flight catering market in Hong Kong.

Based on the findings from the pre-audit questionnaire completed by CPCS in November 2013, it was determined that CPCS 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 CPCS's representative, Ms. Annie Wong, Quality Assurance Manager. The site visit was conducted in the CPCS office located at Chek Lap Kok by Ms. Annie Yeung on 5th December 2013. The purpose of this audit was to verify CPCS's commitments to the CAC.

2. OBSERVATIONS AND COMPLIANCE

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

- With commitment from its top management, an environmental management system (EMS), has been established and implemented in accordance with ISO 14001:2004 requirements since 2004.
- The Environmental Steering Committee, which is chaired by the Quality Assurance Manager, has been established to monitor energy and fuel consumption and establish strategy to reduce CO₂ emissions.
- The company-wide Environmental Policy has been established, with an objective to seek opportunities for minimising the environmental impacts arise from their company.
- The Chief Executive Officer, Mrs. Jenny Lam, is responsible to review the annual performance and set up new objectives and targets (O&Ts) for addressing the CAC requirements.
- Environmental news and information have been disseminated to its staff members through the company's magazine "Food for Thought" and during the annual integrated training.
- CPCS has joined the Hong Kong Airport Authority Carbon Reduction Pledge to reduce airport-wide carbon emissions by 25% per workload unit by 2015 from 2008 levels.

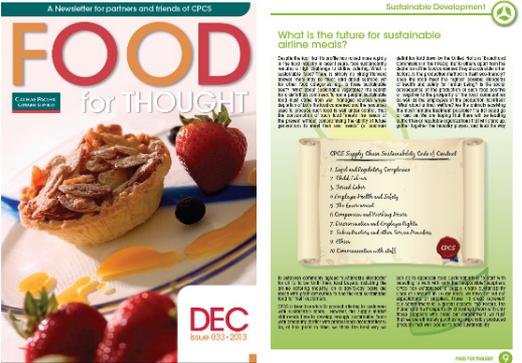
Regarding the six commitments of the Clean Air Charter, the table below summarizes the achievements of CPCS:

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"> ◆ CPCS complies with the requirements under the Air Pollution Control Ordinance as set out by the Hong Kong Environmental Protection Department (EPD). ◆ CPCS has obtained the Hong Kong Legislative and Regulatory Requirement Register. ◆ The energy and fuel consumption data are monitored and recorded by Engineering and Operation team on monthly basis. ◆ CPCS has established, maintained and implemented EMS for its flight catering related operations and other daily operations (with well-defined Environmental Policy and Energy Policy). ◆ CPCS has committed to take part in Hong Kong Airport Authority's carbon reduction programme for reducing airport-wide carbon emissions by 25% per workload unit by 2015 from 2008 levels.

Commitments	Actions done
<p>2) Use continuous emissions monitors (CEMs) at significant sources, e.g. large and medium plants. (Relevant to large / medium industrial operations and power plants)</p>	<ul style="list-style-type: none"> ◆ CPCS’s major emission sources are towngas boilers, refrigerants and vehicles. Regular monitoring of smoke level of vehicle fleet as well as CO₂ content from boiler stacks have been conducted. ◆ Significant emissions are identified mainly as carbon dioxide, particulate matters, and sulfur oxides. ◆ Energy audit has been conducted for the 1/F office at CPCS.
<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"> ◆ As one of the subsidiaries of Cathay Pacific Group, CPCS has published their electricity, fuel and ozone-depleting substances consumptions, carbon dioxide emissions in Cathay Pacific Sustainable Development Report and website annually. ◆ CPCS has compared the energy and fuel consumptions on monthly and annual bases. ◆ CPCS has reported its EHS data to Swire Group every 6 months.
<p>4) Undertake to adopt energy-efficient measures in their operations.</p>	<ul style="list-style-type: none"> ◆ CPCS has replaced 23 pre-Euro and 2 Euro-II high-loaders with Euro IV or higher emission control standards since 2009. CPCS has purchased 23 Euro IV and 16 Euro V diesel trunks to further reduce the emissions. <div data-bbox="802 1317 1295 1686" data-label="Image"> </div> <p data-bbox="869 1697 1230 1733" style="text-align: center;">Fleet of Euro V high loaders</p> <ul style="list-style-type: none"> ◆ CPCS has switched the fuel supply from diesel to town gas for the kitchen boilers in 2011. After the adoption of the cleaner fuel, the operation reduced emission of 993 tonnes of carbon dioxide equivalent (CO₂e).

Commitments	Actions done
	<ul style="list-style-type: none"> ◆ All CPCS's trucks has undergone regular checks to ensure the engine operating normally. The exhaust fumes of high-loaders have been checked during maintenance. ◆ Emissions from CPCS's boiler are monitored by regular tests so as to ensure normal fuel combustion. <p>CPCS has implemented a number of energy saving measures during its operations to reduce emissions, including:</p> <ul style="list-style-type: none"> ◆ CPCS replaced the air-cooled condensers in the blast chillers by more energy-efficient water-cooled condensers in 2011, saving approximately 670,000 kWh of electricity per year. ◆ Outbound cold rooms were installed with 1,000-square-meter plastic curtain in 2012 to reduce energy consumption of the HVAC (heating, ventilation, and air conditioning) system of 1 degree Celsius. ◆ LED lightings were installed in the lobby, inbound and outbound areas to replace traditional halogen lamps, saving an approximately 15,800 kWh of electricity per annum. <div style="text-align: center;">  <p>LED lighting in CPCS</p> </div> <ul style="list-style-type: none"> ◆ Over 390 luminosity enhancement jackets has been installed in all the light tubes in the cold rooms. This resulted in doubling the light power (lux) of fluorescent light tubes whilst reducing the number of tubes by 360 pieces, saving 190,000 kWh electricity annually. ◆ The aging Cold Room evaporator coils had been replaced by new coils in 2010 to reduce refrigerant leakage. The reduction in refrigerant usage has been reduced by 1,829 tonnes of CO₂e.

Commitments	Actions done
	<ul style="list-style-type: none"> ◆ Water contains mineral salts, which accumulate on the inner surface of boilers as mineral scales. This reduces heat transfer efficiency which in turn increases diesel consumption. In 2010, hydro-flow devices were installed to overcome this drawback, successfully reducing the diesel consumption and saving 96,600 litres of diesel per annum. ◆ CPCS has conducted cleaning of the HVAC system in the company regularly.
<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"> ◆ CPCS has been posting the information on the Air Pollution Index (API) (which has been replaced by Air Quality Health Index, AQHI, since 30 December 2013) on the intranet so as to remind vulnerable staff members to reduce outdoor activities during high API/AQHI days as far as possible. ◆ Staff members are encouraged to take environmentally friendly public transport.

Commitments	Actions done
<p>6) Share air quality expertise in business with others.</p>	<ul style="list-style-type: none"> ◆ CPCS has shared their best practices among the companies of the Swire Group through regular environmental task force meetings. ◆ CPCS has publicized its environmental efforts and achievements through its magazine “Food for thought” and CPCS Annual Environmental Report on its website. <div style="text-align: center;">  </div> <ul style="list-style-type: none"> ◆ CPCS has been awarded with the Hong Kong Award for Environmental Excellence (HKAEE) 2011, Manufacturing Sector – Certificate of Merit. <div style="text-align: center;">  </div> <p style="text-align: center;">Certificate of Merit in HKAEE</p> <ul style="list-style-type: none"> ◆ CPCS has requested its contractors to go green with them by using environmentally preferable products for conducting services in the office.

3. CONCLUSION

Cathay Pacific Catering Services (H.K.) Ltd. has demonstrated their commitments towards the Clean Air Charter’s requirements and is recommended to be certified under the Clean Air Charter.