

Summary of Carbon Footprint for Listed Companies

上市公司碳足跡摘要

Part 1 Reporting Entity Information 第一部分 報告機構資料			
1.1 Company information 公司資料			
Name of reporting entity: 報告機構名稱:	Eng:Cathay Pacific Airways Limited 中文:	Stock code: 股份代號:	00293
Hang Seng Industry Classification 恆生行業分類(HSIC):			
(i) Industry: 行業:	Consumer Services 服務業 - 30 ▼		
(ii) Sector: 業務類別:	Transportation 運輸 - 304 ▼		
1.2 Basis of information reported in this form (e.g. weblink(s) to the carbon audit report, GHG accounting report, Environmental, Social and Governance report (ESG report) or sustainability report (GHG emission-related chapter) of the reporting entity, etc) 報告內容的基礎 (例如: 報告機構的碳審計報告、溫室氣體排放核算報告、「環境、社會及管治報告」或可持續發展報告(與溫室氣體排放有關的章節)之網絡連結等):			
www.cathaypacific.com/sdreport			
Attachment 附件 Additional files upload if any (not more than 3 files, not exceeding 2Mb per file) 上載附件檔案 (如有) (不多於3個檔案及每個檔案少於2MB) File Description 文件描述: File 文件: File Description 文件描述: File 文件: File Description 文件描述: File 文件:			
Part 2 Greenhouse Gas (GHG) Emissions 第二部分 溫室氣體排放			
2.1 GHG Emission Data 溫室氣體排放數據			
Reporting period: 報告期:	2016-01-01 To (至) 2016-12-31		
GHG Accounting Standard / Guideline: 溫室氣體核算標準 / 指引:	<input checked="" type="checkbox"/> EPD/ EMSD Guidelines 環境保護署/ 機電工程署指引 <input checked="" type="checkbox"/> GHG Protocol 溫室氣體議定書 <input type="checkbox"/> International Organization for Standardization (ISO) 14064 國際標準化組織 (ISO) 14064 <input type="checkbox"/> Others, please specify: (其他, 請說明):		
Operational boundary <u>Note 1</u> 營運邊界 <u>備註 1</u>	Brief descriptions on emission sources 排放來源簡述	Emission data 排放數據	
Scope 1 範圍 1:	Aviation Fuel, Fuel Combustion and Towngas	17200000 tonnes CO ₂ -e (公噸二氧化碳當量)	
Scope 2 範圍 2:	Electricity and Towngas	80123 tonnes CO ₂ -e (公噸二氧化碳當量)	
Scope 3 範圍 3:		tonnes CO ₂ -e (公噸二氧化碳當量)	
Reported GHG emissions in total: 所報告的溫室氣體排放總和:	17280123 tonnes CO ₂ -e (公噸二氧化碳當量)		
2.2 Company related information 與公司有關的資料			
Total number of full-time-equivalent employees of the entity(s) covered in the reported GHG emission data during the reporting period: 報告期內溫室氣體排放數據所涵蓋機構的相等於全職僱員總人數:	35990		
Total gross floor area owned/controlled by the entity(s) covered in the reported GHG emission data during the reporting period (m ²): 報告期內溫室氣體排放數據所涵蓋機構擁有/控制的總樓面面積(平方米):			
Total revenue of the entity(s) covered in the reported GHG emission data during the reporting period (HK\$ million): 報告期內溫室氣體排放數據所涵蓋機構的總收入(百萬港元):	92751		

Other information which is relevant to the entity's business operations covered in the reported GHG emissions during the reporting period, please specify (e.g., total no. of passengers, total no. of customers, total unit of goods produced, total no. of hotel rooms occupied, total kWh electricity generated, or total measures of freight load, etc.):

報告期內溫室氣體排放數據所涵蓋機構的其他有關營運資料，請說明(例如：乘客總人數、顧客總人數、製成產品總數量、酒店入住房間總數、總發電量(千瓦/小時)或貨運總量等)：

34.3M passengers 1.9M tonnes of cargo

2.3. Geographical coverage of reported GHG emission data 所報告的溫室氣體排放數據地域範圍：

Operations within Hong Kong 香港以內的營運

Operations outside Hong Kong (Please specify city(ies)/country(ies)) 香港以外的營運 (請說明城市/國家名稱)：

Please also specify the percentage of GHG emissions arising from Hong Kong operations 請同時說明由香港營運所產生的溫室氣體百分比：99 %

Subsidiaries 附屬公司

Please list out the subsidiaries covered in the GHG emission data during the reporting period:
請列出報告期內溫室氣體排放數據所涵蓋的附屬公司：

1	Hong Kong Dragon Airlines Limited
2	Hong Kong Airport Services Limited
3	Cathay Pacific Services Limited
4	Cathay Holidays Limited
5	Vogue Laundry Limited
6	Cathay Pacific Catering Services Limited

Additional information on physical boundary in relation to GHG emission reported (if applicable):

與所報告的溫室氣體排放數據相關之建築物邊界的附加資料(如適用)：

Operations within Hong Kong and our aircraft globally

Part 3 GHG Emission Reduction Measures, Future Initiatives and Targets

第三部分 減少溫室氣體排放的措施、未來計劃及目標

3.1 GHG emission reduction measures implemented during the Reporting Period

在報告期內減少溫室氣體排放的措施

No. 列序	GHG Emission Reduction Measures 減少溫室氣體排放的措施
1	In 2016, we took delivery of 10 Airbus A350-900XWB aircraft, which are equipped with our latest cabins, seat entertainment systems and inflight connectivity. The combination of advanced aerodynamics, lightweight composite materials and the latest Rolls-Royce Trent XWB engines resulted in a 25% reduction in fuel burn compared to existing wide-body aircraft. As well as reducing operating costs, the highly efficient A350 also benefits the environment, with a corresponding cut in CO2 emissions, reduced NOx emissions and a smaller external noise footprint.
2	The first Cathay Pacific flight powered by biofuels arrived at HKIA in May 2016. This flight was operated on a newly delivered Airbus A350-900 and was the world's longest biofuel flight to date. The following 21 delivery flights from Toulouse will also use a 10% blend of biofuel. This biofuel is made from sustainable sugars, using a process of fermentation whereby modified yeast produces hydrocarbons that can be processed into jet fuel. Not only does this fuel have a lower life cycle CO2 than fossil fuel, but biofuel also burns cleaner. The intent of using biofuel on these flights is for Cathay to become accustomed to flying on renewable fuel as we move closer to larger volumes becoming available over the next three to five years.
3	The Flight Efficiency Working Group was established to facilitate a coordinated approach to managing our fuel use better and improving fuel efficiency. The cross-departmental team focussed on projects in the following areas: Aircraft weight Aircraft performance Aircraft operation Aircraft efficiency We continued the regular washing of our engines, which removes airborne dust, grease, and other contaminants. A dirty engine reduces its efficiency, leading to more fuel burn and, in turn, more pollution and higher operating costs. Beginning in 2016, to further reduce fuel consumption and improve carbon emission, we have started increasing the frequency of engine washings from every 11 to 16 weeks, to 6 to 11 weeks. We have also begun to implement engine washing at certain outports to increase efficiency, utilising otherwise unused ground time.
4	In 2016, 14 electric vehicle chargers were installed at Cathay Pacific City and Cathay Dragon House, amounting to a total of 21.
5	HAS serves 21 airlines at HKIA and operates the largest vehicle fleet in the Group. Our GPS tracking system allows us to efficiently manage our fuel consumption. In 2016, there was a decrease of 2.7% in fuel consumption per flight in comparison to the previous year. We expect additional improvement in fuel efficiency as the GPS tracking system is expanded.
6	CPCS serves 41 airlines and is one of the largest flight kitchens in the world. Through equipment replacement, maintenance and optimisation projects in 2016, 2,500 tonnes of CO2 emissions have been reduced. Some of the initiatives included the installation of more than 2,000 pieces of LED lights, installing two water-cooled chillers to replace older and less efficient equipment. In addition to this, the insulation of chilled pipes, suction pipes, and air ducts has also been replaced in order to reduce lost energy, and optimise the cooling and ventilation demand of the air handling unit in order to avoid over consumption of electricity.
7	

CPSL has been operating the Cathay Pacific Cargo Terminal since 2013.

Electricity usage was 21.7 kWh per tonnage in 2016, representing a 0.5% decrease against 2015. Some of the energy efficiency initiatives implemented in 2016 included retrofitting over 1,200 lighting fixtures with more energy efficient ones, such as LED lights and induction lamps as well as increasing charging facilities to cope with the growth of electric vehicle use.

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Vogue Laundry Services employs over 560 staff and serves over 23 airlines, 17 hotels and has a daily output of 251,000 items, equivalent to 71 tonnes of laundry.

Vogue runs a fleet of 23 vehicles for its collection and delivery services. In 2016, six Euro II trucks were replaced by two Euro V trucks. Since March 2016, the use of B5 biodiesel has been trialled on one of the delivery routes.

3.2 GHG emission reduction measures for future initiatives and targets

為未來計劃及目標而制訂的減少溫室氣體排放措施

No. 列序	Future Initiatives 未來計劃	Target GHG Reduction (Qualitative/ Quantitative) 減排目標 (性質/ 數量)
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Part 4 Verification information

第四部分 核證

Has verification note 2 been conducted? 是否曾經進行核證? 備註 2	<input type="radio"/> Yes – please fill in the blanks below (是 – 請填寫以下空格) <input type="radio"/> No (否)
Verification body 核證機構:	PwC Hong Kong
	<input checked="" type="checkbox"/> Others, please specify: (其他, 請說明:) Refer to Assurance Statement http://downloads.cathaypacific.com/cx/aboutus/sd/2016/about-this-report/independent-assurance/index.html
Date of verification: 核證日期:	2017-06-23
Remarks (e.g. various verification status for different subsidiaries): 備註(例如: 各附屬公司的核證情況):	