

## ENVIRONMENT

Swire Pacific's objective is to achieve zero impact on the environment, starting with greenhouse gas emissions, water and waste. We call this goal net zero. With a view to achieving the goal, we are setting quantifiable targets, making investments designed to reduce our environmental impact and concentrating on the three Rs – reduce, reuse and replenish. In 2013, business units started to make quarterly reports, which were included in the group management accounts.




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### REDUCE

To reduce our carbon emissions, water use and the amount of waste we produce

- Swire Properties aims to reduce its electricity usage by 52 million kWh per year by 2020. Investments intended to improve energy efficiency are expected to have aggregated around HK\$500 million by 2020. The financial return on these investments is expected to be positive, with estimated savings of HK\$910 million in electricity costs by 2020.
- Cathay Pacific aims to achieve a 2% per annum improvement in fuel efficiency up to 2020.
- TAECO generated 1.3 million kWh of renewable energy from solar panels in 2013.

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### REUSE

To reuse and recycle things that we use and where possible to return them to the environment

- Swire Beverages is using more recycled and plant based material in its packaging and is encouraging consumers to recycle more. This will reduce the amount of waste going to landfills.
- Swire Beverages recycled 11% of the waste water which it produced in 2013.

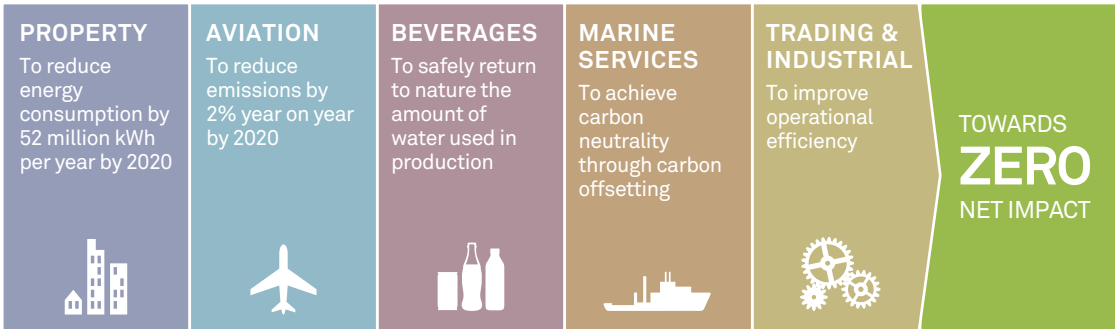
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### REPLENISH

To replenish resources which we consume, through investment and offset

- Swire Coca-Cola USA will replenish up to 273 million litres of water per year through its Jesse Creek flow regeneration project in Idaho. This is sufficient to offset the Idaho plant's entire annual water consumption.
- Swire Pacific Offshore participates in forest conservation in Paraguay.
- Cathay Pacific's FLY greener carbon offsetting program offset 11,000 tonnes of carbon in 2013. Money generated is used to support projects that offset the CO<sub>2</sub> generated by flying.

Our Environment Strategy



Greenhouse Gas Emissions

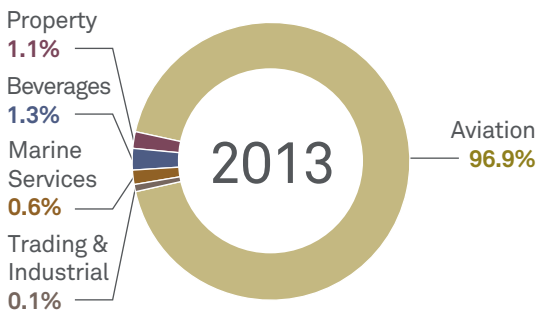
We believe that climate change is a risk to our business. Reductions in greenhouse gas emissions are necessary in order to reduce climate change.

In 2013, our greenhouse gas emissions were 16.6 million tonnes of CO<sub>2</sub>e, down from 16.7 million tonnes of CO<sub>2</sub>e in 2012. This is attributable to less fuel consumed by the Cathay Pacific group. Although the Aviation Division accounts for 97% of our total emissions, we encourage all operating companies to reduce their emissions.

Cathay Pacific is replacing old, less efficient aircraft with new, more efficient aircraft. In 2013, it took delivery of 19 new aircraft, retired or deregistered 10 aircraft and returned four aircraft to their lessors. It wants to start using biofuels. This will help to achieve net zero. Cathay Pacific is a member of the Round Table on Sustainable Biofuels and of the Sustainable Aviation Fuel Users Group Asia. Swire Pacific is looking at possible biofuel investments.

Cathy Pacific has set itself the target of improving fuel efficiency by 2% per annum between 2009 and 2020. It supports IATA's target of carbon neutral growth by 2020.

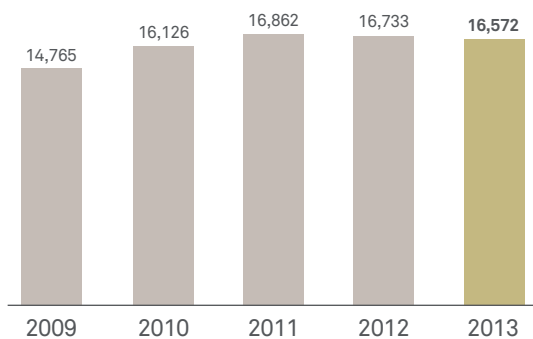
GHG Emissions by Division



Cathay Pacific seeks to manage its emissions in accordance with IATA's four pillar strategy;

GHG Emissions

Thousand tonnes of CO<sub>2</sub>e



IATA's Four Pillar Strategy



**ENERGY EFFICIENCY**

Electricity consumption is our second largest source of greenhouse gas emissions. As the cost of electricity rises, making buildings and operations more energy efficient is a priority. Swire Properties' energy consumption was 8% higher in 2013. This compares favourably with the increase in occupied space in the investment property portfolio.

Our group energy committee helps operating companies to identify energy savings. We require all new buildings and major renovations to obtain at least the second highest grade under an internationally or locally recognised building environmental assessment (Building Environmental Assessment Method (BEAM) or Leadership in Energy and Environmental Design (LEED)). Over HK\$100 million was spent on energy saving investments in 2013.

Swire Properties aims to reduce electricity consumption by 52 million kWh per year by 2020. This is equivalent to the electricity consumption of 15,000 Hong Kong households.

HAECO's radiant cooling ceiling air conditioning system installed in its hangars at Hong Kong International Airport was recognised for its energy saving performance at industry awards in Hong Kong and the USA.

The new Cathay Pacific air cargo terminal, which opened in February 2013, has an energy efficient material handling system and a radiant cooling ceiling and uses natural light where possible.

By signing the Hong Kong Government indoor temperature charter, some of our Hong Kong businesses have agreed to keep average office temperatures between 24 – 26°C in the summer.

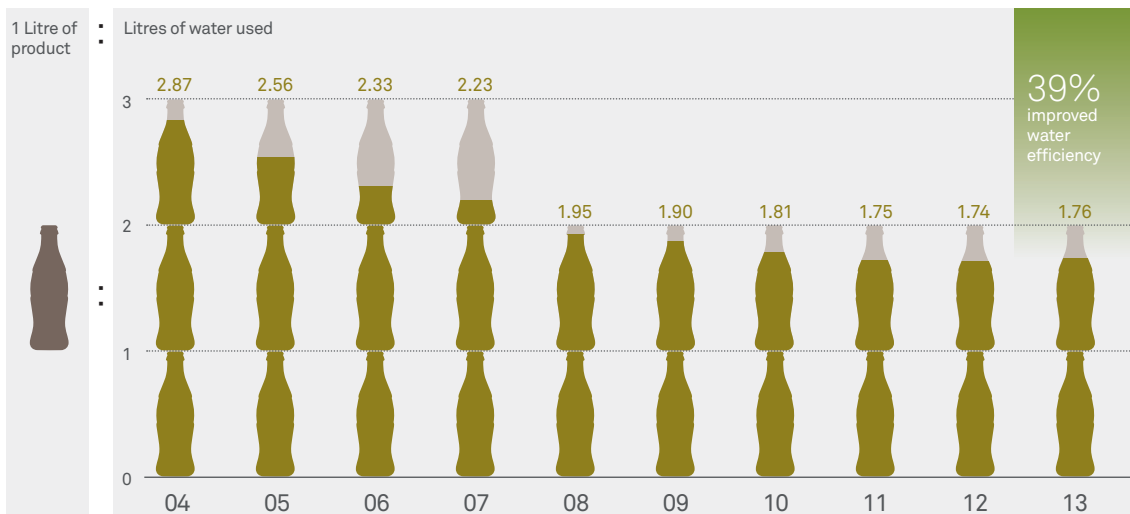
**THE CARBON DESK**

In 2013, five emissions trading schemes commenced in Mainland China and more are planned for 2014. Swire Pacific recognises the risks and opportunities associated with carbon trading. In 2014 we aim to register our first carbon credits with a view to setting up a platform for internal carbon trading. Cathay Pacific achieved carbon offsets in 2013 through FLY greener. The offsets are small but raise awareness. They are equivalent to taking nearly 2,300 cars off the road. We are looking for investments in businesses which will generate carbon credits and so help us to reach net zero.

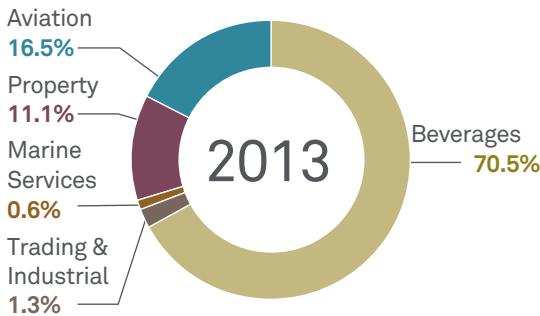
**Water**

In 2013, our total water consumption was 8.6 million cubic metres, an increase of 13% from 2012. Swire Beverages accounts for 71% of our total consumption, using water to make beverages and maintain hygiene. Water quality and access to

**Water Efficiency at Swire Beverages**



Water Consumption by Division



clean water are concerns in Mainland China. Water efficiency (measured in litres of water used per litre of product produced) has improved by 39% since 2004. In 2013, Swire Beverages continued to invest in water efficiency.

In 2013, Swire Coca-Cola USA invested in significant water source regeneration schemes for the first time. A flow restoration project in Jesse Creek, the water source for Swire’s Fruitland bottling plant in Idaho, will restore nearly 1 billion litres of water per year to Jesse Creek. Of this amount, an estimated 273 million litres per year will be attributable to Swire Beverages. A similar project in Chalk Creek, Utah, will restore 11 million litres of water per year to the water source for our Utah bottling plant.

Waste

In 2013, the Hong Kong government published a blueprint for the sustainable use of resources. Those with whom we deal are increasingly aware of the problems associated with waste, including shortage of space at Hong Kong landfills. Cathay Pacific aims to increase recycling and to reduce material usage and waste, in each case by 25% by 2020. Cathay Pacific Catering Services sends its waste food to be converted to pig and fish food. Swire Beverages has introduced lightweight water bottles, bottles made from recycled PET and reverse vending machines. Swire Waste Management composts food waste on two of the outlying islands of Hong Kong.

Waste Management in Swire Properties

- 2014 Targets**
  - Extend a pilot waste management engagement programme to all tenants.
  - Receive certification under the ISO14001 Environmental Management System (which has a waste management component).
  - Achieve “Class of Excellence” award in the Wastewi\$e Scheme for commercial centres.
  - Set waste management targets for 2020.
- 2013**
  - Signs The Food Wise Charter in Hong Kong.
  - Starts to recycle rechargeable batteries.
  - Includes standard waste management requirements in cleaning contracts.
  - Collects 3,000 mooncake tins, including at other Swire companies, for recycling.
- 2012**
  - Forms a team to improve waste management.
  - Installs a food composter capable of handling 100 kg of food per day in Dorset House at Taikoo Place.
  - Starts to donate surplus food from company annual dinners to charity.
- 2011**
  - Completes recycling 48 tonnes of glass and 628 tonnes of stone flooring at the end of the four-year Pacific Place contemporisation project.
  - Receives 14 separation of waste awards from Hong Kong’s environmental protection department.
  - Collects 2,000 mooncake tins for recycling.
- 2010**
  - Starts to recycle glass bottles at 12 residential developments.
- 2009**
  - Starts to recycle used cooking oil and mooncake tins.
- 2007**
  - Installs an automatic baling system to compact recyclable waste.
  - Starts to recycle electronics waste.
- 2006**
  - Begins to recycle fluorescent tubes.
- 2005**
  - Installs a food waste processor to recycle food waste.
  - Introduces building information modelling to reduce construction waste.





### Biodiversity

We comply with all legal requirements relating to biodiversity. We are contributing to the development of the Biodiversity Strategy and Action Plan for Hong Kong. Staff from Taikoo Motors are removing non indigenous plants and restoring native habitats. With Xiamen University, TAECO has planted over 27,000 mangrove trees since 2009 on 38,000m<sup>2</sup> of coastline. With Endangered Species International, Swire Pacific Offshore is trying to protect Philippine forest turtles. The Swire Group Charitable Trust supports a marine research centre in Xiamen which monitors marine ecosystem responses to global and regional environmental changes.

### Air Quality

Air pollution is a big problem in Hong Kong and Mainland China. Vehicles cause a lot of it. We are trying to reduce our contribution by replacing our vehicles and using electric vehicles where we can.

### Swire Sustainability Fund

This fund is available for investment in businesses which can improve sustainability. Two investments were made in 2013. Green Biologics is a biotechnology company which is developing renewable chemical and biofuel technology, in particular for butanol. NanoSpun Technologies is a company which is developing a water treatment process using nanotechnology.

#### 2013 AIMS AND PROGRESS

**Aims** | To use quarterly management accounts to monitor sustainability achievements against targets

**Progress** | Done

**Aims** | To move towards net zero

**Progress** | In progress

**Comments** | Swire Properties and Cathay Pacific have set emission reduction targets. We have made investments in businesses which, if successful, will reduce our net impact on the environment

**Aims** | To continue to explore opportunities to increase energy efficiency, to generate carbon credits and to conduct internal carbon trading

**Progress** | In progress

**Comments** | Our energy committee and carbon desk continue to identify new opportunities for efficiency improvements and obtaining carbon credits

#### AIMS FOR 2014

To set targets to achieve net zero

To form working groups on the management of waste and water

To register our first carbon credits