

2013



## **Environmental, Occupational Health & Safety Report**

Taikoo (Xiamen) Aircraft Engineering Co., Ltd.



# Preface

Environmental, Occupational Health & Safety Report 2013 states the efforts and performance in the areas of environmental protection, occupational health and safety of TAECO over the past year, and shows TAECO's determination on the coordinated development between business and environment.

## ||The scope of the report

### **Period**

This report covers calendar year 2013, it also provides the partial information before 2013 and plan in 2014, which is easy to compare.

### **Scope**

The report includes only the EHS, OHS and CSR activities of TAECO while excluding its subsidiaries and joint venture companies.

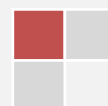
### **Remark**

TAECO are described in the report not only past and present major work but also future projections, plans and objectives. These forecasts, plans and objectives are written based on current information and actual there may be discrepancies in the future and hope to get reader's understand.

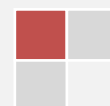


## CONTENTS

1. Executive Summary .....	5
2. Brief Introduction.....	6
3. Environmental Management.....	9
3.1 Environmental Management Organization.....	9
3.2 Disclosure / Communication of Environmental Information .....	10
3.3 Implementation of Laws and Regulations .....	11
3.3.1 Implementation of Laws and Regulations over the Past 3 Years .....	11
3.3.2 Measures and Ways to Deal with Complaints.....	11
3.3.3 Pollutant Monitoring .....	11
3.3.4 Emergency Plan and Drill .....	12
3.3.5 The Implementation of TAECO New, Renovation and Expansion Project EIA and the "Three Simultaneous" .....	13
4. Resource and Energy Consumption.....	14
4.1 Water .....	14
4.2 Electricity & Energy Saving Measures .....	15
4.2.1 Electricity Consumption .....	15
4.2.2 Main Corridors Lighting Modification.....	16
4.2.3 Lamp Replacement in Manufacturing Shop of Hangar 3.....	16
4.3 Fuel Consumption .....	17
4.3.1 Consumption.....	17
4.3.2 Consumption per Man-hours sold .....	18
4.4 Greenhouse Gas Emission.....	19
5. Environment Performance .....	20
5.1 Fugitive Gas Treatment System Management.....	20
5.1.1 Fugitive Gas Total Emission Control .....	20
5.1.2 Fugitive Gas Treatment System Maintenance.....	21
5.1.3 Fugitive Gas Treatment System Improvement.....	22
5.2 Waste Water Treatment System Management .....	25
5.2.1 Waste Water Total Discharge Control.....	25



5.2.2 Pollutant Factors Control.....	25
5.2.3 Waste Water Treatment System Improvement.....	26
5.3 Solid Waste and Hazardous Solid Waste Management.....	28
5.3.1 Total control .....	28
5.3.2 System Improvement.....	29
5.4 Noise System Management .....	31
5.4.1 Factory Boundary Noise Control.....	31
5.5 Dangerous Chemicals Management .....	32
5.5.1 Chemicals Consumption.....	32
5.5.2 Documented Management System .....	32
5.6 Green Procurement Status and Measure.....	33
5.6.1 Management Measure .....	33
5.6.2 Existing Status .....	34
6. Occupational Health & Safety .....	35
6.1 Revised Occupational Health & Safety Policy.....	35
6.2 2013 OHS Performance.....	35
6.3 Occupational Health Management in 2013 .....	36
6.3.1 Occupational Health Examination.....	36
6.3.2 Annual On-site Sampling Evaluation for Potential Risk of Occupational Diseases .....	36
6.4 Further Improvement of TAECO OHS Management System.....	37
6.4.1 Work Safety Standardization.....	37
6.4.2 Safety Training .....	37
6.5 The OHS Safety Campaign and Award Scheme .....	39
6.5.1 Fire Safety Campaign .....	39
6.5.2 OHS Award for Departments with Nil Industrial Injuries.....	39
6.5.3 2013 Safe Production Month.....	40
6.6 2014 OHS Plan.....	41
6.6.1 Complete the Documentation System for TAECO OHSAS 18001 Management System .....	41
6.6.2 Conduct Self-assessment of TAECO Work Safety Standardization .....	41



---

6.6.3 Enhance OHS Training.....	41
6.6.4 OHS Safety Campaign .....	41
7. Social Responsibility .....	42
6.1 Community Engagement.....	42
6.2 Bicycle Association Activities .....	47
6.3 Fly Greener.....	48
8. Contact Us.....	49



# 1. Executive Summary

As TAECO grows it makes an ever greater contribution to HAECO Group and to Xiamen, the city that is our home. A key part of this contribution is ensuring we grow in an environmentally responsible way and we adopt sustainable development practices within our business. We accept our social responsibility to our staff and the city in which we operate and are committed to upholding socially responsible practices in all of our business dealings. We aspire to environmental best practice utilizing eco-efficient technologies to reduce our consumption and to the pro-active recycling of waste to minimize the impact of our operations on global resources.

We believe aviation plays a vital role in global development, breaking down barriers and fostering the exchange and understanding that will lead to a peaceful and socially responsible world. TAECO is proud to be part of this great industry and will be an active player in pursuit of the sustainable development goal.



## 2. Brief Introduction



**||Our mission||**  
**To provide**  
**the highest quality and safety standards**  
**in civil aircraft maintenance and**  
**engineering services,**  
**at the most competitive prices to customers,**  
**and at a reasonable return to our shareholders,**  
**with continuous development for our staff**

TAECO was formed as a joint venture company in 1993 with Hong Kong Aircraft Engineering Company Ltd ('HAECO') as its largest shareholder and provider of management and engineering support. It became a subsidiary of HAECO in 2004. HAECO and TAECO are members of the Swire Group.

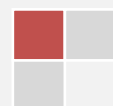
TAECO operates six double B747 bay hangars at Xiamen Gaoqi International Airport. The first hangar started operation since March 1996 and the sixth hangar in June 2011. A narrow-body aircraft can be maintained in the middle of each of Hangars 1, 2, 3, 5 & 6. Hangar 4 is designed for A380 and B747 aircraft.

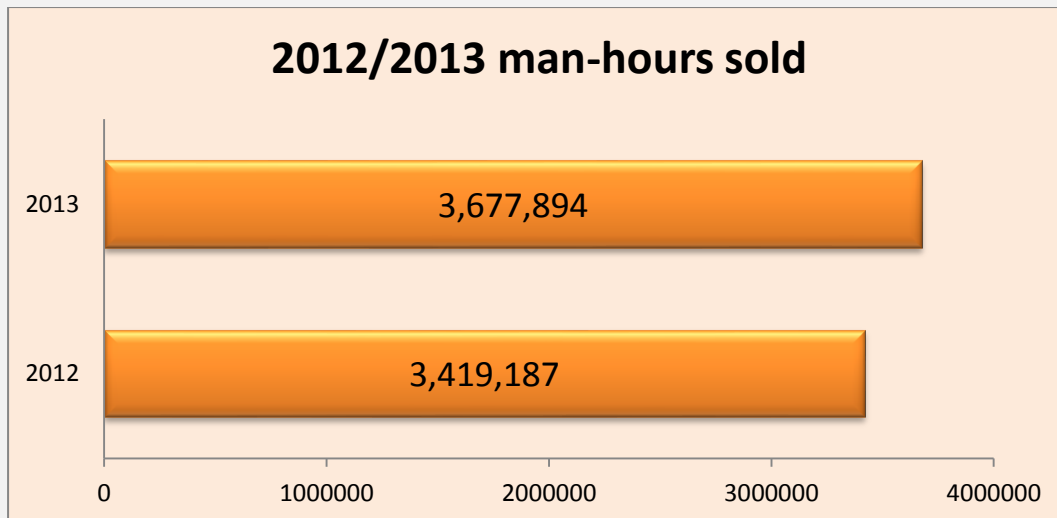
All hangars provide efficient and safe access to aircraft through fuselage & tail docking suspended from their roofs plus fixed under-wing docking stands. There is an apron area of approximately 200,000 m<sup>2</sup> outside of these hangars for aircraft parking, cleaning, refuelling and engine run testing.

By the end of 2013, TAECO had completed maintenance for over 1,874 aircraft and provided services to more than 30 airlines and aircraft leasing companies from all over the world.

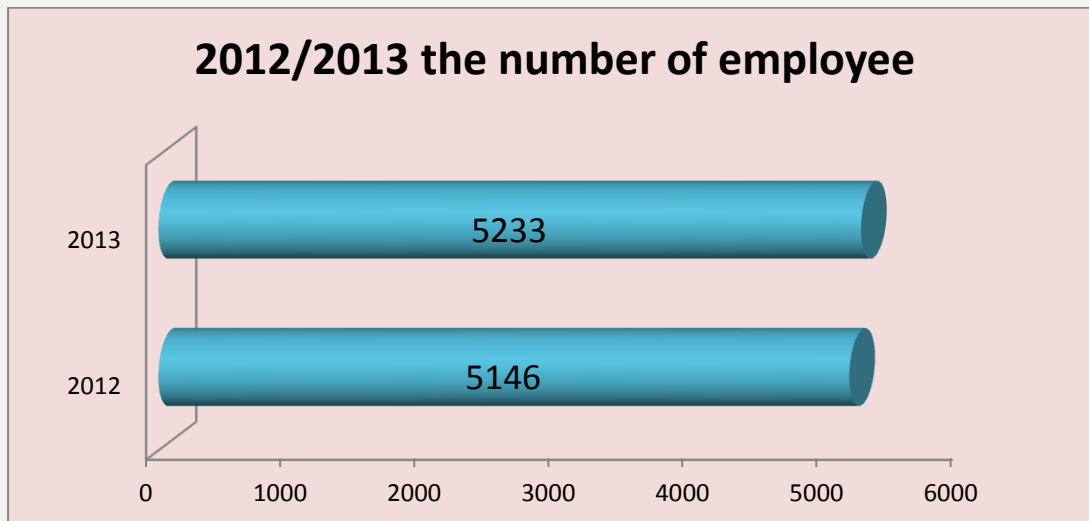
Since March 2011, TAECO is Asia's first and only Airbus approved and Boeing licensed completion centre for their respective ranges of executive and private jets.

In 2013, through the joint efforts of all departments that our business amounted to 1,860 (HK\$ m) and 11.5% increase comparison with 2012. Total man-hours sold are as follows:





As of 31 December 2013, TAECO had a total of 5,233 employees. With the smooth operation of maintenance base in Xiamen, TAECO has been accepted by its customers for its comprehensive high-quality servicing.



In accordance with the Swire Group Policy, TAECO has been seeking a development way, meanwhile committed to protecting and enhancing the earth's life support system. Search for the "new approach" to "do better" to reduce the impact on the earth's ecosystem. For demonstration, we establish an environmental policy as follow:





## 《Environmental Policy》

Our commitment is to protect the ecosystem and conserve natural resources, by ensuring that our business develops in an eco-friendly manner. We strive to minimize our own environmental impact, so as to be the leader on environmental issues in our industry. In our business processes and decision making, environmental considerations will be of the highest priority.

We will operate according to 5 key principles, as follows:

- 1、 **Conservation** — we will strive to reduce direct / indirect consumption in resources and energy. We will apply advanced eco-efficient technologies to reduce use of resources, and we will recycle wherever possible.
- 2、 **Legal Compliance** — we will ensure that daily operations comply with, and where possible exceed, PRC Environmental Law and Regulations on pollution and emissions.
- 3、 **Education** — we will promote environmental responsibility amongst our Staff, Suppliers, Contractors and the Local Community, to encourage higher environmental standards throughout the value chain.
- 4、 **Transparency** — we will make our environmental performance transparent to staff, customers and share-holders, through the open display of information within our facility and in our annual sustainability report.
- 5、 **Continuous Improvement** — we will set and meet clear targets for continuous improvement in energy and resource efficiency.

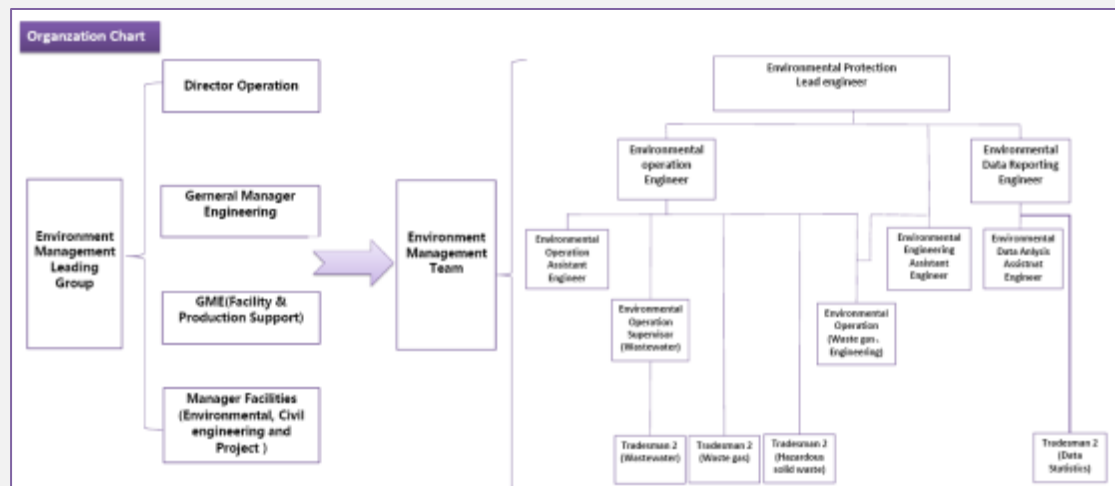


## 3. Environmental Management

### 3.1 Environmental Management Organization

Environmental protection at TAECO is one of the important responsibilities of all its Managers. Procedures and advice for environmental protection are provided by Manager Facilities (environmental, civil engineering & project) to General Manager Engineering, Director Operation and Chief Executive Officer.

To ensure the company comply with the requirement of the national, local laws and regulations. There are 14 full-time employees for environmental protection including the environmental protection operation (waste water, waste gas, hazardous waste, noise etc.) and technical assessment of environmental engineering as well as environmental data collecting / analysis / reporting to manager.



### 3.2 Disclosure / Communication of Environmental Information

TAECO was actively improving the staff awareness on environmental protection work. Whilst share the experience in energy-saving / emission reduction with the sister companies and residents. In addition, publicize the environment information via the internal network and posters to improve the environmental protection awareness and make the information more transparent.



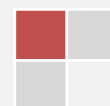
EHS Board



Intranet



Water Saving Signs



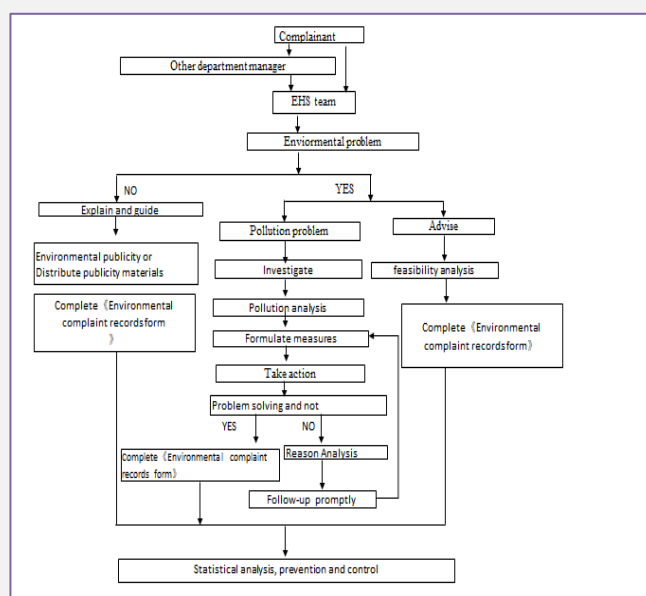
### 3.3 Implementation of Laws and Regulations

#### 3.3.1 Implementation of Laws and Regulations over the Past 3 Years

From year 2011 to 2013, the company did not have a serious environmental pollution accident, environmental violations and environmental petition cases.

#### 3.3.2 Measures and Ways to Deal with Complaints

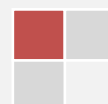
TAECO continued implementing internal complaints handling process to ensure the daily operation in line with the environmental laws and regulations.



#### 3.3.3 Pollutant Monitoring

For strengthening pollution control to ensure pollutant discharge meet standards' requirement, even beyond them, TAECO built the effluent treatment plants with standardized outfalls, installed the fugitive gas treatment equipment and effluent on-line monitoring system.

In 2013, TAECO has past the regular supervision and monitoring by Xiamen City Environmental Monitoring Center Station. Besides, TAECO commissioned a third party who has the qualifications of Liac-MRA, CNAS, and CMA to carry out quarterly environmental monitoring of outfall of wastewater and fugitive gas treatment and boundary noise for continuous improvement. And monitoring results showed that the emission concentration of pollutants met the standard.



### 3.3.4 Emergency Plan and Drill

#### 3.3.4.1 Emergency Response Plan for Abrupt Environmental Accidents

Based on the actual situation and under the chief administrative department's guidance, TAECO entrusted a third party which have qualifications of environment risk evaluation to compile the TAECO Environmental Risk Assessment Report and update TAECO Emergency Response Plan for Abrupt Environmental Accidents in September 2013. During the process, we systemically analyzed the grade of accident, response programs and emergency handling methods based on actual operation condition of factory and the distributor status of risk sources. Emergency facilities shall be improved to achieve the practical function written into the Plan in 2014.

#### 3.3.4.2 Business Continues Plan

Following the request of the Swire Group 's BCP (business continuity plan), TAECO prepared the BCP for Chemical Spillage Chapter Master manual and made annual drill plan. In 2014, TAECO will further review and update the emergency materials for adequate storage. Also EHS team will conduct a leakage drill to test the feasibility and usability of BCP meanwhile enhance the emergency ability of staff.

#### 3.3.4.3 Environmental Emergency Drill

In view of great attention by Huli EPB (Bureau of Environmental Protection) to TAECO's environmental protection, TAECO performed the annual environmental emergency drill on 18 Dec 2013 and invited the Huli EPB and the Airport PSB (Bureau of Public Security) for on-site monitoring and guidance. The Facilities Department jointly with plating shop, OHS team, fire services & security department, clinic and physics & chemistry laboratories carried out the drill on sodium cyanide spillage in the Plating shop of Hangar 1 annex building.





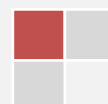
At the end of the drill, Director of Operation made a concluding statement of this successful practice and raised out some requirements for improvement in the future including adequate protective equipment and appropriate the emergency disposal scope as well as safety consciousness strengthening in our daily training, besides that emergency responding speed and efficiency are very critical to protect our property and lives.



### 3.3.5 The Implementation of TAECO New, Renovation and Expansion Project EIA and the "Three Simultaneous"

Construction of the environmental protection plants for 6 hangars was strictly implemented based on the principle of “the design and construction and put into use all perform at the same time”.

Location	EIA approved date	Check and acceptance approved date
Hangar 1	April 13, 1994	December 19, 1996
Hangar 2	February 26, 1999	January 7, 2000
Hangar 3	April 23, 2001	January 6, 2004
Hangar 4	April 27, 2005	November 8, 2006
Hangar 5	June 30, 2006	May 7, 2008
Hangar 6	May 30, 2007	June 4, 2012

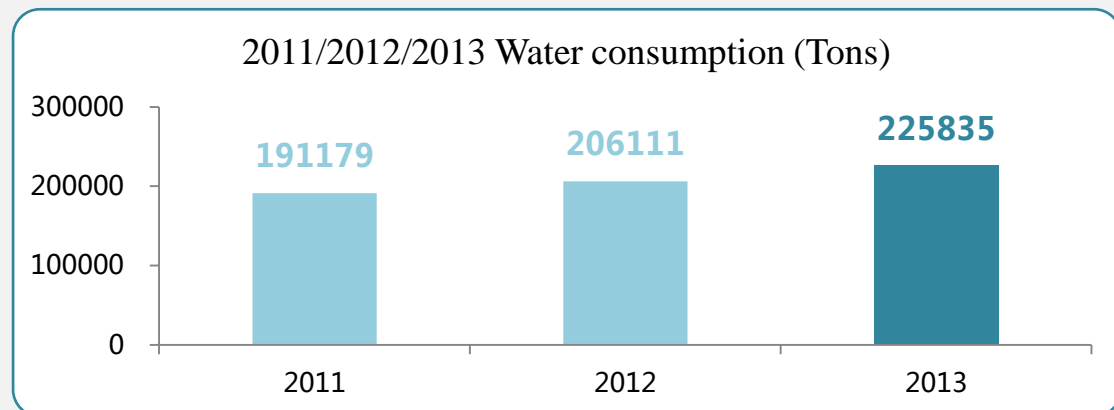


## 4. Resource and Energy Consumption

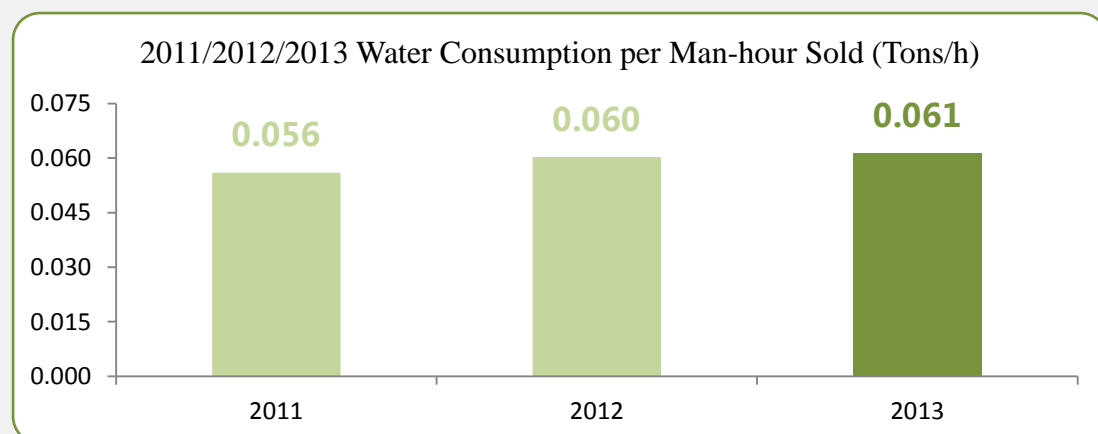
For continuous improvement in 2013, TAECO set a target of 5% reduction to minimize resource consumption and enhance energy efficiency through latest technology application, energy saving modification and human behavior control etc. While not all the goals were completed mainly due to relevant business increasing.

### 4.1 Water

The total water consumption in 2013 was 0.23 million Tons representing an increase of 9.6% in comparison with 2012. The mainly reason is that more aircraft stripping / painting business and increasing cleaning jobs demanded by higher sanitary standard. Especially, a series of toilets renovations and sanitary ware upgrading significantly multiplied the water consumption.



In view of the water consumption increase, this is reflected accordingly in the water consumption per man-hour sold increase comparison with 2012.



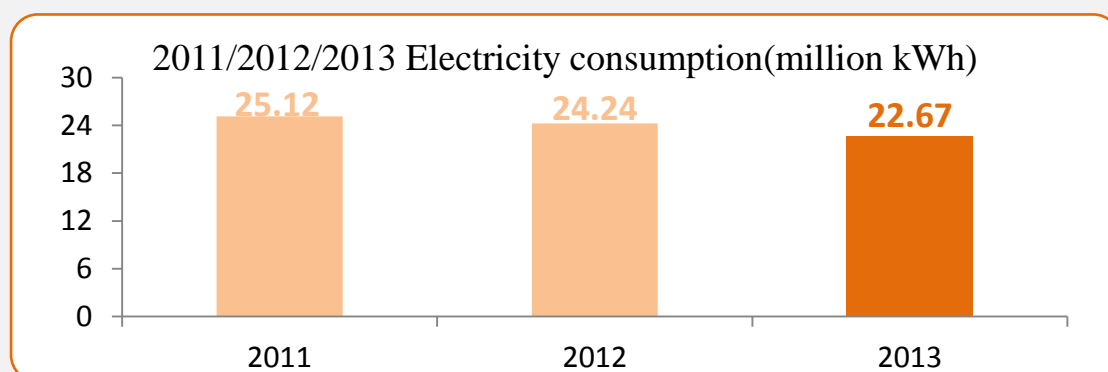


## 4.2 Electricity & Energy Saving Measures

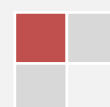
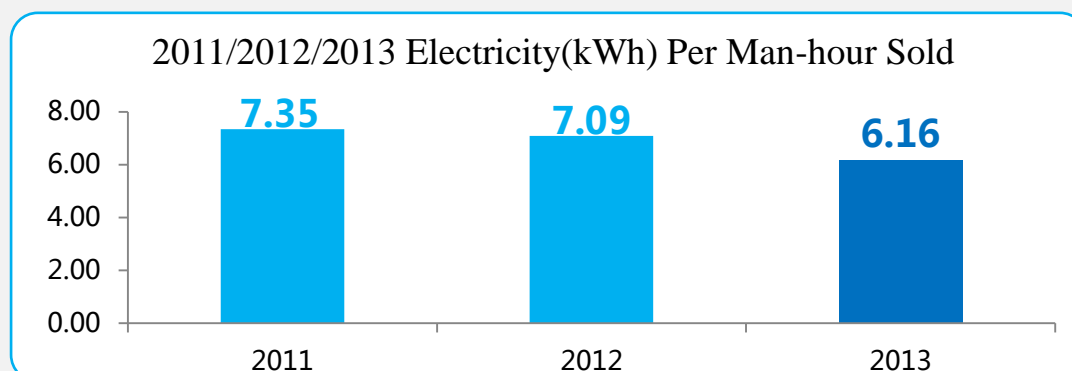
### 4.2.1 Electricity Consumption

The total electricity consumption in 2013 was approximately 22.67 Million kWh representing a reducing of 6.5% in comparison with 2012. Which was contributed by the hangar ceiling light and nose docking air conditioning with approximately 600,000 kWh saving. In addition, the solar panel generation was 1.3million kWh representing an increase of 8% in comparison with 2012, which also is a significant reason.

Type	Ceiling Light	Nose docking A/C	Total
2012	1645403	1919654	
2013	1265540	1703329	
Change (kWh)	-379863	-216325	-596188
%	-23%	-11%	



The businesses activities have gained better recover. This is reflected in the electricity consumption per man-hour sold reduction comparison with 2012.





### 4.2.2 Main Corridors Lighting Modification

There are 555 EA T5 2\*28W lamps replacement by 1\*16W LED at main corridors and 151 EA T5 1\*14W lamps replacement by 1\*8W LED at staircase in Mar 2013, with a projected saving of 0.2 million kWh per year.



### 4.2.3 Lamp Replacement in Manufacturing Shop of Hangar 3

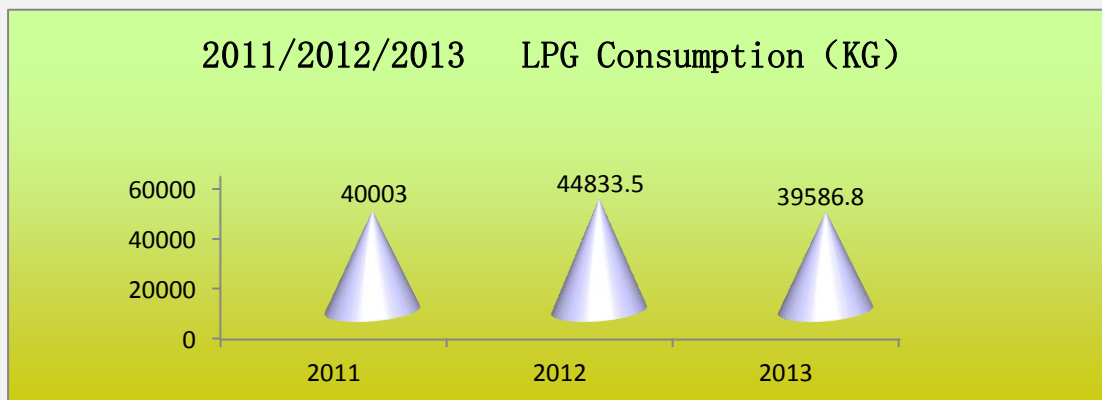
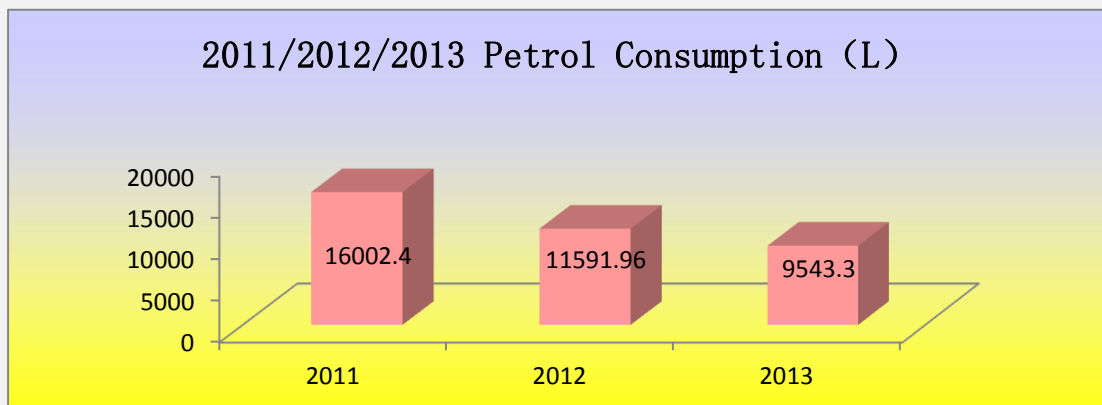
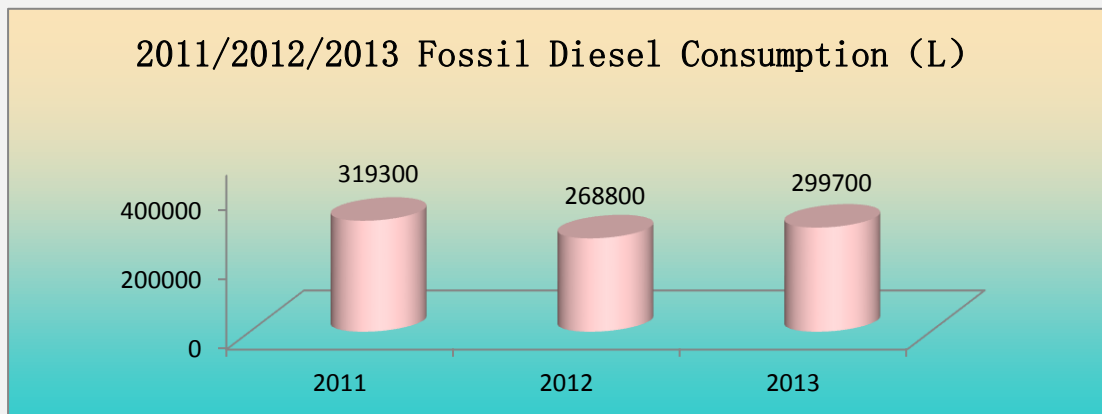
There are 225 EA T5 2\*28W lamps replacement by 2\*12W LED at Manufacturing shop of Hangar 3 in Aug 2013 with a projected saving of 60,000 kWh per year.



## 4.3 Fuel Consumption

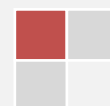
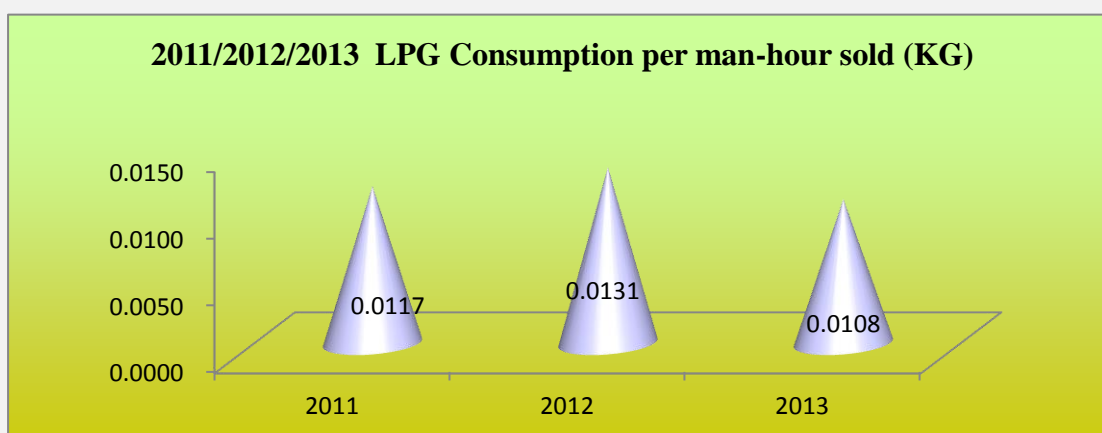
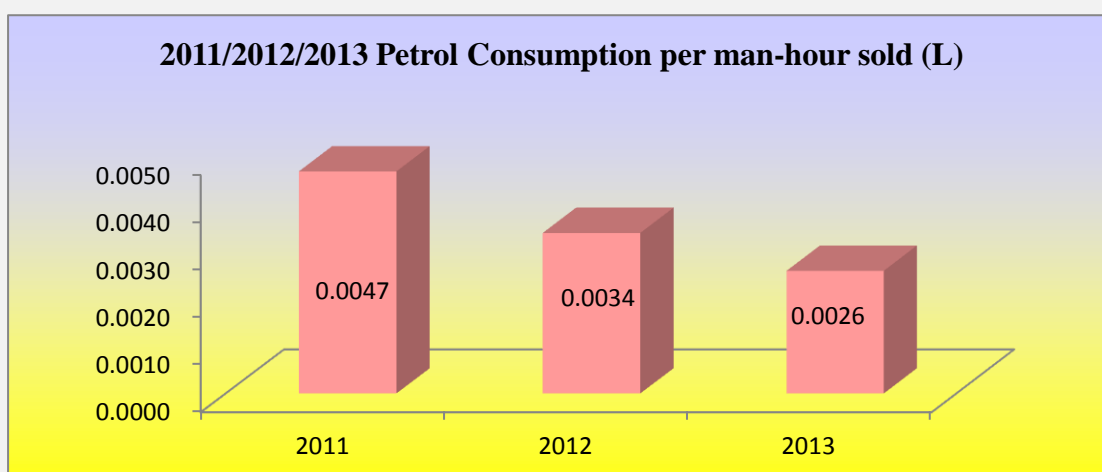
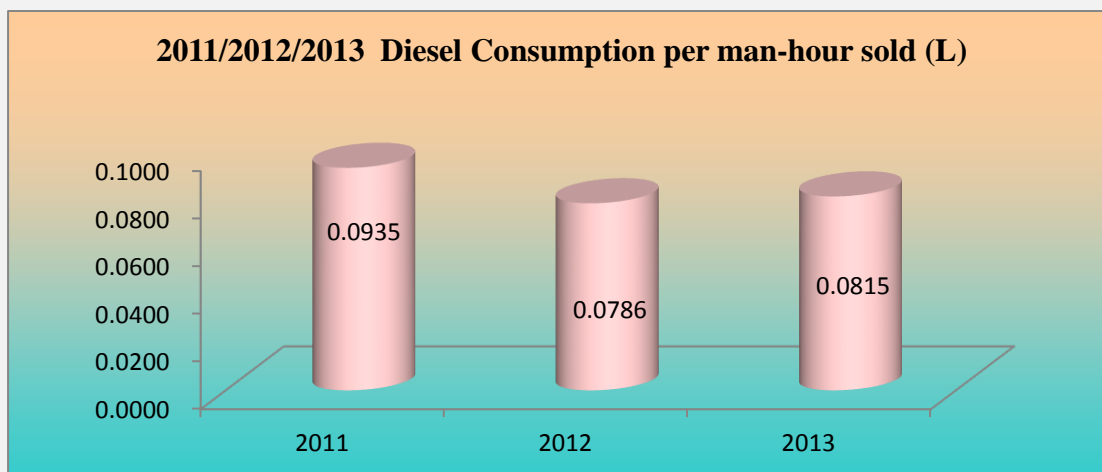
### 4.3.1 Consumption

The total diesel consumption in 2013 was increased by 11% comparing with 2012. Due to the hotter summer weather and mobile air-condition vehicles usage both contribute to the increasing, while petrol consumption was decreased by 18% comparing with 2012 due to lower business activities. The LPG consumption also was decreased by 12% comparing with 2012. Details refer to the following.



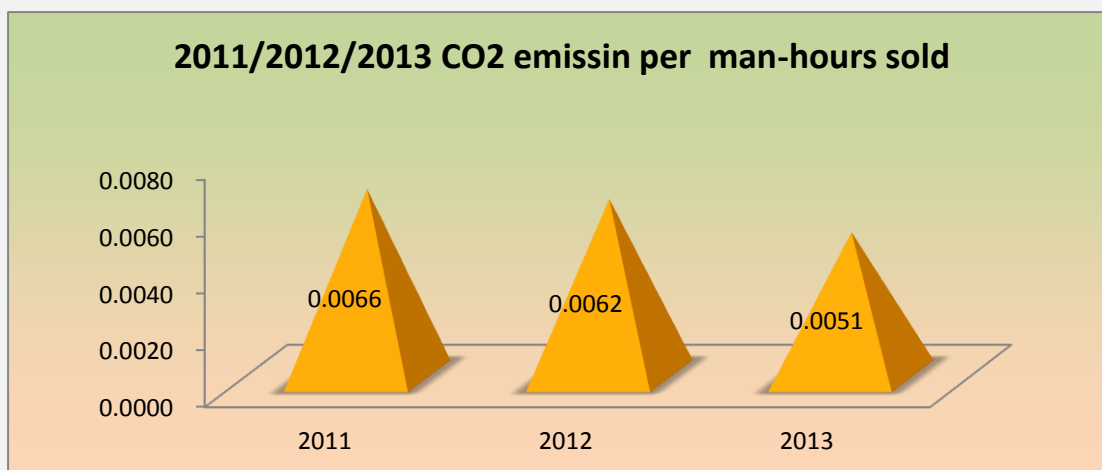
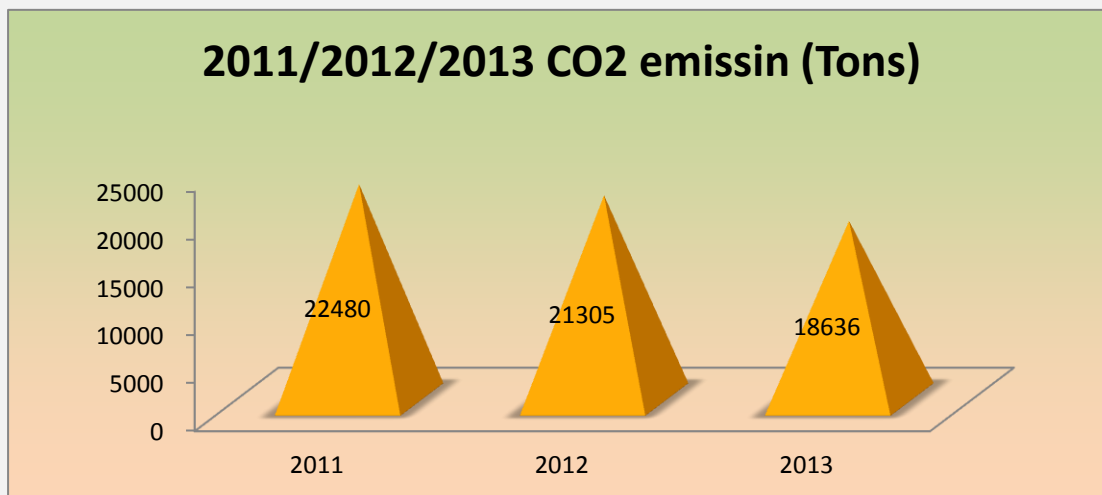
### 4.3.2 Consumption per Man-hours sold

The corresponding consumption per man-hour sold as follows:



## 4.4 Greenhouse Gas Emission

TECO's greenhouse gas emissions are shown in Appendix A. Over 90% of these emissions related to electricity consumption and so a series of actions are being taken to improve energy efficiency. The balance emissions were generated from the consumption of fuels by vehicles, which are also being further managed for reduction.



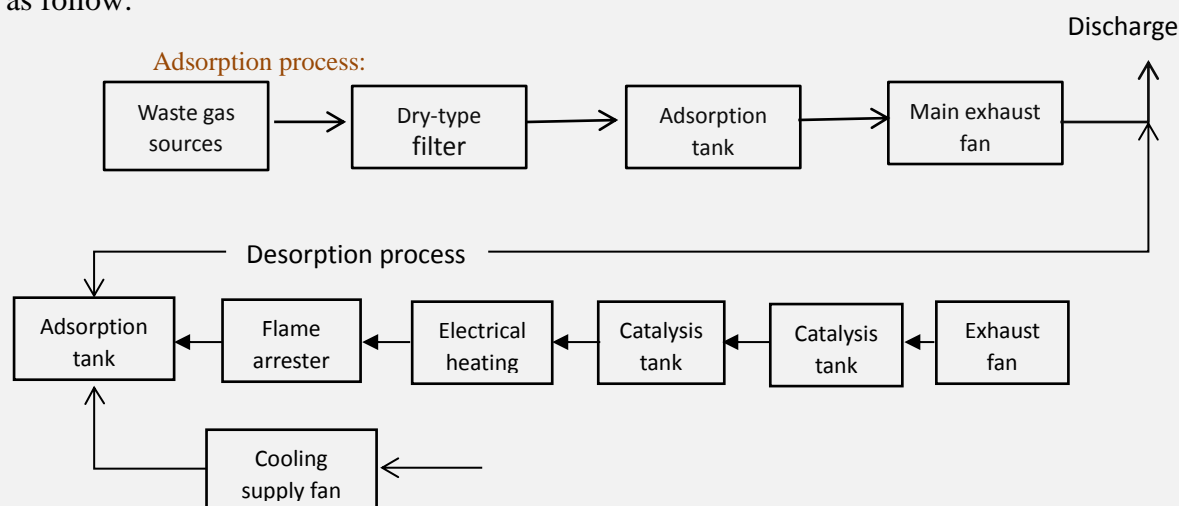
TAECO strives to identify opportunities for CO<sub>2</sub> emission reduction. The overall total greenhouse gas emissions were decreased by 14% in 2013 comparing with 2012. TAECO GHG (Greenhouse Gas) emissions will be disclosed through HAECO's sustainable development report according to GHG protocol.



## 5. Environment Performance

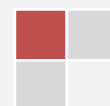
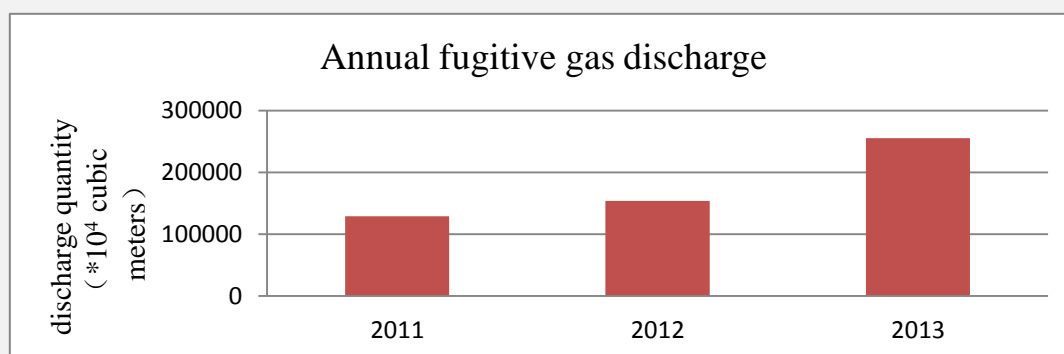
### 5.1 Fugitive Gas Treatment System Management

In order to provide a better working environment for employees and reduce the pollutants emission into the atmosphere, TAECO had installed 28 sets of fugitive gas treatment equipment for 6 Hangers to dispose the fugitive gas generating during the process of painting, striping, adhesive spraying and solvent cleaning. Moreover six sets of mobile treatment equipment were allocated for aircraft painting and stripping in hangar. All the treatment facilities were the integrated device with adsorption enrichment & catalytic purification, of which the process flow diagram was showed as follow:



#### 5.1.1 Fugitive Gas Total Emission Control

The fugitive gas emission mainly generate from the painting and adhesive spraying process. The total emission was about 2.55 billion cubic meters in 2013 with 66% increase compared with 2012 that mainly due to the painting business growing.



### 5.1.2 Fugitive Gas Treatment System Maintenance

TAECO take great importance to the fugitive gas treatment equipment and entrust profession skill personnel of third party to make periodic inspection and preventive maintenance to ensure it in good operation.



Electricity control system inspection



Active carbon inspection



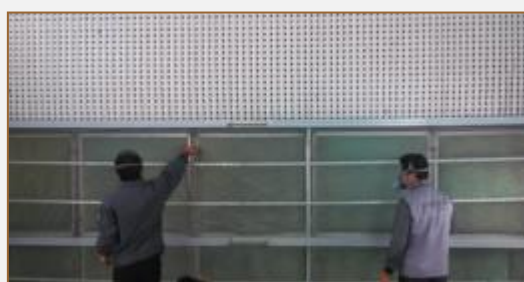
Filtrate cotton replacement



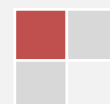
Active carbon desorption



Daily carbon replacement



Filtrate cotton and filtrate paper cleaning



### 5.1.3 Fugitive Gas Treatment System Improvement

#### 5.1.3.1 Fugitive Gas Treatment System Upgrade

5 sets of fugitive gas treatment system in TAECO were upgraded in 2013 and passed the environmental acceptance by EPB, which can further improve the environment of workshop and reduce the emissions.

##### A. Fugitive gas treatment system renovation in baking room



##### B. Modification of water curtain type spraying shop in Hangar 1

#### >>Project Overview

Existing water curtain type spraying shop in hangar 1 annex was aged and worthless repair therefore was modified to dry filter type painting room for free wastewater generation, and is able to meet the environmental regulations and CAAC civil aviation maintenance standard.



Air supply platform



The upgraded paint shop of Hangar 1

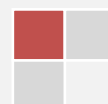


#### >>Environmental Benefit

After modification, the system shall not use water pump and correspondingly reduce electricity consumption of 33,750kWh, also saved fresh water 36m<sup>3</sup>/a and improve the fugitive gas treatment efficiency.

#### >>Progress of the Project

More than 400k RMB capital expense was invested for this project and with a





successful trial run, it passed the environmental monitoring by local EPB and launch to operation.

C. Installation of fugitive gas treatment system for paint storage & mixing room in Hangar 1



D. Fugitive gas treatment system renovation in Interior Refurbishment Shop of Hangar 2



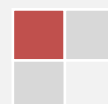
E. Installation of fugitive gas treatment system for Water transfer printing shop of Hangar 4



### 5.1.3.2 Power Control Modification

In order to provide safety working environment for maintenance personnel, the power control facilities of exhaust fans in workshops of the old Hangars have been completed in 2013.

### 5.1.3.3 Hangar 5 Painting Room Upgrade in Progress





---

In order to improve the efficiency of fugitive gas collection and the painting environment for employees, the painting room in Hanger 5 is going to be upgraded of which the design plan is under study.

#### **5.1.3.4 Plan to Construct Sole Painting Bay**

In order to reduce the fugitive gas emission concentration during painting and improve the air quality in hangar, the design of specialized fixed fugitive gas treatment equipment for hangar painting and striping was initiated in 2013, and planned to implement in 2014.



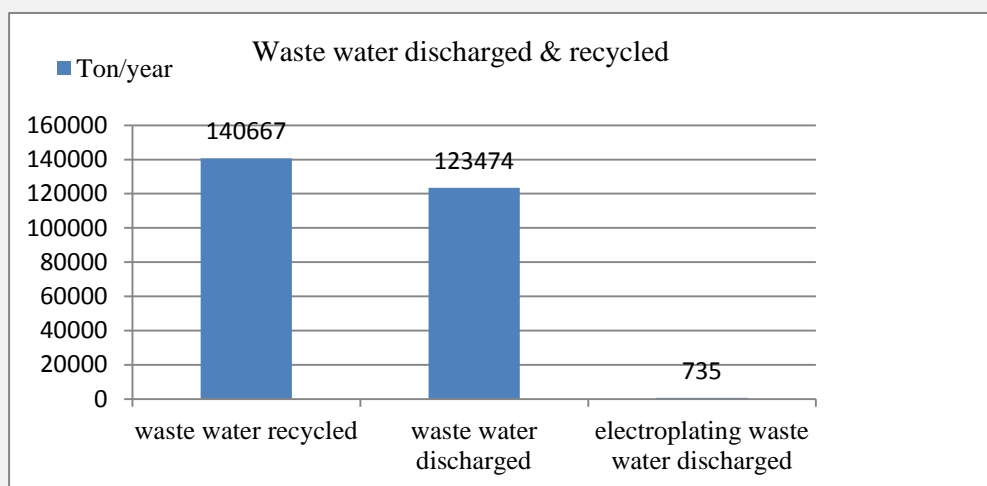
## 5.2 Waste Water Treatment System Management

Factory and domestic waste water which was disposed after biochemical system and ultrafiltration system, met the PRC National Standard (GB/T 18920-2002 Quality Standard for Reuse of Treated Waste Water), and is being reused for toilet flushing, greening, the plane surface cleaning and tool cleaning.

Electroplating wastewater which was disposed after electrochemistry system and Nano-filtration system, met the PRC emission standard (GB 21900-2008 Electroplating Pollutant Discharge Standards) before discharge.

### 5.2.1 Waste Water Total Discharge Control

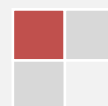
In 2013, the total consumption of recycled water was 140,667 tons. The total discharge of waste water was 124,209 tons, covering electroplating wastewater emissions 735 tons.



### 5.2.2 Pollutant Factors Control

In 2013, monitoring concentration of COD (Chemical oxygen demand) was 22.3mg/l, BOD<sub>5</sub> (five day biochemical oxygen demand) was 7mg/l, NH<sub>3</sub>-N (ammonia nitrogen) was 1.81mg/l, CN<sup>-</sup> (total cyanide) was 0.002mg/l, Cr<sup>6+</sup> (six chromium) was 0.004mg/l, TNi (total nickel) was 0.009mg/l, TCd (total cadmium) was 0.05 mg, TCr (total chromium) was 0.03 mg/l.

The concentration of above pollution factors were meeting with the relevant water quality standards (GB8978-1996 integrated wastewater discharge standard, GB/T 18920-2002 Quality standard for reuse of treated waste water, GB 21900-2008 Electroplating pollutant discharge standards).



### 5.2.3 Waste Water Treatment System Improvement

Improvement of wastewater system in 2013 as follows:

- ◆ Ultrafiltration membrane system lifecycle replacement in Effluent Treatment Plant I enhanced the quality of treated waste water.



- ◆ Water level probe alarm installed in 7 sewage pools in Effluent Treatment Plant I to handle emergency when alarm ringing at night.



- ◆ Replacement of three blowers in Effluent Treatment Plant I which was demanded by PRC's regulation (Obsolete catalogue on high energy consumption electromechanical equipment (products) ) for the energy saving purpose.



- ◆ Upgraded of lifting pump in Effluent Treatment Plant I for treated waste water supplying to Hangar1 to 5 improved the stable supply of treated waste water.





- ◆ In the mid of the 2013, a standby treated waste water spare pump was separately installed on the annex roof of Hangar1/2/3/5 to ensure the stable supply of treated waste water when the main pump was broken down.



- ◆ To distinguish conveniently, using different colors of paint to spray on electroplating waste water system, factory waste water system and treated waste water system.

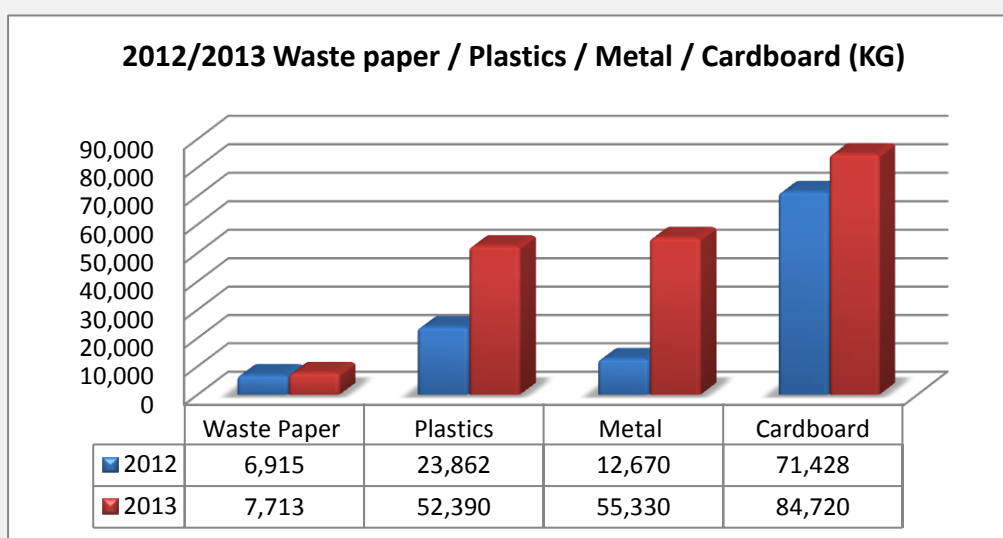


## 5.3 Solid Waste and Hazardous Solid Waste Management

TAECO have a tightening monitoring for the daily operation of solid waste and hazardous solid waste, and strictly managed process including classification, collection, transportation, staging and so on, and disposal by the qualified environmental company.

### 5.3.1 Total control

**A. Solid Waste:** The solid waste recycled including waste paper / plastics / metal / cardboard between 2012 and 2013 was specified as below:



**Waste Paper Recycling:** The amount of waste paper recycling in 2013 is 11.5% more than in 2012 due to the number of aircraft maintenance increased 7.3% in 2013 compared with 2012, which demonstrates the paper consumption was closely related with the number of aircraft maintenance.



**Metal Recycling:** The volume of metal recycling in 2013 is 336.7% more than in 2012. This was due to a large number of scrapping of metal working stands in 2013



**Paperboard Recycling:** Compared with 2012, the amount of paperboard recycling in 2013 was increased by 18.6% due to the mass consumption of material with paperboard packing.

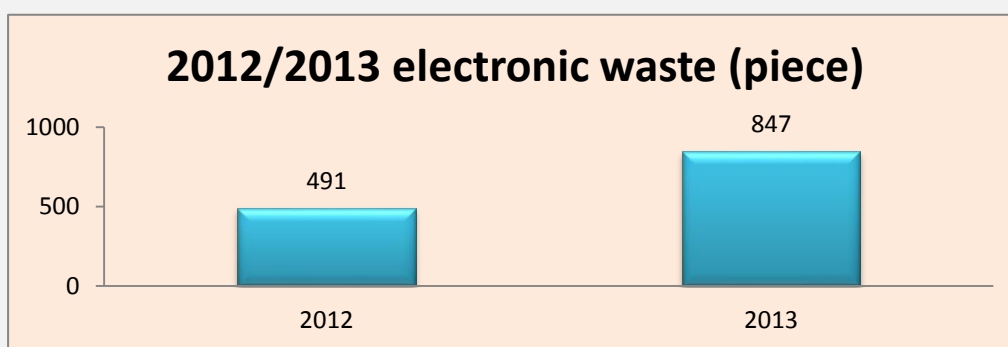
**B. Hazardous Solid Waste:** The total amount of producing hazardous waste between 2012 and 2013 was about 658 tons and 583.3 tons. Hazardous waste reduction in 2013 is mainly due to using thinner wipe to replace rags to wipe of oil / solvent in parts of spray paint process from the second half of 2013.



On 10 Apr 2013, conducted by the Waste management center of Fujian province, the cyanide waste generated from electroplating workshop has been delivered and safely handled by the Fujian Hazardous Waste Treatment Co., Ltd.



**C. Electronic Waste:** The total piece of electronic equipment scrapping is respectively 491, 847 between 2012 and 2013. The quantity electronic accessory separated from PC increase led to the total amount increase in 2013.

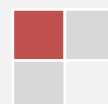


### 5.3.2 System Improvement

■ Temporary storage for aircraft removals of Hangar1 were used as a temporary storage to store the hazardous waste due to the HW12 qualified Contractor been suspended to disposal paint / stripper hazardous waste since July 2013.



■ Under EHS guideline, hazardous waste generating department was required to make management regulation for the hazardous waste arising site, and implement sources classification as well as collection.





■ Renew the distinguishable signs of hazardous waste in storage.



■ Since April 2013, in order to consolidate the documents system management, the existing paper documents has been scanned into computer.



## 5.4 Noise System Management

### 5.4.1 Factory Boundary Noise Control

- ◆ In order to strengthen the noise pollution monitoring, TAECO conducted a self-monitor of factory boundary noise monthly. TAECO entrusted the third party with qualification to monitor the noise levels, and the result showed that noise reached 64.2 dB in daytime, 53.2dB at night, which met the PRC standard (GB12348-2008 the factory boundary noise emission standard).

厂界噪声检测表		
日期	位置	噪声 (dB)
2013/12/21	一期厂界内	61.3
	二期厂界内	60.5
	三期厂界内	61.9
	四期厂界内	62
	五期厂界内	62.8
备注		

检测数: 52085

**CTI 华测检测**

### 检测结果

报告编号: EDD11F00038F  
Report No. 第 2 页 共 3 页  
Page of

检测项目: 噪声  
Test Result (1) 厂界噪声

采样人: 朱林华, 何世山 单位: dB(A)

测点位置	主要声源	运行状况	2013年11月01日昼间噪声强度		备注
			测量值	背景值	修正结果
厂界西侧外1米监测点1#	交通	正常	64.2	---	64.2

(2) 厂界噪声 采样人: 朱林华, 何世山 单位: dB(A)

测点位置	主要声源	运行状况	2013年11月01日夜間噪声强度		备注
			测量值	背景值	修正结果
厂界西侧外1米监测点1#	环境	正常	53.2	---	53.2

附: 厂界噪声测点示意图

附: 检测仪器 (名称、型号、编号)  
多通道声级计 AWA5680-3 BTTEHLXM0003

- ◆ Under noisy environment, people are required to wear noise-protection products such as earplugs and earmuffs etc.





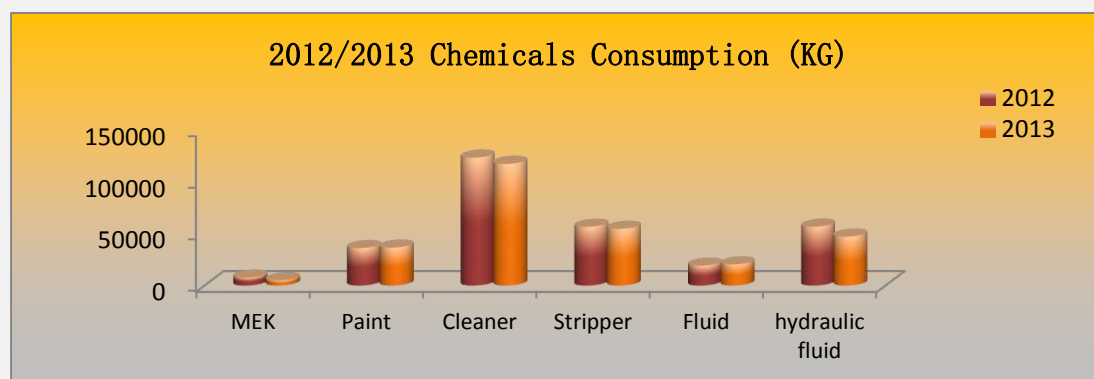
## 5.5 Dangerous Chemicals Management

For the management of dangerous chemicals, TAECO strictly complied with the national and local laws and regulations, especially require dangerous goods warehouse administrator must hold a qualification certificate with a professional ability of classification and storage based on the characters of dangerous chemicals. In addition, all the chemicals purchased, of which the MSDS (Material Safety Data Sheet) should be stored to the dangerous chemicals database, and reported to the relevant responsible team.

For the dangerous chemical waste, they must be disposed by a qualified contractor.

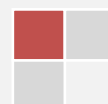
### 5.5.1 Chemicals Consumption

In 2013 the chemical consumption was reduced by 6% compared with 2012, mainly due to the spreading of Cleaner Production concept with a decreasing of MEK and cleaning usage.



### 5.5.2 Documented Management System

- ★ For further improve the dangerous chemicals usage management in 2014, we will monitor and request the production departments to establish file management system.
- ★ In 2014, we plan to further study the chemicals MSDS and display the Chinese version of the Chemicals Notify Card in following main department: the dangerous chemicals store / cleaning workshop / painting shop and relevant departments.



## 5.6 Green Procurement Status and Measure

### 5.6.1 Management Measure

According to Swire Pacific Green guidelines, we reference below points and setting procedure in area which selects the produce is the environment lower impacting during the procurement activities.

#### A. General principles for buying green office equipment

##### Energy efficiency

- >>Select office equipment with energy efficiency labels and specify the requirement of energy efficiency labels in the procurement policy.
- >>Selecting equipment with energy efficiency labels helps consumers achieve actual energy savings, promotes public awareness on energy conservation and encourages manufactures to introduce energy-efficient products.
- >>check power ratings of the model's power management modes, so that you can select the most energy-efficient, value for money model.
- >>Look for the machines with the lowest time options to move to power management modes.

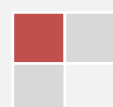
##### Material efficiency

- >>Ensure that the machine can operate effectively using recycled paper.
- >> Ensure that the machine can produce double-sided output.
- >> Ensure that the machine can has toner or ink-save modes.

#### B. Office waste management

##### Procurement

- >> Paper for office machines, printing and general use should be blended with a maximum of recycled paper, low in brightness, chlorine-free and free of plastic coating, as this prevents recycling.
- >> Cleaning materials should be eco-friendly.
- >> Toilet paper should be blended with a maximum of recycled paper.
- >> Use refillable pens and reusable stationary, such as envelopes, folders, packaging material, boxes and plastic foam.
- >> Use rechargeable batteries where possible.
- >>Subscribe to electronic version of newspapers, magazines or reports when possible.



## 5.6.2 Existing Status

In 2013, TAECO launched the e-taeco system, which implements the electronic purchase orders to the purchasing department to buy products they need, reducing paper use. During procurement process, we consider that in the green purchasing environment for supplier selection, besides according to environment supplier of the traditional supply chain standards and the Swire Pacific Green guidelines, but also consider the supplier's performance. TAECO is committed to partnering with suppliers, to establish the sustainable development in the overall improvement of the supply chain, the preferential choice to social and environmental policies with suppliers, as well as the priority to purchase of influence of smaller environmental mark product.

The screenshot shows the e-TAECO web application interface. On the left is a sidebar menu with the following items: 系统菜单, AXX-AXX, BAC-Maintenance basic table, CMS-Clinic Maintain System, EHR-Electronic Human Resource, ESFM-eSFM, ESR-Electronic Service Request, LMS-Line Maintenance System, LPS-Purchase Request Form, 201-PRF (selected), 202-Quotation & Confirm, 208-PRF Evaluate, 211-PRF Part Close, LSS-Library Process sheet print, PCS-Product Control System, TFP-Taeco Form Platform, and TSF-Touch Screen Facility. The main content area shows the '201-PRF' form. It includes a toolbar with List, Add, Edit, Cancel, Close, and Replacement buttons. The form fields are: PRF No.: [text box], Status: Outstanding (dropdown), Date: [text box], Proposed By: [text box], Description: [text box], Approving Status: [text box], and BeneficiarySect: [dropdown]. Below the form is a table with the following columns: PRF No., Log, Status, BudgetNo, Request Sect, P/N, Description, and Beneficiary Sect.

## 6. Occupational Health & Safety

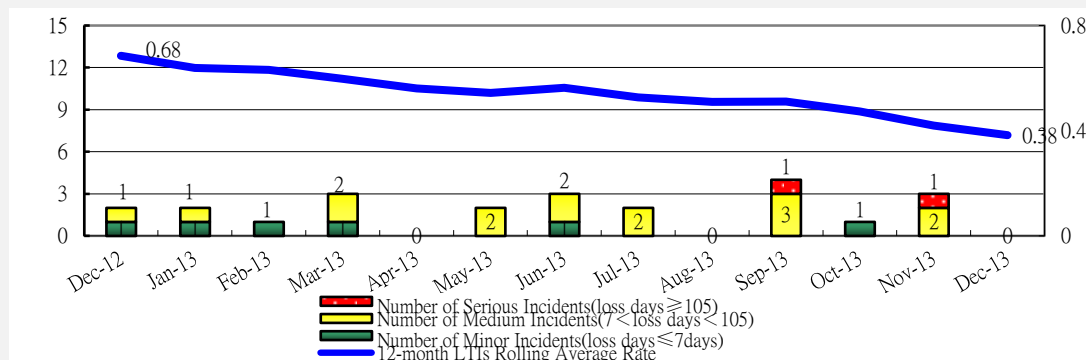
### 6.1 Revised Occupational Health & Safety Policy

With aspiring to be “Best in Class” in health and safety, TAECO reviewed its OHS policy in 2013 and replaced it with 6 key principles - Safety First, Active Prevention, People Oriented, Involvement of People, Solidify Cooperation and the Pursuit of Excellence.

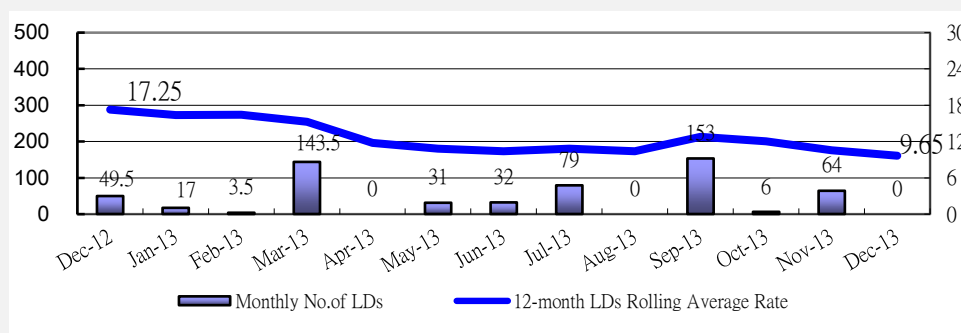
### 6.2 2013 OHS Performance

The OHS committee established a not-to-exceed target of 37 incidents of industrial injury in 2013 based on approximately 5% reduction from 2012 actual arising. In order to achieve the objectives, the overall objective was further broken down to individual departmental target. All departments were responsible for their own safety management. From January to December 2013, there was a total of 21 LTI cases which was 44.7% lower than the same period in 2012 and the Lost Day (LD) due to our injuries was 560 which was 41.5% reduction compared with the same period in 2012.

Following is the monthly quantity comparison among Minor, Medium and Serious injury cases in 2013:



Monthly Lost Days comparison chart is as follow:



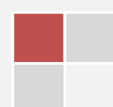
## 6.3 Occupational Health Management in 2013

### 6.3.1 Occupational Health Examination

- a. Xiamen Center for Diseases Control and Supervision (XMCDC) authorized Xiamen Zhong Shan Hospital and Xiamen Hospital of Traditional Chinese Medicine to perform occupational health examination for over 2148 relevant TAECO staff. Subsequently, the XMCDC analyzed the medical results and confirmed that nil occupational disease was identified.
- b. TAECO arranged the entry medical check for 146 new employees. TAECO also arranged the medical check for 30 staff before their termination of services in TAECO.

### 6.3.2 Annual On-site Sampling Evaluation for Potential Risk of Occupational Diseases

According to the national legal requirements, TAECO commissioned Xiamen Center for Diseases Control and Supervision (XMCDC) to conduct on-site sampling evaluation for potential risk of occupational diseases in September 2013. Three discrepancies were revealed in the sampling evaluation and the mitigation measures had been implemented. This includes developing of a new aircraft painting ventilation system. The first installation in Bay 8 is expected to be completed in July 2014. The same ventilation system will be installed to other bays across the facility if the test result in Bay 8 is successful and satisfied.



## 6.4 Further Improvement of TAECO OHS Management System

Either the State Administration of Work Safety or the TAECO customers has requested TAECO to have an international recognized OHS management system. Driven by HAECO group, TAECO has planned to go for OHSAS 18001 system and obtain the external OHSAS 18001 accreditation soon.

### 6.4.1 Work Safety Standardization

Xiamen Administration Association of Work Safety conducted an on-site audit to TAECO's Work Safety Standardization in Oct. 2013. TAECO passed the audit and received the level 3 Work Safety Standardization certificate in Dec. 2013. In the process of establishing Work Safety Standardization, TAECO focused on perfecting the management system including established some code of practices on safety management, strengthened the safety inspection and corrected the findings.



### 6.4.2 Safety Training

**a. General Safety Induction Training:** All new employees should be formally inducted when joining the Company to explain the company structure, safety policies, general safety rules, basic safety techniques and the implementation of safety programs. In 2013, there are 155 employees received the General Safety Induction Training.

**b. Training for Special Equipment Operators:** Special training has been provided to employees who are required to operate special equipment, including crane, lifting appliance and tow truck etc. A total of 231 employees received such kind of training in 2013.



**c. Departmental general safety training:** General safety training has been provided to Production department staff once every quarter and to Support department staff once every 6 months. The training aims to improve staff's safety awareness and to provide the updated OHS knowledge to them. In addition, the Production department also used the morning briefing to communicate safety information and typical accident details etc. to employees.



## 6.5 The OHS Safety Campaign and Award Scheme

### 6.5.1 Fire Safety Campaign

In March 2013, TAECO launched the Fire Safety campaign aimed to encourage all employees to report any potential fire hazards existed in TAECO facility. A total of 125 reports were received through the campaign and all of them had been properly followed up.

### 6.5.2 OHS Award for Departments with Nil Industrial Injuries

Safety is always the top priority that underscores every facet of our operation. TAECO is committed to provide a safe and healthy working environment to every one of our staff and encourages all departments to improve their safety performance. “Zero incident or injury” is our ultimate goal. In order to get individual department’ involvement on improving their OHS management, TAECO developed an award scheme to appreciate the departments with good OHS performance in 2013.

There were totally 12 departments and 3730 staff got the awards. The senior management expressed the appreciation to the staff contribution in OHS performance during the lunch with departmental representatives.





### 6.5.3 2013 Safe Production Month

June of 2013 is the National Safe Production Month. In accordance with the government requirement, TAECO conducted a series of activities focused on work safety publicity, safety education & safety inspection.

OHS team has prepared safety banners & posters displayed across the TAECO facilities. During the safety inspection, a total of 123 safety hazards were identified, all of them had been solved.

The activities conducted by TAECO got the praise from the Civil Aviation Administration of Xiamen.



## **6.6 2014 OHS Plan**

### **6.6.1 Complete the Documentation System for TAECO OHSAS 18001 Management System**

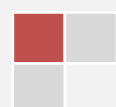
### **6.6.2 Conduct Self-assessment of TAECO Work Safety Standardization**

### **6.6.3 Enhance OHS Training.**

- a. Provide safety training to departmental OHS representatives.
- b. Provide special safety training on prevention of occupational diseases to the departmental OHS representatives for “train the trainer” of their own departments.

### **6.6.4 OHS Safety Campaign**

- a. Conduct campaign on designing aircraft engine & pylon maintenance platform.
- b. Conduct road safety campaign.
- c. Conduct safety campaign on working safely at height.



## 7. Social Responsibility

### 6.1 Community Engagement

TAECO has been attaching importance to community engagement, and want to contribute to local community. In 2013, TAECO constantly enriched and diversified the activities. The major activities are as follows.

#### (1) TAECO Hope School

On 5 Mar 2013, 9 TAECO volunteers spent meaningful time with poverty-stricken students, brought in gifts and played games with the students.



#### (2) Earth Hour

On 22 Mar 2013, TAECO set up a signature wall and appealed to the employees to support the Earth Hour activities. About 1,000 employees signed their name on the wall. Each signer got a small candle. On 23 March the Earth Day, TAECO's employees and their family turned off the electric lights and lit the candles to join the global event.

TAECO encourages employees to save energy at work and at home, hopes more people would pay more attention to climate change through the event.



### (3) Mangrove Project

Working with Xiamen University (XMU), TAECO started the mangrove project since 2009. By the end of 2013, approaching 28,000 mangroves had been planted in an area of 38,000 square meters, covers 2,500 meters long coastline.

In 2013, TAECO planted 4 times, 317 TAECO volunteers and 47 children volunteers participated in planting mangroves this year.



### (4) Trash Removing

On 20 Apr 2013, TAECO organized 163 volunteers to remove trash on a local mountain.



### (5) “Draw Your Heart Closer with Your Children” Seminar

TAECO also provides training programmes for CSR volunteers. Choose the topic that volunteers are interested in, then invite experienced professional psychological consultant to give a training course to the volunteers.

On 19 Jun 2013, 155 TAECO volunteers participated in the “*Draw Your Heart Closer with Your Children*” seminar to learn the communication skills, emotional management methods and how to establish good parent-child relationship.







### (6) Open Day

From 22 Jun 2013 to 27 Jul 2013, TAECO organized employees' children to visiting company and understand the work of their parents. The event included TAECO introduction, lecture & quiz on aircraft knowledge, souvenirs distributing, hangar tour, polaroid-type family snaps, and watching planes take off & land.



667 employees' families visited TAECO in the past 6 weekends.

123 TAECO volunteers from all departments participated in this event. In particular, many engineers voluntary helped to guide the visitors and explain the knowledge of aircraft to the children.

It is a good chance for employees' family to learn more about aircraft knowledge.

### (7) Mangrove Exploration Summer Camp

27 Jul 2013 to 28 Jul 2013, Center for Ocean Sciences Education Excellence China (COSEE China), one of TAECO CSR events partners, organized a Mangrove Exploration Summer Camp in Xiamen. Through the fair and open selection process, 7 TAECO employees' children were selected to this COSEE Program.



During the weekends camping, the children went to mangrove wetland to learn the current situation of mangrove wetlands in Xiamen and main threats to the mangroves. The children put forward some measures to develop and protect the mangrove wetland resources.

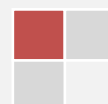


### (8) Healthy Walking

On 9 Nov 2013, a CSR event, Healthy Walking, was held at Gan En Square of Wuyuanwan Xiamen to promote healthy lifestyle to the public.

About 300 TAECO employees participated in the event with their families and friends.

The event started at 9:00. Almost all of the walkers complete the whole 4 kilometers distance and after the competition each walker got a potted plant as gift. For the top 50 walkers, we rewarded them each a set of fitness equipment. We also prepared silicone sports watches for the children to encourage them.



### (9) Students Visits

In 2013, TAECO organized 9 students visits, 717 students visited TAECO. TAECO promote aerospace education and general aviation knowledge to the students, including TAECO introduction, lecture & quiz on aircraft knowledge, souvenirs distributing, hangar tour and watching planes take off & land.





## 6.2 Bicycle Association Activities

In 2013, for continue to promote “low-carbon travel, health and environmental protection”, TAECO Bicycle Association had organized 6 times cycling activities and had cycling tracks through Tong an, Zhangzhou and Kinmen (Taiwan), the total travel nearly a thousand miles.

- >> On 2 February 2013, the cycling team launch from TAECO Staff Quarter, riding 140 km to reach to Zhangzhou Zhao Jia Village. This cycling activity opened a new chapter in 2013.
- >> On 22 to 23 June 2013, the members of the bicycle went on a one-way ride about 180 km, to Zhangzhou Dongshan Island to celebrate the 20<sup>th</sup> anniversary of TAECO.
- >> On 9 November 2013, There are 14 members took participate in the “Kinmen Iron Horse” cycling activities jointly organized by Taiwan Merchant Association Xiamen and TOP bike club. It is not only take exercises but also communication with the ride friends from Taiwan and had a happy ending for the cycling activities in 2013.





## 6.3 Fly Greener

TAECO continues to offset 100% duty air travel CO<sub>2</sub> emissions both domestic and international through a one-off contribution to the Cathay Pacific Fly Greener Programme at year end. The HK \$79,977 was contributed for 2013 travelling, which is in line with Swire Pacific guidance.



※ Cathay Pacific's FLY greener carbon offset program gives you the opportunity to reduce your carbon footprint. This is an entirely voluntary scheme; passengers wishing to participate are invited to opt in by using cash or Asia Miles to offset the carbon dioxide emissions of their flight. The contribution is a fraction of the ticket cost, but it provides you with a means to make a difference.

(More details please visit:

[http://www.cathaypacific.com/cpa/en\\_HK/aboutus/flygreener](http://www.cathaypacific.com/cpa/en_HK/aboutus/flygreener))



## 8. Contact Us

Thank you for reading the report.

We welcome your views on how we may further our environmental and social commitments or improve our reporting.

Please contact us via our email.

Leon, Zhang Yu Hong

Manager Facilities

(Environmental, Civil Engineering & Project)

[zhangyuhong@taeco.com](mailto:zhangyuhong@taeco.com)

Chen Xin Feng

OHS Manager

(Occupational Health & Safety)

[xfchen@taeco.com](mailto:xfchen@taeco.com)

Jeff, Zhuang Zhi Feng

Lead Engineer (EHS)

[zfzhuang@taeco.com](mailto:zfzhuang@taeco.com)

Allyson, Liang Hui Ying

PACC Assistant Officer (CSR)

[allysonliang@taeco.com](mailto:allysonliang@taeco.com)

**More information, please view the link below:**

<http://www.taeco.com>

