



Chapter 5

Review of Performance on Green Policy

CAD's green policy is energy conservation, paper conservation, recycle, proper disposal of environmentally hazardous waste and provision of awareness training for staff.

Energy Conservation

Conserving Electricity by Energy Saving Initiatives

Buildings Managed by CAD

In buildings and premises managed by CAD, such as the Air Traffic Control Complex (ATCX), Air Traffic Control Tower (ATCT) and Back-up Air Traffic Control Complex (BATCX), we have explored various initiatives to save energy on our air-conditioning system, lighting system and lift system. Occupants of the buildings have also implemented various housekeeping measures to help save energy, such as switching off unnecessary air-conditioning when the space is not in use.

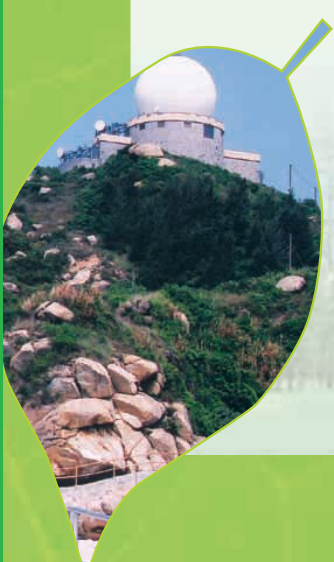
Energy Saving on Air-conditioning system

We have implemented the following new initiatives in 2003

- switch off the fan coil units at the corridors at BATCX.
- switch off the fresh air units at BATCX during daytime in summer.
- inject more outdoor cool air into ATCX, ATCT and BATCX during winter period.
- reduce the maintenance time of the water-cooled chiller systems in ATCX, ATCT and BATCX such that the use of the less energy efficient air-cooled chiller systems could be minimised.

We are exploring with the Electrical and Mechanical Services Department (EMSD) the feasibility and cost-effectiveness to implement the following energy management opportunities (EMOs) to save energy cost on the air-conditioning of ATCX, ATCT and BATCX: -

- Provision of anti-scaling system for water-cooled chiller systems at ATCX, ATCT and BATCX
- Provision of spare heat plates to reduce maintenance time for water cooled chillers at BATCX
- Usage of oil additive for chiller compressor at ATCX and ATCT



Energy Saving on Lighting System

We have implemented the following new initiatives in 2003

- switch off the outdoor architectural floodlights at BATCX.
- switch off part of the corridor lightings at ATCX and BATCX.

Energy Saving on Lift System

In 2003, we have suspended one passenger lift and one cargo lift at ATCX during non-office hours.

CAD Offices Managed by Other Organizations

We would regularly convey our concerns about exploring energy saving initiatives to the building managers of other CAD offices. Besides, we have given the building management of Queensway Government Offices our full support on the new energy saving initiatives such as controlling indoor temperature at a reasonable level and shortening the operation hours of air conditioning chiller plant by the Government Property Agency. In addition, we installed occupancy sensors and used energy saving fluorescent tubes in the Main Conference Room of our headquarters at Queensway Government Offices in 2003 for energy saving purposes.

Targets for 2003 and 2004

Despite the implementation of various energy conservation measures, the average daily electricity consumption in the ATCX and Tower in 2003 increased by 1.5% comparing to the year of 2002 (Figure 10).

The increase in electricity consumption in 2003 was mainly due to the need to adopt various environmental precautions against the spread of the SARS.

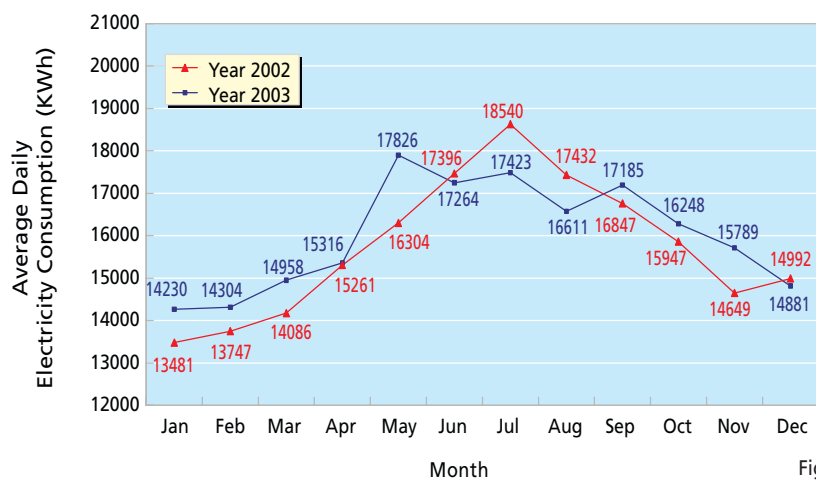
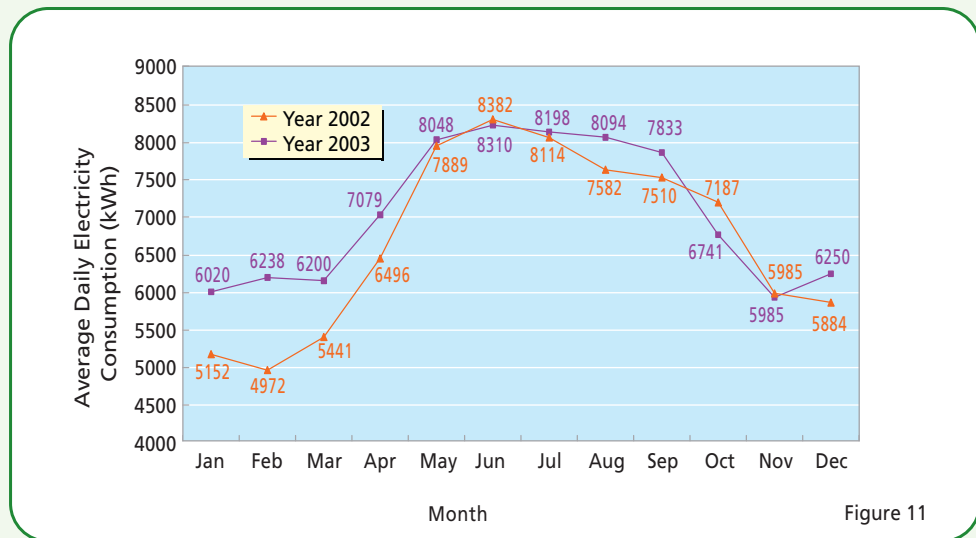


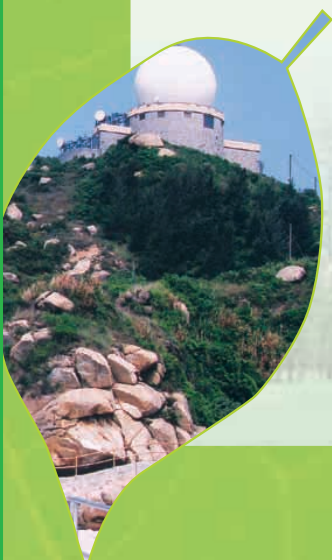
Figure 10

Due to the same reasons mentioned above and the re-opening of the staff canteen housed in the BATCX, the BATCX also recorded an increase of 5.1% in the average daily electricity consumption in 2003 (Figure 11).



The overall increase in electricity consumption in all CAD premises in 2003 was 3.2% amounting to 31,872 kilowatt-hours on average daily.

In the year of 2004, we will continue to follow the guidelines of the Environment, Transport and Works Bureau on reducing the electricity consumption by 3.0% from that of the year of 2002.



Conserving Fuel

Poor driving habit not only increases fuel consumption, but also causes more pollutants to be emitted. We thus provide information on eco-driving to our drivers to remind them to drive and maintain vehicles properly so as to reduce fuel consumption and pollution.

Purchasing Energy Efficient Equipment

Air Traffic Control Equipment

To support Government's drive for energy saving, we have purchased air traffic control equipment of high standard of energy efficiency to save electricity. Example was the replacement of the old Mount Parker Primary Surveillance Radar having



tube design and 3 MW peak transmission power by a new fully solid-state radar with 24 kW peak transmission power, but with the same radar coverage, at the end of 2003.

We have completed a feasibility study to replace the cathode-ray-tube displays by state-of-the-art LCD displays for the Radar Data Processing and Display System and planned to implement the first phase replacement in early 2005.

Other Equipment

We are obliged to observe central guidelines from the Government on green purchasing and taking environmental considerations into account when procuring goods and services. Environmental terms such as high standard of recyclability and energy efficiency have been included in our tender specifications whenever applicable.



Paper Conservation

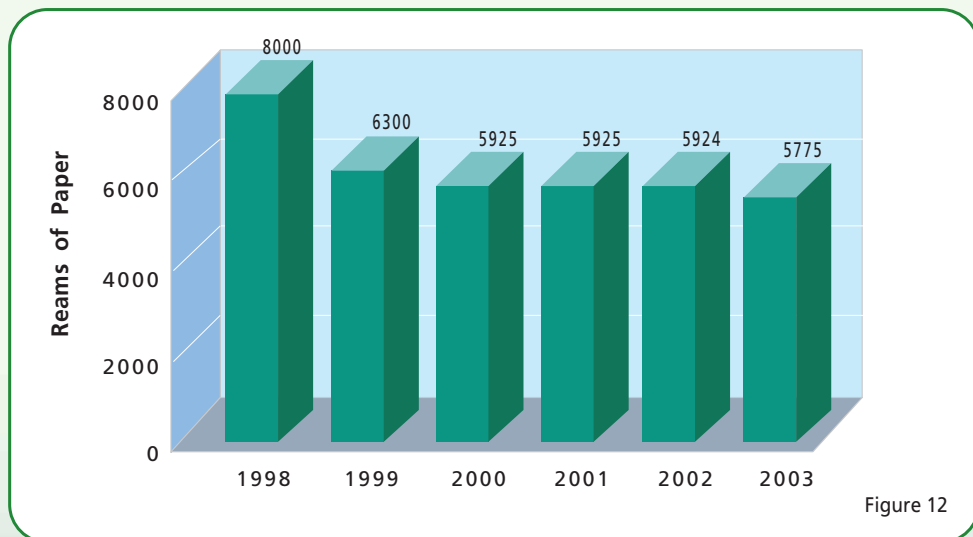
We encourage staff to implement different green measures for reducing paper consumption.

It is our continuous target to reduce paper consumption by encouraging staff to implement various green measures such as communicating by e-mail, printing on both sides of paper and using double-side photocopier / printer. In addition, the use of the Document Management System enables information such as posting circulars, departmental circulars and telephone lists be disseminated electronically. As a result, paper circulation within CAD has been reduced.

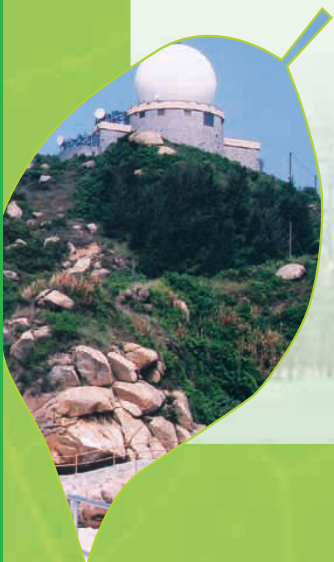
Targets for 2003 and 2004

In the year of 2003, with continuous effort of our staff, we were able to achieve our target of reducing 2.5% of our paper consumption from 5924 reams in 2002 to 5775 reams.

It must be pointed out that such consumption level represents a significant drop of 28% over 5 years from 8,000 reams in 1998 to the 2003 level (Figure 12)



In 2004, we will continue our efforts in promoting electronic communication among staff. In addition, we shall follow the guidelines of Environment, Transport and Works Bureau on reducing paper consumption by 5% from the 2002 figures.



Recycle

We implement waste paper and laser printer cartridge recycling schemes to save the Earth's natural resources.

Waste Paper

Our staff would separately dispose of recyclable waste paper in conveniently located recycling bins. CAD's cleaning contractors then transport those papers to designated locations for recycling (Table 1).

Table 1

2003					
Waste Paper Collection (Kg)	Jan - Mar	Apr - Jun	Jul - Sep	Oct - Dec	Total
	2210.7	2196.0	1983.5	1607.6	7997.8

Laser Printer Cartridges

We return used laser printer cartridges to our suppliers for recycling. (Table 2)

Table 2

	1998	1999	2000	2001	2002	2003
Laser Printer Cartridge	Purchased 153 units	Purchased 150 units	Purchased 166 units	Purchased 167 units	Purchased 167 units	Purchased 88 units
	Recycled 33 units	Recycled 72 units	Recycled 67 units	Recycled 77 units	Recycled 124 units	Recycled 269 units

Targets for 2003 and 2004

The recycling of laser printer cartridges in the year of 2003 showed a significant increase of 117% from the 2002 figure. Our target for 2004 is to continue our efforts in recycling waste papers and cartridges.



Proper Disposal of Environmentally Hazardous Waste

Compliance with the environmental regulations with regard to the disposal of chemical waste systems.

Chemical Waste Disposal

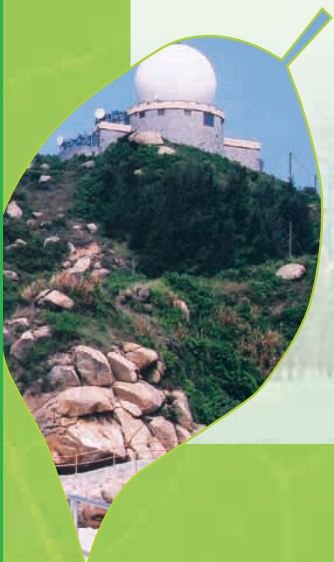
Air traffic control equipment located in 13 equipment outstations are essential to maintain the air traffic operation. When the normal city mains supply to these equipment is interrupted, the equipment will automatically and immediately switch to operate on alternate power supply from standby diesel generator and sealed-type battery. The chemical waste so produced, arising from the use of engine lubrication oil and battery fluid by the standby generators and batteries, are required to be properly disposed of.

Targets for 2003 and 2004

In the year of 2003, our maintenance contractor has handled the waste in accordance with the statutory requirements under the Waste Disposal (Chemical Waste) (General) Regulation of the Waste Disposal Ordinance (Chapter 354 subsidiary legislation C). Supervision on our contractor will be continued to ensure their proper handling and disposal of chemical waste in the year of 2004.

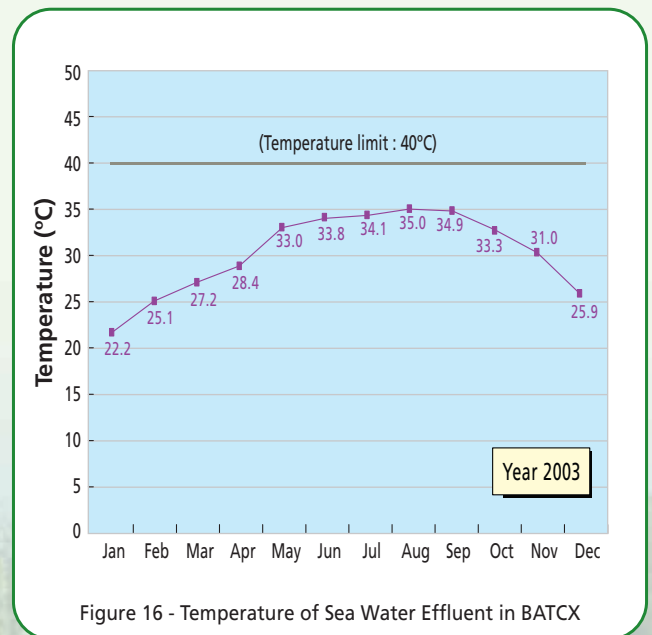
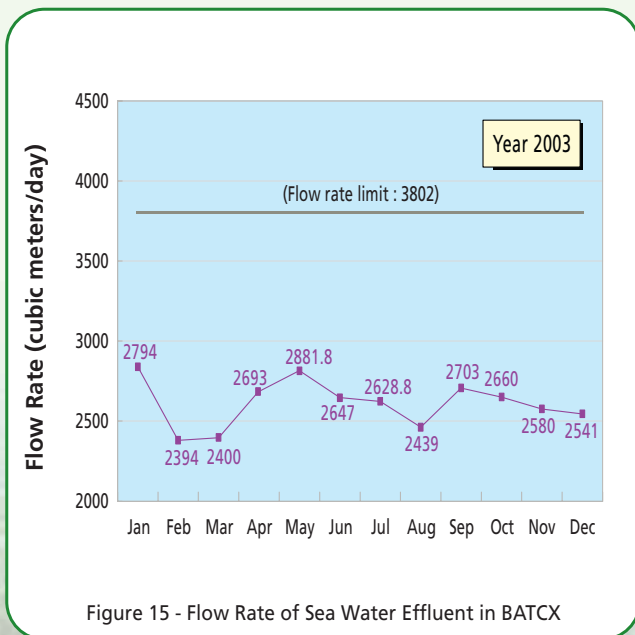
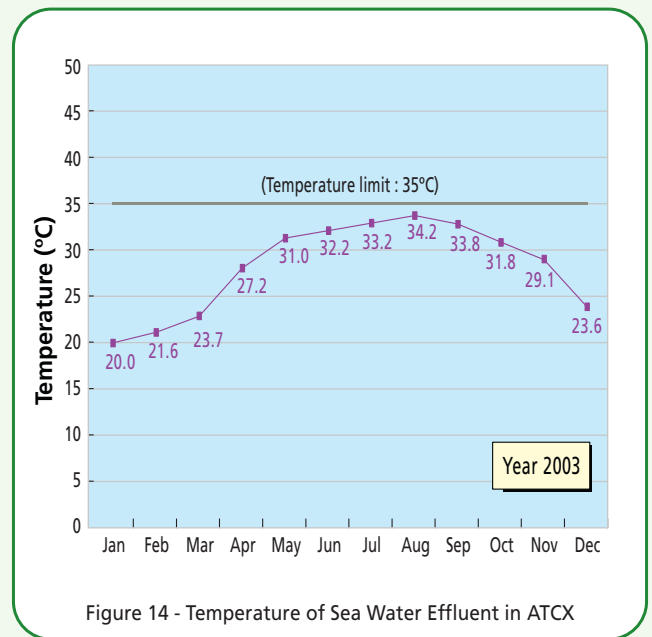
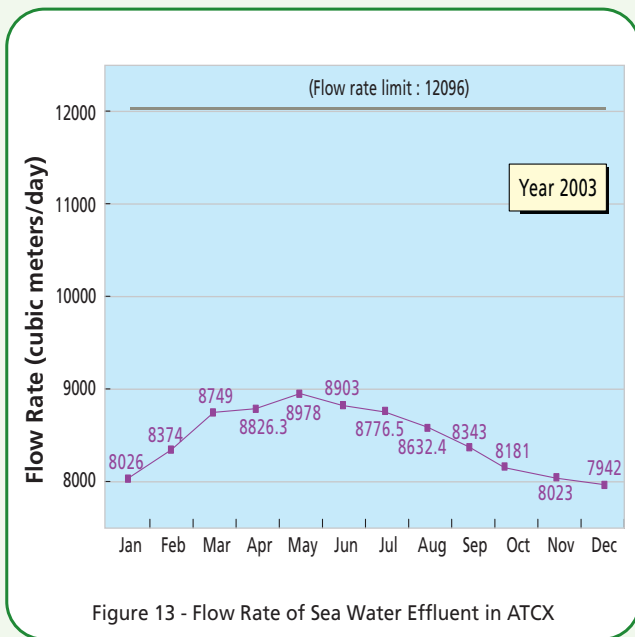
Discharge of Effluent of Sea Water Used for Cooling

Our ATCX, ATCT and BATCX use sea water for their cooling systems. We ensure that the sea water effluent is discharged in compliance with the requirements set under the Water Pollution Control Ordinance (Chapter 358).



Targets for 2003 and 2004

As in the year of 2002, our monthly measurement of the flow rate, temperature, pH value and residual chlorine level of the effluent shows that the limits of these four control parameters were not exceeded in 2003. In 2004, we will continue to monitor all these parameters. (Figures 13 to 16 present the monthly variation of the flow rate and temperature of the sea water discharged.)



Staff Training on Environmental Issues

Throughout 2003, we have used various means to familiarize our staff with the importance of energy conservation and our green measures. Also, we have displayed publicity materials on energy saving at conspicuous locations to remind them to be environmentally responsible.

