

# Chapter 5 Our Green Performance

To ensure environmentally responsible operations, our green policy in 2006 included energy conservation, paper conservation, recycling, proper disposal of environmentally hazardous waste and provision of environmental awareness briefing for all staff.

## Being Green

### Energy Conservation

#### Air-conditioning

Air-conditioning accounts for the majority of the CAD's electricity consumption. In 2006, we followed a number of additional steps to reduce the energy used by air-conditioning systems, including:

- Using Polarised Refrigerant Oil Additives (PROA) to improve efficiency of air conditioning units at some of the outstations
- Thermostatic control of room temperature to avoid over-use of air-conditioning
- Switching off all unnecessary units at the Back-up Air Traffic Control Complex (BATCX)



## Lighting systems

Using lights in a responsible manner is one of the quickest and easiest ways to help care for the environment. In 2006, we implemented the following measures:

- Installed energy efficient LED exit signs at the Air Traffic Control Complex and Tower (ATCX/TWR) and BATCX
- Replaced existing T8 fluorescent light tubes with T5 tubes in our offices at ATCX/TWR and Airport Freight Forwarding Centre

These new initiatives were in addition to existing measures from previous years, such as not using the architectural floodlights at BATCX and switching off all unnecessary corridor lights at ATCX/TWR and BATCX.

In 2007, we will implement the following measures to further save energy :

- Replacement of outdoor architectural floodlight underneath ATCX/TWR by energy efficient LED light ;
- Replacement of T8 fluorescent light tubes by energy efficient T5 tubes in the common area, staircases and plant rooms at ATCX.

## Elevators

In 2006, we continued to reduce energy consumption by suspending one passenger elevator and one cargo elevator at ATCX during overnight periods.

## Results

In 2006, energy consumption at ATCX/TWR fell by 0.12% (Figure 10). This follows a downward trend in recent years.

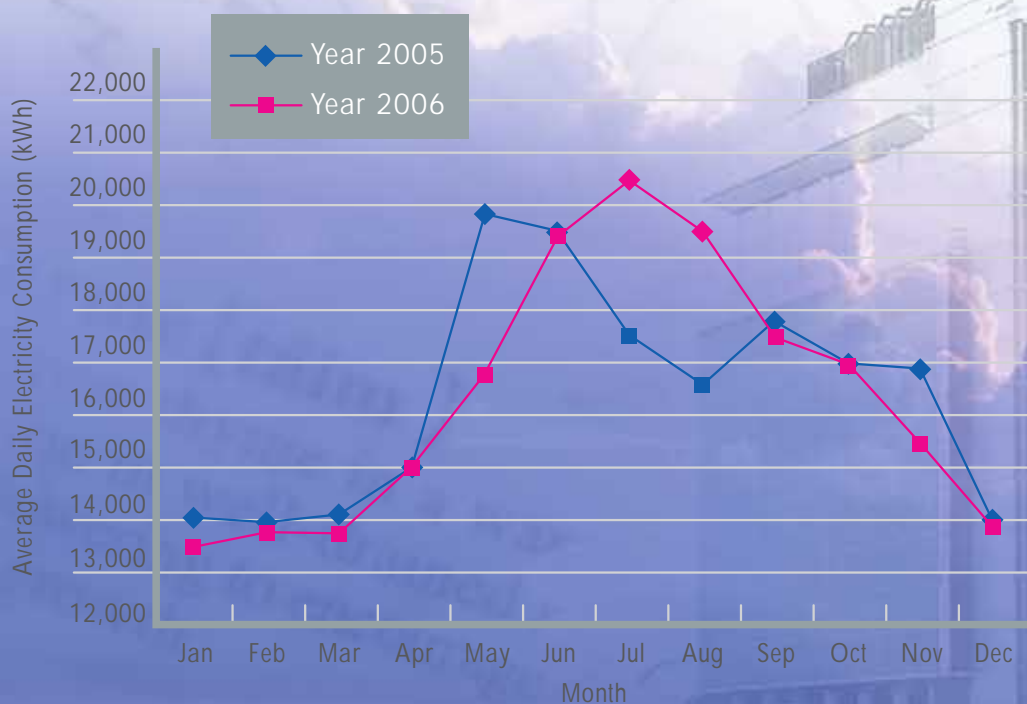


Figure 10

Average daily consumption of electricity at BATCX rose 3.56% in 2006 (Figure 11).

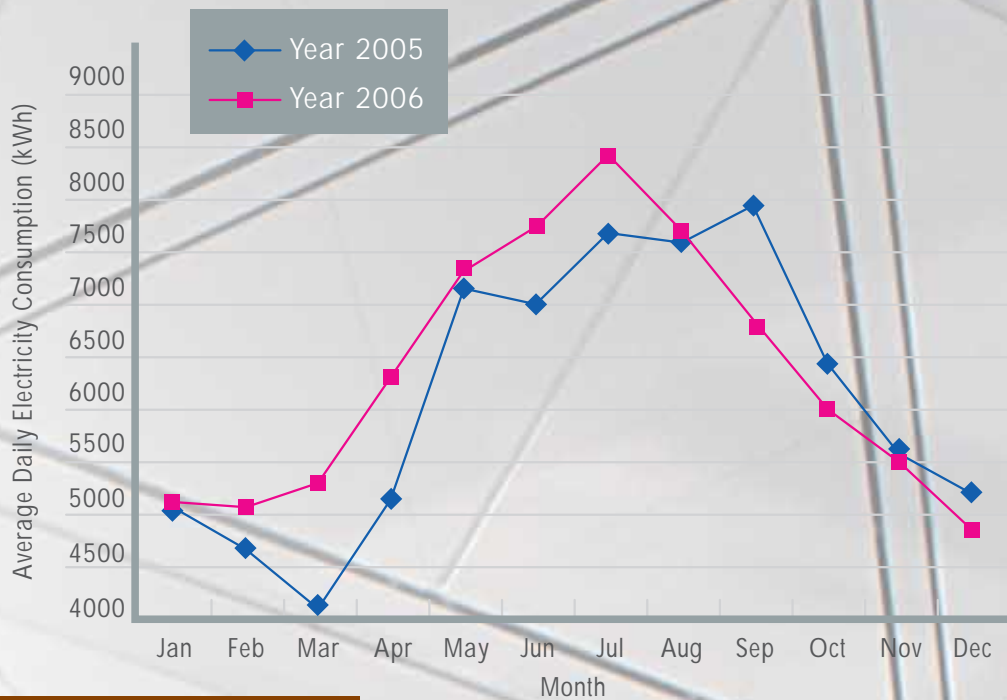


Figure 11

### Third-party Property Managers

We regularly discuss energy-saving initiatives with the managers of buildings not owned and operated by CAD. For instance, at Queensway Government Offices, the management authority now strictly controls air-conditioning and operates its chiller plant on shorter hours, which significantly reduce energy wastage.

### Our Performance in 2006

In 2006, CAD premises consumed a combined 30,473 kilowatt-hours on an average day. This was a 0.1% increase on 2005, but a 1.4% reduction from that of 2002.

### Target for 2007

In 2007, we will continue to adhere to our energy-saving policy.

### Driving Green

All CAD drivers receive training on environmentally-responsible driving practices, and all vehicles are regularly maintained to ensure that emissions are within an acceptable range.

## Buying Green

### Air Traffic Control Equipment

In addition to meeting key safety standards, all new air traffic control equipment that we purchase must also be energy-efficient. For instance, in 2006, about 90% of the Air Traffic Management Systems' standard cathode-ray-tube (CRT) displays were replaced with sophisticated, low-energy LCD displays.

### Other Equipment

Environmental considerations are taken into account when procuring goods and services of any description. Wherever feasible, our tender specifications require operations that emphasise recycling and energy-efficiency.

### Target for 2007

In new equipment purchases and tenders in 2007, we'll continue to demand the high levels of energy-efficiency and environmentally responsible operations.

## Paper Conservation

All staff are encouraged on a continuous basis to reduce their paper consumption wherever possible. In addition to double-sided printing and photocopying, our Document Management System enables many announcements and other important information to be disseminated electronically.

### Our Performance in 2006

In 2006, we used 6,152 reams of paper (Figure 12), which was a 4.5% reduction on 2005.

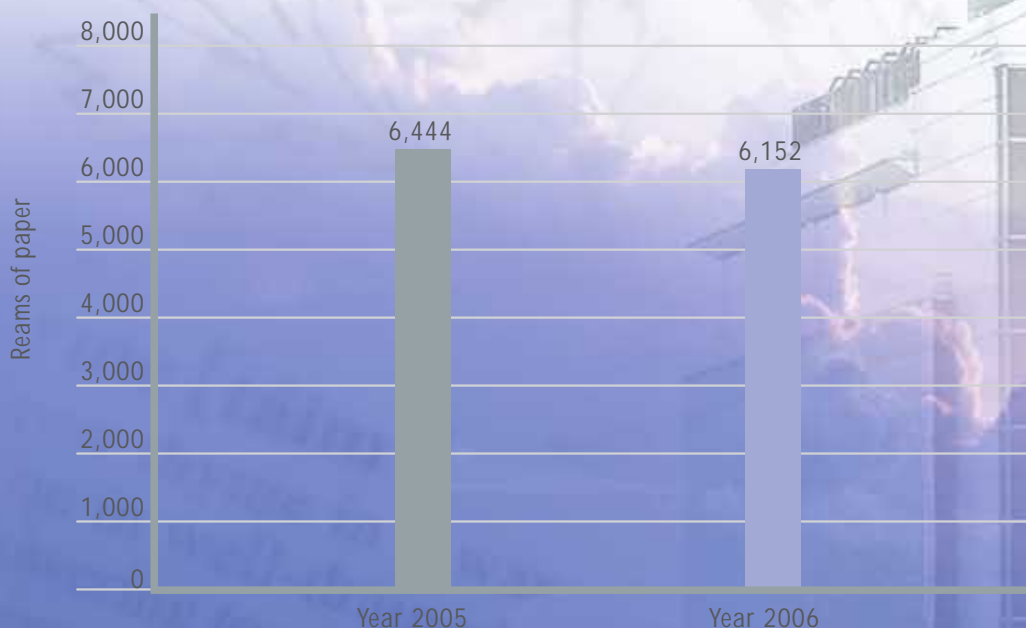


Figure 12

### Target for 2007

In 2007, we'll strive to reduce this figure further, using electronic communication wherever possible and emphasising the use of recycled materials in any situations that require printed matter.

## Recycling Initiatives

Our recycling programmes target at waste paper, used CDs and laser printer cartridges, all of which are forwarded to our suppliers or other designated parties for recycling. The following charts show the volume of materials sent for recycling in 2006 compared to 2005.

### Waste Paper

	2005	2006
Waste Paper Collection (Kg)	5,654	5,700

### Used Compact Disc

	2005	2006
Used Compact Disc Collection (g)	10,264	20,731

### Laser Printer Cartridges

	2005	2006
Laser Printer Cartridge purchased	142 units	278 units
Laser Printer Cartridge recycled	294 units	362 units

### Targets for 2007

In the year ahead, all staff will be reminded to continue recycling waste paper, used CDs and laser printer cartridges. We'll also examine whether there are other areas where recycling initiatives are feasible or appropriate.

## Environmentally Hazardous Waste

### Chemical Waste

We operate 13 outstations, all of which are essential to safe air traffic control. In the event that the mains electricity supply to these outstations is interrupted, they automatically switch to other power supplies, such as standby diesel generators or battery packs. However, both these alternative power supplies generate chemical waste that must be disposed of in a safe and appropriate way.

In 2006, our appointed contractor handled all wastes in accordance with statutory requirements.

### Target for 2007

In 2007, we will monitor our contractor to ensure continued statutory compliance.

## Sea Water

Both ATCX/TWR and BATCX use sea water for their cooling systems. To ensure minimum environmental impact from this process, all sea water discharges are monitored for flow rate, temperature, pH value and residual chlorine under standards set by the Water Pollution Control Ordinance.

In 2006, we remained within the prescribed limits. Figures 13-16 show the quality of our discharges from ATCX/TWR and BATCX respectively.

Flow Rate of Sea Water Effluent from ATCX/TWR

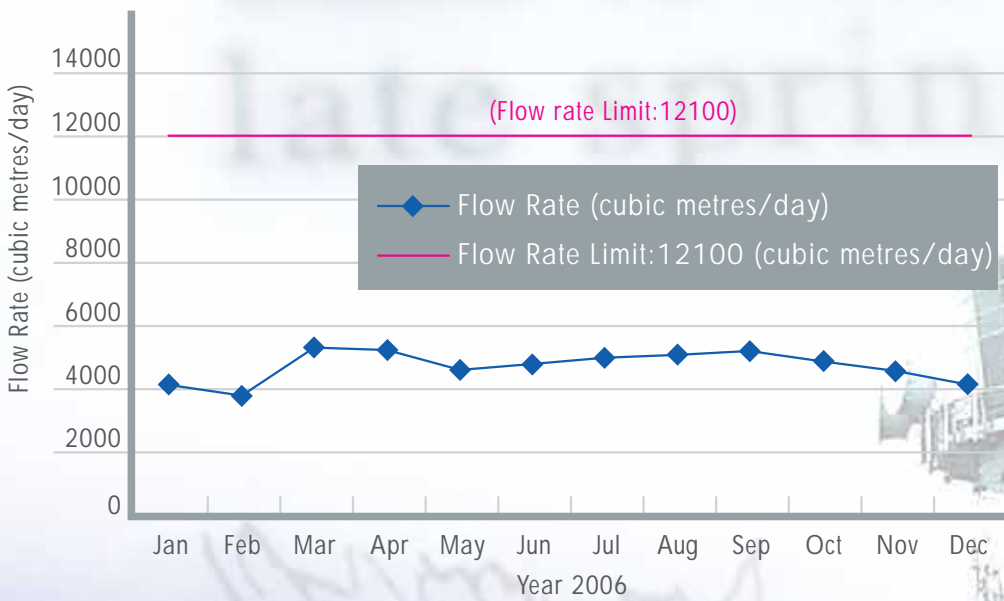


Figure 13

Temperature of Sea Water Effluent from ATCX/TWR

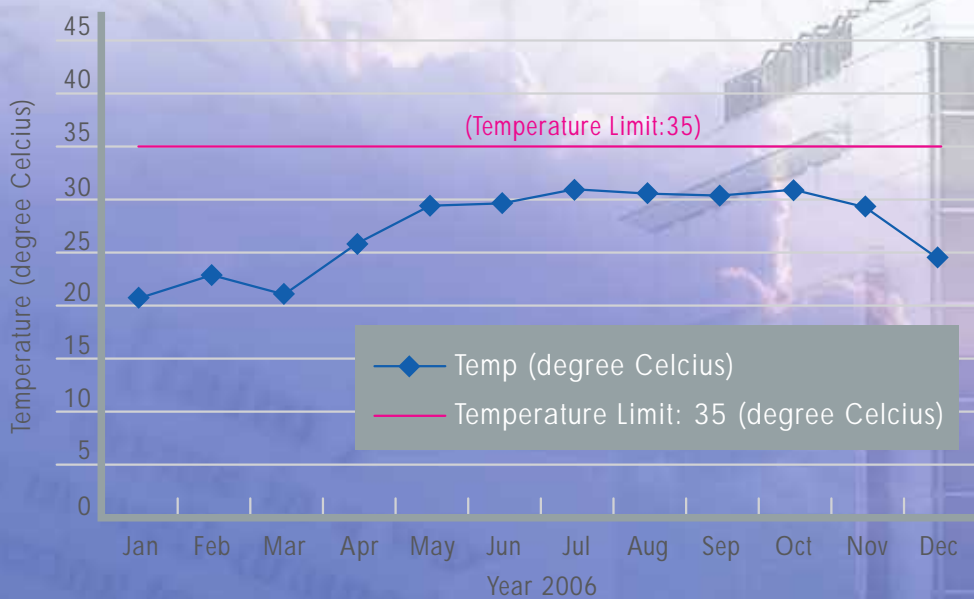


Figure 14

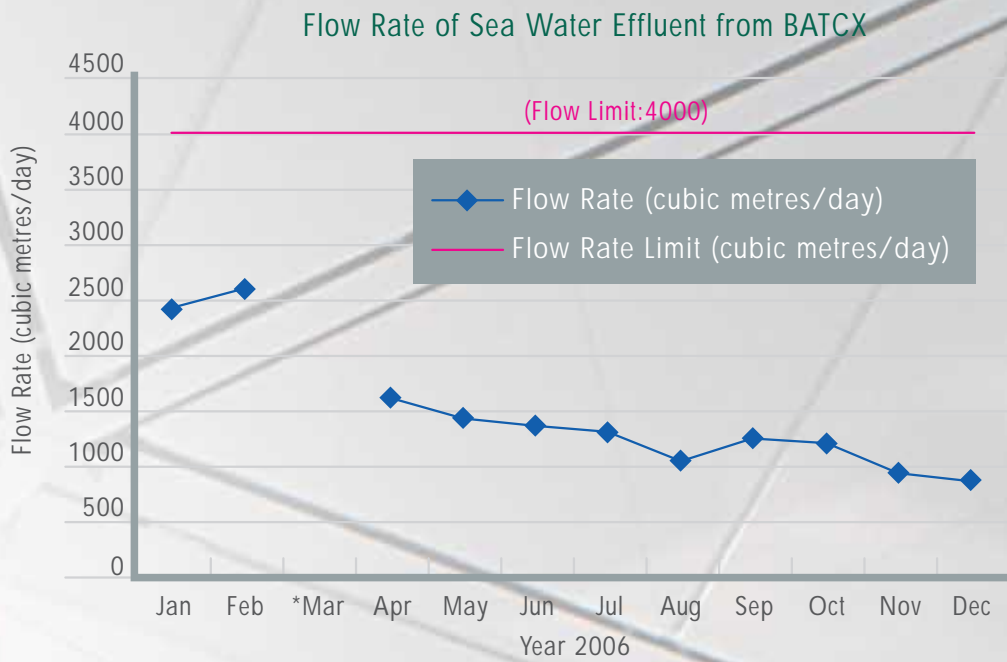


Figure 15

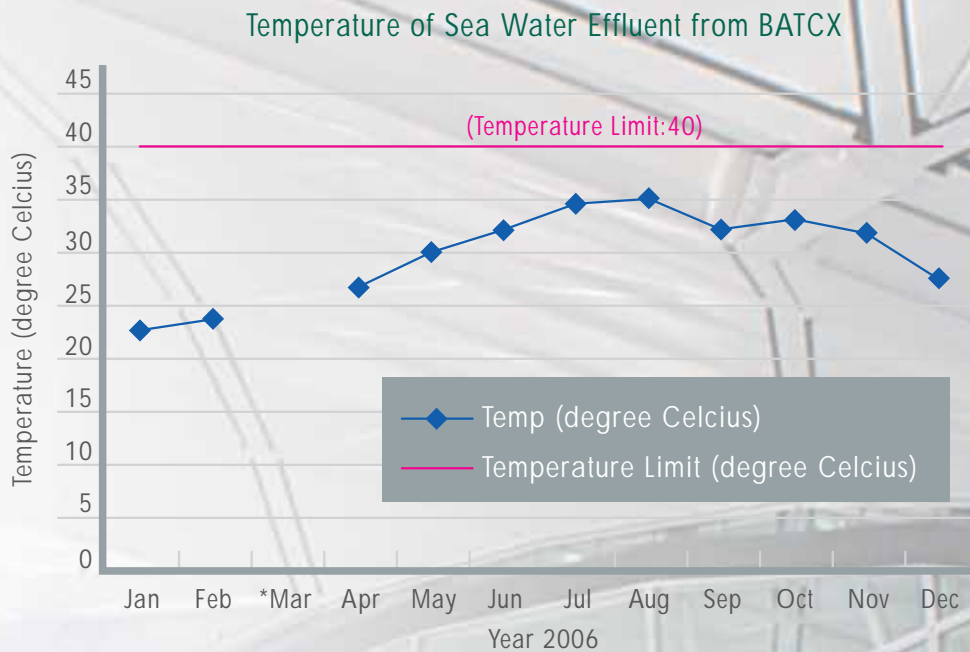


Figure 16

\* Note: Air-cooled chiller was used in March 2006.

### Target for 2007

In 2007, we'll continue working hard to ensure that these discharges remain within the accepted limits.

### Staff Training

In 2006, we worked hard to remind all staff of the importance of environmentally-responsible operations, such as the need to reduce energy consumption and save paper.

In the year ahead, we'll continue to emphasise our green policies and play our part in helping to protect our planet's precious natural resources.