

Environmental Report 2006

Hong Kong Police Force

Introduction

The Hong Kong Police Force operates within the well-established constabulary concept of preserving life and property, preventing and detecting crime and maintaining law and order, with a strong emphasis on enlisting community support. Apart from the Force Headquarters and specialist divisions or units, Police services are organised on a geographical basis. There are six Regions, each divided into Districts which are sub-divided into Divisions. Police premises span across the territory with some offices located in commercial buildings or in Government's joint-user buildings.

Environmental Policy

2. Our mission is to enhance Force members' environmental awareness through education and publicity, and to encourage their participation in conserving the environment; to work with relevant organisations to promote environmental management in the Force; to develop and maintain a management system to improve the environmental quality of its activities; and to comply with relevant legislations and codes of practice.

Commitment and Management

3. The Steering Committee on Green Management, chaired by the Director of Finance, Administration and Planning, comprises both civilian and disciplined representatives from various Major Formations at a senior level, and serves as the focal point for directing energy and environmental management issues in the Force. The Steering Committee closely monitors the consumption of paper, envelope, electricity, gas, fuel and waste paper collection. There are also Regional Green Management Committees in 6 Regions/Formation, namely HK Island, Kowloon East, Kowloon West, NT South, Police College and Police Tactical Unit. All these Committees are under the stewardship of leading commanders to strengthen green efforts in the Force.

4. To reinforce green management efforts in the Force, the Green Manager Scheme has been modified to provide a three-tiered structure for promoting and monitoring green measures at each level:

- Green Manager at Major Formation level
 - to serve as the leader for his/her Major Formation on all green management related issues, including the implementation of green initiatives and monitoring of resource consumption

- Assistant Green Manager at Formation level
 - to develop and implement green measures in the various units/bureaux/divisions in the Formation
- Green Warden at office level
 - to conduct random checks on office premises with a view to reminding colleagues to comply with the housekeeping green measures, e.g. switching off unnecessary lighting, putting computer/office equipment to the energy- saving mode, and using both sides of the paper

Goals

5. In recent years the Force has set targets for Formations to follow in achieving savings in consumption of electricity and paper. While much has been done to save electricity and paper on a best endeavour basis, the following saving targets are set for the coming two years to sustain the momentum.

<u>Resource Item</u>	<u>Formations</u>	<u>Reduction Target over 2006/07 and 2007/08</u>
(a) Electricity	(i) Police Headquarters complex and NTS Regional Headquarters complex	5%
	(ii) Formations located elsewhere	2%
(b) Paper	All Formations	6%

Overall Performance in Resource Consumption

6. The environmental performances of the Force in terms of electricity, paper, envelope, fuel, gas and waste paper are illustrated in Figures 1-6. The operation of the NTS Regional Headquarters and the Ma Liu Shui Headquarters for Marine Outer Waters District and Marine North Division in October 2005 and March 2006 respectively had resulted in greater electricity and gas demand for 2006. However, owing to electricity savings achieved elsewhere, e.g. those for the Police Headquarters Complex mentioned in paras. 26 and 27 below, an overall decrease of 1.82% was noted in electricity consumption for the past year. On the other hand, due to the installation of new gas meters in the above new police premises, the overall gas consumption went up by 7.14%. It should, however, be noted that we have already achieved substantial savings in electricity and gas consumption over the past few years.

Performance in 2006

I. Waste Minimisation

7. The Force continued to sustain our efforts in minimising paper consumption. Measures such as communication by e-mail, printing both sides of paper and reusing of envelopes had become common practice of staff at all levels. A new fax receiving system with a screening function was installed at the Police Headquarters such that unwanted fax messages were weeded out at source. In light of the Environmental Protection Department's recommendation for a higher usage rate of recycled paper against virgin paper, we had raised the percentage of recycled paper from 25% to 30% of the total allocation.

8. Reference materials or information was disseminated by e-mail and e-bulletin boards in place of hard copies. For example, the Information Systems Wing set up an intranet platform to disseminate information of staff interest, which made it possible for officers to book facilities, read the training activities and administrative matters at their own terminals, hence saving the amount of paper used and promoting the concept of paperless office. Formations also reviewed the distribution list of documents to eliminate unnecessary distribution copies, and replaced paper-based returns by emails whenever possible. The adoption of "Paperless Conference" at both Headquarters and regional levels was also encouraged.

9. Staff were requested to use the E-phone Message function in the Lotus Notes Platform instead of writing the messages on paper. Likewise, they were asked to print less paper through manipulating the layout of printouts for record-keeping purposes. The way to use the functions for printing multiple pages on one sheet were illustrated step by step in the green tips widely circulated among the staff.

10. In conducting procurement of products, we took into account environmental factors such as energy efficiency and recyclability as far as applicable. We also purchased green products like re-cycled ink/toner cartridges and environmentally-friendly/rechargeable batteries.

11. Other waste-minimising measures adopted included:-

- the re-use of old floppy discs through re-formatting
- the use of environmentally friendly plain paper fax machines
- the use of electronic greeting cards to replace the use of paper cards

II. Energy Conservation

12. Energy saving stickers were displayed at conspicuous places within the Force to enhance staff awareness on energy conservation. Unnecessary energy consumption was cut as far as possible by a series of housekeeping measures, such as reducing water temperature for gas boilers, shortening the operation hours of lifts, and routine checking to switch off lights/air conditioners outside office hours. Staff were reminded to switch off lights and air-conditioners when they were not in the office, and to turn off all electrical equipment when not in use. Some formations such as

Kowloon West Regional HQs and Western Police Station posted their self-designed slogans in prominent areas to promote energy conservation.

13. The Force adopted the recommendation of the Environment, Transport & Works Bureau by setting the ambient office temperature to 25.5 in summer months. To complement this green initiative, the Force had relaxed the dress code for male officers performing indoor office duties in plainclothes. Staff might dispense with the wearing of a tie, except when they were required to officially meet with members of the public or participate at formal occasions.

14. Other than energy saving in normal office setting, the Force also paid attention to the two Police Clubs. Some of the adopted energy saving measures included:-

- suspension of winter operation or warm water of the swimming pool
- use of electrical barbecue
- EMSD and electricity supply companies had been invited to conduct “energy saving walkthrough” in the clubs to advise on energy saving measures
- use of energy saving lighting bulbs
- appointing officers to conduct frequent patrol of the clubs and to switch off unnecessary electricity supply
- conducting briefings to contractors regarding energy saving matters

15. Fuel consumption was another focus in green management in the Force in the past year. For police land transport, green driving practices were widely promoted and addressed in all driving training programmes. Two environmentally friendly hybrid vehicles had been put in use on a trial basis in the Force. The intention was to examine the feasibility of using these vehicles as replacement for all small patrol cars. Policy approval has been given to change all unmarked saloon cars deployed in support of criminal investigations to more environmentally-friendly options. Specific measures adopted to contain fuel consumption included : -

- use of more fuel efficient types of vehicles
- replacement of older less efficient vehicles
- close monitoring of vehicle maintenance to ensure low emissions
- close monitoring of vehicle fuel consumption

16. Energy saving measures to reduce fuel consumption had similarly been taken for the Marine fleet. Operational directives on the use of maximum speeds and maintaining launches/vessels at minimum cruising speeds with minimum number of engines in use had been issued and practiced. Other new initiatives to minimize energy wastage included:-

- introducing latest developed environmentally-friendly propulsion engines into the police fleet through the replacement projects, such as fuel efficient electronic ignition controlled engines and more pollution-free four-stroke outboard engines
- reinforcing the engagement of shore electricity supply while police vessels berth alongside for a prolonged period but were in need of operational shipboard equipment and system, instead of running their own generators on board

III. Environmental Awareness Among Staff

17. To promote environmental awareness amongst staff, the Force had publicised useful tips on green management in internal publications as well as via the intranet. Suggestion boxes were put in place to encourage green ideas from the staff. Some premises organised promotional activities to foster staff participation. 16 “Green Corners” were set up in Police premises to provide forums for sharing of views and good practices on green management. In addition, an electronic-green corner was set up on the intranet in May 2006 to provide a platform for fast and easy dissemination of updated information on green management issues, including useful green tips to promote green culture.

18. Green management concepts were also incorporated into the police training programmes and activities. Officers were regularly briefed of green management issues during the training days. The Hong Kong Police College had taken the initiative to introduce an environmental consciousness component into basic driving instruction intended to increase police drivers’ environmental awareness. The module, which covered the following areas, would be converted into DVD for closed loop presentation to officers awaiting driving examinations and for uploading to the intranet of the Force:-

- car pooling and task combination – to achieve multiple objectives in one journey instead of several separate trips, ensuring each trip would be essential and could not be achieved by other means
- route planning – to select the most efficient route, avoiding traffic congestion, road construction or unnecessary navigation of hill sections
- selection of vehicle – to ensure that the most efficient vehicle would be matched to the nature of the journey, e.g. using a small saloon car instead of goods vehicle where possible
- professional driving habits – to ensure optimal fuel and vehicle efficiency, including proper gear selection, avoidance of unnecessary or excessive acceleration/braking, curtailing use of air conditioning when not required by weather conditions, turning the engine off whilst waiting
- professional vehicle maintenance habits – to ensure fuel efficiency and reduce repairs, including checking of tyre pressures, removal of equipment/loads not required for that journey, cleaning of air filters, radiators, etc

19. Apart from instilling positive values and calling on young people to help Police fight crime, the Force also hopes, through the Junior Police Call (JPC), to promote their awareness of environmental protection, so that these potential leaders of our society would be well equipped with knowledge on environmental protection. The Force and World Wild Fund for Nature Hong Kong jointly organised the “Hang Seng Bank- Junior Police Call Environmental Detective Competition” in 2005 with sponsorship by Hang Seng Bank. The competition, which included web games, environmental case studies and report presentations, received enthusiastic response. The web games attracted over 100,000 entries and over 7,200 participants submitted more than 1,200 environmental reports. The competition was the first large scale

environmental programme organised by the Force and sponsored by a commercial organisation. For its sponsorship of the activity, Hang Seng Bank had won the gold award in the "Community Relations" category at the China Golden Awards for Excellence in Public Relations competition in 2006. The award was a recognition of the Force's partnership with the commercial sector in promoting civic responsibility among young people.

IV. Recycling Programmes

20. The Force had all along adhered to the 3-R 'Reduce, Re-use, Recycle' principles. Other than energy saving housekeeping practices, we had put in place the following recycling programmes :-

Waste Paper

21. The Force engaged the service of two contractors centrally arranged by the Government Logistics Department for collecting paper wastes. Conspicuously-labelled 'recycle green boxes' were placed in Formations to collect waste paper for recycling through those two companies.

Can and Plastic Bottle

22. Three-coloured waste separation bins for collection of waste papers, aluminium cans and plastic bottles were widely placed in Police premises. There was also an aluminium can and plastic bottle crushing machine at the Police College to instil an environmentally responsible culture amongst the staff and trainees.

CD/VCD/DVD

23. The initiative of recycling confiscated CD/VCD/DVD was first introduced in Mongkok Police District in 2002 and further extended to Crime Kowloon West in 2004. Arrangements had been made with a recycling company to collect the seized discs for recycling. The company would first destroy the discs in piles by drilling holes and breaking them into smaller granules before transporting them to the Mainland for recycling. In office environment where the quantity of unwanted CD/VCD/DVD was small, a central collection point was put in place for recycling such discs.

Others

24. The Force engaged the service of a commercial contractor for collecting empty cartridges, scrap lead and empty shell. In addition, four IT consumables vendors were engaged for collecting used cartridges of specific models.

V. Energy Review of the New Police Headquarters Building

25. Arsenal House, the new PHQ building, was fully occupied in end October 2004. To take care of energy consumption in the new building, a Working Group on Energy Conservation in Arsenal House was set up in late 2004 with representatives from resident formations, Central District, Arch SD and EMSD. An

Energy Review Task Force was also formed by Arch SD, focusing on the energy review for the new building. Site visits were conducted to selected areas which were most representative of the building's situations. Apart from observing the energy usage pattern and house keeping practices, spot measurements of lighting level and indoor thermal conditions were taken during the site visits. After a detailed analysis of the energy data collected, the Task Force recommended a number of Energy Management Opportunities (EMO), which had been put to the PHQ Building Management Committee for endorsement and implementation.

26. Full implementation of the EMOs on the new Arsenal House took place in April 2005, and Arch SD continued to collect energy data on a monthly basis for the purpose of monitoring the energy consumption profile. The final assessment of energy performance for the new building from April 2005 to March 2006 came out in late 2006. As compared with the consumption profile without the EMOs between November 2004 – March 2005, the annual electricity demand of Arsenal House was cut by nearly 15% in 2005/2006 in terms of KWHr, corresponding to a cost saving of \$5.3M. Additional saving of \$160,000 was also achieved in 2005/2006 by the application of summation metering scheme.

27. All major electricity consuming sector of Arsenal House except the two PHQ restaurants recorded substantial energy and cost savings in 2005/2006, as shown below :-

<u>Item</u>	<u>Estimated Energy Saving (KWHr)</u>	<u>Estimated Cost Saving (\$)</u>
(a) Air-conditioning installation	2,800,000	3,200,000
(b) Carpark ventilation	720,000	800,000
(c) Office lighting & equipment	837,000	1,000,000
(d) General lighting & power for common facilities and public area	57,000	66,000
(e) Lift & escalator	100,000	115,000
(f) PHQ restaurants	(233,000)	(266,000)
(g) Miscellaneous installations	339,000	385,000

Figures shown in brackets denote an increase in consumption/expenditure

For the PHQ restaurants, the rise in electricity consumption in 2005/2006 might be the result of the relatively low consumption rate in 2004/2005 when the restaurants just started business in late 2004 and had a particularly low sales volume. As kitchen equipment and air-conditioning installations accounted for most of the restaurants' electricity consumption, the electricity demand would go up with the sales volume of the restaurants.

28. To enable better control of electricity usage by office equipment and lighting, monthly data by floors were disseminated to PHQ Formations, and those with upsurges in energy cost also requested to give explanations for the increases. This was aided by the Building Energy Management Reporting System at Arsenal House that facilitated analysis of power usage in individual floors and lift zones. It was a very useful tool to enable floor occupants to take appropriate measures to control energy consumption.

29. In the summer of 2006, the special air-conditioning arrangements to various floors in Arsenal House outside normal operating hours were revisited that all Formations were requested to re-examine and justify any exceptions outside normal hours. The exercise not only helped floor occupants review their needs but also achieved actual reduction in electricity consumption.

30. Other energy-saving measures implemented at Arsenal House included a further three months' trial to accurately quantify electricity and monetary savings for the partial lift services reduction at non-peak office hours; and an air quality testing on the basement carparks' ventilation to allow further consideration to reducing the hours of ventilation in the basement carparks for energy saving purposes.

VI. New Initiatives

31. Energy conservation continued to be one of the core elements in the planning and design of new police buildings and special attention was paid to the architectural design and building services system. At the planning stage, e.g. in the new Central District Headquarters & Division project, Arch SD requires tenders to include information on energy conservation/green installations in their submissions, and this would be one of the factors for consideration of the competitiveness of the tender. In the new Marine Outer Water and Marine Divisional Operational Base Complex which came into operation in March 2006, a number of designs were made at the building to improve energy efficiency, including the purposely designed windows and high ceiling that ensured efficient ventilation, the provision of programme lighting and air-conditioning control systems which reduced energy wastage, and the use of heat generated from air-conditioning equipment to pre-heat water in domestic water main.

32. For enhancing energy conservation at Penny's Bay Police Post, the following two installations were upgraded after its commissioning in July 2005:-

- The use of photo-voltaic (solar) panels on the roof was extended from pre-heating water only to all other electrical usages by connecting the panels to the China Light and Power (CLP) Company Limited's distribution system, so that solar energy preserved can be used before CLP's power was expended. The works were completed in August 2006 and resulted in a reduction of 38% in monthly electricity expenses in September 2006
- The extension of the scope of programme lighting control to interior lights was completed in September 2006. Further reduction in monthly electricity expenses would be expected

33. The new New Territories South Regional Headquarters and Operational Base Complex came into operation in October 2005. The design of the building, e.g. the purposely configured tower block and green devices in the building services system, helps to maximize energy efficiency and conservation. There are also installations in the building services system to enable a critical and sectorial monitoring of the power consumption for air-conditioning, lifts and lighting etc. in the building. To monitor the energy consumption of the NTS RHQ, various energy-saving measures have been implemented and there was a 50% reduction in electricity cost from \$1 million per month (at the first beginning and before moving-in) to around \$0.5 million per month. Some of these measures include:-

- most offices equipped with an automatic lighting and air-conditioning (AC) sensor system whereby lights would be off and AC would be maintained at a minimum level of air flow after a set time period of 30 minutes
- use of energy-efficient T5 tubes for the whole building
- lighting in common corridors on all floors and in all staircases reduced by up to 70%
- in each lift lobby, florescent lights reduced by 40%, and all spotlights permanently switched off except those used as emergency lighting
- lighting in goods lift lobbies reduced by 60% by de-lamping
- all decorative lights switched off
- provision of a desk lamp for officers working night shifts in TPT Office so that most of the office lights could be switched off when the occupancy rate was low
- AC of Officers' Mess off 24 hours a day and switched on only when it is required
- AC of Canteen, AGC, TV Room, Fitness Room and Resource Centre, off between 2300 hours and 0730 hours
- AC of Firing Range off whenever there is no course run
- one-fourth of the passenger lifts permanently shut down
- tangential ventilation fans of vehicle park operated only during the periods of changing over duties

34. The Police Tactical Unit Headquarters had included various environmental-friendly initiatives in the building refurbishment projects. The initiatives included:-

- comprehensive re-wiring works to minimize future breakdown of electrical services
- replacement of the fan-coil type air-conditioning systems by Variable Refrigerant Volume system that enabled the supply of air-conditioning on individual room demand
- replacement of T8 tubes by T5 tubes
- application of environmental painting system with low Volatile Ozone Content in refurbishment of external walls
- installation of energy meters in individual building for better monitoring of electricity consumption
- replacement of the gas boiling system by the solar heating systems
- installation of dual flushing systems in toilets

35. A number of environmental improvement works had been carried out in other police premises to include energy-saving installations. For instance, the old air-cooled chiller units of Caine House in Wanchai were replaced by new water-cooled chiller units in 2006, with a saving of 20% in total electricity consumption for the building. The conventional T8 lighting tubes were also replaced by energy-efficient T5 tubes in Marine Regional Headquarters, Marine North Division, Chai Wan Police Station, etc.

Engagement with Stakeholders

36. The Force works closely with EMSD to identify energy saving opportunities. EMSD has completed energy audits on 20 police premises, and the resultant Energy Management Opportunities were either implemented or being actively pursued. As a long-term engineering service partner of the Force, EMSD is prepared to explore new effective energy-saving products that can be applied to the Force equipment. For instance, a trial energy saving project named “Duct Static Pressure Reset” was done at the Police Headquarters building in 2006.

37. As a large number of police premises have staff canteens, the catering contractors are identified as key partners to achieve environmental protection. To motivate the canteen operators to save energy, Tai Po Division included a new requirement for the canteen operator to bear 40% of the utility charges in the renewed service contract. Kowloon West Regional Headquarters kept close contact with the caterers to solicit their participation in green house keeping measures, such as grouping customers to sit together so that some lights and air-conditioning could be turned off during non-peak hours.

38. We are also supportive of the green events organised by other departments or organisations. The Information Systems Wing joined the “Collection of Tin Mooncake Boxes Campaign” organised by the Friends of the Earth in 2006 again. The Police Adventure Club fielded two teams in the 13th Green Power Hike Competition and took the 50km Disciplinary Force Category title in February 2006. The teams raised \$10,000 funds for the Green Power to support environmental education in Hong Kong.

Action Blue Sky Campaign

39. A massive publicity campaign, called Action Blue Sky, was kicked off by the Chief Executive in July 2006. To show our support for the campaign, the following measures were devised to help improve the air quality in Hong Kong: -

- (a) to solicit views and suggestions from Force members, via the Police Staff Suggestions Scheme, on how to reduce activities that cause air pollution;
- (b) to revisit policies on marine usage of fuel and policies on idling police vehicles; and
- (c) to further rationalize our dispatch service.

40. The concerned Formations were requested in late 2006 to take forward the above measures. By the end of 2006, a one-vehicle dispatch system for all districts of Hong Kong Island had been introduced in the HKI Region. The KW Region would also establish a centralized dispatch team in early 2007 for the collection and dispatch of documents for their District/Divisional Investigation Teams.

Focus for Further Action and Improvement

41. The Force will continue to keep up the momentum in the drive to save energy for promotion of a greener working environment. The effectiveness of the energy saving measures adopted in the Force will be monitored closely.

Feedback

42. It is intended that the publication of this Environmental Report will serve as a comprehensive and useful guide for promoting a green culture within the Force, our client departments and contractors. If you have any views and suggestions in connection with this Environmental Report, you are welcome to contact us via email at *phq-gr@police.gov.hk*

**Administration Wing
Hong Kong Police Force**