

# *Environmental Report 2006*



*Education Bureau*

# **Environmental Report 2006**



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# FOREWORD

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Maintaining an environmentally friendly surrounding is crucial to the development of our future generations. As a matter of policy, we are committed to improving our environment and delivering our services in an environmentally responsible manner. To take this forward, we undertake to promote environmental education in schools, fully comply with environmental legislation, and initiate housekeeping measures to preserve common resources and nurture civic responsibility for the environment. In supporting Government's policies on environmental protection and sustainable development in Hong Kong, we will keep on pursuing our environmental goals and striving for continual improvement in our environmental performance.

The objective of this report is to outline our policies and management measures with respect to environmental issues, our past performance and our direction for the coming year. This year, a separate chapter on our response to the Clean Air Charter has also been added in the report.



# **CONTROLLING OFFICER'S PROFILE OF KEY RESPONSIBILITIES**

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We, in the Education Bureau, are responsible for formulating and reviewing education policy, and overseeing the effective implementation of education programmes. Permanent Secretary for Education is responsible for the Policy Area 16: Education.

As the vision of our Bureau, we provide quality school education for our students, to develop their potential to the full and to prepare them for the challenges in life. One of our missions is to deliver professional services and ensure effective use of resources.

The Bureau had an establishment of 6834 permanent posts as at 31 March 2007. Apart from 68 Government primary and secondary schools, our offices are located in 21 venues throughout Hong Kong.



# ENVIRONMENTAL POLICY

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Our environmental policy is to promote environmental education in schools, to enhance our staff's environmental awareness through participation in environmental protection activities, to maintain a management system to improve the environmental quality of our activities, to fully commit to implementing the Clean Air Charter, to adopt responsible environmental housekeeping practice and to comply with relevant legislations and code of practice.

We devote our green efforts in two main fronts: to promote environmental education in schools as well as implement in-house green measures in offices and schools to economize use of resources.



# NEW REQUIREMENTS UNDER CLEAN AIR CHARTER

The Chief Executive kicked off a massive publicity campaign entitled Action Blue Sky on 25 July 2006 to stimulate the community's awareness of improving the air quality in Hong Kong. In tandem with a public appeal for energy conservation, he has also directed that the Government should take the lead in reducing energy consumption.

To show our strong commitment to environmental protection and concern about the well-being of our future generations, the Chief Executive, on behalf of the Hong Kong Special Administrative Region Government, signed the Clean Air Charter on 27 November 2006. Accordingly, all government departments and bureaux are required to adopt the principles and spirit of the Charter when designing and implementing measures having regard to the specific nature and need of their operation and activities.

## (a) INSTITUTIONAL CHANGE: BUREAU GREEN MANAGEMENT

To put in place an effective management framework, Principal Assistant Secretary (Administration) has been appointed as our Bureau Green Manager to oversee the environmental issues. Under her chairmanship, a cross-divisional Bureau Green Management Working Group with representatives from all divisions has been set up since 1999 to develop the Bureau's environmental objectives and oversee the implementation of green housekeeping programmes.

Apart from serving as the focal point for directing energy and environmental management issues and to strengthen green effort in the Bureau, the Working Group also initiates and monitors the progress of green measures, and reviews the overall strategy for green management in the Bureau, aiming at seeking continual improvement.



To respond to the Clean Air Charter in order to save energy and improve air quality in the long run, we have enhanced the function of our Bureau Green Management Working Group and stepped up green management.

To reinforce green management effort, we have strengthened the existing Energy Manager scheme to provide a two-tiered structure for promoting and monitoring green measures. 14 Energy Managers have been nominated at Divisional level to oversee the implementation of energy-saving and green measures in the Bureau. Further, environmental audit and inspection teams with 43 Assistant Energy Managers and 38 Green Executives have been set up at Sectional level to perform energy conservation duties and implement green measures, such as conducting regular checks, tendering advice to staff concerned and keeping in view the energy consumption situation closely. They take on the role of Energy and Emission Management Teams to co-ordinate measures to reduce energy and paper consumption in Divisions and Sections.

Further, electricity consumption of all office venues have been reviewed and monitored on a bi-monthly basis at the Bureau Green Management Working Group meetings.

## **(b) FOLLOW-UP ACTIONS TO THE CLEAN AIR CHARTER**

### **Energy Audit**

By the end of 2006, plans were in hand to conduct an energy audit in our Headquarters in Wu Chung House, our largest office venue, and another audit in our Kowloon Tong Education Services Centre in June 2007.



### **Reduction of Air Pollution**

#### **(1) Use of Fuel efficient types of Vehicles**

Vehicular emissions are the major local source of air pollution and reducing emissions from vehicles can definitively improve our air quality. We are gradually replacing our 6-vehicle fleet with environment-friendly petrol private cars.



With issue of “Environment-friendly Private Car Certificate”, our new vehicles emit about 50% less hydrocarbons and nitrogen oxides and consume about 40% less fuel than the conventional petrol Euro IV private cars. Owing to their higher fuel efficiency, our new cars also emit about 40% less carbon dioxide, the major contributor to global warming. Further we have been closely monitoring the maintenance of our fleet to ensure low emissions and would continue to strive for replacing the remaining vehicle fleet by environment friendly petrol private car model in future.

Moreover, to help reduce emission of polluting particles, we have been using unleaded gasoline in our vehicle fleet since 1991.

## **(2) Promotion of Green Driving**

We have been following the “Environmental Friendly” Guidelines issued by the Government Logistics Department and promoting green driving practice widely. In particular, our drivers observe the running-in speed as recommended for that particular type of vehicle, take care not to labour the vehicle, avoid high engine revolutions in low gear and perform frequent checks for overheating or any other defects developing in order to maintain the vehicles at their best environmental friendly condition all the time. Moreover, to reduce idling emissions and achieve fuel saving, our drivers are always reminded to switch off engines while waiting.

## **(3) Economical Pool Car Resources**

Further, we have been practising the principle of car pooling and task combination, i.e. to achieve multiple objectives in one journey instead of several separate trips. Whenever circumstances permit, “car pool” orders from different users would be arranged to adjust transport demand and as a result, the use of vehicles could be reduced.



## Issue of New Circulars To Schools

To help alleviate problem of global warming, we issued a circular in May 2006 to remind all schools to maintain air conditioning temperature at 25.5 degrees with a view to reducing the emission of carbon dioxide in Hong Kong. We issued another circular in November 2006 to require all schools to formulate a school-based environmental policy and implement effective measures for energy saving so as to help improve air quality.



# KEY ENVIRONMENTAL PERFORMANCE IN 2006

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## (a) ENVIRONMENTAL EDUCATION

We adopt a cross-curricular approach in the promotion of environmental education and promote school-based and action-oriented activities to encourage students in protecting the environment.

To fulfil the goal of promoting environmental education, various initiatives have been undertaken, which include-

- issue of "Guidelines on Environmental Education in Schools";
- setting up Environmental Resources Corners at Education Resources Centres;
- production of multimedia packages and education television programmes on environmental education;
- organisation of school events on environmental education together with various government departments and green groups;
- incorporation of appropriate environmental education elements in school syllabuses at all levels and updating curriculum guides and exemplars to assist schools to plan their environmental education programmes; and
- production of a reference handbook on "Education for Sustainable Development for Primary Teachers".

## INTERACTION WITH SCHOOLS

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### School inspections and visits

We conducted 10 school inspections and visits in 2006 giving advice on the implementation of environmental education.

- We provided school-based support on promotion of environmental education on a need basis and gave advice on various environmental issues including improving air quality and energy conservation. Schools were also encouraged to formulate environmental school policy and implement measures to save energy.

## **Provision of Resources to Schools**

- We provided resources to schools and training support to teachers.

- A total of 15 training programmes in the form of seminars, workshops and field trips on Education for Sustainable Development were organized in 2006. The themes regarding clean air and energy saving were addressed through talks, school experience sharing sessions and group discussions.



- A web-based environmental education learning package titled “Education for Sustainable Development in Schools in Hong Kong” was developed. Clean air was one of the topics in the package.



- About 50 sets of bilingual teaching resources on clean air and energy conservation were developed. These resources were in the form of News Rewrite, photos, comics, statistics and story, and uploaded onto the Moral and Civic Education Resource Net for teachers’ use.
- Leaflets on “Switch Off Idling Engine for a Greener City – Notes for Schools” were distributed to all schools in Hong Kong in May 2006 for educational and promotional purposes.

## **School Activity to Promote Environmental Awareness**

- We organised school activities to promote environmental awareness, some of them in collaboration with various government departments and non-government organisations to promote environmental protection.
- In 2006, we organized Professional Development Programmes for teachers on “Quality Life-wide Learning Activity Workshop Series” together with Kadoorie Farm and Botanic Garden, WWF Hoi Ha Marine Life Centre, Hong Kong Wetland Park and Hong Kong Ocean Park Academy. Primary and secondary school students also took part in 8 events.

• Student Environmental Protection Ambassador Scheme (SEPAS) 2005/06

- Student Environmental Protection Ambassador Scheme (SEPAS) and the Sixth Hong Kong Green School Award (6th HKGSA) were organized in collaboration with Environmental Protection Department and Environmental Campaign Committee to promote environmental protection in schools. Energy saving and conservation with focus on clean air was the major theme of both functions.
- A total of 805 primary and secondary schools participated in the Scheme and some 16639 Student Environmental Protection Ambassadors (SEPAS) were appointed.
- All SEPAs were also appointed as the Blue Sky Ambassadors to assist teachers in organizing environmental education activities related to improving air quality.

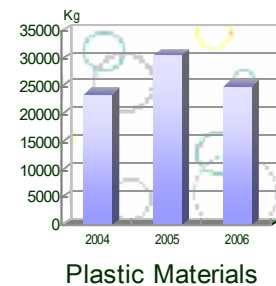
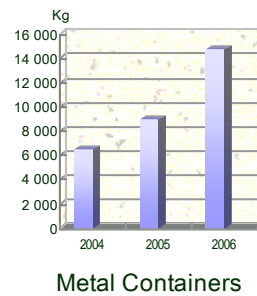
• School Environmental Award Scheme 2005/06

- The Homantin Government Secondary School and Tin Shui Wai Government Secondary School were granted the School Honours Awards.
- Students of Hennessy Road Government Primary A.M. School and Tai Po Government Primary School were granted the Environmental Campaign Committee MTR Environmental Award for Schools, and 6 students from Government Secondary Schools were granted the ECC Environmental Awards for students.
- A teacher of Homantin Government Secondary School was granted the Outstanding Environmental Protection Teachers Award.



• Waste Separation and Recycling Scheme in Schools

- We worked together with the Environmental Campaign Committee to organise the Scheme to promote the concept of "4Rs", i.e. reusing, reducing, recycling and replacing disposable products. As at end of 2006, the participating schools collected 390,580 kilograms of waste paper, 14,806 kilograms of metal containers and 25,194 kilograms of plastic material.



## BUILDING PARTNERSHIPS

We also worked together with various government departments and green groups to promote environmental protection. We participated in the following working groups and committees in 2006 to provide advice on the organisation of school activities and production of resource materials to schools to promote environmental protection-

- Clean Hong Kong : Publicity and Public Education Group
- Community Involvement Committee on Greening
- Country and Marine Parks Board
- Environmental and Conservation Fund Committee
  - Environmental Education & Community Action Projects Vetting Committee (Environment and Conservation Fund)
- Environmental Campaign Committee
  - Environmental Campaign Committee Education Working Group
- Hong Kong Environmental Education Group
- World Wide Fund
  - Hong Kong Education Committee



In response to the Clean Air Charter, we encouraged the above Working Groups or organizations to incorporate plans on improving air quality and energy saving into their activities, such as projects or competitions and newly developed resource materials for schools.

## (b) IN-HOUSE HOUSEKEEPING MEASURES

### DESIGN AND CONSTRUCTION WORKS FOR NEW SCHOOLS

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We introduce various environmentally-friendly initiatives in the design and construction works of new school buildings, including -

- reduction in noise and air pollution during construction through the implementation of mitigation measures;
- where feasible, installation of photovoltaic system and grey water recycling system;
- reduction in construction wastage resulting from the increased use of precast and prefabricated building elements;
- increased application of re-usable materials, in particular metal framework, site hoarding and recycled products;
- improvements to indoor air quality resulting from the use of fresh air pre-conditioners in classrooms and low volatile organic compound-emitting building materials;
- use of environmentally friendly refrigerant for air-conditioners;
- use of energy saving devices such as sun shading on external elevations, occupancy sensors, photo-sensor controlled lighting, T5 fluorescent lamps, electronic ballasts and variable refrigerant volume air-conditioning system;
- use of water-saving devices such as dual-flush toilet system and sensor-taps for wash basins;
- increased landscaping in school playgrounds and upper levels and roof of school to promote greener environment for both the schools and their surrounding areas;



- provision of varied plant species and designated green areas in schools to stimulate students' interest in natural science and encourage students to develop horticultural skills;
- use of shared facilities among schools in a school cluster which has enabled a greener, more spacious environment in these schools; and
- introduction of hygiene improvement measures to schools, including toilet provision without main entrance doors and hand washing facilities in playgrounds.

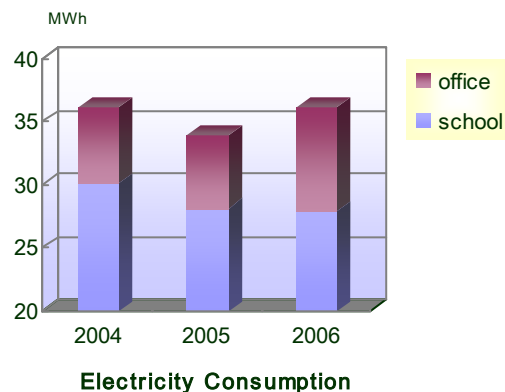
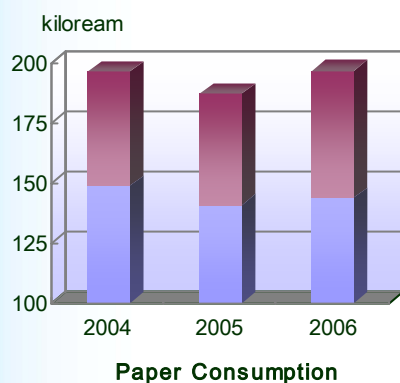
For the implementation of School Improvement Programmes, we have implemented the following environmentally friendly design measures –

- for all new school improvement projects with air conditioning installation, the Overall Thermal Transmission Value (OTTV) calculations were not more than  $23 \text{ W/m}^2$ ; and for 63.6% of all school improvements projects, OTTV calculations were not more than  $18 \text{ W/m}^2$ , against the statutory requirement of  $30 \text{ W/m}^2$ ;
- 63% of sanitary appliances in new buildings were installed with water-saving devices;
- use of occupancy sensor to control lighting and ventilation/air-conditioning in disabled toilets and some infrequently-used rooms (e.g. conference rooms, interview rooms, etc.);
- efficiency of driving motors for lift and escalator installations was not less than 85% which is better than the acceptable level of over 60% in the industry;
- use of the less toxic Ni-MH battery in Fire Services panels and emergency lighting when battery capacity required is less than 15 Ah; reducing the use of timber by alternative structural solutions such as metal hoarding and other structural means; and
- use of diesel hammers were not allowed as specified for all piling contracts.

## CONSUMPTION OF RESOURCES

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We are making continuous efforts in economising the use of paper and reducing electricity consumption. There was a slight increase in paper and electricity consumption in 2006, mainly due to establishment of the new Kowloon Tong Education Services Centre, increase in activities and consultation on new education initiatives and more school activities. We are actively exploring more concrete and effective measures to seek improvement in these areas.



### Conserving Energy

- We continue to adopt energy-efficient measures and sustain our efforts in reducing energy consumption.
- We are carrying out the project of saving electricity consumption and installed energy saving fluorescent tubes with electronic ballasts.
- We have been strictly complying with the policy set by Electrical and Mechanical Services Department by maintaining the ambient office temperature at 25.5 degree.
- We prepared quarterly electricity consumption reports, attended 3 sessions of experience sharing workshops of Hong Kong Energy Efficiency Award, Green Management Workshop for Green Managers, and Seminar on Air Ventilation Assessment in 2006, and conducted internal energy audits periodically.



## HIGHLIGHTS OF OTHERS GREEN MEASURES IN 2006

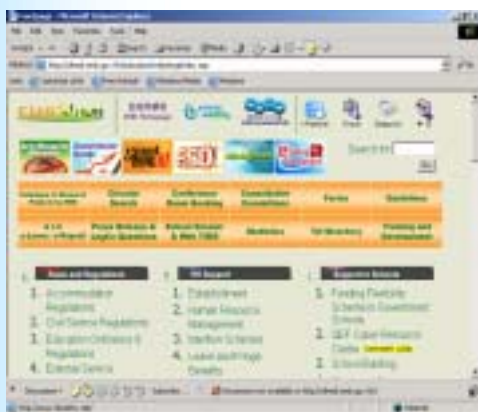
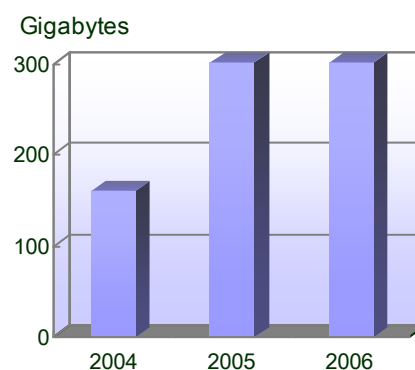
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We have all along adhered to the 4Rs, “Reduce, Re-use, Re-cycle and Replace disposable products” principles and focused on minimising waste and implementing various green measures on a continuous basis. These measures and achievement are highlighted below.

### (1) Minimizing and Reducing Wastes

#### Using Electronic Means of Communication

- With a view to promoting paperless operation in our daily work and reducing the use of paper in turn, use of electronic mails becomes the most popular means of communication in the Bureau. We had 2 700 Lotus Notes Mail user accounts with the mail database size of 750 gigabytes; there were around 7,800 Intranet accounts with a database size of 300 gigabytes.



- The Intranet platform has been widely used to disseminate Bureau information including telephone directory, training activities, newsletters, etc. and process administrative and personnel matters e.g. booking of conference rooms and processing of leave applications.

## (2) Reuse and Recycle of Wastes

As an integral part of our green strategy, we had put in place the following recycling programmes.

### **Green Purchasing**

- In procurement of goods, 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 and toner cartridges.
- We supported procurement of green products for use in the Bureau. In arranging tenders, we included common environmentally friendly terms such as trade-in clauses, recycling arrangements, etc. as far as practicable. Trade-in arrangements for the supply of ink and toner printer cartridges were arranged. In this connection, a total of 1 313 used cartridges were returned to the suppliers concerned for recycling or public auction in 2006. Further, we collected a total of 2 577 pieces of computer waste for recycling either by contractors under the disposal contracts or through public auction.
- We would require tenderers to use recycled plastic bags when inviting tenders for the coming new cleansing contracts in 2007.

### **Collecting Waste**

- We provided green boxes in offices and schools for collection of paper wastes for recycling.
- Throughout the year, we collected a total of 168,649 kilograms of waste paper for recycling.

### **Improvement in Indoor Air Quality**

- We implemented ventilation improvement measures bi-yearly, including indoor air quality check and cleaning of air outlets to ensure the indoor air quality meets the standard promulgated by the Environmental Protection Department.

## Promotional Green Activities

- We organised a series of activities to promote green management in our Bureau in 2006, including:



### (1) The Seventh Paper Saving Competition

We organised the seventh Paper Saving Competition to encourage colleagues working in government schools and our Bureau offices to save paper in their daily operation.

#### Prize

Best Performance Award in Paper Saving

Best Progress Award in Paper Saving

#### Winning Teams

Professional Development and Training Division

North Point Government Primary School

Information Technology Management Division

Farm Road Government Primary School

### (2) Promotional Messages on Newsletter and Bureau Intranet

To invite direct participation of staff in protecting the environment, and appeal for their support and contribution in this aspect, we disseminated green messages and notices on the bureau newsletter EDB Pulse and EDB Intranet's pop-up window to promote green management.



### (3) Green Christmas

- Donation of Clothing and Small Electrical Appliances
  - We collected and donated 21 packs of clothing and small electrical appliances to the Salvation Army during Christmas 2006.
- Electronic Christmas Cards
  - We designed and sent e-cards during Christmas and Chinese New Year to our working partners, same as what we did in the recent years.



# WAY FORWARD

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We fully recognize the significance and importance of environmental protection and green management. In line with this commitment, the Bureau will continue to devote efforts and resources to maintaining a high level of green management practice and setting a good example to the community.

On education front, we will continue to help schools develop a green culture in which students will be empowered with the necessary knowledge, skills and attitude to become environmentally friendly citizens. To support schools in implementing environmental education, we will continue to provide a broad range of services including school visits, teacher education programmes, territory-wide green activities, teaching guidelines and learning resources.

Within our Bureau, we will strive to reduce electricity consumption having regard to actual operational requirements. With completion of energy audits and review of our enhanced green management measures, we would be better able to work out more specific energy saving targets in 2008.

## TARGETS FOR 2007

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Our targets for promotion of environmental education in the school year 2006/07 were:

<i>Key Action Area</i>	<i>Targets for 2006/07 School Year</i>
■ We conduct school inspections and visits to give advice on the implementation of environmental education	■ To advise schools on implementation of environment education during seed project visits and school-based experience sharing sessions on environmental protection through organization of Life-wide Learning activities.

- We organise school activities aiming at promoting environmental awareness.
- To fund 400 school visits to the Mai Po Nature Reserve.
- To organise activities in collaboration with various government departments and non-government organisations to promote environmental protection.
- To conduct seed project on promotion of Creativity, Critical Thinking and Communication among students at schools which adopt environmental promotion as a major theme through Life-wide Learning activities.
- We provide advice on organisation of school activities and production of resources materials to schools to promote environmental protection.
- To provide advice on organisation of school-based activities for schools to promote environmental protection.
- To organize quality Life-wide Learning workshops to teachers with environmental protection as a main theme through joint ventures with the following organisations -
  1. Hong Kong Ocean Park Academy
  2. HKWWF Mai Po Nature Reserve
  3. HK Wetland Park
  4. Kadoorie Farm and Botanic Garden

In conducting our business, we will continue to adopt environmental housekeeping practices to economise use of resources and minimise waste. In the coming year, we will continue to –

- initiate and promote environmentally friendly housekeeping practices;
- devise more effective measures to strive to improve air quality;
- conduct energy audits to help identify room for improvement in energy conservation;
- promote the use of electronic means in communication within the Bureau; and
- organise activities and training to promote staff's awareness and participation in green management.

# CONTACT US

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We value very much your feedback on the Environmental Report 2006, which would be most useful for improving our report in the coming year. If you have any comments/suggestions, please complete this form and send it back to Senior Executive Officer (Administration Support) 2, Education Bureau, 10/F Wu Chung House, 213 Queen's Road East, Wan Chai, Hong Kong or fax it to 2893 0858. You may also send any comments by email to [edbinfo@edb.gov.hk](mailto:edbinfo@edb.gov.hk). Thank you.

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## Feedback Form

1. Do you find the Report informative?  Yes  No
2. Do you find the content of the Report easy to understand?  Yes  No
3. Which other topics would you like the Report to cover?  
\_\_\_\_\_
4. What improvement would you recommend?  
\_\_\_\_\_
5. What is your overall view of the Report?  
 Excellent  Good  Adequate  Poor

Name : \_\_\_\_\_  
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