

For discussion on  
20 December 2006

**LEGISLATIVE COUNCIL  
PANEL ON ENVIRONMENTAL AFFAIRS**

**Green Measures in the Government**

**PURPOSE**

The Government attaches great importance to environmental protection. This paper sets out major green measures that the Government has adopted in the areas of procurement, public works and energy efficiency.

**GOVERNMENT PROCUREMENT**

2. The Government has long implemented a green procurement policy. As early as year 2000, the Stores and Procurement Regulations (SPR) were amended to require Government departments to give consideration, as far as possible and where economically rational, to purchase products: -

- (i) with improved recyclability, higher recycled content, reduced packaging and greater durability;
- (ii) with greater energy efficiency;
- (iii) utilizing clean technology and/or clean fuels;
- (iv) which result in reduced water consumption;
- (v) which emit fewer irritating or toxic substances during installation or use; or
- (vi) which result in smaller production of toxic substances, or of less toxic substance, upon disposal.

All bureaux and departments must follow the SPR and the green procurement guidelines therein, when making their procurement decisions.

3. Since year 2000, the Government has also developed and adopted “green” specifications for a range of commonly used products so as to ensure that they meet certain environmental standards. In the past

four years, we purchased more than \$180 million<sup>1</sup> worth of these “green” products, including recycled paper, office stationery, cleansing materials, etc<sup>2</sup>. A list of such products, together with their “green” specifications, is at Annex. Government departments will also incorporate “green” considerations in the marking schemes, wherever appropriate, to encourage the market to identify “greener” products for their procurements. For example, in the marking scheme for the evaluation of recycled photocopying paper, additional marks will be given to those products with higher percentage of recycled contents, that avoid the use of chlorine as bleaching agent, or that use biodegradable surfactant.

4. Regarding office equipment and electrical appliances, the Government has incorporated “energy label” under the voluntary “Energy Efficiency Labeling Scheme” (EELS) as a mandatory requirement in the purchase tenders for room coolers, refrigerators and photocopiers. Subject to market availability, the Government will further incorporate “energy label” as a mandatory requirement in other types of products, with priority given to compact fluorescent lamps, laser printers and dehumidifiers. To facilitate the procurement of “green” office equipment by bureaux and departments, the Electrical and Mechanical Services Department has also issued a “Guide for Energy Efficient Green Office Equipment”. Riding on the success of the voluntary EELS, the Government is preparing new legislation for the introduction of a mandatory EELS, covering room coolers, refrigerators and compact fluorescent lamps supplied in Hong Kong.

5. As for environment friendly vehicles, there are currently nine hybrid petrol cars in the Government fleet. The Government commenced a trial in April 2005 to study the suitability of hybrid petrol cars for departmental operations and their operating expenses. It has been observed so far that they are on par with comparable conventional petrol-driven vehicles in terms of performance and maintenance costs. On top of that, they also have better fuel efficiency. In the 2006/07 Policy Address, the Chief Executive has proposed giving 30% concession on the first registration tax for vehicles with low emissions and high fuel efficiency. The Panel in its meeting on 27 November 2006 supported the Government proposal of providing tax concession for environment friendly vehicles. The Government will give priority to vehicles

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<sup>1</sup> This does not include the value of fuel oils.

<sup>2</sup> It is worth mentioning that amongst the major categories of products purchased by the Government, pharmaceuticals and computer systems (hardware and software) already represented 70% of the total purchase value. Other major expenditure items include marine equipment and spare parts, telecommunication equipment, laboratory equipment, food and beverage, arms and ammunition, etc. These products apparently do not have green alternatives.

complying with the specific environmental standards when Government vehicles are due for replacement each year, subject to operational requirements and the rational utilization of resources. The Government has also been purchasing Liquefied Petroleum Gas (LPG) light buses to replace diesel ones since 2002. Currently, 155 or 50% of the 309 light buses in the Government vehicle fleet use LPG. The number of LPG light buses will increase to 214 or 69% of the fleet by March 2007.

6. Green procurement guidelines aside, it must be emphasized that waste reduction is another key element in our procurement policy. While it is good to buy “green”, it is even better to buy “less” and dispose “less”. In this regard, the Government has achieved about 5% reduction in paper use in 2005. At the same time, the ratio of recycled paper used has also increased from about 25% in 2004 to 40% in 2005. It is also a requirement in the SPR that Government departments should avoid single-use disposable items as far as possible. On the disposal end, the Government Logistics Department has assisted Government departments to establish contracts for the collection and sale of recyclables, including paper waste, optical discs, metal scrap, surplus equipment, etc.

## **PUBLIC WORKS**

7. In the public works arena, environmental considerations are incorporated in all contracts. In particular, we require all contractors to minimize the generation of construction and demolition (C&D) materials, and to maximize their reuse. Recycled aggregates and recycled asphalt are widely used in public works. Since 2002, some 630,000 tonnes of recycled aggregates had been used in over 150 projects. Similarly, more than 100,000 tonnes of recycled asphalts had been used in public works since 2004. In addition, contractors are required to adopt reusable metal hoardings to reduce the use of timber in temporary works. Other “green” materials used in public works include recycled plastic fenders/handrails and pulverized fuel ash<sup>3</sup> for concrete production.

8. To promote the wider use of environmental-friendly construction methods and materials in public works contracts, marks are awarded in the tender assessment for proposals that adopt such methods and materials. Tenders with environmental-friendly proposals will have a higher chance of winning the tender. In addition, the Government, in cooperation with academic institutions, is conducting comprehensive studies on the use of other recycled materials, including rubber-modified

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<sup>3</sup> Pulverized fuel ash is a by-product produced by power stations as a result of coal burning. The material has been used for manufacturing of concrete.

asphalt for road pavement construction. As a showcase, the EcoPark in Tuen Mun has made use of recycled glass for footpath paving blocks, rubber-modified asphalt and reclaimed asphalt for road pavement, and recycled aggregates for non-structural concrete.

## **ENERGY EFFICIENCY**

9. To demonstrate our commitment in environmental protection, the Government has pledged to reduce its power consumption by 6% in four years from FY 2003-04 to FY 2006-07, taking FY 2002-03 as the base year. This is equivalent to an annual saving of 1.5% of electricity. With our concerted effort, we have achieved a 3.6% or 76 million kWh reduction in electricity consumption during the first two years of implementation, and are well on our way to meet the 6% target.

10. In the 2005/06 Policy Address, the Government has further pledged that all Government office buildings shall achieve a 1.5% reduction in electricity consumption starting from January 2006. This is equivalent to an annual saving of 7.5 million kWh of electricity. Based on preliminary data, the electricity consumption of Government office buildings has achieved a reduction of electricity consumption by 2% in the first half of 2006, compared to the same period last year.

11. To further improve the energy efficiency of Government buildings, a technical circular was promulgated in November 2005, setting out the guidelines and procedures for Works Departments on the adoption of energy efficient features and renewable energy technologies in new Government buildings and retrofit projects. All newly designed government buildings and retrofit projects should be in full compliance with our Building Energy Codes.

12. For existing buildings, the Government has conducted energy audits and re-audits in over 200 major venues. Energy saving and renewable energy projects have been implemented to reduce electricity consumption in these buildings. For instance, the Government has extensively implemented energy efficient fluorescent tubes and ballasts, variable speed motors and water-cooled air-conditioning systems to save energy.

13. As standard house-keeping practices, all bureaux and departments have been implementing a series of energy saving measures, including maintaining air-conditioning temperature at 25.5 Celsius, switching off some elevators and lifts during off-peak hours, reduction of

air-conditioning hours, switching off lightings and computers when not in use, etc. With the Chief Executive taking the lead, Government colleagues are also encouraged to dress lightly in the summer to suit the 25.5 Celsius room temperature setting. Energy wardens have been appointed to tighten the implementation of these energy saving measures. Green management workshops and web-based bulletin board are also used to disseminate information on energy saving and facilitate experience sharing.

14. The 2006/07 Policy Address also encourages the adoption of green rooftop. Planting on the rooftop could attenuate urban heat island effect, improve the effectiveness of heat insulation facilities, and hence reduce the energy consumption for air-conditioning. Rooftop planting would also enhance the visual amenity. Since 2001, about 50 Government buildings have included rooftop planting, and such feature will be incorporated in the design of new government buildings as far as practicable.

## **WAY FORWARD**

15. Notwithstanding the progress we have made so far, the Government will continue to take the lead in environmental protection and set a good example for the community. The Government will continue to advance the practice of green procurement, in terms of reducing our consumption of resources, facilitating the collection of recyclables, including additional green requirements to product specifications, and, where economically rational, expanding the range of green products we purchase. In the public works arena, the Government will continue to explore other suitable recycled materials for use in public works projects such as paving blocks with recycled glass. In support of the “Action Blue Sky” campaign, the Government will continue to closely monitor our electricity consumption, replace low energy efficiency equipment, ensure new Government buildings comply with the Building Energy Codes, maintain good house-keeping practice, and conduct green management workshops to further disseminate information on energy saving.

16. It must be emphasized that the community must also do their bits in protecting our environment. In this regard, bureaux will encourage public bodies and sub-vented organizations under their purview to development green procurement policy by making reference to Government’s practice. We also urge Members to bring green practices

to your offices, as well as organizations in your constituencies.

**ADVICE SOUGHT**

17. Members are invited to note and comment on the green measures in the Government.

Environmental Protection Department  
December 2006

**Green Specifications of Common User Items  
Purchased by the Government Logistics Department**

**(I) Products with Recycled Content**

<b>Item No.</b>	<b>Description</b>	<b>Green Specification</b>
1	Paper photocopying white recycled A4	(i) The paper shall contain at least 80% recovered fibre or at least 40% post-consumer fibre by weight. (ii) Paper packaging (paper wrapper and carton box) must be made from 100% recovered fibre by weight.
2	Paper photocopying white recycled A3	(iii) Bleaching agent being used in pulp/paper production, if necessary, preferably does not contain chlorine. (iv) Surfactant used in pulp/paper production, if necessary, preferably is biodegradable. (v) Chemical Oxygen Demand in water discharge during pulp and paper production preferably is less than 20kg/tonne of paper produced.
3	File jacket c/w lever arch mechanism	Made from hard and stiff cardboard containing at least 50% recovered fibre.
4	File jacket c/w 2-ring spring mechanism	
5	File box with lockspring for foolscap size paper	

**(I) Products with Recycled Content (Cont'd)**

<b>Item No.</b>	<b>Description</b>	<b>Green Specification</b>
6	Paper toilet in roll	(i) Must contain by weight 100% recovered fibre and that recovered fibre must contain not less than 60% post-consumer fibre.
7	Jumbo roll toilet paper	(ii) Bleaching agent used in pulp/paper production, if necessary, must not contain chlorine.
8	Paper towel (manifold)	(iii) Surfactant used in pulp/paper production, if necessary, must be biodegradable.
9	Hand roll paper towel	(iv) The packaging (such as core/paper wrapping/carton box) must be made from 100% recovered fibre.
10	Pencil recycled black lead HB	(i) Non-toxic colour paint must be used.
11	Pencil recycled black lead HB w/eraser	(ii) Pencil barrel must be made of recycled paper.
12	Pencil recycled dark blue	(iii) No heavy metals in dye in graphite.
13	Pencil recycled red	
14	Recycled paper for printing	With recycled content of recycled pulp or post-consumer fibre.
15	Hydrocarbon lubricants & compound	With recycled content.

## **(II) Environmentally Friendly Products**

<b>Item No.</b>	<b>Description</b>	<b>Green Specification</b>
1	Powder detergent	(i) Contains no Ethylene Diamine Tetraacetate. (ii) Contains no reactive chlorine compounds. (iii) Do not contain Alkylphenoxytoxylates. (iv) Biodegradable at least 90% of the product.
2	Cleansing powder, lavatory	Contains no Ethylene Diamine Tetraacetate.
3	Soap toilet liquid	(i) pH of 5% solution ranges from 6-10. (ii) All surface active agents must be readily biodegradable. (iii) Bio-accumulative preservatives are not allowed.
4	Pen ball-point – refillable black	Refillable.
5	Refill for ball-point pen – black	
6	Pen ball-point – refillable red	
7	Refill for ball-point pen – red	
8	Clutch pencil 0.5mm (mechanical pencil)	Refillable.
9	Lead refill for clutch pencil black HB 0.5mm	

## **(II) Environmentally Friendly Products (Cont'd)**

<b>Item No.</b>	<b>Description</b>	<b>Green Specification</b>
10	Correction fluid white (brush type) 20ml	(i) Must not contain ozone depleting substance (Class I & II).
11	Thinner for correction fluid 20ml	(ii) Toxic elements comply with EN71 Part 3 or equivalent.
12	White correction fluid pen	
13	Photocopier	(i) Low ozone emission design. (ii) Toner recycling mechanism. (iii) With energy label from EMSD.
14	Fuel oils	(i) Ultra low sulphur diesel contains less than 0.005% sulphur content. (ii) Ultra low sulphur diesel has cetane number of minimum of 51. (iii) Unleaded motor spirit.
15	LPG light bus	Use LPG fuel.
16	Hybrid electric vehicles	With electric motor for reducing vehicle fuel consumption.
17	Particulate removal device	Reduce particulates, carbon monoxide and hydrocarbons from the emission of diesel vehicles.
18	Environmental friendly process ink	Contain vegetable oil or soybean oil and a low content of volatile organic compound in the ingredients.