

**Council for Sustainable Development's Report on Better Air Quality Engagement Process –  
Government's Response**

<b>Item</b>	<b>Recommendation</b>	<b>Response</b>	<b>Progress</b>
1	To adopt roadside air pollution measurements as the target for improvement and take reductions in pollutant concentration levels at appropriate locations as the goals to strive for rather than emission inventory targets (paragraph 4.8).	<p>In developing measures to improve air quality, the Government's strategy has been geared towards reducing emissions at source so as to improve both ambient and roadside air quality. Setting emission reduction targets is an internationally adopted approach in air quality management.</p> <p>We are reviewing Hong Kong's AQOs with reference to the latest AQGs published by WHO and other international practices. The review will look into, inter alia, whether the future AQOs should make separate provisions for assessing ambient and roadside air quality. The review is expected to complete in 2008.</p>	We are carrying on the review with an aim to complete it in 2008.
2	To adopt a colour-coded system and the target for the Government and community at large should be to reduce the number of high air pollution coloured days, e.g. if red is taken as the chosen	<p>The Government has been using colour codes in addition to index values to represent different air pollution levels under the current API System. We also provide advice to the public on health aspects during high API days.</p> <p>To further improve the operation of the current API System, we have engaged a team of leading academics from local tertiary</p>	We are carrying on the review with an aim to complete it in 2008.

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	<p>colour then a target of zero “red” days within x years should be established (paragraph 4.9).</p> <p>When “red” days alerts do occur, the Government must, with timely notice, discourage activities that generate air pollutants namely driving of private vehicles and use of non-essential electrical and diesel equipment in certain zones. Organizers of outdoor activities involving schools and vulnerable groups should be advised to postpone such activities on “red” days and the use of public transport systems should be enforced in</p>	<p>institutes to review the API System. The objective is to develop a new health-based API system which will provide timely advice to the community on the effect of air pollution on public health. The review is expected to complete in 2008. Subject to the recommendations, we would then revise the API System and look into what activities should be avoided on high air pollution days.</p>	

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	certain zones (paragraph 4.10).		
3	To adopt road pricing as soon as possible in congested areas – to be finalized subsequent to discussion – such as Central, Wanchai, Causeway Bay and Mongkok (paragraph 4.12).	Congestion charging and environmental charging serve different objectives, involve different stakeholders and require different charging strategies. From the transport angle alone, we consider that the case for introducing road pricing, particularly before the Central-Wan Chai Bypass is in place, is weak. We need to take a cautious approach and manage public expectations on our way forward. From overseas experience, an electronic road pricing scheme that aims to relieve traffic congestion can only be implemented equitably and effectively with the availability of alternative routes that have adequate capacity for motorists to bypass the charging zone. In the case of Hong Kong, such an alternative route is the Central-Wan Chai Bypass which will not be in place before 2016. As the Council points out, road pricing by itself will not combat roadside air pollution. The initial finding of the AQOs Review has reconfirmed that while the roadside air quality of the locality where the measure is being implemented would be improved, the diverted traffic would bring the problem to other areas. Thus, it is difficult to scientifically justify the introduction of this measure on pure environmental	We will keep the need for road pricing under review.

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		grounds.	
4	To review the current policies on how to assist the transport industry through the HK\$3.2 billion allocation in upgrading light, medium and heavy vehicles to the latest Euro vehicle standards (paragraph 4.13).	<p>The \$3.2 billion allocation is amongst a host of measures rolled out by the Government to reduce local pollution from the road transport system. The scheme aims to encourage vehicle owners to replace their pre-Euro and Euro I diesel commercial vehicles with new ones meeting the prevailing statutory vehicle emission standards as soon as possible.</p> <p>The Government has recently extended the application period for pre-Euro vehicles from end September 2008 to end March 2010 (that is, the deadline will be the same as that for Euro I diesel commercial vehicles). We intend to consider the need of other measures, such as raising the vehicle licence fees of old vehicles, upon expiry of the extended deadline to provide an added impetus to vehicle owners to replace their old vehicles with cleaner ones. We will fully consult the affected sectors when formulating the relevant proposals.</p>	As at end August 2008, about 5 700 pre-Euro diesel commercial vehicles and 2 300 Euro I diesel commercial vehicles had been replaced under the scheme, making up a payment of \$323 million of the grant.
5	To support the franchised bus fleets as required (paragraph 4.13).	We will continue to encourage the franchised bus companies to replace their older buses earlier and deploy more cleaner buses to busy urban corridors.	---

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6	To explore cleaner fuel options like LPG for light goods and passenger vehicles (paragraph 4.13).	<p>At present, the LPG refilling network can only meet the demand of the taxi and light bus fleets. If the use of LPG is extended to diesel light vans and light goods vehicles, according to EMSD's consultancy study completed in 2001, a total of about 1 000 filling nozzles would be required (that is, the current number of filling nozzles would have to be increased by 1.4 times).</p> <p>Due to the dense population in Hong Kong's urban area, it is not easy to find sites to construct additional LPG filling facilities while meeting the safety requirements. Nevertheless, the Government has a standing policy since 2000 to include LPG filling facility requirement in new land sale plans and renewal of petrol filling stations, subject to safety requirements being met. We would keep this option under review in the light of the progress in our efforts to expand the LPG infrastructure.</p>	One non-dedicated LPG station at Yuen Long will come into operation in late 2008, while two others at Kwai Chung and Yuen Long are planned for tender in 2008/09.
7	To build more pedestrianized areas and close roads in congested locations (paragraph 4.13).	Since March 2000, we have implemented pedestrianization schemes in over 35 streets and completed traffic calming measures (such as reducing the width of carriageways to provide wider footpaths for pedestrians and installing speed tables to raise the level of carriageways to reduce vehicular speed) in seven districts, such as those in Paterson Street and Kai Chiu Road in	Whilst there are constraints in providing more pedestrianized zones, we will continue to implement traffic calming measures at suitable locations identified in the busy districts.

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		<p>Causeway Bay, and Temple Street and Fa Yuen Street in Kowloon. Pedestrianization helps improve the air quality in the pedestrianized area. However, as traffic has to be diverted and cannot be truncated in reality, the subsequent air quality along the diverted route is impaired.</p> <p>The potential of further pedestrianization in recent years has been undermined by street promotional activities, street performances, illegal shop extensions and campaigning activities, etc in the existing pedestrianized area. In view of the street management problems, the Yau Tsim Mong District Council did not support turning the three pedestrianized schemes in Mong Kok to permanent schemes and keep them as trial schemes.</p>	
8	To consolidate the number of transport options for the public, e.g. reducing the number of unused or half-used bus routes during certain hours during the day	We have been pursuing the strategy of rationalizing the bus network to enhance network efficiency, as well as to reduce traffic congestion and environmental pollution. We have been working with the District Councils and franchised bus companies to pursue route cancellations, amalgamations, truncations and frequency reductions, to reduce the number of bus trips and improve bus	Together with the franchised bus companies, we are pursuing on-going measures in the context of their route development plans.

<sup>1</sup> As compared between 2002 (when the franchised bus fleet reached the height of 6 378 buses) and 2007 (when the franchised bus fleet had a

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	(paragraph 4.13).	<p>stopping arrangements, particularly on busy corridors.</p> <p>Through these efforts, from 1999 to 2007, a total of 109 franchised buses have been withdrawn (the total number of franchised buses in 1999 and 2007 were 5 998 and 5 889 respectively) from the road, and some 5 700 bus trips per day and 4 800 bus stoppings per peak hour at the relevant busy corridors were reduced<sup>1</sup>.</p> <p>In view of the considerable rationalization already done, the level of service of many bus routes have been reduced to a level barely acceptable to the local residents. The District Councils have raised increasingly strong objections to further rationalization proposals, and this will reduce the amount of rationalization that can be further implemented. We will seek to balance the public demand for bus services and the need to improve road traffic and the environment, and pursue further bus service rationalization in consultation with the District Councils where practicable.</p>	

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total of 5 889 buses), the total number of buses withdrawn was 489.

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9	To consider imposing selective vehicle restrictions on high air pollution days (paragraph 4.13).	Imposing selective vehicle restrictions on high pollution days is an innovative concept, which as far as we are aware, has not been applied in any overseas jurisdictions. Major implementation and enforcement details, such as when to trigger the restriction, how much advance notice be given to vehicle users, and how long such restriction should be made, are exceedingly complex. We would closely monitor international experience on whether and how the concept will be applied and its outcome in abating roadside pollution. In the meantime, we are studying the feasibility of setting up a pilot “low emission zone” which would restrict the entry of older franchised buses into a district with high traffic flow, in order to evaluate the practicability of introducing “low emission zone” in Hong Kong, its effectiveness in improving roadside air quality, its impact on the overall road traffic network, public transport services and passengers, as well as the level of public acceptance, bearing in mind there are other competing transport objectives (such as the need to provide new low-floor buses for the disabled etc.). We will also study whether deploying all older buses to operate outside the “low emission zone” would shift the roadside air pollution problem to areas which are currently unaffected or worsen their current situation.	We are assessing whether sufficient number of new buses could be distributed to run on the routes concerned and the earliest time to introduce the proposed pilot scheme, taking into account the replacement schedules of the old franchised buses.



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10	To look into ways of stopping the practice of fuelling Hong Kong privately owned vehicles in the PRD Region with low grade diesel and the subsequent driving of these vehicles on Hong Kong roads (paragraph 4.14).	The Government believes that the best approach to control cross-boundary air pollution in Hong Kong caused by vehicles using Mainland fuel is to promote the use of cleaner fuel in Mainland. Guangdong is progressively supplying the National III motor fuels (which are on a par with the Euro III fuels) to the PRD Region from January 2008, and expanding the supply network to cover all cities in the region by the end of 2008. It is also examining the possibility of advancing the introduction of National IV motor fuels by 2010. We expect that the situation would continue to improve as the difference in the motor fuel standards between the PRD Region and Hong Kong continues to narrow.	---
11	To introduce policies to mandate the use of low sulphur diesel for vessels like ferries and private boats in line with road transport fuels used in Hong Kong (paragraph 4.15).	Pollution from the marine transport system also contributes to air pollution and should be placed under tighter control. Indeed, Hong Kong has been fulfilling its obligations under the relevant international convention which regulates the emissions of harmful substances and the quality of fuel oil used on board and shipboard incineration. The Government has also taken the lead to use ULSD in all of its vessels since 2001. The Government has also set up an inter-departmental working group to formulate a strategy to reduce emissions from this source, particularly through	We are making preparation to launch the trial scheme, with an aim to complete it within 2009.

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		<p>the use of cleaner fuel. It is now examining the practicability of local ferries using ULSD and will conduct a trial scheme to test out the technical feasibility shortly.</p>	
12	<p>To mandate strict building codes and regulations for new and existing buildings to eliminate unnecessary and wasteful energy consumption, and making it compulsory to install energy efficient equipment and appliances (paragraph 4.17).</p>	<p>At present, the Building (Energy Efficiency) Regulation imposes requirements on energy efficient building design through limiting the “Overall Thermal Transfer Value” of buildings (that is, heat gain through the building envelope).</p> <p>In order to further improve energy efficiency of buildings, thereby combating air pollution and alleviating global warming, the Government proposes to introduce mandatory implementation of the Building Energy Codes for certain new and existing buildings.</p> <p>We have completed a three-month public consultation in March 2008, and the vast majority of the views received are in support of the proposal. We are now preparing the relevant legislation for introduction into the LegCo in 2009.</p>	<p>The regulation is currently in force.</p> <p>We are now preparing the relevant legislation with a view to introduce it into the LegCo in 2009.</p>
13	<p>To educate the public not to be wasteful in energy use, e.g. street advertising lights</p>	<p>The Government is committed to promoting energy efficiency and conservation. We will continue to encourage the public to improve their energy consumption patterns through various public</p>	<p>We will continue to organise various programmes to promote energy efficiency and conservation to the</p>

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	should be turned off during early morning periods (paragraph 4.17).	education, publicity and promotional programmes.	public.
14	To encourage building owners to switch off lighting and air conditioning in empty buildings (paragraph 4.17).	The Government has been implementing various community-wide programmes and initiatives to promote energy saving, such as promoting effective energy management methods, e.g. switching off unnecessary lighting and electrical appliances.	We will continue to organize various programmes to promote energy efficiency and conservation to the public.
15	To set up incentives for the electricity companies to work with consumer groups and supply less environmentally damaging power with requisite rewards (paragraph 4.17).	<p>The Government has been providing incentives for the power companies to improve their environmental performance.</p> <p>Under the new post-2008 SCAs signed between the Government and each of the two power companies in January 2008, the permitted rate of return of the power companies will be linked to their emission performance. Bonus will be offered should they over-achieve the stipulated emission caps, while penalty will be imposed should they under-achieve the caps. The new SCAs have also put in place provisions to encourage the power companies to adopt more usage of renewable energy. They will enjoy a higher permitted rate of return for their investment in</p>	The new SCAs will be effective from October 2008 and January 2009 for CLP Power and Hongkong Electric respectively. We will keep in view their implementation.

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		<p>renewable energy facilities. Bonus will also be offered to them in accordance with the extent of renewable energy usage in their electricity generation.</p> <p>In addition, bonus will be offered to the power companies based on the number of energy audits performed for customers and the actual energy saved. Both power companies have agreed to set up a loan fund to provide loans to non-Government customers to implement energy saving initiatives identified in the energy audits to promote energy efficiency. They have also agreed to set up an education fund for energy efficiency and promotional activities.</p>	
16	To mandate eco-labels for electrical equipment and appliances and encouraging the market for energy efficient equipment and related services, promoting environmental design and construction methods for buildings and introducing off-peak pricing schemes for	To promote energy efficient products, the Government has been operating a voluntary EELS for appliances and equipment used both at home and office as well as for vehicles. The scheme aims to save energy by informing potential customers of the product's level of energy consumption and efficiency rating, so that buyers can take these factors into consideration when making their purchasing decision. The scheme now covers 18 types of household appliances and office equipment.	We will keep in view the implementation of the first phase of the mandatory EELS and start to plan for the coverage of the second phase later this year.

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	consumers (paragraph 4.17).	<p>To further facilitate the public in choosing energy efficient appliances and raise public awareness on energy saving, we have introduced a mandatory EELS through the Energy Efficiency (Labelling of Products) Ordinance which was enacted in May 2008. Three types of products covered in the first phase of the mandatory EELS are room air conditioners, refrigerating appliances and compact fluorescent lamps. We will continue to expand the scope of the mandatory EELS to cover other electrical appliances.</p> <p>To improve energy efficiency of buildings, the Government has completed a three-month public consultation on 31 March 2008 on the proposed mandatory implementation of the Building Energy Codes. With the overwhelming public support on the proposal, we are now preparing the relevant legislative proposal, taking into account the views collected. Meanwhile, we will continue to promote the application of the Building Energy Codes to buildings, raise the public awareness on the importance of energy saving in buildings, and work with the professional bodies to promote good practices on building energy efficiency and conservation in Hong Kong.</p>	<p>We are now preparing the relevant legislation with a view to introducing it into the LegCo in 2009.</p>

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		<p>On off-peak pricing scheme for electricity consumers, the two power companies have implemented progressively increasing block tariff structure for their domestic customers under which the tariff rates increase with higher electricity consumption. The objective is to encourage customers to achieve energy saving with a view to better protecting the environment.</p> <p>CLP Power has also introduced Time Of Use rate, e.g. concessionary tariff rates for domestic customers using night storage water heaters and relatively lower tariff rates than those during the "on-peak" period for bulk tariff customers, large power tariff customers and customers using ice-storage air-conditioning systems, in order to promote electricity use during the "off-peak" period. This helps to defer the installation schedule of new generating facilities of the power company and hence achieve the long term objective of efficient use of energy.</p>	<p>We will continue to keep in view of the relevant development.</p>

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17	<p>To adopt more thoughtful habits on electricity consumption in Hong Kong (paragraph 4.19).</p> <p>To encourage this through providing educational messages, working with consumer groups, exploring more options for renewable energy and leading by example in the activities of the staff and facilities of the Government.</p>	<p>The Government is committed to lead by example in promoting energy efficiency.</p> <p>Using the operational conditions of 2002/03 as the comparison basis, with the concerted efforts of bureaux and departments, the total normalized electricity consumption of the Government in 2006/07 has reduced by about 7% as compared with 2002/03. The reduction is made possible through the implementation of housekeeping measures on energy conservation and the carrying out of energy saving projects by bureaux and departments.</p>	<p>We will continue our efforts in improving energy efficiency and conservation in the Government.</p>

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18	To promote better energy and environmental practices amongst its staff and to foster an energy saving and environmental culture (paragraphs 4.22 and 4.23).	The Government has put in considerable efforts to promote energy efficiency and conservation. We have issued appeal letters in May and June 2008 to various trade associations to solicit their support in purchasing energy-efficient electrical appliances and are implementing housekeeping measures for saving energy. A seminar was held in September 2008 to introduce relevant energy-efficient technologies and measures to trade representatives and their staff. Moreover, we have established the “HK EE Net” and produced a number of leaflets to provide information on energy-efficient technologies to the public. At the same time, we are promoting environmental practices and culture within the Government through various initiatives such as implementing the Clean Air Charter as well as preparing and publishing environmental reports.	We will continue our promotional efforts on energy saving and environmental practices within the Government and for the public, including employers and employees.
19	To speed up the process to reduce emissions of VOC from retail and manufacturing products (paragraph 4.24).	The emission of VOC contributes to the photochemical smog problem. The Government has been implementing the Air Pollution Control (Volatile Organic Compounds) Regulation to control VOC emissions from architectural paints and printing inks, as well as six types of consumer products in phases from April 2007 to January 2010. The requirements are on a par with those adopted in California which are the strictest world standards	We are closely monitoring the market situation to ensure that the regulation is effective in reducing VOC emissions. At the same time, we are consulting the stakeholders on the proposal to extend the regulation to cover other products, with a view to introduce the further



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		<p>on VOC limits.</p> <p>We are now considering to extend the regulation to other products, including non-architectural coatings, adhesives and sealants.</p>	<p>control by 2010.</p>
20	<p>To mandate the switch from industrial-grade diesel to ULSD for the catering, construction and port industries (paragraph 4.25).</p>	<p>To further reduce emissions from the industrial and commercial sectors, the Government has enacted a regulation in June 2008 to mandate the use of ULSD in such processes. The new regulation will come into operation from October 2008. It will place Hong Kong amongst the very few areas in the world which require the use of ULSD across all individual and commercial processes.</p>	<p>We will keep in view the implementation of the regulation.</p>
21	<p>To continue pursuing dialogue with Guangdong in tackling regional air pollution and sharing knowledge and resources where feasible, particularly in setting of post 2010 air quality goals (paragraph</p>	<p>The Government will continue to collaborate with the Guangdong authorities to improve the regional air quality.</p> <p>In particular, Hong Kong and Guangdong have been progressively implementing a set of measures stipulated in the PRD Regional Air Quality Management Plan to reduce emissions from power plants, vehicles and industrial sources. The Guangdong side is also carrying out the additional control</p>	<p>We will continue to step up our collaboration efforts in order to improve the regional air quality.</p>

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	4.27).	measures as recommended in the Mid-term Review Report of the Management Plan in order to achieve the mutually agreed reduction targets by 2010. The two governments will also initiate discussions about the post-2010 emission reduction arrangements, including the future emission reduction targets.	
22	To carry out research on air pollution and the health implications, particularly at roadside level, to provide information to the public	The Government fully shares the Council's concern over the implications of air pollution on the health of the public. Over the years, we have commissioned medical professionals to carry out health studies in different areas including the impact of ambient and roadside air pollution <sup>2</sup> .	We are carrying on the reviews with an aim to complete them in 2008.

<sup>2</sup> We have previously commissioned the following studies about the health effects of air pollution –

- (a) "Short-term Effects of Ambient Air Pollution on Public Health" - September 1997 by CUHK;
- (b) "Short-term Effects of Ambient Air Pollution on Public Health - A Follow-up Study" - February 1998 by the University of Hong Kong (HKU);
- (c) "Study of Economic Aspects of Ambient Air Pollution on Health Effects" - April 1998 by the EHS Consultants Ltd.;
- (d) "Short-term Effects of Ambient Air Pollution on Public Health - An APHEA 2 Study" - May 1999 by HKU;
- (e) "Short-term Health Impact and Costs due to Road-traffic Related Air Pollution" - March 2002 by HKU and CUHK;
- (f) "A Comparative Study of the Effects of Air Pollution on General Practitioner Consultations in Hong Kong and London" - August 2003 by CUHK;
- (g) "Assessment of Toxic Air Pollutant Measurements in Hong Kong" - November 2003 by HKUST and CUHK; and

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	such as the local and regional sources and nature of air pollution and explaining the implications for our society and economy so that citizens can make the right choices in order to change methods of work and lifestyle as necessary (paragraph 4.28).	At present, we are reviewing the AQOs in light of the latest air quality standards adopted by other jurisdictions, including the new AQGs of WHO, as well as the new scientific evidence and data on the health effects of air pollution. We have also engaged leading academics to review the API System. The objective is to develop a new health-based API System which will provide timely advice to the community on the effect of air pollution on public health and what activities should be avoided on high pollution days. We expect to complete both reviews in 2008.	
23	To develop a holistic and comprehensive implementation plan which includes, amongst other things, the need to provide the much needed authority and resources to the	We are developing a holistic and comprehensive air quality management plan to further improve Hong Kong's air quality in the context of the AQOs Review, which is expected to complete in 2008.	We are carrying on the review with an aim to complete it in 2008.

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- (h) "Assessment of Toxic Air Pollutant Measurements in Hong Kong - An Extended Study" - February 2006 by HKUST, CUHK and the Civic Exchange.

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	Environmental Protection Department and various other government bureaux and departments charged with the task of implementation (paragraph 4.30).		

**Environment Bureau  
October 2008**