

URBAN PLANNING AND ENVIRONMENTAL LAW QUARTERLY

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Motor vehicles' emissions are a major source of Hong Kong's persistently high levels of air pollution. Commercialisation and higher usage of electrically powered vehicles would directly reduce polluting emissions. In this edition we consider aspects of Hong Kong's and several other countries' plans to move towards this goal.

The Editors

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EVs CAN DRIVE AIR POLLUTION LOWER

Clean Air Network (CAN) is a Hong Kong NGO which focuses on reducing Hong Kong's air pollution. CAN does excellent work raising the public's and, it is hoped, government's awareness of air quality issues, publishing a regular newsletter with information as to steps residents, industry and the government can take to prevent or, at least, limit air pollution.

In its November 2010 newsletter, CAN provides a timely reminder of the enormous practical value of electric vehicles (EVs) in reducing the daily volume of motor vehicle emissions, which are the single biggest cause of Hong Kong's air pollution. CAN observes that Hong Kong lags behind some other jurisdictions in adopting EVs for every-day use. EVs are not 100% carbon emissions neutral – as they use electricity for re-charging their batteries – but they are responsible for far less emissions than combustible fuel vehicles. CAN made the following points in its newsletter :-

“The C-40 Climate Leadership workshop took place in Hong Kong last week-Thirty cities attended and shared their knowledge on how to build cities with greener transportation systems.

There are now 80 electric vehicles (EV) in Hong Kong, as of September 2010, most of which are passenger cars, and 160 charging points. The Environmental Protection Department (EPD) in Hong Kong says the city is actively promoting the use of EVs, but during the C-40 meeting, some cities shared their experiences, showing the kind of real commitment it takes to build a city with E-mobility.

Starting from 18 June 2010, businesses have been able to benefit from a Profits Tax Deduction for Capital Expenditure on environment-friendly vehicles. In addition, Vivian Lau, deputy secretary for EPD said during last week's meeting, the government will promote EV infrastructure by providing incentives for installing EV charging stations in, for example, car parks in multi-storey buildings by giving exemptions of gross floor area (i.e. if the property owner promises to allocate

more car park space for EVs, they will be given more floor area).

However, in comparison to other cities, Hong Kong is not doing enough to promote EV use:

London

The city did a survey and learned that 90% of car journeys are only 5-10 miles long, easily within the range of most EVs. Thus, the city is keen to promote EV use.

They found that possible EV owners have a travel range of 10-50 miles per day, own more than one car, and are usually existing hybrid car owners.

A programme called Source London will be launched in spring 2011; it ambitiously aims to deliver 1,300 public charging points across London by 2013. London city is currently working with supermarkets to build up a huge network of charging stations.

1. The ultimate goal is for every Londoner to be within one mile of a charging port.
2. This program is cheap: owners can pay approximately £100 for membership and charge their EVs in any station for a year!
3. EV drivers are exempted from the congestion charge, which is up to £10 per day!
<http://www.sourcelondon.net/>

Copenhagen

The city of Copenhagen is providing big incentives for their EV program as well.

For instance:

1. up to 500 public parking spaces reserved exclusively for EVs
2. no parking fee for EV drivers
3. licences granted to private EV charging station operators for a period of ten years
4. all private passenger cars are required to pay a tax up to 180% of the vehicle value, and this fee is completely waived for those who purchase an EV.

Portland (U.S.A.)

In 2009, the city adopted a Climate Action Plan committing itself to deliver a transportation system that supports the goal of reducing local greenhouse gas emissions. Specifically relevant to EVs, the Climate Action Plan establishes several goals and proposes actions to achieve goals aimed at reducing the carbon emissions from fossil fuels used to power vehicles. In order to achieve these goals, it is estimated that 13 percent of all non-commercial vehicle miles travelled on Portland's roads in 2030 will need to be in EVs. This translates into as many as 50,000 EVs in the metro area, based on average per capita vehicle miles.

The plan consists of :

1. working with car-share companies and transit agencies to ensure affordable access to EV technology
2. providing tax incentives for residents and businesses, such as rebates of up to US\$7,500 for purchase of an EV, and US\$2,000 for drivers who require garage upgrades in order to install home chargers with higher voltage for a faster charging speed.
(<http://www.chargeportland.com>)

The C-40 climate meeting was an excellent opportunity for participating cities to exchange knowledge and concepts in order to create lower carbon cities. CAN hopes the Hong Kong government will learn from these leading examples – and promote EVs as a cleaner transportation option in our city.”

Examples of EVs activity in other countries are as follows :-

Netherlands

Early in 2010 Amsterdam announced a plan to establish a Euro 3 million fund to finance grants to businesses which replace their conventional vehicles with EVs. Grants of between Euro 15,000 and 45,000 per vehicle to cover up to 50% of the additional purchase costs of EVs will be available from the fund. As well, businesses which commit to purchasing 20 (or more) EVs will be entitled to a fleet – grant of up to Euro 250,000. The grant scheme is the city's latest initiative in its drive to have 200,000 EVs by 2040.

The city council has also installed 45 charging stations throughout Amsterdam, with plans to have 200 to serve an estimated 15,000 EVs by 2015. Meanwhile, Dutch McDonalds franchises will install charging points to enable customers to re-charge batteries of their EVs (for a fee) while they eat.

In 2009 the Dutch government purchased 500 Think EVs for the government car fleet.

Germany

Munich has ambitious emission-reduction targets : a reduction of CO2 emissions to 50% of 1990 levels by 2030. In terms of public transport, Munich recently has been testing hybrid buses from three different makers.

For private transport, Munich is monitoring real-world experiences with second generation of electric mini cars. This programme encompasses 40 vehicles. Some are being used by Siemens employees, who report a high level of satisfaction when they can use a charging facility at their company, even if they have no garage with a mains outlet at home. In other cases, electrifying parking spaces at municipal “Park & Ride” stations has been found to be a perfect solution, with good long-term implications.

Outpatient nurses at the Red Cross are also using the new-generation EVs. The Red Cross is apparently delighted with its electric experience; in the case of conventional cars, the short-distance, heavy-duty nature of outpatient nursing means that cars break down often within 35,000 KMs of usage. The EVs, in contrast, seem to be taking such heavy usage in their stride.

In cooperation with Audi, Munich authorities will be participating in the “EFLOTT” project, which intends to evaluate daily usage patterns of range-extended Audi A1 E-Tron cars. With a constant GPS connection, it will be possible to see when and where people charge their cars, where they tend to drive at a faster pace, when they need full air-conditioning and heating, and how often they go on spontaneous long-distance trips. It is expected that in relation to EVs this will show that people's “range anxiety” with EVs is an overestimated emotion.

Munich also will be installing “real” charging stations for long-term use. Apparently, most charging stations until now were set up on a short-term basis, only to disappear silently when a specific project was finished. However, Munich's electricity utility has not yet figured out a profitable business model for this.

France

For the past five years, the Alsace and Franche Comté area of eastern France has budgeted Euros 150 million on a total of 64 projects dealing with electric transport. Eric Gross of the Pôle véhicule du future in Mulhouse said that his region aims to be a “cluster” of sustainable transportation, and cited one example: the *F-City* car.

F-City was developed by FAM, a French maker of utility vehicles, as a vehicle for urban self-service applications. In other words, it is a car designed from beginning to end for car sharing: robust, simple, plain, and easy to use. FAM's thinking was that a conventional car is not well suited for car sharing, so a specialist vehicle needed to be created. By pooling efforts within the cluster, the *F-City* was ready within two years of its conceptual outset in 2008 – and a short development time means a lower cost.

Strasbourg was the first city in which the “F-City mobility system” was established. With its medieval street grid, normal passenger-car traffic is not allowed, and so *F-City* can occupy a real niche.

Users can book a car by mobile phone; they can also see the location of the next *F-City* station on their mobile. They do not have to worry about the capacity of the Ni-Mh batteries that the *F-City* uses : the administrative centre monitors this by remote control, and when a car is running low, a truck is sent to swap batteries. A swap takes less than 10 minutes.

The *F-City* car has a range of 80 KM and cost the municipality Euros 33,000 per unit. It is not suitable for highway use, however. At this stage, French municipal administrators plan to introduce EVs only for city use. As they are ubiquitous in Strasbourg, the *F-City* EVs are a popular medium for advertising, which earns the municipality a constant stream of income.

The next major project is likely to be equipping parking spaces with induction-technology charging facilities. (Induction means cable-less: the technology is embedded in the tarmac and a user only needs to park his car in the proper spot). Soon, Strasbourg airport will have several such low-maintenance charging stations that eliminate the hassle of cables.

United Kingdom

The government recently sponsored a Stg.25 million competition – *Technology Strategy Board's Ultra Low Carbon Vehicle Demonstrator Competition* – which attracted 8 consortia as participants.

In June 2010, one of these consortia, led by the engineering firm Arup, announced that its report was available to the public on request. The announcement (16 June 2010) briefly summarised key findings of the report :

Distance

- Electric vehicle drivers use their cars like the typical UK driver. The majority of journeys are less than five miles. At similar distances, conventional car engines are at their most polluting and catalytic converters are at their least effective.
- Average daily mileage is 23 miles - well within the i-MiEVs's 80 mile range.

Drivers

- Drivers use the entire speed range of the car, showing they are happy to drive at motorway speeds when required.
- The vehicles were driven in all temperatures throughout the winter period, in temperatures as low as 10 degrees celcius. There was a drop-off in usage at very low temperatures, which is likely to be the result of normal reduced car usage during extremely cold weather, when only essential journeys are made by most car owners.

Energy use and charging

- Vehicles are parked for 97% of the time, typically overnight and during school hours, allowing lengthy battery charging periods at home and work
- Although vehicles use only the electricity needed to charge them, they were often left plugged-in for more than 20% of the time, occasionally for several days at a time.

Canada

The Canadian government recently published its *Electric Vehicle Technology Roadmap* which identifies “critical energy technology requirements, gaps and milestones needed to advance electric vehicles in Canada”.

A few of the points made in the report, as summarised in the *Executive Summary* (8 March 2010) are as follows.

- (i) By 2018, there will be at least 500 000 highway-capable plug-in Evs on Canadian roads, as well as what may be a larger number of hybrid-electric vehicles. All these vehicles will have more Canadian content in parts and manufacture than vehicles on the road in Canada in 2008.
- (ii) Electricity, as an alternative to traditional transportation energy, is becoming a near-term reality for many countries, including Canada. EVs will contribute to promoting sustainable energy development, while addressing air quality and climate change.
- (iii) The market for EVs in Canada is increasing as Canadians look for cleaner, more efficient vehicles. Research confirms that consumers in North America are willing to pay more for an EV if the environmental benefits are significant. In Canada, it is expected that these benefits can be achieved because the majority of Canada's electricity is generated from renewable and low-emission sources.

With significant amounts of energy and a growing EV industry, Canada is well positioned to capitalise on this form of clean transportation. Canada's industry is also well placed to be a major supplier of EV components and vehicles, not only in Canada but also internationally. Canada has the opportunity to link its efforts concerning EVs with those of the United States, because of the integrated North American automotive industry.

To achieve the timely and effective commercialisation of EVs, governments and industry must work together on ensuring that the necessary steps are taken. These steps include many activities, such as the development of advanced batteries, a charging infrastructure, electricity storage devices, codes and standards, and policies, as well as public education and consumer acceptance.

The most important of these activities is energy storage. Progress toward widespread use of EVs depends above all on one factor: increasing the amount of electrical energy that can be stored in a given volume or weight on board a vehicle, thereby extending electric traction's range.

In Canada, a higher share of this electrical generation is from renewable sources than in almost any other country, which means that conversion of the Canadian on-road fleet to EVs would result in large reductions in the fleet's carbon emissions. As well, several of the provincially, territorially and locally owned utilities that provide electrical energy in Canada have a strong interest in electric traction.

If the recommendations are adopted and the strategic initiatives are implemented, Canada will retain its vibrant and growing EV industry and play a role in the transition toward a more sustainable energy mix.

(iv) The report's recommendations, include:

- Make timely and substantial investments in Canadian development and manufacture of EVs and in energy storage devices to build on Canada's already strong presence in these industries.
- Consider supplementing federal, provincial and territorial mechanisms to promote the development, public acceptance and procurement of personal and commercial EVs, and the installation of the charging infrastructure.
- Reconstitute the Steering Committee as a Roadmap Implementation Committee mandated to ensure that the strategic initiatives identified in the Roadmap are addressed.

(v) Strategic initiatives identified by stakeholders are in four categories and include

a) *Technology*

- Improve energy storage through basic and applied research, including improvements in:
 - manufacturing techniques – with the goals of adding scale, improving efficiency and reducing costs
 - energy density – to reduce costs, increase range and achieve smaller, lighter systems
 - management and control electronics – for more efficient use of available energy storage
 - system packaging – to optimise thermal, electrical, mechanical and safety elements

- Reduce the cost of EV components by a factor of two to three so they can be competitive with equivalent ICE components.
- Reduce the weight of the components.

b) *Codes, standards, regulations and infrastructure readiness*

- Review national, provincial/territorial and municipal regulations that impact the manufacture and use of EVs in Canada. Ensure that the regulations support EV development without compromising safety and other concerns.
- Harmonise North American standards and practices concerning the integration of EV components, including charger interfaces.

c) *Studies and assessments*

- Assess the merits of, and develop a mandate for, an Electric Transportation Institute as a Canadian focus of applied EV research and development and other activities required to accelerate widespread use of EVs.
- Assess the potential impacts of incentive programs for the purchase of EVs on EV penetration and the impacts of battery warranty and lease programs.

d) *Education and outreach*

- Assess the resource requirements for training, education and certification in skills related to the emerging EV industry. Provide this information to organisations that can develop technical courses on EV repair, service and maintenance and on the conversion of ICE-based vehicles to EVs.
- Develop educational and public relations programs that increase EV awareness.

Scandinavia

Norway, Sweden and Denmark have comparatively sophisticated and advanced environmental protection laws, for the most part. Therefore, it is not surprising to see that these countries are leaders in encouraging wider acceptance and use of EVs.

Commercial and private use of EVs in Norway is far higher than, say, in Hong Kong, which is partly demonstrated by the range of "zero emission EVs" available on the Norwegian market, including: *Peugeot 106, Peugeot Partner, Citroen Saxo, Renault Kangoo, Think and Toyota Prius H2*. Norway has its home-grown EV, the *Think*, which has 40% of the EVs market.

Standard specifications of passenger EVs in Norway are:

- maximum Speed-110 km/h
- 0 to 60 kph time – under 10 seconds
- charging time – 8 hours from standard
- approximate range per charge – 200 km
- safety features – ABS, Airbags
- capacity – 4 full size adults + luggage

The governments of all three Scandinavian countries offer significant incentives to convert to EVs, key features of which are:

Norway

- exempt from non-recurring vehicle fees
- exempt from sale tax
- exempt from annual road tax
- free parking where there is public parking
- EVs permitted in bus and taxi lanes
- free use of toll road

- exempt from taxation for company car benefit tax (from 01.01.2009)

Denmark

- exempt from registration fee (import duty)
- exempt from road toll

Sweden

- cash incentives
- exempt from congestion charges and some parking fees.

Conclusion

Whilst Hong Kong's government deserves credit for the small steps it has taken to integrate EVs into our transport system, much more needs to be done. It is recognised that EVs themselves are at an early development stage, which limits their competitiveness in the market place, but this state of affairs is rapidly changing, as witnessed in China's car industry, for example. Mainland vehicle manufacturers, such as BYD, plan to increase significantly their development and output of EVs in the immediate future.

Given Hong Kong's wealth and ideal demographics for the use of EVs, the government could surely implement more robust incentives to encourage drivers to convert to EVs, which would significantly improve our appalling air quality.

[Sources include: *CAN Newsletter*, November 2010; *Electrifying Europe: What's Working?* (2nd report from a Car Tec conference) 29 October 2010; *Arrup report – UK's largest electric vehicle trial – first findings*, 15 June 2010; *Executive Summary – a strategic vision for highway capable EVs*, Government of Canada, November 2010; *Report of Miljo Innovasjon AS re Evs*, November 2010.]

LEGISLATION DIGEST

Air Pollution Control (Motor Vehicle Fuel Regulation (Cap. 311L) [Gazette published on 7 May 2010, No. 18 Vol. 14, Legal Supplement No. 2]

On 1 July 2010, *Air Pollution Control (Motor Vehicle Fuel) Regulation* (Cap. 311L) was amended to tighten the specifications for motor vehicle diesel and unleaded petrol. Starting from 1 July 2010, all motor vehicle diesel and unleaded petrol should adhere to Euro V standards.

Energy Efficiency (Labelling of Products) Ordinance (Cap. 598) [Gazette published on 15 January 2010, No. 2 Vol. 14, Legal Supplement No. 2, and Gazette published on 30 October 2009, No. 44 Vol. 13, Legal Supplement No. 2]

On 19 March 2010, Hong Kong Government introduced the *Energy Efficiency (Labeling of Products) Ordinance (Amendment of Schedules) Order 2009*. The amendment adds washing machines (washing capacity not exceeding 7 kg) and dehumidifiers (dehumidifying capacity not exceeding 87 litres per day) to prescribed products. Under the amended ordinance, specified categories of washing machines and dehumidifiers must carry a reference number as well as a specified energy efficiency label (together with a list of other required information) on the label.

Waste Disposal Ordinance (Cap. 354) [Gazette published on 18 June 2010, No. 24 Vol. 14, Legal Supplement No. 2]

On 19 November 2010, Hong Kong Government announced that certain sections of the *Waste Disposal (Amendment) Ordinance 2006* came into operation.

The *Waste Disposal Ordinance* now requires that collection or disposal of clinical waste be licensed,

and the relevant waste disposal facility to be in accordance with the same specifications as in the case of general chemical waste.

Clinical waste includes Group 1 (used or contaminated sharps), Group 2 (laboratory waste), Group 3 (human and animal tissues), Group 4 (infectious materials), Group 5 (surgical dressings, swabs or waste dribbling with blood) and Group 6 (other specified waste).

Building Energy Efficiency Ordinance (Cap. 610) [Gazette published on 3 December 2010, No. 48 Vol. 14, Legal Supplement No. 1]

The introduction of the *Buildings Energy Efficiency Ordinance* (Cap. 610) provides a legal basis for the mandatory implementation of the Building Energy Code (the "BEC"). The Electrical & Mechanical Services Department (the "EMSD") has issued a series of codes as well as Hong Kong Energy Efficient Scheme for Buildings for voluntary compliance. However, participation from private sector was not satisfactory, and the government now mandates compliance with the BEC. Under the ordinance, new commercial buildings and the communal areas of new residential and industrial buildings, in both the private and public sectors, as well as major retrofitting works in existing buildings, must comply with the BEC.

The BEC specifies basic energy efficiency standards for four major types of building services installations, namely air-conditioning installation, electrical installation, lift and escalator installation, and lighting installation.

The main provisions of the ordinance are set out below :-

(a) Prescribed Buildings [sections 7-15, Schedule 1]

The ordinance requires all post-enactment prescribed public and private buildings to have declarations that they meet relevant requirements at the design and occupation approval stages.

Prescribed buildings include: commercial buildings; non-residential or industrial portion of a composite building; hotels and guesthouses; common areas of residential buildings; common areas of a portion of residential or industrial portion of a composite building; common area of an industrial building; educational buildings; community buildings; municipal services buildings; medical and health care services buildings; buildings owned by the government, the main purpose of which is to perform functions of government; and passenger terminal buildings of airports and railway stations.

At the design stage, developers of buildings must submit a declaration to the Director of Electrical and Mechanical Services, certified by a Registered Energy Assessor. The declaration must state that suitable design provisions have been included to enable compliance with the BEC.

At the occupation approval stage, developers of buildings, within 4 months after obtaining the occupation approval, must submit a declaration to confirm compliance with the BEC, certified by a registered energy assessor.

Failure to comply with these requirements results in a fine to a maximum of HK\$500,000.00 for section 8 and HK\$1,000,000.00 for section 9 offences, plus a daily default fine.

Further, the owner of the building, or the responsible person, must ensure that the energy efficiency standard stated in a certificate of compliance is maintained.

(b) Major retrofitting works [sections 16-20, Schedule 3]

Existing buildings' energy efficiency must comply with the standards set out in the BEC when they have completed their major retrofitting works. The requirement applies to additions to, or replacement of, a building services installation as specified in the BEC, where the retrofitting works cover a total floor area of not less than 500m² under the same series of works within 12 months.

Failure to comply will attract a penalty of a maximum fine of HK\$50,000.00.

(c) Energy Audit [sections 21-25]

In addition to the above requirements, there must be energy audits of commercial buildings' common areas and commercial portions of composite buildings, whether constructed pre-enactment or post-enactment, once every 10 years. The results should be exhibited in a conspicuous position at a building's main entrance.

(d) Improvement Notice [section 26]

The Director of Electrical and Mechanical Services may issue an improvement notice if the owner or responsible person is contravening the requirement under the ordinance or that having contravened the requirements, the contravention is likely to continue or be repeated. Failure to comply with an improvement notice attracts a maximum fine of HK\$250,000.00 and a daily default fine.

(e) Enforcement [sections 27-29]

Authorised officers are responsible for the enforcement of the ordinance. The officers may enter any part of a prescribed building that is not a residential unit during reasonable hours. There is also a notice system whereby authorised officers should be given access to the premises after a 14-day notice.

(f) Appeals against the Directors of Electrical and Mechanical Services' decision [sections 32-39]

An aggrieved person may issue a notice of appeal to the Director of Electrical and Mechanical Services within 14 days after the date on which he/she is notified of the decision or direction appealed. The notice shall contain particulars, including particulars of witnesses. The Director of Electrical and Mechanical Services will then deliver the notice to Secretary for the Environment.

The Buildings Energy Efficiency Appeal Board, consisting of not more than 5 members from each of the 5 prescribed professional streams, shall be appointed within 21 days after receipt of the notice to hear the appeal. The Board may authorise inspection of the relevant installation.

The Board may confirm, vary or revoke the decision or direction, or may substitute its own decision or direction. The Board may also make order as to costs of the appeal proceedings.

(g) Code of Practice [sections 40-41]

The Director of Electrical and Mechanical Services may issue or amend the existing

code of practice. The code is admissible in evidence.

(h) Miscellaneous Matters [sections 42-51]

A person who forges any declaration, certificates or energy audit forms under the ordinance, or who knowingly or recklessly provides false or misleading information, shall be liable upon conviction to a fine of HK\$100,000.00 and to imprisonment for 6 months.

Persons who knowingly or recklessly provide any false or misleading information as to registration of a registered energy assessor, or provide material false or misleading particulars in any declaration, certificates or energy audit forms under the ordinance, shall be liable upon conviction to a fine of HK\$100,000.00 and to imprisonment for 6 months.

There is a defence of due diligence if he or she took all reasonable steps and exercised all due diligence to avoid committing the offence. If the defence is that the offence is due to an act or default of another person, he shall issue a notice providing necessary particulars. A person is not entitled to rely on the defence by reason of reliance on information by others, unless it was reasonable to rely on such information in the circumstances.

TOWN PLANNING

New zoning for flats

The Town Planning Board is considering rezoning as much as 29.5 hectares of industrial and business land for residential use as part of an official bid to boost home supply. The sites have an existing gross floor area of approximately 840,000 square metres.

The majority of the sites are in the New Territories - Fan Ling, Sha Tin, Yuen Long, Tuen Mun and Tsuen Wan. The biggest industrial area to be rezoned comprises 10 sites in Siu Lek Yuen, Sha Tin, amounting to 7.4 hectares. The only urban area is in Tai Kok Tsui. The site, at 0.2 hectares, is the smallest on the list.

The government aims to lift residential land supply via the application list system and by taking a proactive approach to putting sites on the market. Another 30.2 hectares of industrial sites will be rezoned in the near future for specified industrial business, columbarium and other uses.

The total existing gross floor area ("GFA") proposed to be rezoned for non-industrial use is about 920,000 square metres, the Board announced. This is slightly larger than the fall in manufacturing industries' demand for factory floor space by 2020, estimated at 850,000 square metres of GFA.

Between 2001 and 2003, the Board rezoned approximately 196.5 hectares of industrial land for specified industrial business uses, and another 48.6 hectares for non-industrial uses.

Review of the rezoning of a 0.8 hectares area in Kennedy Town is expected to be completed this year, and the rezoning of a 5.2 hectares Fan Ling site is awaiting formal review.

[The Standard, 15/09/2010]

Po Toi to farm the wind for quiet power

A new group has been set up to use local technology to build the territory's first wind farm.

The non-governmental group, SURE NGO, plans to build the wind farm on Po Toi Island, southeast of Stanley.

Christian Masset, the group's vice chairman, said wind speed ranges from 8 to 13 kilometres per second on the island, offering the "best setting" for implementing the project. Po Toi was chosen because it is not connected to the grid and its electricity is produced by an expensive diesel generator. Electricity is not available when the generator is switched off at night, and the generator is very noisy.

The group hopes to open the wind farm next year, producing 70 kilowatts of electricity per hour. It also aims to educate the public on renewable energy as well as manage other energy projects.

The latest project will require the installation of 5,000 micro turbines and connecting the system to every household on the island, at a cost of approximately HK\$5 million. The micro turbines have been designed by a local company, Motorwave Group. This will be the first time the turbines have been used for large-scale power generation, although the machinery already has been in use for educational and small electricity production in schools and at other locations. The group hopes to raise the HK\$5 million from corporations, sponsors and the public.

The Po Toi project will raise awareness in the community of renewable energy alternatives, and put Hong Kong in the front line of cities bringing solutions to their air pollution problems.

The simplicity of this system makes it easy and cost-effective to maintain, and its modular structure means that the system always keeps on running.

Po Toi has 30 permanent inhabitants, but the population swells each weekend with more than 200 visitors.

[*The Standard*, 06/10/2010]

Study to fight wall effect

The density of property development above Nam Cheong and Yuen Long stations along the West Rail line will be reviewed to prevent, or diminish, the "wall effect" posed by these developments. In his policy address, the Chief Executive said there as increasing public concern over the past few years about high-density buildings affecting air ventilation, causing an increase in temperatures.

The government will review the outline zoning plans for various districts step by step and, where justified, revise the relevant planning parameters to lower permissible development densities. The government will also review approved schemes of above-station property developments at the two West Rail stations to lower their development densities.

The vice-president of the Institute of Planners said the government and property developers should note that people now put more weight on a better living environment.

[*SMCP*, 11/10/2010]

New country park for northern Lantau

A new country park covering 23 sq km may be designated for northern Lantau Island in the near future, the Chief Executive has announced.

"To step up our ecological conservation efforts and to provide Hong Kong people with more open space in a natural environment, we will initiate the statutory procedures to designate our 24th country

park which will be situated on northern Lantau," he said.

The new country park would increase Hong Kong's total country park area to 440 sq km. In a development plan for Lantau unveiled in May, the government listed green initiatives that included the proposed country park. Protected green space accounts for 40 per cent of the city's land, an area of 417 sq km.

[*SMCP*, 11 October 2010]

Set example on 'inflated buildings'

The government has been asked to set a good example by addressing its plans to construct "inflated buildings" as part of its West Rail project partnership with the MTR Corporation.

Environmental group Green Sense found six residential projects to be built atop three West Rail stations and the Tin Shui Wai light-rail station will have large car parks, clubhouses and shopping malls taking up as many as seven levels of the buildings. Such facilities increase the total gross floor area for which flat buyers have to pay. Tall buildings also create a "wall effect", blocking air flow.

Critics allege developers abuse the government's concessionary policy encouraging the construction of environmentally friendly buildings. New measures have been introduced to cut back on the claims developers may make for extra facilities and green features, but these will not go into effect until April.

Six projects have already been approved and would not be affected by the new measures, but the government should set an example. Small and more affordable flats should be built, because most of the units planned would be three-bedroom "luxury" flats of about 1,000 square feet.

In respect of the three projects planned for Tsuen Wan West station, it is significant that there are already clusters of high-rise blocks "walling off" the coast of Tsuen Wan. If the new projects go ahead as planned, they are bound to make worse air ventilation in the inner parts of the district.

The new government policy aims to control the scale of developments by capping the amount of floor area that can be given to green features and amenities. Facilities and features, such as balconies and clubhouses, should not exceed 10 per cent of the total gross floor area of a development.

At present, they may be exempted from calculations of the gross floor area and this has proved a bonanza for developers, which get areas taken up by most of these facilities for free but still include them in a flat's gross floor area. Widespread abuse has inflated the scale of development, but shrunk the usable area of flats for homeowners.

The MTR Corp is acting as an agent of the government in the West Rail developments and has responsibility for managing the planning and development process. A spokesman said plans for some of the projects cited by Green Sense were approved two years ago.

[*South China Morning Post*, 18/10/2010]

Developers oppose new law for flats sales

A number of the corporate members of the Real Estate Developers Association (Reda) met yesterday to discuss the measures announced in the chief executive's policy address relating to flat sales and the artificial inflation of apartment sizes. Their stated aim is to work with the government as

much as possible, but they expressed doubt that all the measures are feasible.

However, the association had not changed its view that there should be no law to regulate sales of flats. There are already updated guidelines for sale arrangements, which have been working well to date.

The committee will discuss various aspects of the proposed new regulations governing residential sales, including such matters as: the definition of a new flat; sales practices; price lists; show flats; saleable areas; and the enforcement mechanism and penalties. The committee expects to make public its recommendations within a year.

The 14-member committee is chaired by the permanent secretary for transport and housing, Duncan Pescod, and includes lawmaker Lee Wing-tat, the Democratic Party's spokesman on housing. Lee Wing-tat said he disagreed with Reda that a law was unnecessary, and that Reda should reflect on why its position has always been different from the majority view in society.

[*South China Morning Post*, 22/10/2010]

Family fights to save noodle shop

A 56-year-old family noodle-making operation in Sham Shui Po faces closure under a mandatory auction bid by Lai Sun Development. Leung Fat Noodle is owned by seven children of 90-year-old Yeung Wo-man, who founded the company in 1954. The firm is known for its handmade boletus mushroom noodles, invented by Yeung's brothers. The business produces 1,000 catties of noodles a day, selling them to restaurants and individuals.

Yeung Ding-yin, the youngest son, said the redevelopment will mean the end of the business. He said if they relocate to another district, revenue will fall substantially owing to the loss of the shop's longstanding community connection. As a result, the family may be forced to close the business.

Leung Fat Noodle owns 14 percent of the undivided shares in the lot on Ki Lung Street. All other units in the five-story building, including 15 homes and a frozen meat shop, have already been acquired by Lai Sun during the past two years.

The compulsory sale application threshold was lowered from 90 to 80 percent by the government in April.

Lai Sun deputy chairman Poon Yui Man said the company's application to the Lands Tribunal is expected to trigger an auction to enable redevelopment by the end of the year. The noodle shop is the only business still operating in the redevelopment area since Lai Sun demolished an adjacent building last year.

Yeung Yee-hung, the eldest son of the family, said the developer has taken unusual measures in an attempt to force them to accept the compensation.

The Buildings Department assesses the conditions of a structure under the developer's application for a compulsory sale order. If the building is in a state of severe disrepair, the application for redevelopment has a higher chance of being approved by the Lands Tribunal.

The alliance hopes the government will reinstate the threshold for compulsory sale to 90 percent.

[*The Standard*, 25/10/2010]

Tuen Mun plant to take brunt of sewage disposal

The new sludge treatment facility to be built in Tuen Mun will be able to handle up to 2,000 tonnes of sewage each day, thereby easing the burden on landfills. The seven-hectare facility in Tsang Tsui is expected to reduce the volume of sludge being disposed of in landfills by 90 percent. Construction of the HK\$4.96 billion plant, which will use advanced European Union incineration technology, will be completed by 2013. Thermal energy generated from incineration will be converted into electricity to fully supply the plant's needs; the excess will be fed into the power grid.

The sludge facility, which will have a streamlined wave-form design to blend into its waterside location, will also have an environmental education centre to give its visitors insight into operations at the plant, an exhibition room as well as a lecture theatre.

It will also include a water spa centre for visitors and an ecological garden, which will double as a habitat for water birds.

It is estimated that 1,000 tonnes of sludge will no longer be disposed of by dump in landfills once the facility is up and running. The government will also speed up environmental impact assessments of the site proposed for the Tsang Tsui incinerator as well as for another at Shek Kwu Chau on Lantau Island, before deciding on location and numbers of incinerators.

[*Oriental Daily*, 28/10/2010]

MTR vow on double trouble at Admiralty

Construction work will start next year to expand Admiralty MTR station in preparation for its role as an interchange for four lines. Admiralty is already handling the Island and Tsuen Wan lines, and the new South Island and Sha Tin-Central routes will join them once constructed.

Work is expected to finish in 2015, and one planner pledged yesterday to try to keep disruptions in the area to a minimum. The expansion works will more than double the station's size. Total space will increase to 20,000 square metres from the 9,000 at present. Four new platforms will be installed as well as more than 30 additional escalators.

The station will become an important interchange hub and will provide an easy and convenient connection to the MTR network. It will take passengers less than three minutes to walk from the lowest-level South Island Line platform to the upper three platforms. Apart from the underground expansion, features above ground will also have a major remake.

Harcourt Garden is to be closed during the five-year construction period, and when it reopens it will have a landscaped deck that connects directly to the nearby footbridge system. The open area will also be expanded by 70 percent, with more greenery.

The seven-kilometre South Island Line (East) will be a medium-capacity operation able to handle 20,000 passengers an hour in each direction. There will be four stations: at Ocean Park, Wong Chuk Hang - which will have train sheds and a maintenance depot - Lei Tung and South Horizons.

[*The Standard*, 04/11/2010]

WEST KOWLOON CULTURAL DISTRICT (WKCD)

WKCD would become funding disaster

Alan Leong Kah-kit, who is the Chairman of the Legislative Council sub-committee overseeing establishment of the West Kowloon Cultural District (WKCD), warned that the WKCD could become a funding debacle if the respective heads of the city's arts and culture bodies fail to get together and draw up an overall direction for the city. Leong said that WKCD Chief Executive Officer Graham Sheffield needed to meet with the heads of other government-funded arts and culture bodies to sort out their respective responsibilities, and to work out an overall strategy for the city.

He said that it is difficult to decide how cultural and arts funding should be allocated among the Art Development Council, Leisure and Cultural Service Department, WKCD and Hong Kong Academy of Performing Arts. He suggested that the government should clarify how the WKCD Authority fits in with other such bodies.

According to a May 2004 report by the Department of Real Estate and Construction, University of Hong Kong, the HK\$26.1 billion allocated so far would cover only construction costs, while at least another HK\$11.4 billion would be needed in a trust fund to generate income to cover operating deficits.

[*China Daily*, 14/09/2010]

Vincent Ng's assessment of the three concept proposals

Architect Vincent Ng gave his review of the three concepts for West Kowloon as follows:

Norman Foster: City Park

This concept is proposed by British architect Sir Norman Foster based on the theme of "City Park".

The selling point of the plan is a 19 hectare promenade park with over 5,000 trees. Driveways and car parks are located underground, allowing green streets above the ground. Hotels and residential buildings are erected at the north. The harbour-front promenade and the park are situated at the south and west. The cultural facilities are located within squared street blocks in the centre. There is just one sky-bridge linking the east side to Kowloon Park. Ng views that it is far from ideal to integrate the new development with the 'old city'.

From an urban design perspective, Ng criticises the plan as lacking creativity and an indigenous character. He judges it as the weakest proposal. He thinks the strength of this proposal is merely its simplicity.

Rocco Yim: "One Step, One Surprise"

This concept is put forward by local architect Rocco Yim, based on the theme of "Cultural Connect: Key to Sustained Vitality". His concept is inspired by the famous Chinese painting "A City of Cathay" (Qing-Ming Shang He Tu).

The architect believes the attraction of the cultural district will derive from people's activities within the cultural district. Rocco Yim has divided the district into three zones: (1) A 'City Zone' near the luxury residences above Kowloon station; (2) a 'Green Zone' next to Victoria Harbour; and (3) a 'Cultural Zone' in the middle, which is filled with facilities.

Most of the elements begin in the north ending at the south where the harbour-front promenade is located. This gives a panoramic view of Hong Kong Island. Narrow streets with different spatial character pass through piazzas of varying sizes. Every step is thus another surprise and offers 'sparks of hope in a mist of bewilderment' as suggested by Yim. There is a pedestrian sky-bridge linking the cultural district with both

Kowloon Park and St. George's Park in Yaumatei. Ng comments that among the three designs, Yim's proposal offers the best connectivity with its surroundings.

Rem Koolhaas: Project for a new dimension

This concept is put forward by Dutch architect, Rem Koolhaas, based on the theme of 'Project for a New Dimension'. Ng comments that the design sounds abstract but it is the most innovative design among the three concept proposals.

The layout and zoning is very different from the previous two designs. Koolhaas divided the site into five areas from east to west, with three villages and two parks in between them.

The 'M+' village' at the east is designed using a typical OMA approach of 'staggering blocks'. It comprises a M+ museum, visual arts factory, residential buildings and hotels.

At the west side is the 'Theatre Village', where the music hall, concert hall, performance arts factory, Great Theatre, and other theatres of various sizes are situated. A selling point of Koolhaas' design is the inter-connectivity of these different venues.

The 'Middle Village' bears remarkable resemblance to the 'old city' of Hong Kong. All the buildings are small in size and closely knitted together. The première cinema and theatres are located at the east and west end of the middle village. In addition to a street market, there are shops offering local themed products at ground level on both sides of the streets, with traditional signboards above, in an attempt to create a local atmosphere.

In contrast to the other two designs, Koolhaas' proposal explicitly addresses recent public opinion on the development of Hong Kong, and appears to act like a spokesman for community groups concerned over urban planning and heritage preservation.

The plan includes village farming, open-air markets, hawking and the art works of "The King of Kowloon City". Ng thinks that these ingredients make his design the most 'grassroots' and even 'anti-high-end'. The identity and culture found in old city fabrics is the result of organic development over many decades. Ng is concerned that replicating an entire 'Old city' would risk the WKCD becoming a theme-park.

[*Designing Hong Kong E-Newsletter*, 03/10/2010]

Overseas arts hub director replaced

Japanese museum curator Yuko Hasegawa was the only overseas director of the West Kowloon Cultural District Authority and she was one of the few board members not re-appointed to a new two-term.

Her departure took some by surprise. But art critic John Batten was not surprised. He said that as the only overseas board member, Hasegawa might have felt isolated and found it difficult to adapt to the city's rhythm.

However, one board member was surprised by her departure and praised her as a hard-working and outspoken member. Indeed, Hasegawa attended eight of eleven board meetings held between October 2008 and June 2010, more than some board members based in Hong Kong.

She has been replaced by retired architect and painter, Raymond Fung.

[*SCMP*, 16/10/2010]

Artists seek public's views

Artists have launched an online platform to promote interactive discussion of the West Kowloon cultural hub, just before the West Kowloon Cultural District Authority's three-month consultation period on three conceptual plans for the site ends. The group has conducted video interviews since October with nearly 50 professionals who have given their views on the development of the district.

The public is also welcome to upload videos and share ideas. The videos will be submitted to the Authority as part of the consultation exercise.

The project was organised by the Hong Kong Ambassadors of Design, a non-profit group to promote design and culture through education. It will be a long-term project, continuing after the current round of consultations ends.

The chief executive officer of the West Kowloon Cultural District Authority welcomed the ideas expressed on the platform, adding that the vibrancy of the district will come from the people who use it.

[*The Standard*, 09/11/2010]

Arts hub does not need a forest, say local architects

The Hong Kong Institute of Urban Design was set up by architects, planners and engineers in June 2010. After meeting the three design teams for the West Kowloon Cultural District, the Institute gave their comments on the merits of the three entries to design the cultural hub.

The Institute gave their lowest score to UK architect Norman Foster, who vowed to give Hong Kong its own version of New York's Central Park with 5,000 trees. Institute council member Ivan Ho said the site did not need a forest to function as an urban lung as it was on the waterfront. He criticized Foster's plan for lacking a cultural identity. He said the design is only a commercial site plus a park which has already been built in London, Manhattan and Chicago.

In Koolhaas' design, two ventilation corridors are created to allow the summer breeze to blow in from the harbour. The plan conforms least to the planning requirements set by the West Kowloon Cultural District Authority. Koolhaas proposes a suspension bridge outside the hub and hovering above the Yau Ma Tei typhoon shelter to solve traffic congestion. He also proposes parks with free management, fewer developments and much smaller development sites.

Institute vice-president Vincent Ng said Koolhaas' design would take longer to implement and would spark controversy, although he appreciated his spirit in challenging the government's framework. He further said that the team would have to demonstrate that the proposed suspension bridge would not contravene the Protection of the Harbour Ordinance. Developers would also object to the small development sites.

The Institute regarded the design of local architect Rocco Yim as the safest. Although Yim proposed art pontoons on the harbour, which could draw opposition for reducing the harbour surface area, his plan followed the development density set by the Authority. Institute President, Professor Bernard Lim, praised his plan as the most cosmopolitan. The plan includes alternate spaces for performance, for rest and for accommodating crowds. They are also specially located to take in Hong Kong's landscape, such as the Peak and the Convention and Exhibition Centre. Yim is also the only designer to put the planned Xiqu Centre for Cantonese Opera near Kowloon Park, which

makes it convenient for the elderly coming from the older neighbourhood. Institute member Franklin Yu praised Yim as knowing the place and having included delicate details. But Yu said the drawback is such details would be lost if the plan is coarsely merged with other plans or it is not implemented with great care.

[*SCMP*, 20/11/2010]

WKCD plan selection moving forward

The Stage 2 Public Engagement exercise (PE2) for the West Kowloon Cultural District (WKCD) was concluded on 20 November 2010.

During the 3-month consultation period, a total of 30,000 visitors viewed the displays of the three proposed conceptual plans; 4,000 students from 78 schools have also visited the exhibition. There were also guided tours for diplomats, ministers, minority groups, people with special needs and stakeholders. The Authority has also held 12 forums and nine focus group meetings to collect views from professional and arts and culture stakeholders.

The Authority received over 7,000 completed questionnaires, 160 written submissions and 100 entries via the Facebook group set up by Professor Stephen Cheung Yan-leung, Consultation Panel Chairman of the WKCD Authority (WKCD). These views will be analysed by the Public Policy Research Institute of the Polytechnic University in the coming months. A final report is expected in three months' time. The next step for the Authority is to select a conceptual plan as the basis of the final development plan of WKCD.

The WKCD Board recently approved the formation of a Selection Panel to assess the proposals of the three Conceptual Plan Consultants. The Selection Panel comprises 11 members, including members of the WKCD Board.

The Selection Panel will assess the conceptual plans on the basis of six criteria: (1) key development requirements; (2) planning design principles; (3) community aspirations; (4) technical aspects; (5) design and phasing flexibility; and (6) financial robustness. The Panel will consider the PE2 report on public views prepared independently by the Public Policy Research Institute. It will submit its recommendations to the Board, which will make the final decision in the first quarter of 2011.

Chief Executive Officer of the WKCD, Graham Sheffield, said that the management team would fully support the Selection Panel's work and ensure that the selection process will be carried out with due diligence and impartiality.

[*West Kowloon Cultural District Authority e-Newsletter*, November 2010]

HONG KONG BRIEFING

Water conservation competition

The government is finally showing signs that it recognises that potable water is precious and should be used sparingly. Recently it has conducted a competition to encourage water conservation ideas, with cash prizes for sectional awardees.

The flyer promoting the competition (entries for which closed on 17 December 2010), under the title *Water Conservation Design Competition*, states :

Purpose

Fresh water is a precious and scarce natural resource. To promote water conservation, the Water Supplies Department now launches a water conservation design competition calling for ingenious designs and practices for water conservation.

Categories of Entries

Tertiary Education Student Group: open to all full-time students studying in universities and institutions in Hong Kong or post-secondary programmes accredited by The Hong Kong Council for Accreditation of Academic and Vocational Qualification.

Property Management Group: open to all organisations responsible for management of properties in Hong Kong, including property management companies and incorporated owners.

Catering Services Group: open to all holders of food business licences issued by Food and Environmental Hygiene Department.

Assessment Criteria

All entries will be assessed in accordance with the following criteria :

- promotion of water conservation
- practicality and sustainability of the design and practice
- saving in water consumption
- potential for short term and long term development
- creativity

[*Water Supplies Dep't flyer*, October 2010]

Encouraging switch to ultra-low-sulfur fuel

As announced in the Chief Executive's policy speech, industrial diesel fuel will be banned and the duty will be cut on cleaner vehicle diesel fuel in enhanced government efforts to clean up the air. The administration will also launch a public consultation soon on whether to ban idling engines, and will re-examine road pricing based on new technology.

The administration will insist on linking the profits of power companies with their environmental performances, in negotiating a new regulatory regime. Use of industrial diesel in commercial, industrial and construction activities will be banned under a new bill to be introduced early next year. The more expensive ultra-low-sulfur diesel (ULSD) will become the substitute fuel.

It is hoped the switch can cut 3,110 tonnes of sulfur dioxide emissions a year at an expense of less than a 1 per cent rise in overall business costs. In 2005, the city used about 800 million litres of industrial diesel, which is tax-free. However, the ban will not extend to ferry operators, for fear of increasing the financial burden on the loss-marking operators.

In a separate move, the duty for vehicle diesel meeting the Euro V standard, which is 80 per cent cleaner than ULSD, will be cut by 55 cents from HK\$11.10 per litre for two years. Officials plan to make that fuel mandatory in early 2009.

However, a spokesperson for Shell Oil said Euro V diesel would give the best emission performance only on Euro V vehicles, whereas Hong Kong's latest vehicle standards were only Euro IV.

[*SCMP*, 11/10/2010]

We must help to stop trade in endangered sharks

"A few weeks ago, I spoke at St. Paul's Co-educational College on why Hong Kong is the greatest threat to the world's oceans.

I explained that more than one-third of the globe's shark species are threatened and that Hong Kong is leading the way towards their extinction. This isn't an opinion but a fact, since our city sees more than 55 per cent of the shark trade pass through it. I then invited the students to change how they see these animals; sharks are wildlife, not food.

I asked who had consumed shark's fin, and all the hands, mine included, went up. I also asked who was afraid of sharks and almost as many hands went up. I pointed out that we often fear the unknown or what we do not understand, and the more we understand something, the more fascinating it becomes. For example, although some think sharks are bloodthirsty killers, more people die every year from falling coconuts than from sharks.

And that is when I invited them to have the guts to say "Yes" when something is right, and "no" when something is not. Especially now, as we attend or plan our holiday banquets, wedding ceremonies and other occasions, let us dare to make a difference. Given the impact on the world's oceans, the world no longer needs shark's fin soup. We may want it but none of us needs it, especially since this so damaging to our future health.

A student pointed out that shark's fin soup is a traditional dish that is part of our culture. Yes, I agreed, but sometimes traditions no longer make sense. For example, not that long ago, women in Hong Kong and China were second-class citizens, with the tradition of binding their feet. I suggested that we keep the good traditions and drop the bad ones.

I explained to the young men and women at St. Paul's that we should not listen to the shark sellers or the Convention on the International Trade in Endangered Species of Wild Fauna and Flora (Cites). Our government mistakenly hides behind Cites, a guide for the sale of animals, not their protection.

Protecting sharks is not in the sellers' interests. For them and their bank accounts, sharks need to be sold; people need to eat them.

They even publish nonsense about the health benefits of sharks and how we need to fish them or else they will ruin the oceans. Someone should send them back to elementary biology class.

Obviously, it's not that the shark traders are bad people; it's just that they're interested in filling their wallets, not doing what is right.

So what should we do? Well, as I said to the students, let's dare to make a difference. At a banquet, wedding or holiday feast, let's say "No", because sharks are wildlife, not food. We can celebrate without ruining our oceans, without threatening sharks or other endangered wildlife with extinction."

[SMCP, 23/11/2010 (letter to editor from Ran Elfassy, founder, *Shark Rescue*)]

Vessels to use cleaner fuel

Eighteen shipping companies based in Hong Kong confirmed that they will use cleaner fuel under a voluntary scheme to reduce sulphur dioxide emissions. Under an agreement, the *Fair Winds Charter*, initiated by the Civic Exchange, the participating vessels will use fuel with lower

sulphur content while berthed in Hong Kong from January 2011.

Research shows that the cleaner fuel contains only approximate 0.5% of sulphur. The goal of using this type of fuel is to reduce sulphur dioxide emissions by 80%. Civic Exchange hopes that the government will work with the authorities in Guangdong to set regulations in the Pearl River Delta to reduce sulphur dioxide emissions from ships. Such a scheme is backed by the Hong Kong Liner Shipping Association ("HKLSA"), which represents most container shipping lines.

It is reported that more than half of the members in HKLSA have agreed to switch to cleaner fuel. Switching from bunker fuel to low-sulphur fuel will significantly reduce emissions of sulphur dioxide and particulates at Kwai Chung terminal.

The cleaner fuel is about US\$200 per tonne more expensive than higher sulphur fuel. A study in 2005 showed that vessels berthed at Kwai Chung terminal were responsible for approximate 36% of sulphur dioxide emissions measured at the Environmental Protection Department's local air quality stations. The government reported that authorities in Hong Kong and Guangdong will progressively adopt more advanced fuel standards for motor vehicles and vessels.

[*The Standard*, 24/11/2010]

Mandatory energy codes

On 24 November 2010 the Legislative Council passed a law to make building energy codes mandatory. The codes will apply to all new commercial buildings and to public areas of new residential and industrial buildings, as well as existing ones undergoing major renovation. They cover the energy efficiency of air conditioning, lifts and escalators, lighting and electrical installations in communal areas, but they will not regulate external lighting.

The proposal to include outdoor lights mounted on a building, tabled by Civic Party leader Audrey Eu Yuet-mee, was rejected because of strong opposition from the trade-based seats. Ms. Eu said it was ridiculous to require only indoor lights to be energy-saving but exempt outdoor ones.

Proposed amendments to regulate lights used solely for decoration were also voted down. Secretary for Environment Edward Yau Tang-wah said he would not accept the amendments, as there were no international standards on controlling the brightness and electricity consumption of external lights.

Developers or building owners will be required to hire engineers to submit a declaration to the government that they comply with the codes, after which they would be issued certificates of compliance. Those who breach the energy codes or fail to carry out regular energy audits will face a maximum penalty of HK\$500,000 to HK\$1 million. The codes will not apply to tenants.

The law is to be enacted as a consequence of an unsatisfactory response to a voluntary building code introduced in 1998. Up to last year, the code covers just 1,061 buildings, of which 72 per cent are government premises.

Officials said extending the codes to all buildings was not practical, as many old buildings had space or design constraints preventing installations from being upgraded. Buildings account for about 89 per cent of the city's energy consumption.

[SMCP, 25/11/2010]

Duty to protect Hoi Ha Wan Marine Park

"Christine Loh Kung-wai's column ("Shifting sands", November 19) highlighted the confusion which has arisen over the boundary of Hoi Ha Wan Marine Park, and the status of plots of agricultural land which have recently been sold but which have been under water for a good number of years.

The government should be mindful that the ownership of agricultural land does not automatically give the owner the right to build. Wherever the debate concerning the ownership of land and what defines the boundary of the marine park leads, one point remains clear: the administration has a duty to provide the park with the protection it requires.

In defining that area of protection, in the form of revisiting the *Marine Park Ordinance* and expanding the boundary, or in the Town Planning Board establishing a coastal protection area now that Hoi Ha has become a development permission area, proper protection of the unique environment of Hoi Ha Wan must acknowledge two important points.

Firstly, defining the boundary in relation to a high-tide mark at a particular point in time is far too simplistic and does not recognise the dynamic nature of coast and shorelines ecology.

Secondly, the undersea environment and the coastline which surround it are integral parts of the same ecosystem. Intertidal areas and belts of mangroves which border the sea must be afforded the same degree of protection as the sea areas.

The intertidal areas, particularly the beaches and sand flats, also require protection as valuable public amenities.

The environmental impact of the village of Hoi Ha should be minimised by the installation of sewage facilities as soon as possible and, certainly, before any further development is authorised. The discharge of domestic waste water containing bleaches and non-biodegradable detergents directly into the sea is unsustainable and environmentally damaging.

As for the immediate banning of commercial fishing in the marine park, as Ms. Loh states, it is a "no brainer".

[SMCP, 25/11/2010 (letter to editor from David Newbery)]

'Green' IPO listing proposal

More trees may be saved from the axe as regulators prepare to introduce a change to enable stock exchange listing candidates in Hong Kong to issue only electronic prospectuses.

The Securities and Futures Commission and the stock exchange announced they had concluded a consultation on the proposed "green" law change because of wide support for the programme. The change will take effect from February 2001, if legislators clear it.

The amendment will scrap the current requirement that listing companies must issue paper prospectuses. The change in the law will mean these companies will need to post only an electronic version on their websites and the website of the Hong Kong Exchanges and Clearing, the holding company of the stock exchange.

Listing candidates, however, will still need to make paper prospectuses available to investors who prefer the hard copy. They may also be required to arrange a hotline that investors can dial to request their copy and collect information on where to get them.

Christopher Cheung Wah-fung, chairman of the Hong Kong Securities Professionals Association, said he supported the exchange's move. "This will save printing costs for companies and also help protect the environment. Many retail investors are not reading the prospectuses and those who want to do so would be able to read them online. Overall, this is a good move for the local stock market," Cheung said.

The plan to change the law follows lobbying by environmentalists, such as Green Sense, which revealed that the paper used to print listing prospectuses in 2006 was equivalent to more than 15,000 trees.

Prospectuses have 501 pages on average, with the thickest one to date being 812 pages. Most of them go to waste. An SFC study in 2006 showed only one out of 10 retail investors who picked up an application form also took a copy of the book. In most public offerings, at least a third of printed prospectuses are never taken by investors, the survey found.

[SMCP, 27/11/2010]

Trawling ban a high-water mark for marine conservation

"We should all applaud the chief executive for his commitment to ban trawling in Hong Kong waters within two years. This is the most significant environmental action taken in years, and is as momentous as was the plan to set up the country parks in our city. Our ocean is our biggest asset, and we would be nothing without it.

Contrary to the comments made last week by your reader Kary Yip, suggesting that now is not the right time to ban trawling ("This may not be right time for trawling ban", November 15), we should then ask, "when is the right time?"

Our local waters are practically dead, and trawling simply delays any possible hope for recovery. Your correspondent mentions shrimp fishing as a lost industry, but most people do not know that roughly 70 per cent of everything caught when fishing for shrimp is thrown away – it is treated as a "by-catch" with no value. So we pillage the ocean of its life for a small percentage of higher-value items.

Suggesting that now is not the right time for a ban is an argument similar to the one used by the tobacco industry to oppose the ban on smoking in restaurants – and the plastic bag ban, whose opponents suggested that business would be lost. This was not the case; in both instances, the broader society benefited from cleaner air, improved health and less waste.

It is time that we do things for the greater good of society because, for too long, we have been catering to small groups of vested interests whose use of products or activities have put a burden on the rest of us.

In the case of fishing, a small group in the population has essentially been allowed to bulldoze the ocean floor every day, without any of us taking note. The result is a dead environment that we now have to resurrect.

Many fishermen have said they support this ban, and there is proof around the world that when fishing is stopped, the ocean comes back to life. Wouldn't that be amazing for Hong Kong?

The fishermen would then have all types of new things to catch. This could be done in sustainable ways that do not ruin everything in their wake, as happens with trawling. Supporting the ban on trawling would be supporting historic, positive

change for this city, and proof that we can address tough issues.

Let us put the air we breathe on the same course of action."

[SMCP, 30/11/2010 (letter to editor from Douglas Woodring)]

Building energy codes in Hong Kong

The *Buildings Energy Efficiency Ordinance* was gazetted in Hong Kong on 3rd December 2010. The Ordinance provides a legal basis for the mandatory implementation of the previously voluntary Building Energy Codes.

The Codes specify basic energy efficiency standards for four major types of building services installations, including air-conditioning, electrical, lifts and escalators and lighting. Buildings account for 89% of electricity consumed in Hong Kong. At the design and occupation-approval stages, developers of new buildings covered in the Ordinance must make declarations that they meet relevant energy savings requirements.

According to the Ordinance, it is mandatory that building services installations at new buildings comply with the standards stated in the Ordinance at all times. Existing buildings' energy efficiency must be enhanced when they undergo major retrofitting works. In addition, there must be energy audits of commercial buildings' common areas and commercial portions of composite buildings once every 10 years. The results of the energy audit should be posted at the main entrance of the building in question.

The government expects that, for new buildings, the implementation of the Ordinance should save 2.8 billion kWh of energy in the first 10 years which is equivalent to 1.96 million tonnes cut in carbon-dioxide emissions.

Subsidiary legislation will be prepared for registering qualified persons as Registered Energy Assessors before the commencement of the Ordinance.

[*Environmental Protection Department's press release*, 03/12/2010]

Polluted air causes concerns

A survey released on 1st December 2010 reveals that about 25% of the population wants to leave Hong Kong to escape the air pollution. A survey released in 2008, however, shows that only 20% of the population wanted to move away from Hong Kong due to air pollution. Such comparison shows that more and more people have given up complaining to the government or relevant authorities and have begun planning to leave Hong Kong.

A study, for which 985 people were interviewed, found that those better educated and higher salaried are more likely to emigrate because of health fears concerning bad air quality. For example, 52% of those with post-graduate degrees have a plan to leave Hong Kong, compared with 37% of university graduates and 22% of secondary school graduates. Approximately 49% of those earning HK\$60,000 or more a month said that they will leave Hong Kong for better air, compared to 37% of those earning HK\$40,000 to HK\$59,000 and 30% of those earning HK\$30,000 to HK\$39,000.

As Hong Kong has a population of 7 million, Hong Kong will lose approximately 2 million elite residents in the near future, and the number will increase if the government does not take effective action to resolve the issue of air pollution.

A spokesperson for Civic Exchange said that anti-air-pollution drives in Hong Kong during the past few years have focused on power plants and factories only, and might have paid less attention to public transport, while exhaust emissions produced by buses or heavy vehicles contributed most to the bad air in Hong Kong. Civic Exchange has urged bus companies to introduce clean-fuel vehicles and hybrids instead of diesel-driven vehicles and suggested that more financial support and government aid should be provided to speed up the process of improving air quality.

[*The Standard*, 02/12/2010]

More electric cars in Hong Kong

The government announced recently that there were 85 electric vehicles registered for road use in Hong Kong by mid-November 2010 and the number of electric vehicles will increase as more electric cars are developed.

The Mitsubishi i-MiEV, Tesla Roadster and EuAuto MyCar are now sold in Hong Kong and Hong Kong is the first city outside Japan to sell the former two car models.

Another car manufacturer, Smith, plans to launch electric vehicles in Hong Kong by the end of December 2010, while Nissan will debut its LEAF vehicle in Hong Kong in February 2011, making Hong Kong its first Asian market outside Japan.

The government has said that owners may apply for an expressway permit for electric vehicles suitable for highway use.

The government is also working with car-park operators, building management companies and property developers to have them install charging facilities for electric vehicles.

[*www.news.gov.hk*, 01/12/2010]

Corals in Hong Kong are healthy

According to the results of the *Hong Kong Reef Check 2010*, it appears that the corals in Hong Kong are healthy and stable as 21 out of 33 locations surveyed recorded high coral coverage.

The survey shows that the public piers at Hoi Ha Wan Marine Park and Sharp Island North recorded the highest coral coverage and the range is from 73% to 78.1%.

The survey was conducted from early June 2010 to late August 2010. It covered extensive marine areas, including 33 sites of ecological importance in the eastern part of Hong Kong waters extending from the north of Tung Ping Chau to the south of Ninepin Groups, and including marine parks such as Hoi Ha Wan, Yan Chau Tong and Tung Ping Chau.

The survey revealed a variation in coral coverage ranging from 30% to 78.1%; 21 of them, including dive sites within marine parks, recorded high coral coverage, at above 50%.

Corals at 11 sites were assessed and the average health index was 4.54, which is similar to last year's figure (4.31). The figures in this level indicate that the corals in those sites are in a healthy and stable condition.

The survey also indicates that coral bleaching and some coral damage were observed at a few sites but the impact was minor and localised.

[*www.news.gov.hk*, 04/12/2010]

Fish farmers' nets claim another bird

For the second time in two weeks a bird has been killed near the Mai Po Nature Reserve in a trap set by fish farmers to keep feathered predators from feeding on their stock. Conservationists fear more will die as thousands of migratory birds flock to overwinter around Deep Bay.

A magpie robin, a common bird in the city, was found hanging in a net spanning a fish pond in Lut Chau near Nam Sang Wai yesterday morning. It is thought to have been strangled while struggling to escape the net. On November 24, a black-faced spoonbill, an endangered species, was found dead in the Mai Po Reserve with multiple cuts, the fifth spoonbill known to have been killed in nets.

Under Hong Kong law, all wild animals and birds are protected and it is a crime to hunt and kill them. But it is common for fish farmers with ponds in the western New Territories to install nets and hooks at their ponds to stop birds preying on their fish.

Lut Chau has been a black spot for traps since 2008. Last year, about 40 per cent of the ponds had traps, but up to 60 per cent had them this year.

[SCMP, 04/12/2010]

CLIMATE CHANGE

Floods will move a million

More than one million people in the Pearl River Delta, including Hong Kong, will be forced to move to higher areas by 2050 as climate change increases the risk of flooding.

The prediction is made in a report, entitled *Rich Delta, Costly Flooding*, jointly published by local policy think-tank Civic Exchange and the University of Leeds in Britain. The report concludes that a 20-centimetre rise in sea levels in the region by 2050 will affect more than 2,000 square kilometres in the delta plain, which is vulnerable to tidal inundation.

One of the study's researchers said Hong Kong should follow strategies adopted in the United Kingdom that require decision-makers to direct development away from high-flood-risk areas.

The Hong Kong Observatory recently said that the incidence of heavy rainstorms has increased in the past decade, raising the risk of flooding in low-lying areas such as Tai O and northern New Territories.

[The Standard, 01/12/2010]

Public consultation on climate change strategy and action agenda

The government launched a public consultation on Hong Kong's climate change strategy and action agenda on 10th September 2010 and announced on 3rd December 2010 that the public consultation period would be extended until 31st December 2010. As a result, various stakeholder groups would have more time to consider the proposals and submit their views to the government.

A government spokesman said that the proposed climate change strategy and agenda sets outlines and various means of combating climate change, including: enhancing energy efficiency; promoting green transport; turning waste into energy; and introducing cleaner fuels. In addition to these mitigation measures, the strategy also highlights Hong Kong's vulnerable areas in light of the increasing impact of climate change.

At this stage, the consultation document is available for collection at District Offices,

Environmental Protection Department ("EPD") Regional Offices and public libraries. It can also be downloaded from the website of EPD. The strategy is the result of the study commenced in 2008.

[Environmental Protection Department's press release, 03/12/2010]

Munich Re bets on renewable energy sector

Munich Re, the world's largest reinsurer, helps combat man-made climate change by providing insurance products that reduce the risk for companies pursuing renewable energy projects.

Ludger Arnoldussen, board member for the Asia-Pacific region, said the reinsurer has launched a variety of new insurance policies, including a performance guarantee. For example, the reinsurer would pay compensation if a solar panel or wind turbine fails to perform properly a number of years down the track. Currently, Taiwanese and American companies have bought these policies. The insurance coverage gives companies bargaining power to finance their renewable energy projects and investors should be attracted by the added security when investing in innovative "green" technologies.

There is an increasing number of renewable energy projects on the mainland since Beijing implemented measures to encourage them.

The National Energy Administration has proposed a 10-year development plan focusing on non-fossil fuel energy sources, including nuclear, wind, solar and hydropower. The plan's objective is to establish 500 GW of renewable power capacity by 2020.

Chinese companies now rank among the top renewable energy equipment manufacturers in the world. As suppliers to the mainland's green energy makers are not only producing for domestic use but increasingly for export markets, they need insurance coverage to attract buyers.

In 2003 Munich Re was the first foreign reinsurer to get a licence to operate on the mainland.

[SCMP, 18/11/2010]

Raise the price of fossil fuels to halt climate change

James Hansen, the director of Nasa's Goddard Institute for Space Studies, attended the four-day Climate Dialogue Conference in Hong Kong. He said we needed to put a price on carbon emissions if we want to discourage use of fossil fuels and encourage clean energy.

The conference was jointly organised by Civic Exchange, C40 Climate Leadership Group, a green alliance of 40 world cities, and Hong Kong-based Environmental Campaign Committee. Among the 600 participants were policymakers and mayors, leading scientists and executives from business organisations.

Hansen, who had been called the "godfather of global warming science", spoke at the conference and reiterated his call to end the planet's "fossil fuel addiction". Decreasing the use of coal is vital to lowering the carbon dioxide concentration in the atmosphere from the current 389 to 350 parts per million. Putting a price on carbon could help spur development in renewable energy and energy efficiency in addition to changing behaviour. He also supports the use of nuclear energy, which he considers a lesser evil compared to fossil fuel.

[SCMP, 03/11/2010]

Cancun climate change conference

The United Nations Framework Convention on Climate Change (UNFCCC) was set up to stop global temperatures rising above dangerous levels as a result of man-made emissions. The Conference of the Parties (COP) meets to discuss progress every year. This year saw COP 16, when officials and environment ministers from 194 countries met at Cancun, Mexico.

At the 2009 COP in Copenhagen, rich and poor countries failed to agree on a legally binding target to cut emissions. Instead a weak 'Copenhagen Accord' was signed, that allows countries to choose their own targets but has no power to force them to keep to these targets.

It was generally agreed that it was difficult to reach a global deal to cut emissions. The main sticking points included the 'burden sharing' issue. Poor countries believed that rich countries should make the major cut in emissions because as they caused the problem in the first place. But industrialised countries were wary of committing to anything they believed could limit their competitiveness. They also argued that it was pointless to act unless the fastest developing countries, that will produce the majority of emissions in the future, also act.

[The Telegraph, 23/11/2010]

Experts link climate change to rising food prices

Even if we stopped spewing global warming gases today, the world would face a steady rise in food prices this century.

Global food experts reported that climate change becomes the "threat multiplier" that could double grain prices by 2050 and leave millions more children malnourished.

Beyond 2050, when climate scientists project temperatures might rise to as much as 11.5 degrees over 20th-century levels, the planet will become "gloomy" for agriculture, said senior research fellow Gerald Nelson of the International Food Policy Research Institute (IFPRI).

The specialists of the International Food Policy Research Institute (IFPRI) said they found that climate change worsens future human well-being, especially among the world's poorest people.

The study, issued at the annual U.N. climate conference in Cancun, said food prices will be driven up by a combination of factors: a slowdown in productivity in some places caused by warming and shifting rain patterns, and an increase in demand because of population and income growth. The increases in real prices by 2050 could range from 31 per cent for rice to 100 per cent for corn. And IFPRI estimated that such prices could cause 20 percent more children to be undernourished—25 million more children will go hungry.

IFPRI said some of the impact could be offset by research and development of higher-yielding varieties of corn, wheat and other crops, and by freer, more flexible global trade in food commodities. It estimated that at least \$7 billion in additional spending a year would be needed for crop research and improved irrigation, roads and other upgrades of agricultural infrastructure.

[The Seattle Times, 01/12/2010]

New fund for developing country carbon trading initiatives

On 8 December 2010, World Bank President Robert B. Zoellick announced the establishment of the Partnership for Market Readiness-- to help developing countries set up carbon markets-- at an

event on the sidelines of the UN Framework Convention on Climate Change conference in Cancun.

The Partnership aims to have a total capitalisation of \$100 million. The Partnership received pledges of more than \$20 million by Australia (A\$10m), the European Commission (€5m) and the United States (\$5m) in Cancun today, which built on an early pledge of \$5 million from Norway. In addition, Germany, Japan and the UK announced their intention to support the initiative financially.

The Partnership is expected to begin operating in early 2011 and will provide technical and institutional support to developing countries.

A number of countries, such as China, Chile, Indonesia, and Mexico are exploring the use of carbon market instruments and emissions trading mechanisms as a way of encouraging investment in alternatives to carbon-emitting technologies. They hope to learn from the 10 years of experience of the Clean Development Mechanism under the Kyoto Protocol, and adapt this knowledge to their local contexts. For example, Chile's government is exploring the establishment of a domestic emissions trading scheme; India, similarly, is putting in place a trading scheme for renewable energy and energy efficiency certificates.

[World Bank Press Release, December 2010]

Energy experts focus on policy, technology

Hundreds of engineers, researchers and policymakers from abroad gathered in New Mexico for a weeklong conference to talk about the future of renewable and distributed energy systems. Their mission is to find more affordable and efficient ways to mesh large-scale solar and wind farms and smaller distributed generation systems. They also focused on ways policymakers can develop regulatory roadmaps for encouraging more renewable energy generation. They addressed everything that was necessary to make up a solid portfolio, including regulatory controls, R&D, technology and market acceptance.

Nearly 30 states have developed renewable energy portfolio standards that require electric utilities to get as much as 25 percent of their power from renewable sources within the next decade. Experts at the conference said Europe is leading the way when it comes to articulating its goal to make renewable energy as a majority source of power.

Well-crafted policies and consistent financing through tariffs or other subsidies can give confidence to investors and project developers. Karina Veum of the Energy research Centre of the Netherlands said many European countries are trying to find the right combination of tariffs, premiums and portfolio standards to encourage deployment of more renewable and distributed energy generation. She said it should give a lot more attention to design standards, matching support level with generation costs, because as the countries support more and more renewables, the cost will increase for the consumer eventually.

[The Associated Press, 09/12/2010]

Deal is reached at Cancun summit

The UN climate change talks closed on 11th December 2010 with an agreement aimed at stopping climate change. All major economies agreed to cut emissions and establish a fund to help nations most vulnerable to climate change. The meeting produced a modest deal that for the first time commits all the major economies to reducing emissions; but the end agreement did not meet participants' promise of keeping the global temperature rise to 2C.

The agreement should help prevent deforestation, promote the transfer of low-carbon technologies to developing countries and, by 2020, establish a green fund, potentially worth \$100bn (£63bn) a year, to shield the more vulnerable countries from climate change.

However, participants failed to reach an agreement on how far overall global emissions should be cut. And there are many loopholes for countries to avoid making the deep reductions that scientists say are needed.

Researchers from the Climate Action Tracker said the pledges would set the world on course for 3.2C warming – a catastrophe for many of the poorest countries. Friends of the Earth International warned that it could still lead to a temperature rise of 5C. Nnimmo Bassey, Friends of the Earth's international director, said that all of us would be affected by the lack of ambition and political will of a small group of countries, such as the US, Russia and Japan.

Other measures agreed in outline included the setting up next year of a major climate fund panel to administer and deliver the billions needed for the developing world to adapt to climate change. In a concession to developing countries, this will be largely run by developing countries and not the World Bank.

THE CUNCUN DEAL

- All countries to cut emissions
- Forest deal to provide finance for countries who avoid emissions from deforestation
- Finance deal to potentially provide \$30bn for developing countries to adapt to climate change now, and up to \$100bn later.
- A new UN climate fund to be run largely by developing countries
- Easier transfer of low carbon technology and expertise to poor countries
- China, the US and all major emitters to have climate change reduction actions inspected
- Scientific review of progress after five years

[The Guardian, 11/12/ 2010]

Thermometers point to 2010 being hottest year yet

Year 2010 is going to be the hottest year ever recorded for the world, according to figures released by the World Meteorological Organisation (WMO).

Global average temperatures recorded up to the end of October show that in two of the three data sets used, which are American, 2010 has been clearly the hottest year ever, while in the third set, which is British, it is running equal with the previous hottest year on record, 1998.

Although the position might change when the final figures for November and December have been factored in, analysis has already shown that November temperatures for the world were running at "near record levels". The global combined sea surface and land surface air temperature for 2010 (January-October) is currently estimated at 0.55C (0.99F) above the 1961-1990 annual average of 14C (57.2F).

And it is already certain that the past decade is the hottest 10-year period in the instrumental record. In the 10 years from 2001 to 2010, global temperatures have averaged 0.46°C above the 1961-90 average, 0.03°C above the 2000-09 mean,

and the highest value yet recorded for a 10-year period.

The WMO's director-general, said that the hottest last decade was an indicator of a man-made impact on the global climate.

The highest set of readings was at Mohenjo-Daro, the site of an ancient city in the Indus Valley in Pakistan, where it reached 53.5C or 128.3F on 26 May 2010. This was the fourth highest temperature ever recorded. The only higher recorded figures have been at Al'Aziziyah in Libya (57.8C or 136.3F, in 1922), Death Valley in California (56.7C or 134.1F, in 1913) and Tirat Zvi in Israel (53.9C or 129F, in 1942).

In Russia, the unprecedented heat-waves of July and August have resulted in about 11,000 additional deaths in Moscow alone. Its mean temperatures in July were 7.6C above normal, making it the city's hottest month on record by more than 2C.

[The Independent, 03/12/2010]

ADVISORY COUNCIL ON THE ENVIRONMENT (ACE)

Public Consultation on Hong Kong's Climate Change Strategy and Action Agenda (ACE Paper 12/2010)

Purpose

This paper informs members of ACE of a 3-month public consultation being conducted by the Environmental Protection Department ("EPD") from 10 September 2010 on Hong Kong's climate change strategy and action agenda for the coming decade, and outlines the key proposals of the EPD.

Background

Climate change is an important environmental issue that is affecting global sustainability, and the government has been very concerned about its impact. It has been widely accepted that global increases in greenhouse gas ("GHG") concentration are primarily due to human activities, such as the use of fossil fuels and changes in land use resulting in large scale vegetation removal. Symptoms of global warming include: increases in global average air and ocean temperatures; rising global mean sea level; and an increase in the frequency of extreme weather. In short, the earth's climate and weather systems are experiencing unprecedented change.

The Hong Kong Observatory ("HKO") has been making systematic observations of local climatic variables, and relevant data show that there has been observable changes in many weather patterns during the last 60 years. These data correspond to the changes experienced by many global climatic systems observed over the same period. For instance, the annual mean temperature has been increasing at the rate of 0.12°C per decade. The number of cold days has reduced by 2.3 days per decade, and the average annual rainfall has increased by 51 mm per decade.

HKO forecasts that the rising trend in temperature in Hong Kong is likely to continue. The number of hot days is projected to increase, and conversely the number of cold days will fall dramatically. In addition, there is likely to be greater variability in rainfall patterns, such as intense rainfall. Extremely wet years and extremely dry years are expected to become more frequent for the rest of the century.

The EPD commissioned a consultancy study in 2008 to: review and update the local inventories of greenhouse gas emissions and removals; assess the

impacts of climate change in Hong Kong; and recommend long-term strategies and measures to reduce greenhouse gas emissions as well as to adapt to unavoidable effects of climate change. The Consultants have carried out a series of topical studies and taken into account views of major stakeholders expressed at technical workshops. The consultation paper presents the proposals drawn up from the consultancy study.

Hong Kong's Climate Change Strategy

It is considered that Hong Kong has to adopt a proactive strategy in tackling climate change. The proposed strategy should : -

- (a) be directed at local GHG emission characteristics;
- (b) be forward-looking so as to demonstrate Hong Kong as a leading global financial centre, and that we are committed and contributing to international efforts in combating climate change;
- (c) draw together participation and support from various sectors of our community to promote low-carbon lifestyle. This will allow Hong Kong to continue to go along the pathway of sustainable development; and
- (d) identify the potential of low carbon economy, promote energy conservation and enhance Hong Kong's competitive advantage. It should also aim to strengthen cooperation with the Pearl River Delta region by playing a pivotal role in realising the vision of transforming the region into a quality living area with Hong Kong as the greenest city in the region.

Reducing GHG Emissions

In 2008, GHG emissions of Hong Kong were about 42 million tonnes, which accounts for about 0.1% of global emissions. Per capita GHG emissions in Hong Kong were approximately 6 tonnes, lower than most developed economies. Nevertheless, based on the findings of the consultancy study, the Environment Bureau believes there is scope for Hong Kong to do better to reduce our carbon footprint, and that we should join in international efforts to combat climate change.

The Environment Bureau's major considerations are as follows : -

- (a) Hong Kong is an international city and we should act responsibly with the international community to address the challenge of climate change;
- (b) Hong Kong is a highly advanced economy and we should take actions that befit our position;
- (c) use of waste-to-energy technologies, cleaner fuels and green transportation will bring complementary benefits. The use of clean energy will bring cleaner air and making better use of "waste" will help alleviate the pressure on our landfills;
- (d) going low-carbon will generate new economic opportunities in green and energy efficient technologies and applications, which could be a promising economic growth area in the coming decade; and
- (e) many measures that reduce GHG emissions, such as enhancing energy efficiency of buildings, will drive down household electricity bills and commercial operating costs, and hence possibly render cost savings

in the long term, thus achieving a "win-win" situation.

The electricity generation sector is the largest source of local GHG emissions, accounting for more than 67% of our total emissions. This is followed by the transport sector (about 18%), and other emission sources including waste treatment (about 5%), industrial processes and agriculture. The Environment Bureau has taken into account these emission characteristics. The following comprehensive action agenda is proposed for implementation : -

- (a) maximising energy efficiency: in particular to improve energy efficiency in buildings, including reducing energy demand of air conditioning and other major electrical equipment;
- (b) greening road transport: including promoting the use of electrical vehicles and implementing energy efficiency standards for vehicles;
- (c) promoting use of clean fuels for motor vehicles such as biofuels;
- (d) turning waste into energy: to explore the potential of renewable energy through development of an integrated waste management facility, organic waste treatment facilities and sludge treatment facility; and
- (e) revamping the fuel mix for electricity generation: to increase the use of non-fossil, clean and low carbon fuel for electricity generation. It is proposed that by 2020, coal will account for no more than 10% of the fuel mix, natural gas will account for approximately 40%, renewable energy to make up about 3 - 4% and the balance of about 50% will be met by imported nuclear power. In seeking to improve the fuel mix, the Environment Bureau will continue to uphold its energy policy objectives to ensure reliable, safe and efficient energy supplies at reasonable prices, while minimising the environmental impact caused by the production and use of energy.

Reduction Target

In order to reduce Hong Kong's GHG emissions and transform our city to be low-carbon and green, the community has to act collectively towards a common goal and vision. The government proposes to adopt a voluntary carbon intensity reduction target of 50% - 60% by 2020, as compared with the 2005 level through the implementation of the proposed action agenda outlined above.

If the proposed target is achieved, our carbon intensity level will be reduced to 0.012 - 0.015 kg CO₂-e/HK dollar GDP in 2020. The GHG emissions level in Hong Kong is also expected to reduce from 42 million tonnes in 2005 to 28 - 34 million tonnes in 2020. This represents a real reduction in GHG emissions of 19% - 33% from the 2005 level. Per capita emission is also expected to reduce from 6.2 tonnes to 3.6 - 4.5 tonnes.

Vulnerability and Adaptation

The consultants have identified the following key areas of vulnerability in Hong Kong : -

- (a) biodiversity and nature conservation
- (b) built environment and infrastructure
- (c) business and industry
- (d) energy supply
- (e) financial services
- (f) food resources
- (g) human health
- (h) water resources

The consultancy findings suggest that Hong has significant adaptive capacity to deal with climate change impacts and has many systems in place which could be used to adapt to the physical impacts of climate change. It is likely that some of the policies and facilities may need to be up-scaled in the following aspects : -

- (a) monitoring
- (b) institutional strengthening and capacity building
- (c) disaster management and emergency planning
- (d) research and investigation
- (e) education and public awareness

Review of the Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences (ACE Paper 13/2010)

Purpose

Section 26G of the *Air Pollution Control Ordinance* (Cap. 311) ("APCO") provides that the Secretary for the Environment ("Secretary") shall by technical memorandum ("TM") allocate emission allowances for each type of specified pollutants for electricity power plants for the emission years from 1st January 2010. This paper informs members of ACE of the findings of the Environment Bureau's review of the "Technical Memorandum for Allocation of Emission Allowances in Respect of Specified Licences" issued under section 26G of the APCO in 2008 ("First TM"). It also seeks members' views on the Environment Bureau's proposal to reduce the emission allowances for power plants for the emission years from 1st January 2015 by way of issuing a new TM ("Second TM").

Background

In 2008, the government introduced amendments to the APCO to cap the emission of specified pollutants by power plants. The Secretary may allocate the emission allowances in respect of specified pollutants to individual power plants by stipulating in the TM specific quantity of emission allowances or an allocation method for ascertaining the quantity of emission allowances. In addition, pursuant to section 26G(4) of the APCO, an allocation of emission allowances fixed by the TM in relation to an emission year (other than an allocation made under the First TM) could only take effect at least four years after the commencement of the TM making the allocation.

The Secretary issued the First TM in 2008 having regard to the provisions in section 26G(2) of the APCO. Specifically, the First TM : -

- (a) caps the power sector's emission of sulphur dioxide (SO₂), nitrogen oxides (NO_x) and respirable suspended particulates (RSP) at 25,120 tonnes, 42,600 tonnes and 1,260 tonnes respectively for emission years starting 2010. Comparing to the 2007 levels, the emission caps of SO₂, NO_x and RSP have been substantially curtailed by about 67%, 13% and 46% respectively;
- (b) stipulates that the total emission allowances in (a) above are to be distributed among the power plants operated by the two power companies based on their respective share of the quantity of electricity generation for local consumption starting 2010 and updated not less than once every three years; and
- (c) allows the allocation of not more than one percent of the total emission allowances for the power sector in respect of each of the specified pollutants for new electricity works.

During the Legislative Council's scrutiny of the First TM in 2008, the Environment Bureau undertook to review it within two years.

Review Findings

Methodology for allocating emission allowances

The current methodology for allocating emission allowances, which is based on the respective share of the quantity of electricity generation for local consumption of individual power companies, essentially reflects the allocation method the Environment Bureau adopted in 2005 for assigning emission caps to the two power companies to deliver the 2010 emission reduction targets agreed with the Guangdong Provincial Government for the Pearl River Delta Region. It works well as a driver to require the power companies to retrofit their generation units with emission reduction devices and switch to cleaner fuels. In order to meet the 2010 emission reduction targets, the power companies have already embarked on major retrofitting works to install emission abatement devices to bring about substantial improvement to the emission performance of their generation plants. Following installation of these planned emission abatement facilities, however, the scope for further emission reduction in future is more restricted and varies amongst different power plants.

In addition, the current generation units operated by the two power companies, though designed and constructed to the best practicable requirements then, have different emission performance because of different technologies adopted and stages of development. In general, the younger units emit less than the older ones. This difference in emission performance will have to be accounted for until the older generation units have been phased out. As well, additional scope for retrofitting the existing generation units with emission reduction devices is subject to practical constraints, such as availability of space for the retrofit and practicable emission control technologies.

In considering further tightening of the emission caps on the power plants after 2010, the Environment Bureau will therefore have to take account of the make-up of the existing generation units of each of the power companies as well as the emission reduction devices that have already been or will be retrofitted to their generation units for meeting the 2010 emission caps. In order to realise the maximum emission reduction potential of the power sector, the distribution of the emission allowances can no longer be made based on the sole consideration of the respective share of local electricity generation of the two power companies. Instead, it is necessary to set specific emission allowances for each of the power plants taking account of : –

- the practicability and extent of further emission reduction that can be achieved from the existing power generation units by adopting further emission abatement technologies; and
- the scope for maximising the use of the existing gas-firing generation units.

Scope for Tightening the Emission Caps

The two power companies have been unable to fully utilise their gas burning capacity because of the inadequate supply of natural gas. The Memorandum of Understanding on Energy Co-operation signed between Hong Kong and the Mainland in 2008 will make available additional supply of natural gas to Hong Kong in the coming few years. The Environment Bureau envisages that there will be sufficient supply of natural gas to enable both power companies to make the full use of their existing gas burning capacity towards

2015. By then, the CLP Power Hong Kong Limited ("CLP") will be able to increase the local electricity generation by natural gas from the current level of about 10,900 GWh to about 16,430 GWh and the Hongkong Electric Co. Ltd. ("HEC") from about 3,680 GWh to about 4,060 GWh, thereby increasing the overall share of natural gas in the combined fuel mix of the two power companies for local electricity generation from the current 39% to about 52%.

Increasing the use of natural gas, coupled with the commissioning of the emission abatement equipment being retrofitted, will make it possible for Hong Kong to reduce the emission allowances for SO₂, NO_x and RSP set out in the First TM by 50%, 35% and 34% respectively.

Emission Allowances for Possible New Electricity Works

The current allocation method in the First TM, to allocate not more than 1% of total emission allowances of the power sector in respect of each of the specified pollutants for possible new electricity works, should be retained in relation to the emission years from 1 January 2015, so as to ensure that new electricity works will not be debarred from starting their business even with the use of the most advanced emission reduction technology.

Proposed New TM

The Environment Bureau proposes to reduce the emission allowances for the two power companies to the following levels in relation to the emission years from 1 January 2015 : –

	Emission Allowances for Existing Electricity Works (Tonnes Per Year)		
	Sulphur Dioxide	Nitrogen Oxides	Respirable suspended particulates
HEC			
Lamma Power Station (mixed fuel)	6,780	10,020	300
Subtotal	6,780 [72%]	10,020 [63%]	300 [64%]
CLP			
Black Point Power Station (gas-fired)	1,440	4,140	110
Castle Peak Power Station (coal-fired)	4,260	13,390	420
Penny's Bay Gas Turbine Power Station (oil-fired)	2	2	1
Subtotal	5,702 [36%]	17,532 [66%]	531 [67%]
Total	12,482 [50%]	27,552 [65%]	831 [66%]

The Environment Bureau proposes to set out the following maximum emission allowances equivalent to approximately 1% of the total emission allowances for the entire power sector in respect of each of the specified pollutants for possible new electricity works with a total installed capacity equal to or more than 300 MW in relation

to the emission years from 1 January 2015 as follows : –

Specified Pollutant	Maximum Emission Allowances for New Electricity Works (Tonnes Per Year)
Sulphur Dioxide	120
Nitrogen Oxides	270
Respirable suspended particulates	8

For those possible new electricity works with a total installed capacity less than 300 MW, the existing practice of allocating the emission allowances by multiplying the respective maximum emission allowances set out in the above table with the ratio of the total installed capacity to 300 MW will continue.

The Environment Bureau also proposes to review the Second TM at a frequency of no less than once every three years to enable timely revision of the emission allowances.

If the proposed new Second TM commences to have effect before the end of 2010, the new emission allowances in relation to the emission years from 1 January 2015 would take effect starting from 1 January 2015, having regard to the statutory requirement in section 26G(4) of the APCO that an allocation of emission allowances made by the TM in relation to an emission year (other than an allocation made under the First TM) could only take effect at least four years after the commencement of the TM making the allocation.

Environmental benefits

As compared with the current emission allowances for 2010, the proposed set of allowances will see a reduction of 50% for SO₂, 35% for NO_x and 34% for RSP. The reduction will help improve local air quality given that emissions from the power sector account for 88%, 44% and 28% respectively of the territory-wide emissions of these pollutants in 2008.

The overall share of natural gas in the combined fuel mix of the two power companies for local electricity generation will be raised from the anticipated 39% in 2010 to about 52% in 2015, which incidentally would be broadly the same as the proposal in the Air Quality Objectives Review to raise the power sector's fuel mix ratio to 50% for natural gas.

The Environment Bureau considers that full compliance with the proposed emission caps, stringent as they might be, is feasible, should sufficient supply of natural gas be available for full utilisation at existing gas-fired units and if both power companies optimise the loading schedule to maximise the use of their generation units with better environmental performance, carry out proper maintenance of their plants and ensure appropriate sourcing of environmental-friendly coals. In determining the emission caps for both companies, the Environment Bureau has made reference to the best available demand load forecast and per MWh emission figures of the generation plants of both companies with due consideration of their actual emission performances in 2009.

Report on the 113th Environmental Impact Assessment (EIA) Subcommittee Meeting (ACE Paper 14/2010)

Purpose

At its meeting on 13 September 2010, the Environmental Impact Assessment Subcommittee ("EIA Subcommittee") considered the EIA reports on:-

- (a) South Island Line (East) (submitted by the MTR Corporation Limited); and
- (b) Providing Sufficient Water Depth for Kwai Tsing Container Basin and its Approach Channel (submitted by the Civil Engineering and Development Department).

EIA report on South Island Line (East)
(ACE-EIA Paper 3/2010)

Description of the Project

The project comprises approximately 7 km of partly underground and partly viaduct railway of medium capacity running 3-car trains from South Horizons via Lei Tung, Wong Chuk Hang and Ocean Park to Admiralty. The construction works of the project is planned to commence in 2011 for completion in 2015. The project is a designated project under the following items in Schedule 2, Part I of the *EIA Ordinance* : –

- (i) item A.2 - A railway and its associated stations;
- (ii) item A.4 - A railway depot;
- (iii) item A.7 - A railway tunnel more than 800 m in length between portals; and
- (iv) item K.10 - An explosive depot in a stand-alone, purpose built building.

Consideration of Alternative Options

Chapters 2 and 7 of the EIA report presented considerations given to alternatives/options with respect to railway alignment, location of stations, location of ventilation shafts, location of barging points, construction methods and location of explosive magazine site. The preferred options have taken into account environmental factors as well as other considerations, such as passenger accessibility, site constraints, safety and engineering practicability. Members noted that the public inspection period of the EIA report was from 10 August to 8 September 2010.

Recommendation of the EIA Subcommittee

Having regard to the findings and recommendations of the EIA report and information provided by the project proponent, the EIA Subcommittee agreed to recommend to the full Council that the EIA report could be endorsed with the following proposed conditions : –

- (a) the project proponent should submit to the Director of Environmental Protection (“DEP”) for approval, before commencing the construction of the project, a plan on the construction noise mitigation measures including Indirect Technical Remedies, for the 12 specified noise sensitive receiver (“NSR”) locations;
- (b) the project proponent be required to: set up a continuous noise monitoring mechanism at locations to be agreed with the DEP; make available the results of the continuous noise monitoring mechanism to the public through the proponent’s website during the construction stage; and take active remedial measures in the event that the measured noise levels exceed the worst-case scenario predicted in the EIA report or the levels as revised by the construction noise mitigation measures plan implemented in accordance with condition (a) above;
- (c) the project proponent should set up community liaison groups comprising representatives of concerned and affected parties, including owners’ corporations, management offices, local committees and schools in the affected areas, to facilitate communications, enquiries and complaints handlings on all environmental issues. A

designated complaint hotline should also be set up for the project to address such concerns and complaints in an efficient manner;

- (d) the project proponent should submit a quality tree planting and landscape plan as well as a post-planting care plan (for a period of three years), including compensatory woodlands and the possibility of planting fruit-bearing species, for approval by the DEP;
- (e) the project proponent should submit an updated construction and demolition (“C&D”) material management plan to the DEP for approval before commencement of the construction works. The plan should include, but not be limited to, designated transport routes, maximum volume of C&D materials to be handled per day, working hour and day, maximum number of truck movements per working day, list of measures to minimise potential environmental impacts due to handling of the materials both on site and off site, monitoring and auditing requirements to ensure implementation of the plan; and
- (f) the project proponent should ensure that all diesel fuelled construction plant used by the contractors within the work sites are powered by ultra low sulphur diesel fuel.

REGIONAL & INTERNATIONAL

CHINA

Record pollution after Expo

A month after the commercial hub of Shanghai finished its World Expo, with a theme of “better city, better life,” the city is setting records for air pollution. The city suspended work at factories and construction sites and kept vehicles off the streets to ensure clean air for the six-month, multi-billion-dollar Expo, at which Shanghai presented itself to the world as China’s most developed city.

But since the Expo ended on 31 October, a blanket of brown haze has settled over the city and pollution is more than triple levels of a few weeks earlier. The Media, including the state-owned China Daily, have reported that air pollution last month was the worst for five years. Shanghai’s environmental protection agency blames the pollution on cold weather from the north, and claims November and December always bring bad air.

Whilst an increase in coal burning during the winter, and seasonal weather patterns contribute to pollution, industry experts say the resumption of factory work after the Expo and the increase in vehicle emissions are the main culprits.

[*The Standard*, 01/12/2010]

Flowers are blooming again in Liaoning

Liaoning province has initiated energy saving and emissions reduction projects to try to avoid conflict between economic development and environmental protection. The result has been the return of clear water and bluer skies.

The city of Jinzhou, Liaoning province has had some dramatic breakthroughs in wind power, according to a local official. According to the Jinzhou Development and Reform Commission, it took Jinzhou only two years, 2008 and 2009, to get five wind power fields operating. For the period covered by the 11th Five-Year Plan (2006-2010), total installed wind power capacity is expected to reach 450,000 kilowatts.

In addition to the wind power projects, all coal-fired power plants and steelworks must have desulphurisation equipment by the end of this year. Consequently, Liaoning may be able to reduce its atmospheric pollutants, even with a rapidly developing economy.

In Liaoning, industrial energy accounts for more than 80% of total energy consumption, and 77.8% goes to the metallurgy and petroleum sectors.

Under great pressure, Liaoning made an effort to eliminate 14 industries with outmoded production facilities, in the steel, coke, calcium carbide, chemical fibre, and electric power sectors. Since the beginning of 2010, Liaoning has closed more than 300 small factories in the steel, cement, nonferrous metals, chemicals and papermaking industries.

In the past several years, it has closed more than 1,000 factories with outmoded facilities. The change has brought back clear water and blue skies, changed the economy, and sped up the development of the coastal economic belt.

According to the Asia Manufacturing Industry Association, eliminating outmoded production had helped change the industrial structure and application of new techniques. In this way, factories can reach their energy saving and emission-reduction goals. At the same time, product quality and added value output have improved and costs have decreased.

[*China Daily*, 02/12/2010]

Recycling large appliances to be free

From July 2011, manufacturing companies may no longer charge extra money to recycle large home appliances, according to China’s Environmental Protection Administration (EPA).

Many manufacturers of large household appliances are accustomed to charging customers extra money when they ask companies to help dispose of their old products, resulting in complaints from the public, who find the additional expenses unreasonable when their recycling is beneficial to the environment.

In response, the EPA has created a new regulation. Effective from July 2011, manufacturers — whether dealerships, discount stores or wholesale warehouses — of four distinct appliances (TVs, refrigerators, air conditioners and washing machines) will be prohibited from charging consumers to recycle large appliances. Those found in violation of the regulation will be subject to fines.

Since 1998, the recycling rate of large home appliances has risen from 29% to 53% in 2009. EPA wished to continue the eco-friendly behaviour and believed that appliance manufacturers and companies hindered the good progress by charging extra fees. The agency aims to officially put a stop to such practices by next summer.

[*The China Post*, 10/12/2010]

TAIWAN

Taiwan to spend US\$100 million on “green” architecture

Taiwan has announced that it will spend about US\$100 million to promote environmentally friendly buildings in a bid to cut carbon emissions and create jobs. It is expected the six-year initiative will attract additional investments of NT\$28.4 billion and help create an industry worth NT\$752.9 billion, the cabinet said.

The programme will also create 243,000 new jobs, as the authorities will subsidise private builders which incorporate energy saving and other environmental concepts into their projects. Meanwhile, new public construction projects that cost more than NT\$50 million are required to go green.

Taiwan is keen to promote green technology and architecture as it seeks to reduce its carbon emissions.

[*The Straits Times*, 03/12/2010]

JAPAN

World's first mass-produced electric car

Japan's Nissan Motors marked a major milestone in automotive history yesterday with the launch of the zero-emission *Leaf*, the world's first electric car to be mass-marketed.

Nissan said the five-seater hatch-back was rated with a driving range of 200 kilometres on a full charge under Japanese test standards, more than the 160 km advertised under California's rules and the 117 km range under the US Environmental Protection Agency's rating.

Electric vehicles are seen as a promising alternative to internal combustion engine cars as governments seek to clean up the environment and use less oil. However, their relatively short driving range – typically about a quarter of that of petrol and diesel cars – and their high price remain drawbacks.

To address "range anxiety", Nissan said it had installed charging facilities at about 2,200 dealers' sites across Japan, and quick chargers – capable of recharging up to 80 per cent of a battery's full capacity in 30 minutes – at about 200 other sites.

Delivery will start in Japan and select US states this month, followed by the first European sales in January. Nissan has filled the maximum initial orders for 6,000 *Leaf*s in Japan, and 20,000 units in the US, and these will reach customers over the next year or so.

Nissan is not the first major car manufacturer to sell an electric car. That honour belongs to Mitsubishi Motors, which launched the smaller i-MiEV electric car last year, first to fleet customers and then to individuals in April. But Nissan and its French partners, Renault, are aiming to be the top sellers in the nascent electric car market, which the alliance expects to make up 10 per cent of new vehicle sales globally by 2020.

Until production of the *Leaf* begins in the US at the end of 2012, and in Britain after that, output would be limited to 50,000 units a year, Shiga said. Production of Mitsubishi Motors' 0-MiEV, meanwhile, hit a cumulative 5,000 units last month after sales began in July 2009.

The *Leaf*'s suggested retail price is 3.76 million yen (HK\$348,400) which would fall to 2.98 million yen in Japan after the government's electric vehicle subsidies were applied. Those subsidies are applicable only until the end of Japan's fiscal year, on March 31, 2011. The government has yet to announce its incentive policy beyond that date.

Nissan is taking extra precautions by putting would-be buyers of the *Leaf* through a vetting process to make sure they are the right fit for an electric vehicle. That means anyone driving more than 100 miles a day regularly would be steered toward one of its petrol or diesel cars.

[*SMPC*, 04/12/2010]

THAILAND

Ministry keeps close eye on environmental rules

The Industry Ministry of Thailand is stepping up stricter enforcement of environmental laws to stimulate awareness among factory operators of the need to resolve problems.

The ministry's Industrial Works Department is checking factories that fall into the list of 11 harmful activities and were granted operating permits before the 2007 Constitution took effect. The Constitution mandates that industrial projects on the list of harmful activities conduct health and environmental impact assessments and hold public hearings.

According to the Industry Minister of Thailand, even though these industrial projects are not required to conduct health impact assessments because they were granted permits before the 2007 Constitution became effective, they need to provide environmental impact assessment and it has been found that some places have not been following procedures regarding environmental laws. Factories that were not yet abiding by the law would be suspended according to the Industrial Works Act.

The minister's reaction came after the Industrial Works Department was criticised for its failure to respond to complaints of untreated industrial waste, which has been an issue for years.

The minister said Thailand had more than 3 million tonnes of industrial waste, but only approximately 2 million tonnes were treated.

[*Bangkok Post*, 09/12/2010]

BELIZE

Trawling abolished

The government has announced that it will legislate to ban bottom-trawling totally. The legislation will come into effect on 8 December 2010. A complementary programme to buy-out commercial trawler fishing licences will also be implemented.

[*Elaw*, 04/12/2010]

LAOS

New dam is test case for hydropower projects

One of Asia's poorest countries officially inaugurated a \$1.3 billion hydroelectric dam that is earning badly needed revenue and could set new global standards for limiting environmental damage and improving the lives of those displaced.

The dam in central Laos was the first major hydroelectric project supported by the World Bank after a long hiatus in the face of criticism that dams harm communities and the environment.

Activists warned that it's too early to call the project a success, noting questions remain about the dam's impact on water quality and fisheries and whether people resettled will be able to support themselves economically.

The dam, which has been operating since April 2010, is expected to bring in \$2 billion over the next 25 years, money the government has pledged to spend on reducing poverty in this landlocked nation with few resources besides its mountains and rivers.

The World Bank estimates the project will account for almost 40% of Laos' economic growth this year.

According to the World Bank, the idea of the Lao government is for Laos to become the "battery" of Southeast Asia, because they have tremendous hydropower potential. The World Bank is considering further hydro-projects in Laos.

Between 1950s and the 1980s, some 35,000 large dams were built around the world. They were extolled as engines of economic development and a renewable energy source that does not require polluting fossil fuels.

The new Lao dam, called Nam Theun 2, holds back a 175-square mile reservoir on a tributary of the Mekong River. Six giant turbines pump out 1,070 megawatts of electricity.

The government and its foreign partners say social and environmental concerns are as central to the project as turbines and power lines. A 1,600-square mile protected area has been established to safeguard flora and fauna.

Seventeen villages that had to be moved have been rebuilt. The power company has made a legally binding commitment to double the living standards of the 6,300 residents within five years.

[*Taiwan News*, 09/12/2010]

IRAN

Tehran chokes and blames severe pollution on US sanctions

Residents of Tehran are blaming US sanctions for unprecedented levels of air pollution that have repeatedly forced the closure of universities and schools in the Iranian capital in the past month.

Tehran, surrounded by mountains and with millions of cars on its congested streets, has long been regarded as one of the world's most polluted cities, but the heavy smog that has recently shrouded its streets has been described as the worst in its history. An adviser to Tehran's mayor said the city's residents were breathing "poison" and said the government had asked environmental officials not to discuss the air pollution in public. The situation in the city was "critical".

The smog is said to be the result of a locally produced form of petrol that the government introduced after the imposition of US sanctions which have prevented foreign companies from selling petrol to Iran. At the time, the president of Iran described the sanctions as "futile" and said that within a week Iran would reach self-sufficiency in producing petrol.

Iran is the world's fourth-largest producer of crude oil but the second-largest importer of petrol (after the US) because it lacks refineries. Locally refined petrol produces high levels of pollution, according to the Iranian parliamentary committee for healthcare, because Iranian petrol contains 10 times the level of contaminants of imported fuel.

In its attempt to deal with the smog crisis, the Iranian government has launched small planes to seed clouds and create rainshowers, and closed government offices, universities and schools for a period of at least six days. Sport competitions, some exhibitions and official ceremonies have also been postponed.

The closure of universities was initially seen as a political move to prevent protests on Iran's national student day, but the theory was soon dropped as more and more Tehranis reported headaches and difficulty in breathing. Hospitals

reported a 40% increase in patients with breathing difficulties.

Tehran, notorious for its slow traffic, has little wind due to its location in the foothills of the Alborz mountain range; 27 Tehranis die each day from pollution-related diseases.

[*The Guardian*, 09/12/2010]

U.S.A.

US agency proposes new rules for CO2 storage

The US administration is proposing new rules to protect drinking water and track the amount of carbon dioxide stored by so-called "clean coal" technology. The rules govern an experimental technique for underground storage of carbon dioxide emissions from coal plants and other sources in an attempt to reduce greenhouse gases which contribute to global warming.

According to the Environmental Protection Agency, the new rules clarify standards for carbon storage, so industry knows what is required as it develops the technology. The administration wants to encourage carbon storage, whilst overcoming liability obstacles that could hinder development of the technology.

[*Taiwan News*, 23/11/2010]

US government will not end drilling ban off Florida

The US government will not allow any new oil drilling in the eastern Gulf of Mexico for at least the next seven years, as a consequence of the BP oil spill.

According to a senior administration official, drilling leases will not be considered in the waters off Florida as part of the change. As a result of the BP spill, the administration now understands the need to elevate safety and environmental standards.

Before the spill, the administration had considered a plan to allow drilling in the eastern Gulf.

[*The Macau Post Daily*, 02/12/2010]

BRAZIL

Amazon deforestation falls to new low

Deforestation in the Brazilian Amazon has fallen to its lowest rate for 22 years, the government says. Satellite monitoring showed about 6,450 square kilometres of rainforest were cleared between August 2009 and July 2010, a drop of 14% compared with the previous 12 months. Local officials said the reduction was due to better monitoring and police control.

The environment minister of Brazil said the figures were fantastic and she would be proud to present the results at the UN Climate Change Conference in Cancun, Mexico. She added that Brazil was well on course to reduce deforestation to its target of 5,000 square kilometres per annum by 2017.

The latest figure still represents an area of more than half the size of Lebanon or Jamaica, but it is far lower than the peak of 27,772 square kilometres in 2004. Deforestation is thought to be responsible for about 20% of carbon dioxide emissions worldwide. The cutting and burning of trees in the Amazon has made Brazil a major contributor of the greenhouse gases which fuel global warming.

The latest data was published by the Brazilian Space Research Institute which uses satellites to monitor deforestation in the Amazon.

The head of the Institute said the reduction was the result of co-ordinated action, including greater control of illegal logging by Brazil's environment ministry and the federal police. He also praised responsible businesses that had stopped buying beef and soya produced in deforested areas. A programme that had given legal titles to about 300,000 landholders had also helped reduce the rate of forest clearance.

The Brazilian government has also been promoting extractive reserves where local people can make a living from the forest without destroying it.

Environmental groups have warned that Brazil's soaring economic growth, as well as increasing global demand for agricultural produce, could increase pressure on the Amazon rainforest in the coming years.

[*BBC News*, 01/12/2010]

UNITED KINGDOM

Viking Energy wind farm plan for Shetland considered

Controversial plans to build Scotland's biggest community wind farm are set to be considered by Shetland Islands Council. Viking Energy plans to build more than 100 turbines, after scaling back earlier proposals. Hundreds of people signed a petition last year against the plans, arguing it was too big and would blight the landscape. The project is a joint venture with Scottish and Southern Energy.

The Convener of Shetland Islands Council has urged colleagues to weigh up the economic and environmental issues. The Council is expected to make a recommendation to Scotland's Energy Minister who will make the final decision on the planning application.

The wind farm would also need a seabed cable connecting Shetland with the Scottish mainland to export power.

[*BBC News*, 14/12/2010]

AUSTRALIA

New laws to shame environmental offenders

Businesses which pollute the environment will be named and shamed under new legislation to be introduced in Queensland Parliament.

According to the Climate Change and Sustainability Minister, the new environmental protection laws were tougher than ever and would give courts more power to penalise companies that are doing the wrong thing. The environmental watchdog would be empowered to allow compliance teams to enter business premises suspected of an environmental offence without a warrant.

Under the new legislation, not only will companies be slapped with existing fines, courts will also be able to issue a range of new court orders that will have an impact on a company's reputation and limit their ability to benefit from their unlawful activities. This will create a further deterrent to common breaches of the environmental legislation, such as reckless contamination of waterways and unlawful clearing of native vegetation.

The legislation would allow courts to hand down a publication or notification order by which the offender is "named and shamed" in local media.

It includes a monetary benefit order to require an offender to pay back any financial benefit gained from cutting environmental corners, as well as a

public benefit order, under which an offender would be required to restore the environment for public benefit.

[*The Sydney Morning Herald*, 24/11/2010]

WORLD

Guard the biodiversity that sustains us all

In this, the UN's International Year of Biological Diversity, the environmental challenges we face are severe and increasing, and the need for action has never been more urgent.

Our lives, and those of all other creatures on this planet, are both part of and dependent on biodiversity. Plant and fungal diversity lies at the very foundation of biodiversity, and on them all other life depends. And yet, despite our dependence on this incredible natural heritage for our very lives and well-being – and those of future generations – we are squandering it at an unprecedented rate. Species extinctions are occurring at a rate far greater than the natural cycle, owing largely to habitat destruction caused by human activities such as deforestation and land clearance. Evidence suggests that climate change will accelerate this loss.

But there is hope amid the gloom. In fact, there is no technical reason why a species should go extinct, and great achievements in protecting biodiversity are being made. For example, scientists and conservationists around the world are collaborating on projects such as the Millennium Seed Bank partnership, founded and coordinated by the Royal Botanic Gardens, Kew. This partnership of more than 100 institutions in over 50 countries has already conserved 10 per cent of the world's wild plant species, and is working towards conserving 25 per cent, focusing on those species that are rare, endangered and useful.

What is needed now is the political will and financial resources to underpin these efforts. At the national level, it is essential that biodiversity conservation is "mainstreamed" – made an integral part of government policy and sustainable management practices worldwide. Poverty alleviation, central to the UN Millennium Development Goals, is largely measured in the growth of gross domestic product, but must include sustainable management of the natural capital on which economic health depends.

Effective conservation programmes are based on sound scientific knowledge. Kew's leading work in understanding and conserving plants around the world is hence a key pillar in the fight against biodiversity loss.

A deep understanding of plant science is essential in planning and executing conservation projects. Kew's recent work with various other organisations has revealed for the first time that one in five of the world's plant species is threatened with extinction. As a result, we now have a baseline from which to measure progress in plant conservation around the world.

Biodiversity is essential to our health, wealth and well-being, and we now have the ability to halt its destruction and turn the tide. It is simply a question of priorities.

Committing the political will and a small fraction of the world's financial resources to biodiversity conservation – and the scientific research that underpins it – would bring indispensable long-term benefits, including a healthy planet for our children. The time to start is now.

[*SCMP*, 01/11/2010]

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**Convictions under environmental legislation:
October to December 2010**

[Note: the EPD no longer classifies second (and subsequent) offences.]

The EPD's summary of convictions recorded and fines imposed during the above period is as follows:

October 2010

Twenty-nine convictions were recorded in October for breaches of legislation enforced by the Environmental Protection Department.

Nine of the convictions were under the Air Pollution Control Ordinance, 11 under the Noise Control Ordinance, 8 under the Waste Disposal Ordinance and 1 under the Water Pollution Control Ordinance.

The heaviest fine in October was \$40,000, imposed on a company that illegally discharged waste or polluting matter into a water control zone.

November 2010

Twenty-four convictions were recorded in November for breaches of legislation enforced by the Environmental Protection Department.

Four of the convictions were under the Air Pollution Control Ordinance, 7 under the Noise Control Ordinance, 8 under the Waste Disposal Ordinance and 5 under the Water Pollution Control Ordinance.

The heaviest fine in November was \$50,000, assessed against a company that carried out prescribed construction work in a designated area without valid construction noise permit.

December 2010

Thirty-one convictions were recorded in December for breaches of legislation enforced by the Environmental Protection Department.

Seven of the convictions were under the Air Pollution Control Ordinance, 3 under the Noise Control Ordinance, 15 under the Waste Disposal Ordinance and 6 under the Water Pollution Control Ordinance.

The heaviest fine in December was \$20,000 for an offence of illegal discharge of waste or polluting matter in a water control zone.

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