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## The Conservancy Association

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Submission to the Legco EA Panel by CA  
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The contribution of Hong Kong's carbon dioxide emission to the world is comparatively small, only 0.147% (UNSD, 2002). Even if Hong Kong can drastically reduce its greenhouse gases emissions, it may not necessarily mitigate the impact of global climate change. The latest IPCC Fourth Assessment Report of Working Group III states that global green house gases emissions will continue to grow over the next few decades (2000 to 2030, 45 to 110% from energy use) given the current mitigation measures.

Hong Kong does not need to do anything if we simply follow the Kyoto Protocol (reduce GHG emissions by an average of 5% below 1990 levels by 2008-2012). But Hong Kong should not shun its responsibility as a cosmopolitan city which consumed huge amounts of resources and energy from over the world to keep our lives going as well as economy growing. Although the transformation from an industrial economy to a service economy during the 1990s reduces our local carbon emission, the feat was accomplished by shifting our manufacturing sector as well as sources of pollution and emission to other places in the Pearl River Delta.

### Setting local GHG emissions target

In fact, we have no reason to feel complacent: both our energy consumption and GHG emissions have been on the rise since 2000. Hong Kong should shoulder its responsibility to keep GHG emission to a minimum and adopt a "Kyoto-plus" policy. Since the Hong Kong SAR Administration and the Guangdong Provincial Government agreed to reduce four major air pollutants by 2010, using 1997 as the base year, 1997 could also be used as the base year for GHG emissions reduction.

|      | CO <sub>2</sub> -e in tonnes/Capita | Electricity/Capita (GJ) |
|------|-------------------------------------|-------------------------|
| 1990 | 6.9                                 | na                      |
| 1997 | 6.0                                 | 17.89                   |
| 2000 | 5.9                                 | 19.61                   |
| 2001 | 5.9                                 | 19.95                   |
| 2002 | 6.1                                 | 20.20                   |
| 2003 | 6.4                                 | 20.35                   |
| 2004 | 6.4                                 | 20.52                   |
| 2005 | 6.5                                 | na                      |

### Implement a Carbon Dioxide Emission Trading Scheme

The latest IPCC report pointed out that "integrating air pollution abatement and climate change mitigation policies offers potentially large cost reductions compared to treating those policies in isolation." Implementation of measures to reduce Green House Gases emissions will also reduce that of

other air pollutants such as SO<sub>2</sub>, NO<sub>x</sub> and RSP, but not the other way round. As such, CA suggested including CO<sub>2</sub> emission in the Emission Trading Pilot Scheme for Thermal Power Plants in the Pearl River Delta Region.

It should be noted that SO<sub>2</sub>, though an air pollutant, contributes to a net cooling effect in the form of aerosol. Of course it is important to cut down SO<sub>2</sub> emission in the region, but if there is no provision to cap CO<sub>2</sub> at the same time, the problem of local warming will only exacerbate, as SO<sub>2</sub> promotes cloud formation which reflects heat, and because of its comparatively short lifetimes, the concentration in the atmosphere decreases much faster than that of CO<sub>2</sub>.

#### Proactive Compensation Scheme-Zero Damage to the Environment

Avoidance of habitat damage and environmental degradation should be the guiding principle when planning infrastructure. But when it is not feasible, damage to the environment should be kept to a minimum, preferably zero. Although the present Environmental Impact Assessment process includes evaluation of gaseous emission, it pertains more to air quality impact than GHG emissions. As large scale transport infrastructure such as highways and the logistic park will generate large amounts of GHG, we suggest that a proactive compensation scheme such as tree planting should be implemented to offset the emissions.

#### Auditing Offset Programs

As “carbon offset” is becoming a lucrative business in many places, it is a matter of time when it will reach Hong Kong. We suggest that all offset programs must be duly audited by an independent and authorized agent.

#### Response Strategy

Besides developing mitigation policies to reduce GHG emissions, the Administration should also formulate a response strategy to prevent or reduce the degree of the adverse effect of climate change.

#### *Disaster Management*

It is expected that climate change induced by global warming will lead to more unstable and even chaotic weather. The rising sea level, higher possibility of sea surge, flooding and the potential of the visit of super-typhoon might increase the risk of disasters.

Preparation and coordination of related departments with the government during the disaster moment ought to be improved to cope with extreme weathers.

#### *Higher Energy Demand and Heat Stress*

Warmer weather and higher humidity would result in greater use of air-conditioning and thus higher energy demand. An increase of the ambient temperature by 1°C would increase the electricity consumption by 9.02%, 3.13% and 2.64% in the domestic, commercial and industrial sectors respectively. Moreover, higher annual temperatures could lead to an increased incidence and severity of high temperature extremes, leading to increased occurrences of heat stress and discomfort, particularly among the elderly, the sick and those without access to air-conditioning.

Urban planning might take the issue of climate change into consideration. By increasing amount of greenery, lowering urban density, enhancing air ventilation in urban area, and promoting more efficient management of end-use of electricity would help to minimize the demand of energy.