



FOREWORD

Realising new growth opportunities in alternative investment, technology and production, supply chain industries have started looking into more sustainable operability both directly and indirectly in an effort to contribute to low carbon business enterprises and services. Financing the low carbon economy and government policy play a strategic role to lead the cause but the current development of Hong Kong's climate change policies still lags far behind other world city competitors.

WHAT IS THE LEADERSHIP ROLE FOR HONG KONG IN CARBON TRADING?

Whilst many businesses are now moving towards a more sustainable operation thus nourishing the growth of low carbon business enterprises and services, a low carbon economy is expected to exert a direct impact on both business operations and market participation. The Climate Conference 2008 aims to provide a platform to share insight on the emerging framework that is defining the new drivers of growth in business.

A decade ago it was the digital economy that fundamentally changed the way we operated and did business across borders. The forecast of the growth of a virtual economy and its impact has become a reality. As we begin to approach the first decade in this Century a new economy is emerging. The Low Carbon Economy, which is emerging partly out of necessity and as a result of greater awareness of climate change is beginning to have a noticeable economic impact. What was previously associated with problems of high-cost and inefficiency is now rapidly becoming a high-growth industry where profits and returns are increasingly attractive. The World Bank estimated the global carbon market at US\$64 billion in 2007, a market that has doubled its market worth each year since 2005. Sustainability and carbon emission reduction is fast becoming a ubiquitous rallying theme across all sections of society. The booming markets are creating new and alternative business opportunities that could possibly overtake what the digital economy has brought.

On the last issue, we discussed the opportunities of developing a carbon market and trading platform as a financial centre in Hong Kong with her unique political and economic advantages. The commissioning plans of Clean Development Mechanism (CDM) projects within the territory that Environmental Protection Department released in June further enhance the readiness of Hong Kong in moving towards a low carbon economy. However, the competition is fierce - the newly unveiled Tianjin Climate Exchange is established as China's first comprehensive platform for trading carbon credits under CDM in Mainland China. Valued at US\$13 billion in 2007, the CDM value is now worth US\$25 billion in 2008. The global market is expected to be worth US\$500 billion in 5 years. How would Hong Kong achieve leadership and scale up various low carbon solutions in the PRD region in face of rapid market expansion and business potential as such?

Being recognised as a strong financial centre in Asia region, Hong Kong can take advantage of its close proximity with Mainland China whose projects account for 73% of the total volume of CDM transacted in 2007 by way of financing a low carbon economy on clean technology. Clean technology has become the fastest growing sector in venture capital and private equity investment. Top 10 local banks now have committed 10-15% of project finance on renewable and clean technology, and a TCG survey revealed an average annual return of 87% since 1999 globally. By 2020 generation of power from non-hydro renewable will reach 20%.

On the carbon finance front, the voluntary carbon market was worth US\$350 million in 2007, and is forecast to be worth US\$4 billion in 2012. Trades of voluntary offsets approved through international standards like the Voluntary Carbon Standard have been very limited so far. The Hong Kong Exchange could lead by promoting the trade of these carbon credits.

There are also other unexplored opportunities including commoditising carbon for consumers and ecosystem developing markets.

The "Climate Group will host **"The Climate Conference 2008 – Making Business-Sense of the Low Carbon Economy"** on 27th October designed for senior business executives, policy leaders and stakeholders who are keen to take a lead in tackling climate change by going carbon-neutral, to share insight and dialogue on climate change and leadership business and the opportunities that arise. Specific areas to be discussed include:

- The tools and resources necessary to support financial institutions to develop a road map in this burgeoning carbon market
- The future low carbon technology innovation that would attract investment and encourage emissions reduction
- The investment and lending needs for Hong Kong to spur on the development of low carbon solutions in terms of financial instruments and mechanisms

Professor Lord Nicholas Stern, Chief Economist of World Bank, former adviser to the UK Government on the Economics of Climate Change and Development, will deliver the keynote speech. Professor Lord Stern's landmark report "The Stern Review – The Economics of Climate Change", has transformed the approach to climate change, and has become the beacon for others to follow. Professor Lord Stern's insight on the impact of climate change on world economy will set the scene for the scale of the challenge and opportunities that the region faces.

Peter Zapfel, Assistant to Deputy Director-General of DG Environment at European Commission in Belgium will also outline the forthcoming improvements on EU carbon markets and provide a perspective on the role of the Asian-Pacific region in the emerging global carbon market.

This one-day event will address the current & future trends, risk & opportunities, strategies & solutions and other key elements on low carbon technology and low carbon finance. It is expected that discussion in the conference will conclude with lists of regional climate actions that catalyse strategic leadership in financing a low carbon economy through financial instruments. The event would significantly set the momentum in the region. On-line registration is open with detail found via here:

<http://events.theclimategroup.org/sites/Members/Events/HK2008>

Prospering in the new Low Carbon Economy is essentially making business sense of climate change. Undoubtedly Hong Kong needs to think outside the box in order to capture the markets for European emissions trading allowances and CDM credits in this heavily competitive environment.

MANAGING CARBON IN THE SUPPLY CHAIN

Manufacturers, suppliers, users and disposers of products all have a role to play in minimising the negative effects of products and terminal emissions on the environment. Sharing responsibility for environmental effects will yield a more efficient use of resources, cleaner products and technologies, improved relations between companies and communities, and responsible consumer choices.

Climate Change and Supply Chain

Climate change is a growing concern for all and an increasing number of enterprises is responding to new policies and voluntary commitments to reduce the risks and exploit the opportunities brought along. As corporations attempt to move toward regulatory compliance, environmental sustainability and corporate responsibility, it has become apparent that reducing the impact on climate change requires them to look beyond the boundaries of their own operations.

Supply Chain under the Spotlight

A recent study indicates that exports currently account for nearly 1/3 of China's greenhouse gas emissions. This draws the world's attention on the hidden carbon footprint along global supply chains, giving rise to the debate on whether the consumer or manufacturer should be held responsible for the associated emissions. Although no consent has been reached on the issue yet, both ends of the supply chain are already facing the pressure to reduce their respective carbon emissions.

Multinational enterprises have started looking to reduce the climate impacts of their suppliers as part of their corporate policies to address climate change. Some of them have imposed requirements on their suppliers' performance, while others are at the stage of gathering information on their suppliers. They aim to understand the measures that their suppliers are taking to reduce climate change risks – i.e., the energy being used by suppliers and the carbon emissions associated, sources of other greenhouse gas emissions and measures being taken to reduce these carbon and other greenhouse gas emissions.

The Drivers

Managing carbon in the supply chain is becoming increasingly important for a number of reasons:

- (1) Although there are currently no legal requirements in place to regulate greenhouse gas emissions along the supply chain, businesses have started looking at the issue to minimise the risks associated with potential regulations imposed on them, such as taxation of emissions or emissions limit. A survey conducted by Carbon Disclosure Project earlier this year revealed that 96% of suppliers see greenhouse gas regulations a potential risk to business.

- (2) The monetary value of carbon in the value chain offers new business opportunities and competitive advantages if it can be harnessed. A carbon-conscious approach can lead to internal cost savings by more efficient use of energy, reduced production of waste and recycling of raw materials. Initial work conducted by Supply Chain Network Project showed that some of its partner organisations managed to achieve 9% savings in supply chain expenses by reducing carbon footprints along their supply chains. Retail giant Wal-Mart is expected to save nearly US\$11 billion along the supply chain by reducing the packaging of just 300 toys. In addition, the market is attracted to businesses that have invested in green technologies. For instance, International Finance Corporation is calling on banks in developing countries to increase lending to companies wishing to invest in climate-friendly technologies.
- (3) Media plays an influential role in driving the management of carbon along the supply chains. A survey conducted by Ernst & Young this year found that 19% of businesses believe that media will be one of the main drivers behind implementing sustainable, green and carbon related strategies in their supply chains.
- (4) Consumer awareness about climate change is a driving force behind a market for low carbon products and services. A recent Havas Media survey indicated that in two-thirds of the markets researched (including UK, US, Mexico, Brazil, Germany and France), consumers felt that companies and brands should be finding solutions in combating climate change rather than the government. This can be demonstrated by the increase in sales of climate-safe products. Commitment from major, international retailers to provide customers with information on the climate impact of products is driving expectations on carbon labelling and disclosure into the supply chain.
- (5) Green supply chain management practices incorporated by business leaders have created peer pressure within industries. End buyers have started to incorporate environmental assessments and carbon footprint calculation in their supply chain management programmes. For example, giant companies including Cadbury Schweppes, Dell, Nestlé, PepsiCo, Procter & Gamble and Tesco have teamed up and formed the Supply Chain Leadership Collaboration to work with their suppliers to curb greenhouse gases. This is likely to become a common practice within industries in the future, just as the development of human rights and ethics programme along the supply chains in the mid-1990s.

These compelling drivers simply reiterate is the need for action to ensure clear, consistent and effective measures to effect understanding of carbon impacts across value chains.

The Challenges

A full life study of the carbon impact associated with a product or service is a complex undertaking as it involves gaining data that may not be easily available either in the company itself or its suppliers. Hence, increased collaboration across the value chain is critical to seek and implement solutions for reducing carbon impacts.

However, businesses in China, mostly at the lower end of the supply chain, are in the early stages of understanding and managing energy and developing carbon management plans, and thus there is a knowledge gap along supply chains.

In order to fill this gap, The °Climate Group has formed a partnership with Business for Social Responsibility and British Consulate-General Guangzhou to develop and pilot a series of training sessions called “Managing Carbon in China’s Supply Chains - China Climate Change Training Initiative (CCCTI)”. The goal is to provide knowledge and practical skills to target audience for managing and reporting impact on climate change, including senior business executives (Chinese business owners and strategic directors) and operational managers (those implementing strategies).

CCCTI aims to build awareness of opportunities and practical steps for moving forward in managing carbon in China’s supply chains. Additionally, it will:

- Foster development of common consideration of language and assumptions, while revealing key unrealised, underlying perverse incentives that stand as barriers;
- Identify key obstacles and attendant opportunities for buyers and suppliers to mitigate climate impact in a way that aligns with business imperatives;
- Create communication channels for informative and constructive dialogues between buyers and their suppliers;
- Assess the need for similar convening, including over longer time-scales and with different audiences and promote future training

For more information on CCCTI, please write to: kma@theclimategroup.org.

Useful Links:

Supply Chain Economics

This report from ClimateChangeCorp.com explores how companies can green their supply chain, whilst watching their bottom line.

2016 – The Future Value Chain

This study from the Global Commerce Initiative defines a unique vision of the total value chain for consumer goods from manufacturing to consumption.

SMART 2020: Enabling the Low Carbon Economy in the Information Age

This report from The oClimate Group has a section that focuses on fuel, electricity and heating savings that smart logistics can bring about.

CARBON IN FOCUS

OVERVIEW OF CLIMATE CHANGE POLICIES IN HONG KONG

Chief Executive of the HKSAR government pledged his commitment to address climate change, but declined to set a specific target for reducing GHG emissions. Where is Hong Kong up to at broader government policy level? And how other world cities are responding in leveraging this global action?

The Kyoto Protocol has been extended to Hong Kong since May 2003 as a region of China listing under Annex I of the Protocol, freeing Hong Kong from the immediate responsibility of limiting or reducing greenhouse gas (GHG) emissions, but has to submit national communications in accordance with the specific requirements of the United Nations.

It was not until 2007 when Mr Donald Tsang pinpointed that “global warming has become a challenge to the international community”, and that Hong Kong “should do our part to improve the regional environment” in the Policy Address delivered in October 2007. In the same year Hong Kong adopted the Asia-Pacific Economic Co-operation (APEC) Leaders’ Declaration on Climate Change, Energy Security and Clean Development, and became a member of the C40 Large Cities Climate Leadership Group (the Group). The Declaration, amongst other action agenda, calls upon member countries to work towards reducing energy intensity of at least 25% by 2030 (using 2005 as the base year) while the Group, led by the Mayor of London, aims to accelerate emissions reductions in the world’s largest cities.

To coordinate joint efforts across relevant bureaux and departments, an Inter-departmental Working Group on Climate Change under the lead of Environmental Protection Department was established in October 2007. The Working Group has commissioned an 18-month study on the effects of climate change on Hong Kong, GHG emissions control measures, as well as GHG inventories and emission trends for Hong Kong, with the purpose to collect baseline information for future policy formulation.

In June 2008, the Environmental Protection Department announced the legal framework for projects in Hong Kong to be certified under the Clean Development Mechanism (CDM), under which carbon credits can be obtained and subsequently traded in the carbon market through the implementation of carbon reduction projects.

Various measures have been taken in order to reduce carbon emissions, including promotion of energy efficiency and energy conservation, control of emissions from power plants, use of landfill gas, regulation of emissions from transportation, adoption of emission reduction projects in manufacturing sectors, other demonstration projects, and mandatory implementation of the Building Energy Codes in 2009. Yet, Hong Kong has not set a carbon reduction target and a clear centralised policy regarding climate change, proclaiming low GHG emissions per capita amongst other high-income economies, is seemingly lacking.

Comparison with other cities and states

Developed cities within Europe, the USA and Asia as well as some developing cities have been taking proactive steps in addressing climate change issues. The following table summarises the main climate change policies as well as specific targets set by some of these developed and developing cities and states.

Although China is currently not subject to an emission reduction target under the Kyoto Protocol, there is an increasing pressure from the international arena on China to reduce its emissions, owing to its vast amount of total emissions. China has already formulated centralised climate change policies and is undertaking various ambitious carbon reduction projects. Hong Kong, claiming to be Asia’s World City and as one of the most prosperous cities in China, should make reference to the approaches adopted by other world cities.

City/ State	Characteristics	Key Policies / Strategies	Targets	Progress / Benefits
California (USA)	Population: 36,132,000 Area: 411,049km ² GRP: US\$1.88 trillion (2005) Carbon footprint: 496.95 million tonnes CO ₂ e (2004)	The Global Warming Solutions Act (AB32) 2006	Reduce GHG emissions to 2000 levels by 2010; Reduce GHG emissions to 1990 levels by 2020; Reduce GHG emissions to 80% below 1990 levels by 2050	Estimated US\$4 billion income generated by 2020; Estimated increase in GRP of US\$60 billion by 2020 Estimated 103,000 new jobs created by 2020

City/ State	Characteristics	Key Policies / Strategies	Targets	Progress / Benefits
Québec (Canada)	Population: 7,546,000 Area: 1,700,000km ² GRP: US\$298.26 billion (2006) Carbon footprint: 89.4 million tonnes CO ₂ e (2005)	Québec and Climate Change Action Plan 2006-2012 "A Challenge for the Future" 2006	Reduce GHG emissions by 13.8MtCO ₂ e Reduce GHG emissions to 6% below 1990 levels by 2012	Not documented
Victoria (Australia)	Population: 5,023,000 Area: 237,629km ² GRP: US\$210.02 billion (2006) Carbon footprint: 121.87 million tonnes CO ₂ e (2005)	Victorian Greenhouse Strategy 2002 and Victorian Greenhouse Strategy Action Plan Update 2005	Reduce GHG emission to 60% below 2000 levels by 2050; Increase renewable energy generation from 4% in 2006 to 10% by 2016; Increase renewable and low emissions energy generation to 20% by 2020	Estimated annual GHG emissions reduction of 5-8.3MtCO ₂ from 2008-2012
North Rhine-Westphalia (Germany)	Population: 18,058,000 Area: 34,083km ² GRP: US\$705.56 billion (2005) Carbon footprint: 222.12 million tonnes CO ₂ (2004)	The Energy and Climate Protection Policy of North Rhine-Westphalia 2005	Reduce energy consumption to 20% below 2006 levels by 2020; Increase renewables in electricity supply from 2% in 2006 to 12.5% by 2010 and 20% by 2020 (100TWH)	Reduction of GHG emissions by 31MtCO ₂ annually through cross-sectoral policies; Estimated 23,500 new jobs created by 2020
São Paulo (Brazil)	Population: 40,443,000 Area: 248,809km ² GRP: US\$338.35 billion (2004) Carbon footprint: 83 million tonnes CO ₂ (excl. LULUCF) (2003)	São Paulo State Programme for Climate Change (PROCLIMA) 1995	No targets set	Develops and produces the national inventory for methane and transport emissions.
Maharashtra (India)	Population: 96,752,000 Area: 307,577 km ² GRP: US\$42.25 billion (2004) Carbon footprint: 110 million tonnes CO ₂ (2005)	Maharashtra Strategic Energy Conservation Plan 2005	No targets set	Estimated total cost are US\$758.21 million; Estimated energy saving benefits are US\$2.55 billion; Estimated energy savings of over 20,000GWH; Estimated capacity savings of over 1,000MW by 2012
Tokyo (Japan)	Population: 12,678,000 Area: 177,900km ² GRP: US\$728.30 billion (2003) Carbon footprint: 64 million tonnes CO ₂ e (2005)	Tokyo Climate Change Strategy 2007	Reduce GHG emissions to 25% below 2000 levels by 2020	Not documented
Guangdong (China)	Population: 83,040,000 Area: 177,900 km ² GRP: US\$348.30 billion (2006) Carbon footprint: not documented	Mid- and Long-Term Energy Conservation Plan for Guangdong (2006-2010)	Reduce energy intensity to 15,611MJ per US\$1,000 (16% reduction on 2005 price); Reduce energy intensity by 18% on 2005 price in cities on Pearl River Delta	Not documented
Hong Kong (China)	Population: 6,963,100 Area: 1100km ² GPR: US\$207.21 billion (2007) Carbon footprint: 44.8 million tonnes CO ₂ e (2005)	No centralised policy	No targets set	Consultancy study to update GHG inventories, project future trends in GHG emissions, characterise impacts of climate change, evaluate and recommend strategies and measures for reducing GHG emission and adapting to climate change

The Way Forward for Hong Kong

Not all of the above cities have set specific reduction targets on GHG emissions. Instead, a number of them have set alternative targets by using other criteria such as energy use, energy intensity and renewable content of electricity generation. These targets lay the foundation for solid work on

addressing climate change while allowing flexibility for the cities to build up momentum for carbon reductions and to set emissions targets at a later stage. As Hong Kong has pledged on reducing energy intensity as stated in the APEC Declaration, it would be appropriate for Hong Kong to formalise an energy reduction target, before consensus on a deal to succeed the Kyoto Protocol can be reached by the international community.

Although Hong Kong may not be ready to set a specific GHG reduction target for the time being, there is an urge to develop long-term and aggressive climate change policies, energy efficiency and emissions reduction plans for sectors like power supply, transport and building construction that account for the major local emissions.

Given the strong ability and obligation to address climate change, Hong Kong should take a more proactive role in joining the global efforts to secure our competitiveness in terms of opportunities related to the issue. For instance, having a vibrant and innovative financial sector and with her close proximity to Mainland China, there is a huge potential for Hong Kong to develop herself as the largest carbon trading centre in Asia. Timely planning for climate change policies and strategies will enable Hong Kong to stand on a vantage point.

CLIMATE EVENT

CSR ASIA SUMMIT 2008 – 3-4 NOVEMBER, BANGKOK, THAILAND

Running for the 6th time in 2008, the annual CSR Asia Summit has quickly emerged as one of the most anticipated corporate social responsibility (CSR) events to explore cutting-edge topics unique to the Asian context since its inception.

The theme for this year's Summit is "**CSR: The next agenda – Pushing the boundaries of environmental and social responsibility**". Expecting over 250 international delegates, with over 200 already registered, the Summit seeks to break down highly complex issues, providing delegates with different perspectives on how to tackle them. Kasit Piromya, former **ambassador of Thailand** to Russia, Mongolia, Papua New Guinea, Germany, Japan and the USA, Greg Koch, Managing Director of Environmental and Water Resources, **Coca-Cola**, and Ernest Wong, Supply Chain Social & Environmental Responsibility Program Manager of **Hewlett-Packard** will speak at the Summit keynote panel, and more than **60 CSR professionals** will lead **24 workshops** setting the tone for discussions. Click here (<http://www.csr-asia.com/summit08/programme.php>) to view the event programme.

To receive your 20% discount as a member/partner of The °Climate Group, please tick the 'The Climate Group' box under the **How did you learn about CSR Asia Summit 2008?** section of the registration page. Book your seat now and discover CSR issues you can't afford to miss: <http://www.csr-asia.com/summit08/registration.php> or contact Jimmy Huen at jhuen@csr-asia.com or (852) 3579 8079.

LOW CARBON TIPS

To be able to quantify emission reductions, an organisation needs to measure its carbon footprint. The Climate Group has put together "Top ten tips for developing your carbon footprint" which outlines factors including the need to use a recognised standard to guide the process, such as the GHG Protocol www.ghgprotocol.org developed by the World Resources Institute and the World Business Council for Sustainable Development. Once a GHG inventory has been calculated, measures to avoid or reduce emissions should be put in place. The most cost-effective, direct emission reductions projects, such as energy efficiency, should be tackled first. Fuel switching or purchase of green power are also effective ways to reduce direct emissions. Offsetting should only be considered when all other reasonable measures to reduce its GHG emissions have been implemented. Please refer to the "Top ten tips for purchasing carbon offsets" that describes the essential attributes of a credible offset as well as how to develop a tailored offset strategy.

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ABOUT THE °CLIMATE GROUP

The °Climate Group (www.theclimategroup.org) is an independent, not-for-profit organisation that works globally with government and business leaders to advance climate change solutions and accelerate the transition to a low carbon economy. Founded in 2004 by a diverse group of companies, governments and supporters who saw the opportunity to create new momentum in the international effort, its coalition of proactive leaders – from government, business and civil society – has demonstrated that emissions reductions, essential to slow climate change, can be achieved while boosting profitability and competitiveness. The °Climate Group has offices in the UK, US, mainland China, Hong Kong, India and Australia. The Hong Kong operation has been registered as a statutory charitable organisation since January 2008.

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