



BUSINESS ENVIRONMENT COUNCIL  
商界環保協會

## The Impact of Climate Change in Hong Kong and the PRD From an Economic Perspective

Dr Andrew L Thomson, Chief Executive Officer

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## Outline

- Overview of the climate challenge for business
- The state of play of business in the PRD
- Moving the business community forward



Source: Unknown

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## Climate Challenge for Business

# UNCERTAINTY

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## Uncertainty?



- Price of Carbon – US\$10-85/tonne
- Definition of CO<sub>2</sub> as a pollutant or not
- Definition of air as a common resource
- Rate of rise of atmospheric CO<sub>2</sub>
- Impact of this rise – climate shift, sea level rising, floods, droughts, storms, pest and vectors of disease migration etc
- Future discount rates and return on investments
- Sea level rise is PRD: 9-107cm by 2050 Chinese Meteorological Administration
- Also indicate that we have a 65cm sea level rise plus a historical high tide that 3,400km of area will be flooded giving rise to a single event economic loss ~ US\$ 200 billion

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## My Prognostications



- Standards will get tighter
- Carbon markets will become more formalized and prices reflected in global goods and services – (IPCC US\$ 30-155/T Carbon equivalent)
- Energy will become more expensive (50% increase if carbon at US\$100)
- Sea levels will continue to rise – cm certainly and meters very possibly
- Weather will continue to be unpredictable – go figure!
- We will still see many sub-standard projects developed in Asia – India floods
- Green building materials labeling and building certification will increase – drive for low carbon materials and buildings
- Hong Kong will soon have a Greenhouse building rating scheme similar to the one in Australia
- Project decisions will still be driven by cost decisions – but carbon will be factored in.
- CO<sub>2</sub> emissions will increase before they are stabilized and eventually are decreased
- The actual process of change will be more messy than it should be – chaos theory.
- We will do more studies.. We will procrastinate..
- We will build bigger sea walls and defensive dykes – We will over and under-engineer
- Drive towards carbon foot-printing and carbon offsetting and carbon neutrality will continue

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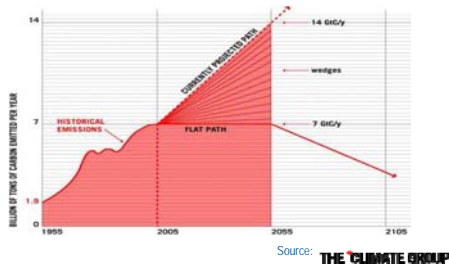
## In the News



- Commission tightens screw on carbon market
- Norwegian solar energy firm to invest 4.31 billion dollars in Singapore
- Save the planet? It's now or never, warns landmark UN report
- Countries ready for serious negotiation in Bali: UN
- World "must wake up to adaptation challenge"
- Risking the Weather: The Insurance Sector Faces Climate Change
- EU climate and energy proposals delayed
- Mitsubishi Aims to Slash Emissions from Product Usage and Manufacturing
- Renewable Energy: Blowing in the Wind!
- BEC launches – Climate Change Business Forum

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## Reducing global CO<sub>2</sub> emissions



Pacala and Socolow originated the idea of the climate wedges through their "stabilization triangle."



Double the fuel efficiency of the world's cars, or halve the kilometres miles travelled

There are about 600 million cars today, with 2 billion projected for 2055



## Conflicting Views

Early intervention



(AP Photo/Shizuo Kamabayashi)

Wait it will be cheaper later

Underlying this we have robustly presented Stern Report on the Economics of Climate Change. BAU approach is going to cost us best case 5% of Global GDP for now and forever, and if take broader consequences (i.e. internalise environment and social costs) then probably 20%

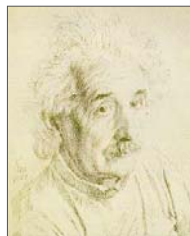
Early intervention would cost us 1% of GDP

## Business Preparing for a Carbon Constrained World



- Efficiency experts
- Technology Adopters
- Technology Providers
- Leaders in Adaptation
- Innovators
- Providers of eco-product or eco-services
- Providers of access to capital
- Providers of climate investment portfolio
- Operators of trading platforms
- Estimators of risks and Insurers
- Partners
- Lawyers

*Insanity: doing the same thing over and over and expecting different results*



BP aspires to be one of the world's great companies, with a sustainable long term future. This is captured by the phrase 'beyond petroleum', reflecting our brand positioning today and our aspiration to meet the world's future energy needs.

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## WBCSD Strategic Model

**Tomorrow's Society  
The Role of Business**

**Public Policy Agenda**  
Key Societal Themes  
Framework Conditions

**Business Agenda**  
The Business Case for SD

**Business license to operate, innovate & grow**

Source WBCSD

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**Key sectors:**

- Power generation
- Industry and manufacturing
- Transport
- Buildings

**Perspective:**

- Hong Kong
- Regional
- Global
- Market

**Key Drivers:**

- Profit
- Local and International legislation
- Market Mechanisms
- Commodity price variations
- Consumer and supply chain pressure
- Risk and reputation
- Innovation and efficiency

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## Sustainability Compass

**Economy**  
Shareholder Value

**Regional Development**

**Community Well-being**

**Society**  
Employee Well-being

**Ecological Stewardship**

**Environment**  
Emission Reduction

**Climate Protection**

**Resource Productivity**

World Business Council for Sustainable Development (WBCSD) – “Towards a Sustainable Cement Industry”

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## State of Play in the PRD

- Rapid economic growth
- Expanding factories and resource consumption
- Energy market underdeveloped – self generation
- 11<sup>th</sup> five year plan – 20% energy efficiency – unrealised
- Largely a voluntary expectation
- Provincial governments offering rebates
- Growing number of technology providers
- Expansion of cleaner energy business
- Growth of the renewable energy business
- Sustainable buildings and cities still a distant aspiration

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Modern Terminals -Eco-mode  
Operation of Gantry Cranes  
HK\$30,000 Fuel  
Saving/year/RTGC

HAESL HK\$4.2 million energy savings from progressive program

**HSBC**

**HSBC optimization of car park ventilation saved 537,463 kWh or HK\$ 440,000/year**

**香港科技大學 THE HONG KONG UNIVERSITY OF SCIENCE AND TECHNOLOGY**

**HKUST 4GWhr electricity or 2,500 tonnes carbon/year lighting, HVAC retrofits**

**Vogue Laundry 樂韻洗衣**

Vogue Laundry – invests HK\$8,000,000 Continuous Batch Washing – HK\$180,000/month energy savings

**萬康 wellcome**

Wellcome Supermarkets  
Heat recovery from refrigerators for hot water for cleaning 13 month payback - saves HK\$4000/month

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## Engaging Business in the PRD

- Enlightened self interest
- Carrot
- Stick
- Education and awareness
- Recent calls – cleaner production certificates, public policy, cross border dialogue

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Page 2



## Business role moving forwards

- Demonstrate leadership
- Engage with stakeholders
- Exercise greater transparency
- Continually improve performance
- Embrace a market where environmental costs are internalized and playing field is level
- Add back to natural capital where possible
- Take a more active and collective role in moving forwards the Public Policy Agenda
- Acknowledge the scale of interventions required to redress environmental balance and accept and lead necessary change

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Page 3



## Awareness of Goals

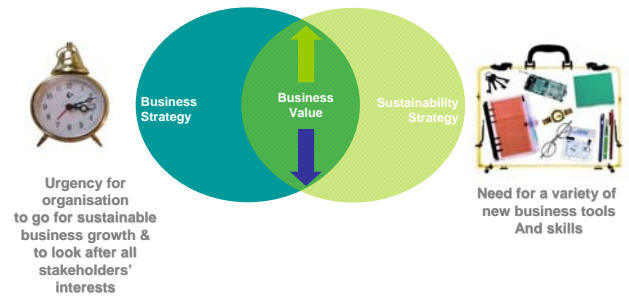
- Low Carbon Economy – that enables us to stabilize atmospheric concentration of CO<sub>2</sub> between 450 and 550 ppm
- Understand that globally the cost of acting is going to be for this scenario at least 1-2% of global GDP
- This goal embeds stopping emission increasing by 2022 and assumes a 1-2.5% emission reduction thereafter
- De-regulated and less distorted energy markets based around the cleanest possible fuel mix
- Establish trading mechanism and a price for carbon to remove uncertainty
- Identify immediately required adaptation measures and implement them expeditiously
- Cost of inaction ~ 200bn PRD - World bank estimate 1-5 m sea level rise would cause of loss of GDP in China of 2.5-11%

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Page 4



## Threat, Challenge or Opportunity?



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Page 5



### Thank you

Dr Andrew L Thomson, Chief Executive Officer  
 Email: athomson@bec.org.hk  
 Tel: 2784 3934