

CLP

More than light

Powering a Sustainable Future

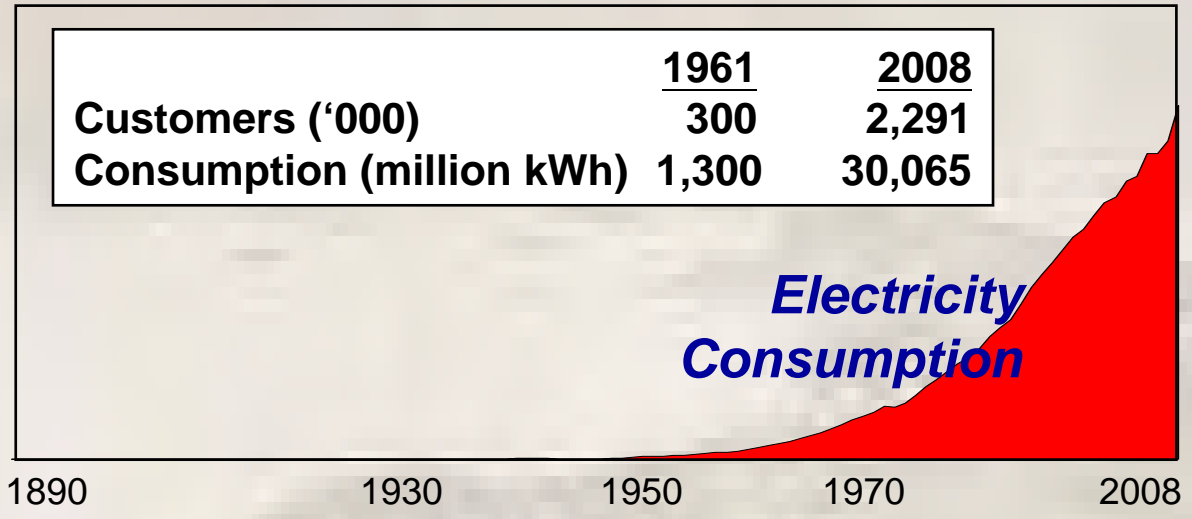
23 October 2009

Mr. Richard Lancaster

Acting Managing Director, CLP Power Hong Kong Ltd



Doing business for more than a century



Recognized as a leading sustainability driven company

- In March 2009 CLP was included in the Dow Jones Sustainability Asia Pacific Index (DJSI Asia Pacific 40)
- Evaluation based on climate change strategies, energy consumption, human resources development, knowledge management, stakeholder relations and corporate governance.
- CLP is the only Hong Kong company included in the DJSI Asia Pacific 40 so far.



Sustainability in Action



Sustainability Report 2008
Performance & Impact

Home | Board & Management | Strategy & Environmental | Governance | Media | Meeting with S.I.C.

Key Performance Statistics

Quarterly Performance
Castle Peak Power Station

Capacity increases by subject to availability of gas, coal and petroleum (GPP)

Year	Period	18.0	Peak capacity	18.0	Peak capacity (GPP)
Year 2007	January - March	17.1	17.4	17.6	17.2
	April - June	17.1	17.8	17.5	17.3
	July - September	17.1	17.6	17.8	17.3
	October - December	17.1	17.2	17.6	17.2
Year 2008	Period	18.0	Peak capacity	18.0	Peak capacity
	January - March	17.1	17.4	17.4	17.2
	April - June	17.1	17.8	17.5	17.3
	July - September	17.1	17.6	17.6	17.3
October - December	17.1	17.2	17.6	17.2	
Year 2009	Period	18.0	Peak capacity	18.0	Peak capacity



CLP's Climate Vision 2050

Carbon Intensity 2007

0.84
kg CO₂/kWh

Climate Vision 2050

0.2
kg CO₂/kWh



75% reduction

in order to help stabilise CO₂ concentrations below 550ppm,
a goal to be achieved internationally by all parties concerned

Technology Roadmap

- > Renewable Energy
- > Nuclear
- > Natural Gas

- > Advanced Coal
- > Carbon Capture and Storage
- > Green Energy and Services



Conventional
Coal-fired Technology



Clean Coal
Technology

- Subcritical Pulverised Coal-fired Plant

Increasing combustion temperature and pressure increases plant efficiency

Advanced combustion systems can increase efficiency, reduce emissions and produce gases better suited to carbon capture and storage

Capture and storage of CO₂ emissions can avoid carbon emissions to the atmosphere

- Supercritical Pulverised Coal-fired Plant

- Ultra-supercritical Pulverised Coal-fired Plant

- Integrated Gasifier Combined Cycle (IGCC)

- Fluidised Bed Combustion (FBC)

- Oxyfuel power plant

- Carbon Capture & Storage (CCS)



Further explanation of these technologies is available at www.clpgroup.com/sustainability

Climate Change Policy Advocacy at International Level

World Business Council for Sustainable Development

- Member of WBCSD Electricity Utilities Sector Project since 2001
- CLP as one of 9 signatories to the Project, comprising 9 global energy companies
- Participated in Bali CoP in Dec 2007

Carbon Disclosure Project

- Participated in 2002 since it first started.
- CLP on “Climate Leadership Index” and “Best in Class” by Innovest (2006)

Copenhagen Conference in December 2009

- CLP supports effective international framework to resolve climate issue
- Call for “New Kyoto”



Air Quality

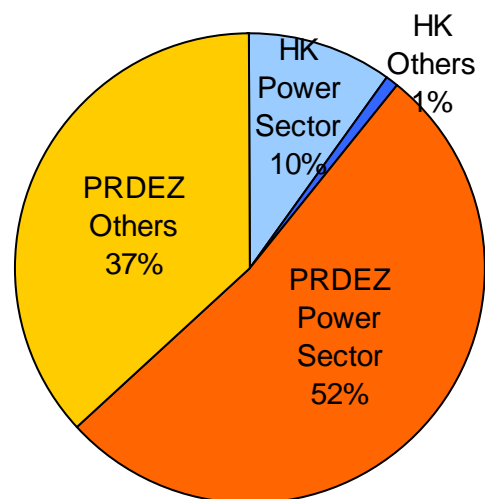
CLP set out an action plan in Our Manifesto on Air Quality and Climate Change (2004)

- Bringing liquefied natural gas (LNG) to Hong Kong
- Reducing emissions from coal-fired generation
- Developing renewable energy
- Promoting energy conservation

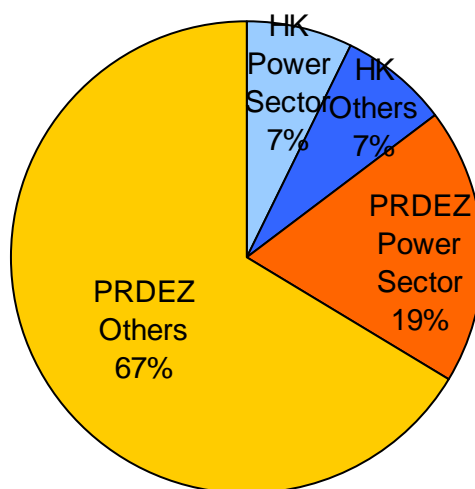


Power Sector Emissions

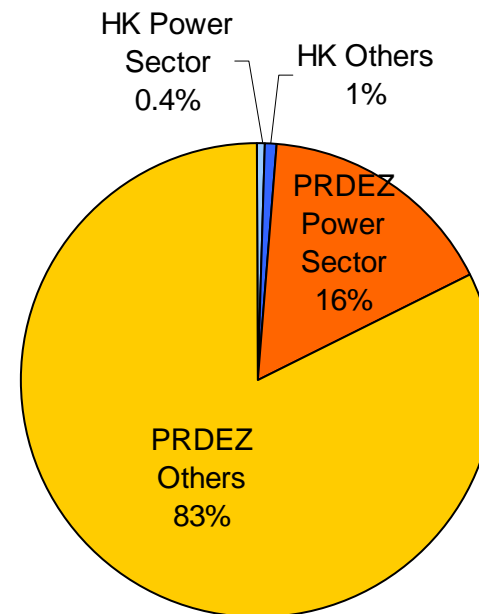
Hong Kong & Pearl River Delta Economic Zone (PRDEZ) – 2003 Regional Emissions



SO₂



NO_x



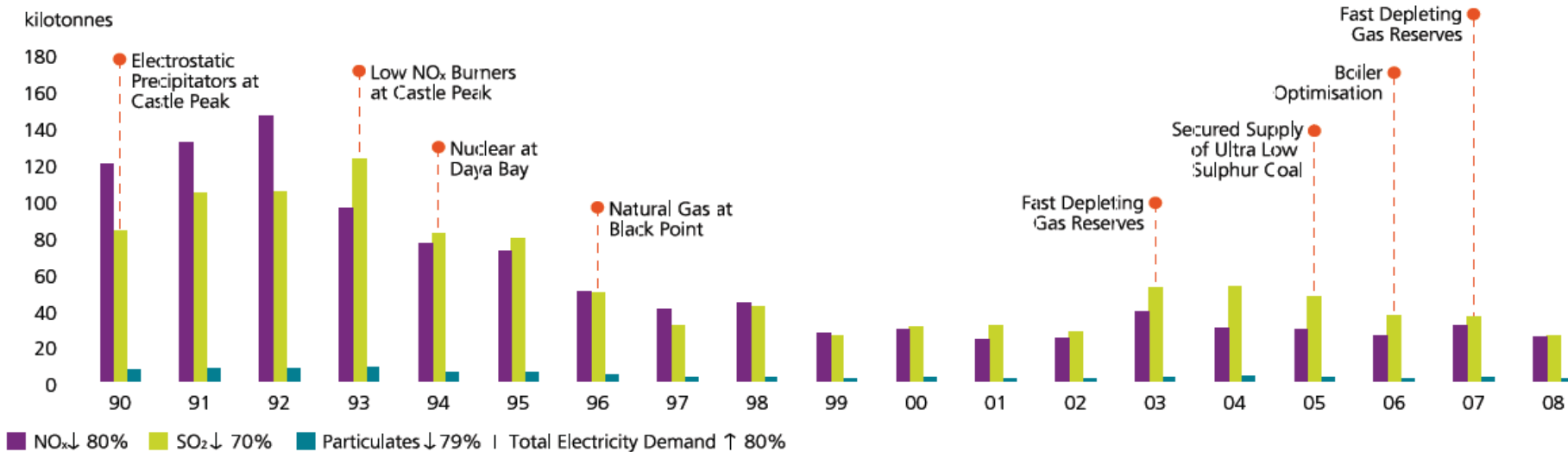
Particulates

Reducing regional emissions requires collaboration across sectors throughout the Hong Kong and PRD the Economic Zone

Source: Report on the Mid-term Review of the Pearl River Delta Regional Air Quality Management Plan by Special Panel on PRD Air Quality Management and Monitoring

CLP's Environmental Performance

Total Air Emissions from CLP Power Hong Kong



Ongoing efforts to reduce total emissions from power generation activities by 70-80% despite 80% increase in electricity demand since 1990.

Promoting Energy Efficiency



“Eco Home”

- The first specialty store for energy-efficient appliances in HK
- Over 100 energy-efficient home appliances



Energy Efficiency Exhibition Centre (EEEC)

- Products and technologies for commercial and industrial customers
- Over 8200 visitors since inception in 2005



Service Extension to Shenzhen

- Energy advice offered to companies in Guangdong that have strong connections with Hong Kong
- Contribute in promoting cleaner production and energy efficiency.



Bringing Natural Gas to Hong Kong



3 sources of replacement gas needed to supply to Hong Kong

2nd West-to-East (WEP2) P/L Gas



South China Sea Offshore Gas



Shenzhen LNG Terminal



Nuclear Power

大亚湾核电站延长合营期合同签字仪式

主办：国家发改委(国家能源局)

承办：中国广东核电集团有限公司 中电控股有限公司

2009.9.29 人民大会堂



1979

Commencement of the interconnection with Guangdong, kicking off discussions about building **China's first commercial nuclear power station** under the Open Door Policy

1985

Signing of the joint venture contract, which accounted for about **1/3 of China's foreign reserves** at the time

1988

Establishment of Nuclear Safety Consultative Committee following a petition by 1 million Hong Kong residents against Daya Bay in 1986

1994

Commissioning of Daya Bay, which supplies **70% of its nuclear power to Hong Kong**, representing about 1/3 of CLP's energy mix

2007

Publication of **CLP Climate Vision 2050**, which pledges to increase CLP's nuclear and renewable energy portfolio to 20% by 2020

2008

Signing of Memorandum of Understanding between Central Government and Hong Kong SAR Government, which guarantees continued nuclear energy supply to Hong Kong

2009

On 29 September, Mr. Andrew Brandler, CEO of CLP Holdings Limited, and Mr. Qian Zhimin, Chairman of China Guangdong Nuclear Power Corporation, signed a contract extending the Daya Bay joint venture. The event was witnessed by Mr. Xi Jinping, Chinese Vice President; Mr. Donald Tsang, Chief Executive of the Hong Kong SAR Government; and CLP Chairman Sir Michael Kadoorie. (Photo above)

CLP and CGNPC extended nuclear power supply from Daya Power for 20 more years

Renewable Energy in Hong Kong - Offshore Wind Farm

- Clean energy for approximately 80,000 households
- CO₂ reduction of approximately 300,000 tons per year
- Supporting HK Government 1-2% RE target
- HK\$5-7 billion investment
- Manageable impact on tariff



Dawn Island - Solar and Wind Energy

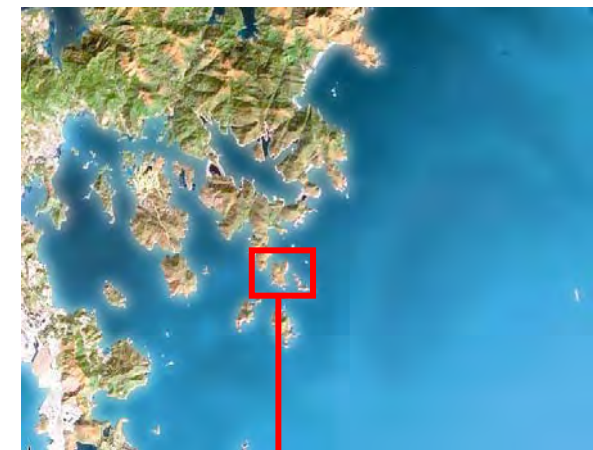
Supply to Operation DAWN, a rehabilitation centre for drug addicts near the Sai Kung peninsula

Phase 1

- 20kW Solar PV and wind turbine facility will be installed by the end of this year

Phase 2

- 200kW facility will be installed by 2011.



Reducing Emissions from Coal Fired Electricity Generation

One of Hong Kong's largest engineering projects in recent years.

- Currently over 2,000 workers on-site, some working around the clock.
- Over 5 million man-hours invested since site construction commenced in late 2007.
- Maintaining supply reliability during retrofitting work is critical.
- First NOx reduction unit in operation.



Clean Energy Road Map for Hong Kong

- Reducing energy consumption
- Strengthening energy infrastructure links with the PRD
- Using more gas for local power generation
- Importing more nuclear energy into Hong Kong
- Promoting renewable energy sources
- Reducing the role of coal

