

Environment Profile - Hong Kong

(Source: <http://www.tradecommissioner.gc.ca/eng/market-reports-by-sector.jsp?nid=570>)

Market Overview

Governments, business and individuals in Hong Kong are all beginning to realise the need to protect our environment. The Government plans to invest millions of dollars in major initiatives for managing waste, improving water quality and reducing air pollution. These include the creation of an Eco Park for recycling; a joint plan by the Hong Kong and Central Chinese Governments to clean up shared water; the Hong Kong's Action Blue Sky which aims to reduce the total amount of emissions and stop the deterioration of air quality in the region; and the implementation of the Harbour Area Treatment Scheme.

There are over 65,000 factories in Mainland China owned by the Hong Kong enterprises. To meet the increasingly stringent regulatory regimes on environmental protection in the global market, Hong Kong companies recognise the need to adopt clean manufacturing and new environmental technologies. The Hong Kong Federation of Industries has launched a One Factory - One Year - One Environmental Project (1-1-1 Project) amongst the factory owners.

One of the fast growing and important markets for environmental technologies and related services is Mainland China. In order to meet the environmental targets stipulated in its State's 11th Five-Year Plan (2006-2010), the Chinese government plans to spend US\$17 billion on environmental protection. This presents huge business opportunities for Canadian companies to use Hong Kong to access for the China environmental market.

Opportunities

Solid Waste Management

In 2006, Hong Kong disposed of about 6.4m tonnes of municipal solid waste. On average, each person is discarding about 1.4kg per day with annual increases of about 3.5%. The three strategic landfills will be filled in the next five to eight years. In response to this pressing issue, the Hong Kong government announced a ten-year Municipal Solid Waste Management Policy Framework (2005-2014) to encourage waste reduction, separation & recycling.

One of the major initiatives is to build a new Integrated Solid Waste Management Facility. Six applicable technologies including Composting; Anaerobic Digestion; Incineration; Gasification; Combination of Mechanical and Biologic Treatment; and the Combustion of Fuel Derived from Waste have been identified for possible use in the proposed facility.

Eco Park, the 20 hectares of land to promote waste recycling and recovery is being developed with a capital investment of approx C\$45 million. The first batch of lots is now ready for leasing. Other opportunities include the Landfill Extension Project proposed to be built in 2010 at a total capital cost C\$1.2 billion. The project will probably incorporate design, build and operate elements. On hazardous waste treatment, the government is seeking potential operator who has expertise on clinical waste management for the existing Chemical Waste Treatment Facility.

While a small amount of waste was recycled domestically, Hong Kong exported 89% of recyclable waste to Japan, China, Taiwan, Korea, Thailand and Indonesia. The recovered waste exported included waste paper, metals, glass and plastic and waste metals. There is huge demand of supplies of these recycled products for re-export from Hong Kong.

Wastewater Management

In Hong Kong, about 75% of sewage undergoes primary treatment under Stage 1 of the Harbour Area Treatment Scheme (HATS). The remaining 25% of the sewage virtually untreated is still being discharged into the Harbour. This is not sustainable environmentally and the government plans to invest about C\$3 billion within the next 10 years to implement the HATS Stage 2 in two phases. Stage 2A (2008-2014) includes the provision of disinfection, the construction of a 130 meter deep tunnel to convey the untreated sewage to Stonecutters Island Sewage Treatment Works, and the expansion of the existing chemical treatment capacity. The government is now identifying the best tunnelling technologies and respective tender will be issued tentatively in 2008. Stage 2B will require the installation of biological treatment facilities. The government will look to public-private partnerships for a "design-build-operate" model for both phases. Canadian wastewater technologies and other related products might also prove useful in the successive stages of the HATS projects.

Potable Water Supply

Canadian firms may be able to assist Hong Kong to maintain, and possibly increase, its water supply sources. The Hong Kong government's plan to develop a Total Water Management (TWM) program would involve water conservation and water resource protection. The TWM includes plans to use recycled wastewater. In addition, the government has completed a pilot project to desalinize seawater in order to increase Hong Kong's water supply. If it show to be technically and commercial viable, the government might wish to increase the capacity. Additionally, C\$360 million has been allocated for the replacement and rehabilitation of 370 km of leakage-prone water mains. Canadian company specializing in water recycling and reuse will find Hong Kong a niche market.

Air Quality Management

Hong Kong has been facing two air pollution issues, local street-level pollution and the regional smog problem. Diesel vehicles are the main source of street-level pollution.

Smog is caused by a combination of pollutants from motor vehicles, industry and power plants both in Hong Kong and in the Pearl River Delta (PRD).

Electricity generation accounts for 92% of the SO₂ and half of the NO_x and RSP emissions. Therefore, the government has tightened and imposed emission caps on the two power plants in Hong Kong and require them to regularly update their pollution control technology. Renewable energy such as wind and solar are also encouraged. The power company has submitted application of feasibility study on a 100-MW offshore wind farm in HK waters. This offers business opportunities for Canadian companies who have the capability in emission reduction such as flue gas desulphurisation, selective catalytic reduction and renewable energy technology.

One of the government's air strategies is to work with the Guangdong government to tackle the regional smog problem including an agreement to achieve the agreed emission reduction targets by 2010, i.e. taking 1997 as the base year, the target is to reduce RSPs and VOCs by 55 per cent each, SO₂ by 40 per cent and NO_x by 20 per cent. In addition, an Emission Trading Pilot Scheme framework has been presented to prospective participating power plants.

In summary, Hong Kong's commitment to improving its environment creates substantial opportunities for Canadian in the areas of Solid Waste Treatment Technologies and Equipment; Water and Wastewater Treatment and Recycling Technologies; Air Pollution Control/Monitoring Systems and Analytical Instruments; Odour Control Systems; Green Building Design & Products; Renewable Energy Technologies; Landfill Gas Recovery Technologies; Clinical Waste Treatment; Energy Saving Systems and Indoor Air Quality Products.

Key Participants

There is a small environmental equipment manufacturing industry in Hong Kong. Many of the technology and products are imported. The market is saturated by more than 60 domestic and international firms offering environmental and engineering services as well as consultancy works. It is desirable for Canadian firms to partner with these companies to capture niche markets both in Hong Kong and China.

Several international engineering firms dominate the environmental market in Hong Kong. The key competitors include SITA (France) and Onyx (France) for the solid waste sector. Japanese companies including Mitsubishi, Ebara and Nippon Steel are keen in incinerator and thermal treatment project. Montgomery Watson (U.S.), Black & Veatch (U.S.), Maunsell (Australia), US Filter (U.S.) and Osmonics (U.S.) are strong in water and wastewater projects. ERM, CDM, Ove Arup and Scott Wilson are well established and active in environmental projects.

Canadian firms including those in the areas of water and waste disinfection, environmental consultancy, air pollution and odour control maintain significant presence in Hong Kong.

Public and Private Sector Customers

Environmental products and services can often be sold through domestic private distributors and engineering firms. Using a local distributor is one of the best methods for Canadian companies to enter the Hong Kong market because the start-up costs are minimal. Canadian firms also need to maintain a continuous presence in order to work closely with local contractors and subcontractors. Companies that offer design-build-operate financing schemes will be in a better competitive position than those that don't offer the complete package. Canadian firms may also use their presence in the Hong Kong market to springboard into other East Asian markets, especially China.

A number of prominent Hong Kong government departments may benefit from Canadian solid waste and wastewater expertise. The Drainage Services Department is responsible for sewage infrastructure. The Environmental Protection Department and the Food and Environmental Hygiene Department are jointly responsible for solid waste management and other clean up work.

The Government Logistics Department (GLD) is the central purchasing, storage and supply organization for the Hong Kong Government. Public procurement is normally completed through open tender which fully comply with the provision in the WTO agreement on Government Procurement. Canadian companies interested in selling to the Hong Kong government should register with the GLD online through the Electronic Tendering System at website: <http://www.gld.gov.hk>

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