

## Seeking power from winds in Guangdong

Winds of opportunity may be blowing in South China for Canadian firms with products or technology related to harnessing the power of the wind for electricity. With continued blackouts and brownouts across the region, efforts are being stepped up to find alternative energy solutions to help fill some of the burgeoning energy demands in one of China's fastest growing regions.

Since 2000, China's demand for power has outpaced supply. In 2002, 12 provincial grids had to restrict power supplies during summer and winter. In 2003 the figure increased to 23. Per capita power generation in China is equal to 1/13 of that of the United States and 1/8 of that in Japan despite rapidly rising per capita power consumption.

China will need a total generating capacity of 1.5 billion kilowatts by

2010. By the end of 2003, its installed capacity was 385 million kilowatts. Much of the required new capacity is to be filled by thermal power and hydro facilities. Developing renewable energy sources, such as wind, will be integral in meeting China's power needs. Presently, the use of wind in power generation is at an unprecedented level of commercialization.

### Investing in wind power

In Guangdong, wind resources across its 3,300 kilometres of coastline are capable of generating 3 million kilowatts of power. Over the next six years, Guangdong plans to invest nearly \$900 million in wind power, aiming to increase its wind power capacity to 800,000 kilowatts by 2010, from the current 66,000 presently being generated by Nan'ao and Huilai wind-power facilities, the second biggest wind farm in China.

Progress is also being made with the Zhuhai Gaolan Wind Power Project, with investment by the Beijing Guohua Electric Power Corporation of \$30 million and the Yangjiang Hailing Island Project with investment by the Hong Kong Zhonghua Electric Power Company of \$123 million.

The Shibe Wind Energy Plant in Huizhou is a demonstration project approved by the central government in a franchise business model. The Guangdong Yuedian Group was selected to build and operate it with an installed capacity of 25,000 kilowatts in phase one, due to be operational by the second quarter of 2005. Upon completion in 2006, the total installed capacity would reach 100,000 kilowatts, with 167 local generating units.

Mainland power producers are looking to the nascent wind power sector to diversify energy supplies and prepare



for future regulations stipulating greater use of renewable energy. Preferential policies are being implemented to support development of clean energy resources in Guangdong. The price paid to wind power plants is \$0.08 per kilowatt-hour (kWh), much higher than the ordinary on grid price of \$0.05 per kWh. Encouraged by such prospects, investors—State-owned power conglomerates, private and foreign firms—have set their sights on the sector.

However, the development of wind power in China is still at an early stage, generating 560,000 kilowatts of electricity last year. The figure is rather small compared to Germany's 14.6 million kilowatts and the world's 39 million kilowatts. Wind power development in China continues to face the challenges of huge investment needs and high per kilowatt production costs.

### Conclusion

Business opportunities for Canadian companies in this sector:

- technology transfer
- project investment via partnerships with local electric companies
- domestically-made equipment production.

Useful local contacts: Guangzhou Institute of Energy Conversion, Chinese Academy of Science ([www.giec.ac.cn](http://www.giec.ac.cn)), Guangdong Yuedian Group ([www.gdyd.com](http://www.gdyd.com))

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## The powerful lure of the Pearl River Delta

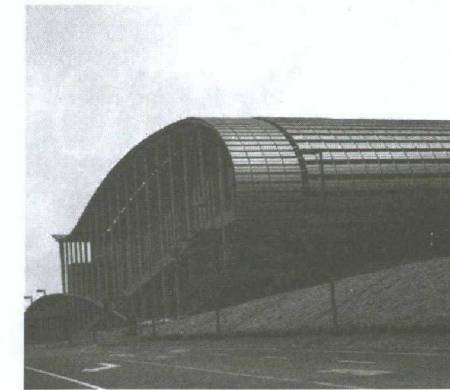
Some 124 Canadian business people had a unique chance to experience the extraordinary dynamism emanating from South China's Pearl River Delta (PRD) region while participating in Minister Peterson's recent Canada Trade Mission to China.

Located at the heart of Guangdong Province, the Pearl River Delta "Factory of the World" accounted for 90% of provincial exports in 2004, which totaled \$247 billion. Guangdong absorbed \$12.3 billion in foreign direct investment—first amongst China's provinces—and achieved a 2004 GDP growth of 14.8% to \$198 billion.

Already a key production and distribution base for China and an export manufacturing platform for the world, the region is home to multinationals such as Avon, Colgate-Palmolive, Heinz, Honda, IBM, Nissan, Nortel, Procter & Gamble, Toyota and Walmart. The region is also experiencing massive infrastructure, industrialization and urbanization initiatives.

### Potential for innovative partnerships

During the Trade Mission, participants met with the Canadian Consulate General trade team in Guangzhou, representatives of more than 40 companies and officials who traveled to Hong Kong to explore innovative partnerships potential in services, agri-food, transportation, education, information and communications, and biotechnology. Local experts also informed them about opportunities and challenges of doing business in the PRD. Companies benefitted from these meetings to develop and to explore new business opportunities in South China. Four partnership agreements were signed by Canadian companies and other ICT opportunities were pursued. These included public security needs of the 2010 Asian Games in Guangzhou, e-government with Guangzhou



Guangzhou's new Exhibition Centre.

City and agri-food links with the Guangzhou Food Association.

Guangzhou has major infrastructure projects in the works including the second phase of the new Baiyun International Airport (\$1.2 billion), a regional railway network, four new subway lines, the development of the port of Nansha and \$29.6 billion worth of new infrastructure in the run-up to the 2010 Asian Games, which it will host. The Hong Kong-Zhuhai-Macau bridge is slated for completion in 2008, opening up even more areas for development in the Western part of the PRD.

The region's history of "openness" and relative freedom from government interference has created a sophisticated business community willing to do business with the world. With some 20 million affluent consumers, the PRD's urban markets are increasingly demanding items for quality of life, modern convenience and lifestyle, including cars, computers, wireless phones and devices, higher education, imported foods, improved health care and recreation.

Adjacent to Hong Kong, the region is also one of the best served areas in China for financial and business services. Hong Kong has invested over \$98 billion in Guangdong; 63,000 Hong Kong firms employ some 12 million people in the Pearl River Delta region and Hong Kong handles 80% of their exports and imports.

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## Shenzhen: PRD business lure

Bordering Hong Kong, the sleepy fishing village of Shenzhen has been transformed into a metropolis of over 5 million people and is considered China's richest city. Shenzhen's ports handled 135 million tons of goods in 2004, with container throughput increasing by 28.6% to 13.6 million twenty foot equivalent units (TEUs). According to one Hong Kong academic, this year;

- For every 100 people in Shenzhen there will be 85 mobile phones;
- Cable TV will reach over 95% of the city's population;
- Over 50% of its residents will have access to digital TV;
- For every 100 households there will be over 80 computers;
- For every 10,000 people there will be 4,600 Internet subscribers;
- Over 50% of schools will have broadband connections and will use multimedia facilities;
- E-commerce will amount to 5 billion yuan (\$609 million) a year;
- Over 50% of enterprises will have home pages; and
- 50% of the city government's public services will offer electronic service delivery.

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