

## Article on Wastewater report *By The JLJ Group*

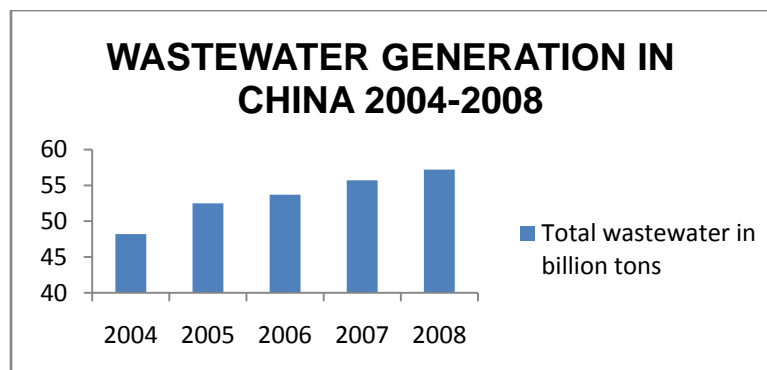
### Introduction

China offers unique investment opportunities in the wastewater treatment industry as the government increases its emphasis on resolving its wastewater issues. Presently, China faces widespread and often severe wastewater problems; the United Nations categorizes the country as one of 13 most likely to encounter the largest water shortages in the future. This article will reveal the general market situation and opportunities and challenges for foreign firms.

### Market overview

China is currently confronted with acute water pollution and scarcity problems. With one of the lowest water resources per capita worldwide, great changes must be made in order to avoid severe crises. Because the water scarcity problem is most severe in the north, the national government developed the South-to-North Water Diversion Project to help supply the north with sufficient water resources. This multi-billion dollar project, projected to be completed in 2050, will link three of China's major rivers and redirect water northward, although many have doubts as to whether this water will be enough. China has one fifth of the world's population but only 7 percent of its water, and the north of China requires water for agriculture as well as for public need.

In addition, water pollution heightens problems for the Chinese population, with nearly 300 million people drinking contaminated water. As recently as July 2009, over 2600 people fell ill in Inner Mongolia due to polluted water. Between 2004 and 2008, there has been an increase in wastewater by 18%, from 48.2 billion to 57.2 billion tons. By 2010, total wastewater generation is expected to reach 64 billion tons. China's ongoing rapid industrialization, urbanization, and economic growth contribute greatly to this issue. Furthermore, despite a growing number of WWTPs, many are not run at full capacity – in 2008, at about 64% of total capacity – due to lack of capital. Under such conditions, the current water treatment infrastructure is inadequate and will require much investment in order to alleviate this national problem.



The number of wastewater treatment plants differs greatly among provinces and municipalities. In general, cities in eastern China receive more capital in water treatment than Western and rural areas, as they contain the highest concentration of urban industrialized areas, which are

the largest generators of wastewater. Key international companies who are well established in the Chinese market are Veolia Water and SUEZ Environment (Sino French), with Shenzhen Water, Beijing Capital and Tianjin Capital as the top Chinese companies. Since 2002, there has been competition for projects in the water industry, with foreign firms such as Veolia Water and SUEZ Environment as well as domestic firms bidding aggressively for the projects. Generally, those with higher quotations as well as suitable technology will ultimately win the project.

At the moment, however, the wastewater treatment infrastructure is underdeveloped. In the 11<sup>th</sup> five-year plan (2006-2010), the Chinese government pledged to dedicate over RMB 300 billion in investments to improve the infrastructure by awarding new projects and by upgrading facilities already in operation. As of early 2009, 1572 new plants had been built and another 2063 more were under construction. In the projected 12<sup>th</sup> five-year plan, urban wastewater treatment processing will reach an estimated 120.13 million cubic meters a day. This in turn ensures the need for continuous large investment in the years to come. Combined with their strong financial background, MNCs' technological know-how and management practices guarantee them a competitive advantage. Domestic firms, however, have the benefit of a strong governmental background and a familiarity with the Chinese market. Today in China, there is also a hot debate going on about whether foreign companies should manage public utility. Their higher bids will or can eventually lead to a tariff increase for the consumer, depending on how the government will handle it.

## Challenges ahead



The vast opportunities and projects already assigned to international enterprises in the wastewater treatment industry also include some challenges. First, the recent global economic crisis is problematic in that it might create difficulties in foreign companies' funds, as particularly high investments are required in the wastewater treatment industry. As a result, concerns over foreign investment may make the government more hesitant to award projects to overseas firms and more

cautious on promises on investment returns. However, water treatment is a national priority and will be one of the industries benefitting from the governmental stimulus package.

Another major issue is the significant debate over foreign companies' impact on tariff increases. The rate of tariff increase will depend in part in the amount of foreign investment in China. In addition, there has been some public concern over management of public utilities by foreign companies. Mounting Chinese financial viability is causing increased competition from domestic companies. Governmental tendencies to support bids from these enterprises may deepen this competition between domestic and foreign firms. At the moment, only 4 % of companies in the industry are foreign-invested. These are mainly focused on supplying integrated wastewater treatment services and advanced technology. A few companies have had problems in the past,

however, of poor management and of not meeting government standards, which could pose another possible challenge. In short, in order to understand the complex Chinese legal requirements in the water sector, a foreign firm needs to conduct extensive research and should prepare to be flexible and adaptable to ever-changing policies.



## Opportunities

In order to gain understanding of the various opportunities in the wastewater treatment industry, MNCs must look closely at the legal conditions and the niche markets existing in China. In Northern China, where there are severe water scarcity problems, water reclamation is desperately needed. The water reclamation industry and the idea of reusing water are still quite new in China, although the market is very broad. Currently, there is an estimated US\$3.6 billion investment by 2015 to realize a reclamation capacity of over 10 million tons a day. This further creates a great opportunity for foreign firms to supply their advanced technology.

The technology transfer in tier 2 and 3 cities is especially important in improving living conditions, as they have not yet been furnished with the appropriate number of facilities. The Chinese government is also highly interested in knowledge transfer. After the public utilities reform in 2003 a clear shift took place towards Public-Private Partnerships (PPP), which urge domestic and foreign firms to invest in public facilities, and it is forecasted that TOT projects will gain sustainable growth in the coming years. Other opportunities exist as well, such as treatment in industrial parks and EIPs where communities have voiced dissatisfaction. Also possible is operation of plants (as China built too many plants in a short time without full knowledge of operating them) and package treatment of WWTPs. Western China is quite favorable to foreign investment, with some cities even open to negotiate network costs. A further option to do business in the Chinese wastewater treatment industry is to export advanced technology and machinery to firms who engage in PPP projects.

*This article was contributed by the JLJ Group, a one stop service provider assisting foreign companies to enter and grow in the China market. For more information please email to [Francesco.Duina@jljgroup.com](mailto:Francesco.Duina@jljgroup.com).*