



Thailand: Water Pollution Control Industry

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Summary

The current total market size for wastewater treatment is estimated at about \$1.533 billion USD, with an average growth rate of about 10% per year (government sector \$613 million USD, private sector \$920 million USD). In general, construction and engineering services costs are 85% of the project with the remaining 15% for equipment. Thus, the market for wastewater treatment equipment is about \$230 million USD. The wastewater treatment market is expected to continue growing by an average of 10% for the next few years due to improved economic performances from the real estate, industrial and agriculture sectors. The growth will be enhanced by the government initiative to build the 3 largest water treatment plants in Bangkok and 15 medium plants in other provinces.

The majority of the equipment used by the water and wastewater treatment sector is sourced from Japan, Europe, ASEAN, the U.S. and China. Total imports of water and wastewater treatment equipment in 2007 were an estimated \$161 million USD. Japan had the largest market share of 30.9%, followed by Europe (18.5%), ASEAN (10.6%), the U.S. (10.2%), China (14.4%), and other (15.4%).

In 2007, the US shared 10.2% of the import market for wastewater treatment equipment and has a potential growth rate of 100% next year due to the favorable of strong local currency against U.S. Dollar. The U.S. wastewater treatment equipment has an excellent reputation for quality and technology, but a major concern is that there are many competitors from Japan and Europe (especially from Germany and Italy), which have similar technology.

Market Demand

The market size for the wastewater treatment equipment was about \$230 million USD in 2007, a growth rate of 5.5% from 2006. The moderate growth in 2007 was mainly due to the economic slow down stemming from political crisis, rising oil price, and increasing interest rates. The market is expected to grow by an average of over 10% for the next few years due to the expansion in the real estate, industrial and agriculture sectors. The growth is expected due to the increasing of foreign investments and the increasing of local investors on waste to energy projects. The growth of wastewater treatment is also predicted in hotels, hospitals, hypermarkets and superstores.

Government sector.

Wastewater treatment in Thailand is divided into two areas: the government and private sectors. The government sector had provided a budget of about \$2.6 billion USD for 95 wastewater treatment projects in Thailand for the last few years (7 projects in Bangkok with budget of \$633 million, 1 project in Samutprakarn province with budget of \$333 million and 87 projects in other provinces of \$1.634 billion)

The Bangkok Metropolitan Administrative (BMA), which looks after the Bangkok capital, has three new projects to finish with in the next few years. The projects are in Bangsue, Klongtoey, and Thonburi areas..

The Pollution Control Department of the Ministry of Natural Resource and Environment is supervising and allocating the budget of \$1.6 billion for 87 wastewater treatment projects in other municipal areas. Presently, 75 projects were finished. Only 12 projects are under construction. According to the Pollution Control Department, Thai government will provide a budget of \$37 million for 3 new municipal wastewater treatment projects in 2008.

The municipal wastewater treatment plant projects generally cost between \$6.6 to \$17 million USD. They are all designed and constructed by local companies. The equipment accounts for about 15% of total plant costs and is imported from Japan, America and Europe.

Private sector

The market size for the private sector is about \$920 million USD. Growth is driven by economic performance and booming direct foreign investment, especially in export-oriented industries.

Industries

Industrial wastewater treatment plants are monitored regularly by the Department of Industrial Works (DIW). The industrial market for wastewater treatment includes construction of new plants and upgrading current facilities as well as replacing obsolete equipment. In the industrial estate zones, the Industrial Estate Authority of Thailand (IEAT) or private property developers have the right to control and enforce rules and standards as well as collect treatment fees from factories. Each factory must install a pre-treatment system prior to discharging wastewater to the main sewer, which is hooked up to the central wastewater treatment plant in the industrial estate. Factories in other areas must have a complete wastewater treatment system that can treat wastewater effectively to the discharge standard, which has a BOD (Biochemical Oxygen Demand) at 20-30 mg/l. The cost of building a treatment plant varies from \$160,000-\$620,000 USD. There are over 100,000 factories registered with DIW, with about 10% of those factories classified as water pollution sources. Thailand had 4,371 new factories registered in 2007.

Hotels, condominiums, Department Stores and High-rise Buildings

Commercial properties cannot avoid installing wastewater treatment systems. They must have a system. The district office will check construction blueprints to learn about the systems and ensure that it works correctly. The construction cost varies from \$60,000-\$92,000 USD, depending on the BOD concentration. Submersible pumps, submersible aerators, blowers, and chemical feeding pumps are the major types of equipment required for the process. Economic recovery is a driving force behind the demand for high-rise buildings, both commercial and residential. The rising oil price has increased transportation cost, so people have moved close to the mass transportation system, where all high-rise buildings are booming. Major super stores like Tesco Lotus, Big C, and Carrefour are also major investors in wastewater treatment. Each firm invests at least \$600,000 for their stores.

Agriculture

The law requires that all wastewater from livestock be treated before discharging it to the public and the BOD should not be over 20 mg/l., but the government is not a strict enforces. Only large farms, which need standard certificates for export, will comply with the law by implementing the water treatment system. Aerators and sewer pumps are major equipment being use for wastewater treatment in swine farms. Thai government, presently, is also subsidized electricity produced from livestock waste. So, more and more large and medium size livestock farmers are participating in turning their wastewater into energy.

Aquaculture is a very large business in Thailand, especially shrimp farming. Thailand earns over two billion USD annually from shrimp exports. Presently, there are about 150,000 acres of shrimp farm area in Thailand. The history of shrimp farming started a few decades ago in the coastal regions, where there is available sea and brackish water. The shrimp raising methods were non-intensive and required no water treatment. An outbreak of disease over ten years ago destroyed most of the coastal farms. Many farmers have moved inland and have found new ways of raising shrimp in fresh water. Now, shrimp farming methods use a closed system, where the water has been treated and recycled. Paddle wheels, aerators, blowers, bio chemicals and chemicals are needed for water treatment in shrimp farms.

Market Data

US\$ Million

	2006	2007	2008	Growth Rate for the next 3 years
Total Market Size	218.00	230.00	276.00	+10%
Total Local Production	193.00	202.00	197.00	-3%
Total Exports	128.00	133.00	146.00	+10%
Total Imports	153.00	161.00	225.00	+20%
Import from the U.S.	20.00	16.00	32.00	+100%
Exchange rate US\$1=Baht	30	30	30	
Inflation	5.0	3.5	4	

Note: There are no official figures for wastewater treatment equipment (excluding engineering and construction services). The above statistics were estimated based on interviews with government and industry sources including statistic data from the Customs Department.

Best Prospect

The best sales prospects for water and wastewater treatment equipment are:

Pumps (Submersible pumps, centrifugal pumps, aerator and mixer pumps, dosing pumps, vacuum pumps)

Sludge Dewatering Equipment (Filter presses, belt press, small dewatering systems)

Screening machines (Bar screens, shredding screens)

Consultants and Engineering Services (pollution prevention technologies, advance wastewater treatment, water monitoring system, biological treatment system, renewable energy technology)

Advance water treatment chemicals.

Key Suppliers

Over eighty percent of total water and wastewater treatment equipment is imported from Japan, Europe, the U.S., China, and ASEAN. The total import market for wastewater equipment in 2007 was about \$161 million and is expected to increase by 20% for the next few years due to the strong of local currency. Imports came mainly from the following countries: Japan 30.9%, USA 10.2 %, China 14.4%, Europe 18.5%, Asean 10.6%, and other countries 15.4%. European and Japanese equipment are a major competitor of U.S. high-tech segment products.

US products have a good reputation among Thai engineering/consultants and always appear on the shortlist as qualified technology. U.S. equipment is well known for reliability, and durability.

Prospective Buyers

Government Sector End-users:

- The Sewerage and Drainage Department (SDD), Bangkok Metropolitan Administration (BMA)
- The Pollution Control Department (PCD), Ministry of Natural Resources and Environment (MoNRE)
- Department of Local Administration (DOLA), Ministry of Interior
- The Department of Industrial Works (DIW), Ministry of Industry
- The Provincial Administrative Office (PAO)
- The Tambon (District) Administrative Office (TAO)
- The Industrial Estate Authority of Thailand (IEAT)
- The Pattaya Municipality Office

Private Sectors End-Users

- Factories, Industrial plants
- Private industrial estate developers
- Hotels
- Department Stores, Hypermarts, Supermarkets, Shopping centers
- Commercial and High-rise Building
- Golf courses
- University complexes and sport complex centers.
- Shrimp and pig farmers

Market Entry

Most international engineering and consulting services established themselves in Thailand by forming partnerships with local consulting firms. They rely on the market expertise of their local partners and the low-cost local services content provided by the local partner. Meanwhile, they offer the high value added content to the project, based on their reputation, past references and expertise. The strategy provides successful synergy to compete in the market with minimal time and investment.

Local engineering consultant companies are eager to work with their international counterparts. They often have to seek international expertise on the subject, when working on large-scale projects. Companies interested in the Thai market are encouraged to promote their companies and expertise to local engineering communities. Organizing a seminar for the local consultant community or personal visits to prospective companies are the two of the most common strategy to enter the market.

Appointing a local agent/distributors is the market entry approach used by the majority of international suppliers of water and wastewater equipment in Thailand. Through their local representatives, suppliers can market their products with minimal time and financial investment. Marketing support is the only major investment required from foreign suppliers. Local representative assume full responsibility in marketing the products. Thus, selecting a competent agent/distributor is the key to successful market penetration.

Market Issues and Obstacles

All pollution control equipment used in wastewater treatment is subjected to 0-5% import duties. Thailand has no barriers against entry of water and wastewater equipment. Neither import restrictions nor specific technical standard requirements exist to regulate importation of wastewater equipment.

In practice however, the current government has circulated instruction to all government agencies that it prefers to work with local engineering consulting companies. If the project needs technical know how, the government prefers a joint venture, in which the foreign partners should not exceed 30 percent of the company's ownership structure.

Trade Events

Entech Pollutec Asia 2008

June 4-7, 2008

Bangkok International Trade and Exhibition Center (BITEC)

Organizer: CMP Media (Thailand) Co., Ltd.

Tel: 662-642-6911

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<http://www.cmpthailand.com>

Resources and Key Contact

For more information about export opportunities in this sector contact U.S. Commercial Service Industry Specialist Pramot Wongvarnrungruang at email: pwongvar@mail.doc.gov

For More Information

The U.S. Commercial Service in Bangkok/Thailand can be contacted via e-mail at: pwongvar@mail.doc.gov ;
Phone: 662-205-5090; Fax: 662-255-2915 or visit our website: <http://www.buyusa.gov/thailand/en>

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