

Environmental Technologies

Overview

(US\$ Billions)	2011 (estimated)	2012 (estimated)	2013 (estimated)
Total Market Size	10.60	10.47	11.70
Total Local Production	8.60	8.40	8.80
Total Exports	0	0	0
Total Imports	2.00	2.07	2.90
• Imports from the U.S.	0.63	0.66	0.70

Source: All figures were estimated by market analysts

Environmental experts estimate that Brazil's environmental technologies market (including equipment, engineering/consulting services, instrumentation, construction and clean up services) is around US\$11.13 billion, of which US\$6.13 billion is related to the water and wastewater subsector; solid waste management at US\$4 billion and air pollution control at US\$1 billion. The actual market size is only a fraction of the market potential, which is estimated at 1% to 7% of Brazil's GDP of US\$2.3 trillion.

Best Prospects/Services

Water distribution in Brazil is available for 93% of Brazil's population, whereas sewage collection services are currently available to only 48% of the population. Of the collected sewage, only 32% is treated, presenting a major pollution and basic sanitation challenge to Brazilian policy makers.

The Brazilian government has made sanitation, including water, wastewater, drainage and waste management, a top priority. The Attorney General's Office is enforcing Federal and legislation from 2007 and 2010 to strive towards adequate water, wastewater (W&WW) and solid waste management policies. Data received from the Brazilian Ministry of Cities show that average annual investments in basic sanitation are around US\$ 4.5 Billion. The Ministry of Cities estimates that until 2030, total investments of R\$ 420 billion (US\$ 210 billion) would be needed to achieve universal access. The funds which will be made available by federal, state and municipal governments, multilateral development agencies and private sector companies should be invested as follows:

- Sewage – 37%
- Water Supply – 25%
- Utility management – 21%
- Drainage – 13%
- Solid Waste – 4%

Currently there are 27 state-owned utilities serving 76% of the population, and municipal and private sector utilities serving about 10% of the population.

In Brazil, there is increasing demand for effluent treatment and energy/water saving technologies as well as for specialized consulting services. Such technologies include advanced water treatment, water loss prevention solutions, “intelligent valves”, efficient water distribution and reuse projects, water saving devices, and rain water systems. Suppliers of water treatment stations incorporate specific imported equipment. Laboratory and analytical equipment are also imported.

Opportunities for U.S. firms include solutions related to water distribution systems, including services and equipment. According to the Ministry of Cities, the water loss rate in Brazil corresponds to about 35% of the potable water produced in the urban areas (unofficial figures are of 40% to 50%), compared to 14% in the USA. Additionally, water reuse is increasingly important in Brazil, especially in the large centers where water scarcity represents high operational costs of water impounding and adduction. Existing legislation that imposes charges for collecting and disposing effluents in water bodies increases the demand for specialized consulting services and effluent treatment technologies.

In addition to the municipal demand, private industry in the chemical, oil & gas, metallurgy, textile, automotive, sugar and ethanol, pulp and paper, and food and beverage sectors all are potential buyers of W & WW solutions. According to an IADB study, entitled “Solid Waste Management – an Opportunity for Municipal Development and for Small Business”, Brazil’s National Solid Waste Policy, which was announced in 2010 and is being implemented in Brazil generates a variety of business opportunities for private sector companies.

According to an IADB study, entitled “Solid Waste Management – an Opportunity for Municipal Development and for Small Business”, Brazil’s National Solid Waste Policy, which was announced in 2010 and is currently being implemented, generates a variety of business opportunities for private sector companies, including:

- Using methane gas derived from sanitary landfills to generate electricity, thereby increasing the landfills operating efficiency;
- Using energy generated from animal manure (Brazil’s animal protein industry is among the world’s largest);
- National Solid Waste Policy determined that by mid-2014, the municipalities will no longer be allowed to dispose waste in open dumps and should be using landfills. This generates a need for installation of new sanitary landfills (50% of the 5,564 municipalities still have garbage dumps);
- Adopting reverse logistic methods to collect and return specific types of waste (i.e. electronic, batteries, tires, fluorescent lamps, lubricant oils, pesticides) from those manufacturers, importers, distributors and retailers who create the waste;
- Installing and managing voluntary delivery points;
- Implementing warehouses for recyclable waste, composting units, waste sorting areas, transshipment and recycling of debris and small sanitary landfills;
- Consulting services for both public and private sector clients.

According to CETESB, the state of São Paulo’s environmental authority, those technologies and services that are in highest demand related to air pollution includes:

- Continuous emission monitoring systems (note, very high demand due to the implementation of new waste incinerators)
- Analytical and laboratory testing goods and services

- Air pollution control equipment
- Fuel vapor control systems (note, new legislation is currently being drafted).

Opportunities

According to the Brazilian Association of Urban Cleaning Companies (ABRELPE), solid waste generation in Brazil is estimated at 62 million metric tons per year, of which about 90% is collected. About 37% of the waste ends up in garbage dumps or “controlled landfills”, both of which are highly harmful to the environment and public health. IBGE - the National Institute of Geography and Statistics indicates that only 32% of the 5,565 municipalities in Brazil have some type of selective waste collection, and that only 10% met the August 2012 deadline to present their solid waste management plan, a policy imposed by the National Solid Waste Policy of 2010, to the Environmental Ministry. Market analysts predict that it is unlikely that municipalities will comply with other legal requirements such as replacing garbage dumps with sanitary landfills, implementing selective waste collection and recycling programs that are currently scheduled to be met by mid-2014.

Despite the slow pace of municipalities in complying with these recommendations, the solid waste management business in Brazil offers significant business opportunities to private sector companies. ABRELPE estimates that there are currently 200 companies in the business, and that 80% of the solid waste management services are performed by private sector companies. The market for municipal urban cleaning in Brazil is estimated at US\$10.5 billion (R\$21 billion), and is expected to reach US\$22.5 billion (R\$45 billion) by 2016, once Law 12.305 of August 2010 is implemented and enforced. Industrial companies are jointly addressing policy compliance through their respective industry trade associations which typically contract feasibility studies, design reverse logistic methods, establish waste collection points and select appropriate waste treatment technologies.

The industry has an interest in the implementation of incinerators, or energy generation plants, in larger and mid-sized metropolitan cities. One example that is common in many industries is the Public-Private Partnership (PPP) model, which was established by the Brazilian organization Foxx in Barueri, in the state of São Paulo. The goal is to install an incinerator with a daily capacity of 825 metric tons of waste. <http://urebarueri.com.br/> According to media sources, Foxx will invest about US\$100 million in the incinerator, located near a sewage treatment plant. The State of São Paulo’s environmental authority, CETESB, is expected to issue the license for the plant by June 2013. SABESP, São Paulo State’s water and wastewater utility, is conducting technical feasibility studies to install incinerators in several municipalities and municipal consortiums.

Web Resources

IBAMA – Brazilian Environmental Institute – www.ibama.gov.br
 CETESB – Environmental Authority of the State of São Paulo - www.cetesb.sp.gov.br/
 ABRELPE - Brazilian Association of City Cleaning and Waste Treatment Companies – www.abrelpe.org.br
 ABETRE- Brazilian Association of Solid Waste Treatment Companies – www.abetre.org.br

Trade Shows

FENASAN - National Brazil's Exhibition of Environmental and Sanitation Services

Date: July 30 to August 1, 2013

Site: Expocenter Norte – São Paulo

Organizer: São Paulo State water utility Engineers Association

Website: <http://www.fenasan.com.br>

Comments: FENASAN attracts a large audience and international exhibitors and visitors.

FIMAI – International Industrial Environmental Trade Show - Traditional annual trade show with focus in environmental technologies for the industrial market.

Dates: November 2013

Site: Expocenter Norte – São Paulo

Organizer: Editora Tocalino

Website: www.fimai.com.br

For more information about export opportunities in this sector contact US Commercial Service Industry Specialist Teresa Wagner at: Teresa.wagner@trade.gov