

Environmental Technologies

Overview

US\$ Billions	2010	2011 (estimated)	2012 (estimated)
Total Market Size	10.00	10.50	11.00
Total Local Production	8.00	8.40	8.80
Total Exports	0	0	0
Total Imports	2.00	2.10	2.20
Imports from the U.S.	0.60	0.63	0.66

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 roughly US\$11 billion, of which US\$6.0 billion is related to the water and wastewater subsector; US\$4 billion for solid waste management and US\$1 billion for air pollution control. 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\$2.5 trillion.

Sub-Sector Best Prospects

In Brazil, there is currently an increasing demand for effluent treatment and energy/water saving technologies, as well as for specialized consulting services. Such technologies include advanced water treatment (filtration), water loss prevention solutions, "intelligent valves," efficient water distribution and reuse projects, water-saving devices, and rainwater systems, among others. Membrane filtration is a technology that has become more common in Brazil as a consequence of cost reduction. Membranes used in ultra-, micro-, and nano-filtration and reverse osmosis are imported into Brazil.

Suppliers of water treatment stations incorporate specific imported equipment. Laboratory and analytical equipment are also usually imported, and in increasing numbers.

Opportunities that are arising include solutions related to water distribution systems, including services and equipment; since the water loss rate in Brazil corresponds to about 40% of the potable water produced in the urban areas. Additionally, water reuse is becoming increasingly important in Brazil, especially in the large centers where water scarcity represents high operational costs for water impounding and adduction. Existing legislation imposing charges for collecting and disposing of effluents in water bodies increases the demand for specialized consulting services and effluent treatment technologies.

Investments in solid waste treatment technologies and waste-to-energy projects in sanitary and hazardous landfills are expanding significantly. The Brazilian government plans to invest R\$ 1.5 billion (US\$ 870 million) in solid waste treatment projects, replacement of garbage dumps, introduction of selective waste collection services, and financing of cooperatives of waste collectors. The Brazilian government expects that recycling activities income will increase from R\$ 2 billion (US\$1.1 billion) to R\$ 8 billion (US\$ 4.7 billion).

The demand for air pollution control products is also rising in Brazil. In addition to industrial demand, the increased number of greenhouse gas sequestration projects in sanitary landfills and the vehicle emission inspection program -- mandatory in some of Brazil's largest municipalities -- generate demand for gas emission monitoring technologies and gas analyzers, as well as the demand for industrial filters.

Opportunities

One of the most important issues affecting the environmental sector in Brazil in recent years has been the Brazilian National Solid Waste Policy of August 2010 (Law 12,305), whose objectives are to stimulate recycling activities and the appropriate management of waste with high contamination potential. A positive aspect of the solid waste policy is the social inclusion of individuals that informally collect waste in Brazil. The law requires that households in municipalities that offer "selective collection services", sort their domestic waste. In order to receive any government funding for urban cleaning and waste management activities, municipality will need to have a waste management plan in place.

The law has yet to be implemented, and companies will need time to adapt to the new requirements and to determine the appropriate treatment for each type of material.

Major Items of the National Solid Waste Policy

- 1- Prohibits creation of garbage dumps;
- 2- All municipalities have to build sanitary landfills that will only allow products that are not appropriate for reuse or composting;
- 3- Prohibits imports of any type of waste;
- 4- Using "reverse logistics" manufacturers, distributors and retailers are obliged to collect used packages. This rule applies to the following products: agricultural chemicals, batteries, tires, lubricant oils, all types of lamps, and electronic products;
- 5- Should manufacturers, importers, distributors and retailers delegate their responsibility for reverse logistics to the state, they will be charged accordingly;
- 6- Responsibility for the waste is shared among the Brazilian society, companies, municipalities, state and federal governments;
- 7- Recycling industries will have priority in government financing;
- 8- Activities related to solid waste management need to follow the priority order as follows: non-generation, reduction, reuse, recycling, treatment, and adequate final disposal;
- 9- Waste should be used for energy generation, once technical and environmental feasibility studies indicate the appropriateness. The emission of toxic gases has to be monitored;

10- The law also foresees that companies that operate with hazardous waste have to register in the “National Registry of Hazardous Waste Operators” and prove their technical capability.

Water/Waste Water Sector:

The Brazilian government's goal is to provide sanitation coverage to all Brazilians. The amount of investments required to reach this objective is R\$178 billion by 2020. (about US\$89 billion). The table below shows the investments needed by geographic region:

Regions/Investments In billion US\$	2020
North	US\$ 8.1
Northeast	US\$ 18.6
Southeast	US\$ 37.1
South	US\$ 16.5
Center-West	US\$ 8.7
Total Brazil	US\$ 89.0

About 30% of the US\$ 89 billion will be needed for replacement of equipment, pumps, asbestos, and cement pipes.

The sector's major challenge is the expansion of sewage collection and treatment, which is expected to attract most of the investments.

Private Sector Investments

As a result of Law 11455 of 2007, the private sector is increasing its direct participation in the sanitation business by operating water and wastewater utilities, which in turn is increasing the demand for higher technology equipment used in water and wastewater utilities. Tenders for these projects are awarded to the lowest bidder as required in the Brazilian Bid Law (Law 8666). This discourages local water / wastewater product from offering sophisticated technologies, because they involve more expensive products.

In 2008, SABESP, the São Paulo state water utility, established its first Public-Private-Partnership with the private Brazilian CAB-Galvão Consortium. Five additional PPPs are being analyzed. In 2007, the municipality of Rio Claro, state of São Paulo, established a PPP with the Brazilian Odebrecht Group to operate and expand sewage treatment. This was the first municipal PPP in Brazil.

The Brazilian Association of Water and Sewage Public Services Concessionaires – ABCON – estimates that the private sector will invest about US\$8.3 billion in basic sanitation works until 2017, and will manage concessions that will cover 30% of the Brazilian population, compared to the current 9.6% level.

The Odebrecht Group has recently created its sanitation company – Odebrecht Engenharia Ambiental (OEA), which already has seven concession contracts in the sector. According to the company, OEA has about US\$690 million to invest in new concessions in the next three years.

The Spanish-owned OHL Meio Ambiente Brasil, which currently has two sewage treatment contracts with municipalities in the state of São Paulo (Ribeirão Preto and Moji Mirim), foresees further investments in waste treatment projects. OHL has investment plans of US\$276 million and plans to bid on five new concessions in the near- to medium-term.

The municipal water utility in Campinas, SANASA, will build two sewage treatment plants using Membrane Bioreactor (MBR) technology.

Web Resources

- ABETRE- Brazilian Association of Solid Waste Treatment Companies: www.abetre.org.br
- ABRELPE - Brazilian Association of City Cleaning and Waste Treatment Companies: www.abrelpe.org.br
- CETESB – Environmental Authority of the State of São Paulo: www.cetesb.sp.gov.br/
- IBAMA – Brazilian Environmental Institute – www.ibama.gov.br
- For more market research reports, please visit: <http://export.gov/mrktresearch/index.asp>

Industry Trade Show

FIMAI – International Industrial Environmental Trade Show: www.fimai.com.br

Date: November 6-8, 2012

São Paulo, Brazil

Organizer: Editora Tocalino

Comments: Traditional annual trade show with focus on environmental technologies for the industrial market.

- For more information about export opportunities in this sector, please contact US Commercial Service Industry Specialist Teresa.Wagner@trade.gov