

## WATER TREATMENT PLANTS

One hundred and four municipalities have been targeted as priorities for upgrading existing facilities or building new plants. At the end of 1993, the National Water Commission was examining proposals for 18 new treatment plants that would be operated under a concession program.

In addition to public works projects, private-sector markets will emerge based on new environmental regulations. It is estimated that only 16 percent of private industry currently treats its waste water before discharge. Many companies are now forced to construct plants to treat their output. Canadian firms should investigate opportunities in industrial parks. Groups of Mexican companies, within these parks, are exploring the possibility of building communally-owned plants to treat their combined effluent.

## OPPORTUNITIES IN THE ENERGY SECTOR

Mexico's energy sector offers significant construction opportunities. The two key customers — *Petróleos Mexicanos* (Pemex) and *Comisión Federal de Electricidad* (CFE) — are the major purchasers of construction services in Mexico, with combined construction budgets totaling over U.S. \$2 billion per year.

### PETRÓLEOS MEXICANOS (PEMEX)

It is estimated that Pemex will have to spend approximately U.S. \$7 billion on construction between 1993 and 1997 to upgrade or replace current facilities. The focus will be on petrochemical plants, waste treatment plants and construction of pipelines. The company currently has 19 plants under construction. Each project is being handled on a turnkey basis where the builder assumes responsibility for financing the construction.

### COMISIÓN FEDERAL DE ELECTRICIDAD (CFE)

The Federal Electricity Commission (CFE) is undergoing a modernization program to improve the country's infrastructure and to extend electricity to

over 700,000 new users per year. At the end of 1993, CFE had 26 new plants under construction. In addition to increasing its generating capacity, CFE is also investing in construction to expand its transmission network and the coal-handling infrastructure at various ports.

Like Pemex, CFE has implemented a build-lease-transfer (BLT) scheme in many of its large construction projects. Typically, a consortia of financiers, construction companies, operators, and equipment suppliers finance, design, build and operate a facility which is leased back to CFE. Canadian companies can consider bidding independently on a turnkey project, participating in a consortium, or acting as a sub-contractor.

## OPPORTUNITIES IN HOUSING

In 1990, the Mexican government estimated that the country faced a deficit of 6.1 million houses. The greatest shortage existed on the outskirts of urban cities, such as Mexico City (2.7 million homes), Guadalajara (0.5 million), Monterrey (0.5 million), and cities in the northern states (1.2 million). The estimated housing shortage in rural areas was 1.2 million units.

Total housing production in Mexico averages 650,000 units per year. As much as 50 percent of this construction is provided by the informal housing sector — usually self-construction by the owner, often without title to the land. The remainder is built by the formal construction sector either through government-backed programs for low-income housing or private development for middle and upper-class dwellings.

Though reliable housing statistics are scarce in Mexico, it is estimated that the current annual demand for new units is as follows: over 70 percent of the need is for homes valued at less than U.S. \$25,000, while 25 percent of the requirement is for middle income homes (\$25 -100 thousand) and a small percentage is for homes exceeding U.S. \$100,000.

## OTHER OPPORTUNITIES

**Tourism** — Opportunity exists in the construction of hotels, marinas, shopping centers, condominiums, and golf courses, as well as the provision of services to new tourism sites — airports, water treatment plants, roads and electrical infrastructure.

**Ports** — Port and maritime infrastructure investment is up 50 percent in 1994 to nearly U.S. \$600 million. A further U.S. \$450 million is expected to be spent on airport construction.

**Industrial Plants, Parks & Warehouses** — At present Mexico has about 100 large industrial parks throughout the country, ranging from basic to world-class production facilities. Many of these parks have arisen from the presence of foreign manufacturers in Mexico, particularly in the *maquiladora* regions of the north. Opportunities will emerge for Canadian industrial design and construction technologies. In addition, there will be a need for construction of private electricity-generating plants and water-treatment facilities for individual companies or groups of companies within an industrial park. The Association of Industrial Parks reports 75 new projects for 1994 totaling U.S. \$360 million.

## COMPETING IN THE CONSTRUCTION CONTRACTING SECTOR

Canadian firms that have been active in Mexico's construction sector point to a number of factors that can contribute to a company's success.

- **Establish a local presence** — A local partner can be a critical factor in the success of a project. A Mexican partner will know how to obtain the necessary permissions from local authorities and will be key in ensuring that materials and labour issues are routinely dealt with.
- **Have staying power** — It takes time to understand who the key players and institutions are in the industry, the complexities of bidding systems, and the building methods employed in Mexico. A firm must