

PUERTO RICO

By Peter W. Harben & J. M. Harris

Peter W. Harben Inc., New Mexico 88011, USA (www.peterharben.com)

The Commonwealth of Puerto Rico is located some 1,600 km southeast of Florida and about 965 km north of Caracas, Venezuela, and forms part of the Greater Antilles along with the islands of Cuba, Hispaniola (Haiti and Dominican Republic) and Jamaica. The total area of Puerto Rico, including its three largest offshore islands, is 9,085 km². Much of the island (less than three times the size of Rhode Island), is hilly and mountainous, and the remainder forms a narrow coastal plain. The central mountain chain, the Cordillera Central, extends east and west and divides the island into its northern and southern regions. Other mountain ranges include Sierra de Luquillo in the northeast, Sierra de Cayey in the southeast and Sierra Bermeja in the southwest.

Puerto Rico was a Spanish colony before being ceded to the US following the Spanish-American War (1898). In 1952 Puerto Rico became a commonwealth with an elected governor and legislators for local matters and the US government maintaining jurisdiction over the island's defence, foreign relations, and trade agreements. Today, the commonwealth is a vibrant bilingual and bicultural society of almost 4 million. Some economists characterise Puerto Rico's economy as 'fictitious' since it has relatively few natural resources and its economy relies on federal aid from the US Government, which depends on the industrialisation programmes and the tax incentives. The slowdown in the US economy has trimmed Puerto Rico's economic growth from 3% to around 2.2% annually. Important industries like pharmaceuticals, electronics, textiles, petrochemicals, processed foods, clothing, and textiles, have now surpassed agriculture (sugarcane, coffee, pineapples, plantains, bananas and livestock) as the primary economic activity, together with tourism (some 5 million visitors per year). Encouraged by duty-free access to the US and by tax incentives, US firms have invested heavily in Puerto Rico since the 1950s.

The island's natural assets include an important location along the Mona Passage, a key shipping lane to the Panama Canal, and San Juan, one of the biggest and best natural harbours in the Caribbean. There are plentiful water resources, with many small rivers draining from the high central mountains, a relatively dry south coast and a fertile coastal plain belt in north. Mineral resources include minor resources of copper nickel, cobalt, iron, chromium, lead, gold and silver, mainly in the centre of the island. However, the island's modest mining industry is centred on non-metallics – particularly stone, sand, salt, and clay. Several large limestone quarries remain active, and sand and gravel resources are of increasing importance for construction and beach replenishment.

Almost all of Puerto Rico's mineral production consists of construction materials, notably sand, gravel, stone, and material used in the manufacture of concrete. Other minerals are clay, graphite, lime, and salt.

Traditionally, construction raw materials – in particular cement, sandstone and trap rock for aggregates – have contributed about 1% of GDP. However, the mining scene has been relatively quiet, as many parts of the island have been sterilised through legislation. For example, in 1996, over 280 ha in Puerto Rico's mining region in Adjuntas were designated as a Puerto Rican State Forest by the Department of Natural and Environmental Resources, and the mining law was amended in June 1995 to prohibit open-pit mining of metallic ores.

Puerto Rican Cement Co.'s (PRCC) dry process cement plant at Ponce, along with the smaller Essroc (formerly San Juan Cement) at Dorada, account for two-thirds of the total value of minerals produced in the country. In September 2002, Cemex SA de CV of Mexico, through its indirect wholly-owned subsidiary Tricem Acquisition Corp, completed the tender offer made for all outstanding shares of common stock of Puerto Rican Cement Co (PRCC) at US\$35/share. Slightly more than 5 million shares of Puerto Rican Cement were tendered, making the value of the deal approximately US\$250 million. Virtually all sales are based on ready-mix concrete, portland cement, and hydrated lime. PRCC also makes paper and polypropylene packaging products with its multi-wall paper bags, sold only in Puerto Rico, used for its own cement along with animal foods and fertilisers. Essroc, headquartered in Nazareth, Pennsylvania and part of the Italcementi Group of companies, has an annual production capacity of nearly 6 Mt, making it the fifth-largest cement producer in North America.

Puerto Rico is the Caribbean's largest energy importer and has a refining capacity of 49,000 bbl/d at Caribbean Petroleum Corp's Bayamon refinery. According to *Platt's Global Energy*, the island's main power utility, government-owned Puerto Rico Electric Power Authority (PREPA), has boosted installed capacity to about 5,700 MW to supply electricity based on a recent annual demand growth rate of 3-3.5%. In addition to increasing its own generating capacity by repowering older stations, PREPA has signed contracts with independent power producers (IPPs) such as the 507-MW EcoElectrica plant, owned by Edison Mission Energy and (formerly) Enron Corp. It receives liquefied natural gas (LNG) from Trinidad and supplies 17% of Puerto Rico's energy needs. Another provider is the 454 MW coal-fired AES Puerto Rico power plant in Guayama.

LNG has been imported from Trinidad since August 2000 to the new EcoElectrica regasification facility at Punta Guayanilla, and a 25-km natural gas pipeline has been proposed to enable it to supply thermal power plants.