

COUNTRY ANALYSIS BRIEFS

Caribbean

Last Updated: October 2008

Background

Most Caribbean islands are net energy importers.

The islands of the Caribbean basin are predominantly net energy importers, with the exception of Trinidad and Tobago. Agriculture and natural resource extraction activities continue to constitute the basis of the islands' economies, though the tourism and service sectors are growing. In recent years, there has been concern that higher global oil prices will impair the Caribbean economies, as they are highly dependent upon oil for the energy needs. In response, the island nations have been discussing ways to promote alternative energy sources and better integrate their energy sectors.



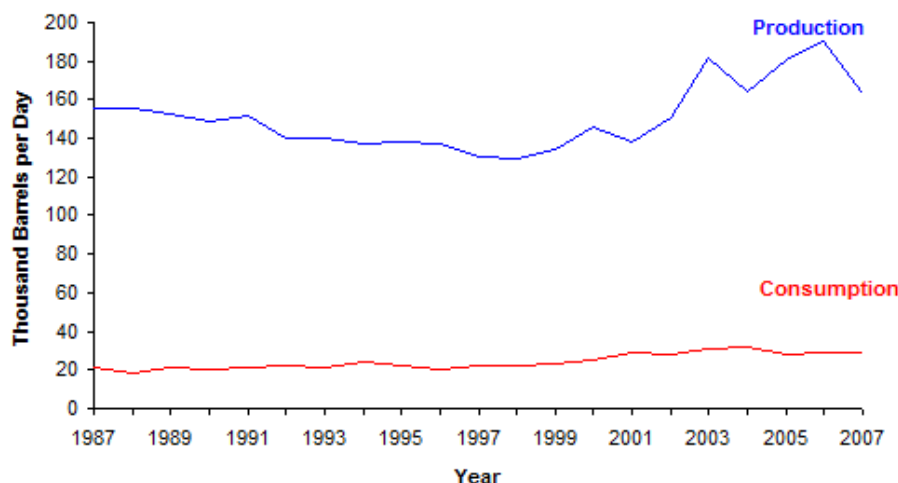
Oil Production

Trinidad and Tobago is the largest oil producer in the Caribbean.

Trinidad and Tobago

Trinidad and Tobago contains the majority of the Caribbean's oil production. In 2007, the country produced 163,320 barrels per day (bbl/d) of total oil production, of which 121,150 bbl/d was crude oil, the remainder mostly consisting of natural gas liquids (NGLs). In 2007, Trinidad and Tobago consumed an estimated 29,000 bbl/d of oil, allowing it to export a sizable amount of its production. In recent years, the country's oil production has begun to rebound; despite the fall in 2007, oil production is still above the level seen in 1998.

Trinidad and Tobago's Oil Production and Consumption



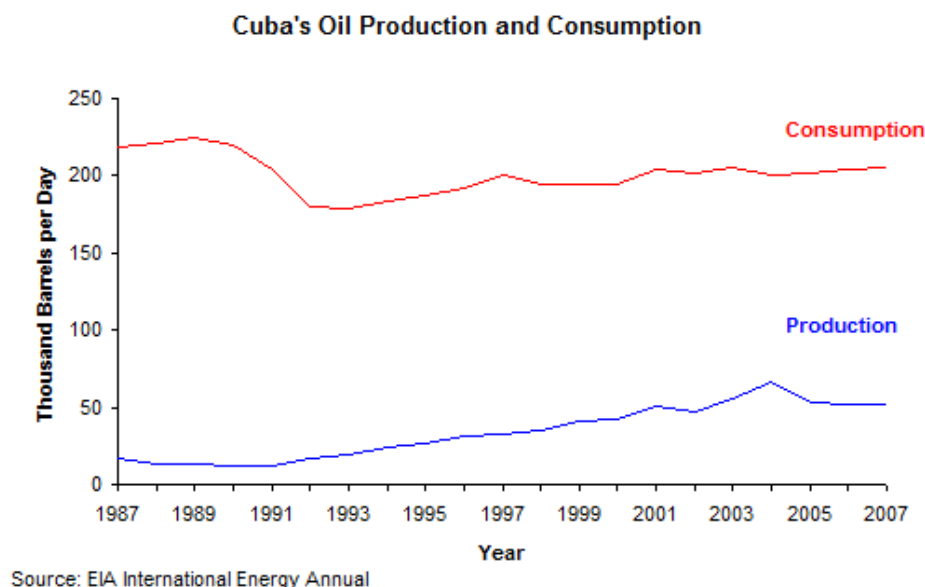
Source: EIA International Energy Annual

Most oil production in Trinidad and Tobago occurs offshore, concentrated off the southeastern and

southwestern coasts. In January 2005, production began at the Greater Angostura field in Block 2(c), the first oil production to occur off the northeast coast of Trinidad. Operated by a consortium led by BHP Billiton, the Angostura field contains an estimated 310 million barrels of recoverable reserves. Overall, the largest crude oil producers in Trinidad and Tobago include Petrotrin and BHP Billiton. Important producers of NGLs in Trinidad and Tobago include the Phoenix Park gas processing plant and the Atlantic LNG project.

Cuba

Cuba produced 52,000 bbl/d of oil in 2007, roughly the same as 2006. In 2007, the country consumed an estimated 205,000 bbl/d, making the island a net oil importer. Cuba's oil production has increased significantly in the past two decades, with the country only producing 16,000 bbl/d in 1984. Most of Cuba's oil production occurs in the northern Matanzas province, producing a heavy, sour crude that requires special processing. Currently, two Canadian companies, Sherritt International and Pebercan, are producing oil in Cuba, under joint-venture production agreements with state-owned oil company Cubapetroleo (Cupet). Much of this production occurs onshore, though there is some offshore production in very shallow coastal waters. Cuba's oil production seems to have largely stabilized in the near term, with any additional increases in production dependent upon the discovery of substantial new reserves (see below).



There has been considerable excitement over exploration activities in Cuba's offshore basins, especially its portion of the Gulf of Mexico. Industry analysts have reported that there could be at least 1.6 billion barrels of crude oil reserves in these basins. However, exploration activities have, so far, been somewhat disappointing. In July 2004, Repsol-YPF announced that its exploratory well in the Gulf of Mexico had discovered high-quality crude oil, however the company noted that it had not discovered commercially-viable quantities. In 2007, Cupet and Venezuela's PdVSA concluded an agreement to jointly explore Cuba's offshore areas, and the country has signed other exploration agreements with Malaysia's Petronas, India's OVL, and Vietnam's Petrovietnam. Industry reports indicate that larger exploratory drilling efforts could begin in Cuba's offshore basins in 2009. There have been concerns raised in the United States regarding the close proximity of any potential Cuban oil production to Florida. However, as oil companies have not yet conducted a comprehensive survey of the area, it is difficult to predict the exact locations of any potential production platforms.

Barbados

While Barbados does not have significant crude oil reserves, it does maintain a small amount of domestic production. Oil production in Barbados during 2007 averaged 1,000 bbl/d, while the country consumed an estimated 8,000 bbl/d. As Barbados has no refining capacity, its oil is refined elsewhere and then returned for domestic consumption.

Regional Initiatives

Many of the Caribbean countries import oil from Mexico and Venezuela under favorable terms. Under the San Jose Pact, Barbados, the Dominican Republic, Haiti, and Jamaica received oil and refined products from those two countries. Cuba also receives crude oil and petroleum products from Venezuela at a discounted rate. In 2005, nearly all Caribbean countries signed the Venezuela-backed Petrocaribe initiative. Under the program, Venezuela sells crude oil and refined products to these countries under favorable financing terms.

The Caribbean has several export-oriented oil refineries, focused towards the U.S. market.

Oil Refining

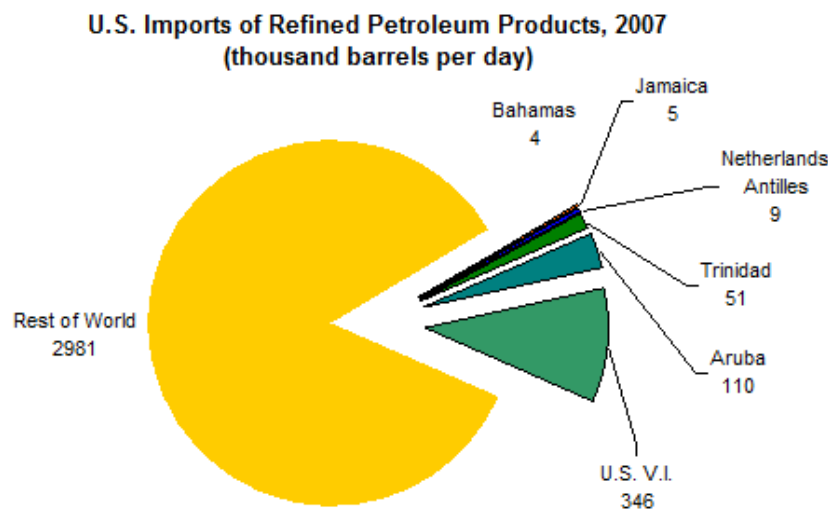
According to OGJ, the Caribbean region has a combined 1.7 million bbl/d of refining capacity. Smaller refineries produce petroleum products for local demand, whereas the larger facilities are geared towards exports to the United States and other markets. The Caribbean is also an important storage location for crude oil brought in from outside the region.

The largest refinery in the Caribbean is the Hovensa facility in the U.S. Virgin Islands, with crude distillation capacity of 495,000 bbl/d. Hovensa, a joint venture of PdVSA and Amerada Hess, sends most of its refined product output to the United States: in 2007, the U.S. Virgin Islands sent 350,000 bbl/d of refined products to the United States (see the [EIA Petroleum Navigator](#) for more details). Other large facilities in the region include the 320,000-bbl/d Isla refinery in the Netherlands Antilles, operated by PdVSA; the 230,000-bbl/d San Nicolas in Aruba, operated by Valero (though the company has stated that it would like to sell the facility); and the 165,000-bbl/d Pointe-a-Pierre in Trinidad and Tobago, operated by Petrotrin. Both the Hovensa and Isla refineries source the bulk of their crude oil supplies from Venezuela. A proposed \$2 billion refinery near St. Elizabeth, Jamaica has entered advanced planning stages. Project sponsor Petroleum Corporation of Jamaica (PCJ) has stated that the facility will have an initial crude refining capacity of 250,000 bbl/d.

In December 2007, Cupet and PdVSA completed the re-building of the Cienfuegos refinery, which had been started during the Soviet era but never completed. The project also reportedly improved the refinery's ability to handle heavier crudes and produce more light products. The facility has a distillation capacity of 65,000 bbl/d, with announced plans to increase that to 100,000 bbl/d at a later date. Cuba has three additional refineries: Havana (34,000 bbl/d), Santiago (22,000 bbl/d), and Cabaiguan (5,000 bbl/d).

Exports to U.S.

In 2007, the United States imported 525,000 bbl/d of petroleum products from the Caribbean, or 15 percent of its total petroleum product imports. The U.S. Virgin Islands represented the bulk of the region's exports to the United States (346,000 bbl/d), followed by Aruba (110,000 bbl/d) and Trinidad and Tobago (51,000 bbl/d).



Source: EIA Petroleum Supply Annual

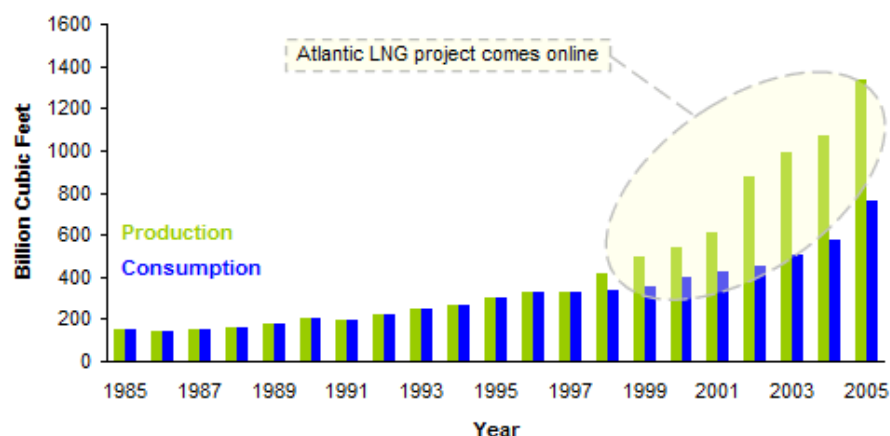
Liquefied Natural Gas

Trinidad and Tobago

Natural gas production in Trinidad and Tobago has skyrocketed in recent years. In 2006, the country produced 1.3 trillion cubic feet (Tcf) of natural gas, up 25 percent year-on-year. The country has benefited from a large amount of foreign investment into the sector, with BP Trinidad and Tobago (BPTT) leading these efforts. Other important players in the natural gas sector include British Gas (BG) and Chevron.

Trinidad and Tobago is the largest exporter of natural gas to the United States.

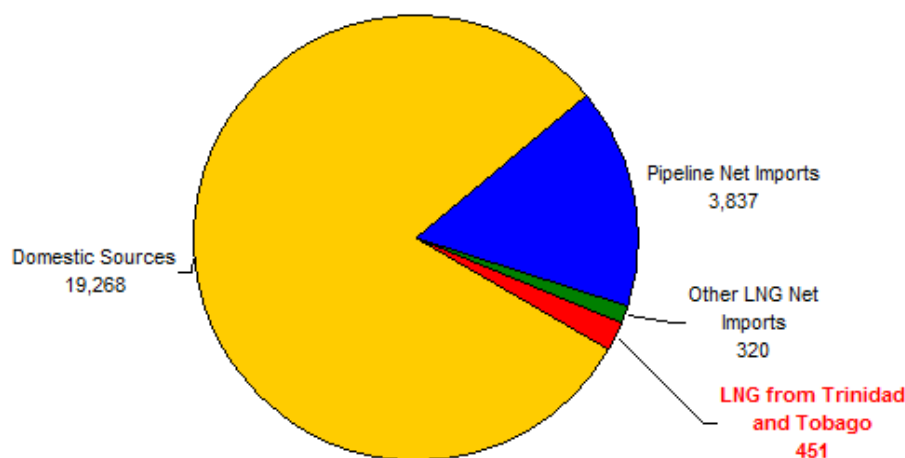
Trinidad and Tobago's Natural Gas Production and Consumption



Source: EIA International Energy Annual

Trinidad and Tobago is the largest supplier of LNG to the United States and one of the largest LNG exporters in the world. In 2007, Trinidad and Tobago exported 451 Bcf of natural gas to the United States, about 60 percent of total U.S. LNG net imports and about 2 percent of total U.S. natural gas supply. The Atlantic LNG Company, a consortium led by BP, BG, and Repsol-YPF, operates four LNG trains at Point Fortin, on the south-western coast of Trinidad. The first LNG train was completed in March 1999, with subsequent trains completed in August 2002, April 2003, and April 2006. The four trains have capacity to produce a combined 14.8 million metric tons (Mmt) of LNG per year (775 Bcf of regasified natural gas). There has been discussions between Atlantic LNG and the government of Trinidad and Tobago over the construction of a fifth and sixth train, though there are no firm plans as of yet to pursue these projects. Trinidad also has a substantial petrochemical industry to further monetize natural gas reserves.

U.S. Natural Gas Supply, 2007 (Billion Cubic Feet)



Source: EIA Natural Gas Monthly

Other Regional Developments

Some Caribbean islands have begun to look towards LNG as a way to diversify their energy consumption away from imported oil. In June 2007, Jamaica received nine bids for the construction of a \$250 million LNG regasification terminal in that country. The Petroleum Company of Jamaica (PCJ) had hoped to bring the facility online by the end of 2009, with an initial capacity of 1.2 Mmt of LNG. However, according to media reports, plans for the project have been shelved for the time being, and the country is now considering compressed natural gas (CNG) as an alternative.

Integrated LNG-power generation schemes have become a viable option for electricity generation in the

Caribbean, especially as it can displace costly diesel or fuel oil. In the Dominican Republic, AES operates the Andres facility, an LNG regasification terminal that feeds two gas-fired power plants. In August 2000, Puerto Rico began importing LNG to supply the EcoEléctrica facility, a 540-MW natural gas-fired power plant.

The Bahamas has become a proposed gateway for LNG to enter the United States via Florida. AES has proposed the Ocean Express project, which would include an LNG receiving terminal in the Bahamas and an undersea pipeline to deliver natural gas to Florida. The project is reportedly still in the regulatory process.

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Foreign Government Agencies

[Ministry of Energy and Energy Industries \(Trinidad and Tobago\)](#)

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