COUNTRY ANALYSIS BRIEFS

Ecuador

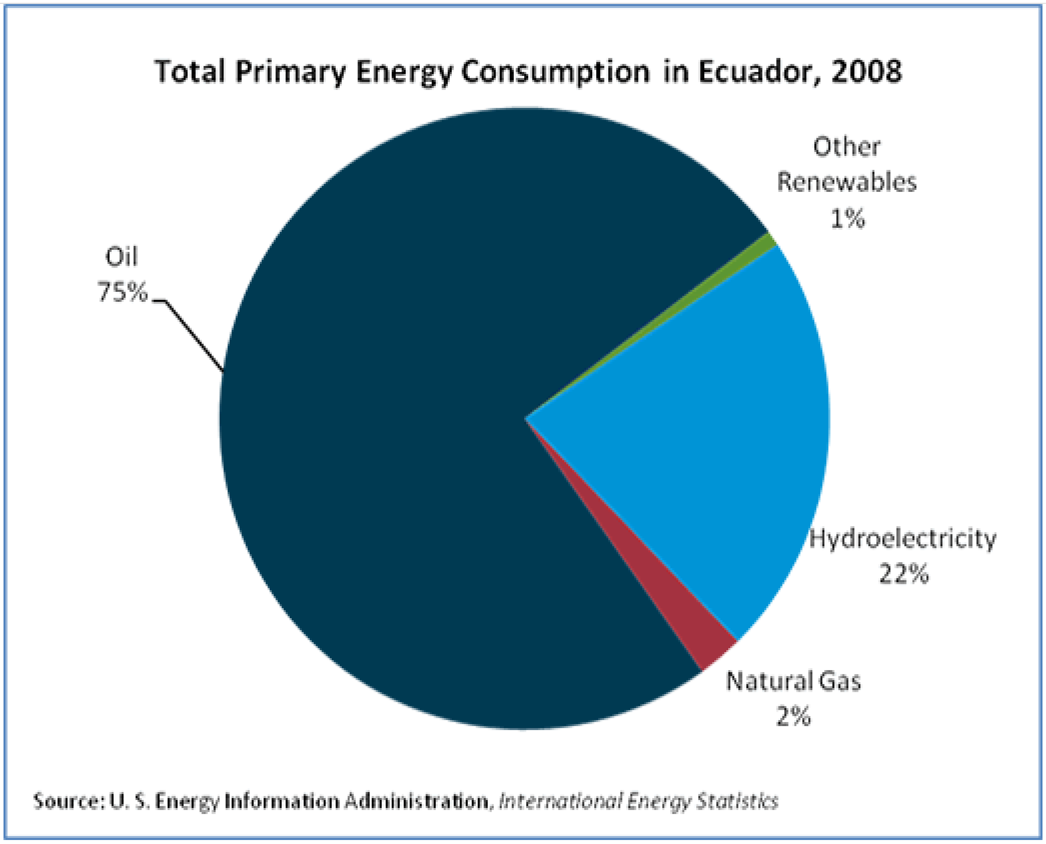
Last Updated: September 2011

Background

Ecuador is a member of the Organization of Petroleum Exporting Countries (OPEC) and oil revenues play a major role in the country's economy.

Ecuador is one of Latin America's largest oil exporters, with net oil exports estimated at 285,000 barrels per day (bbl/d) in 2010. The oil sector accounts for about 50 percent of Ecuador's export earnings and about one-third of all tax revenues. Despite being an oil exporter, Ecuador must still import refined petroleum products due to the lack of sufficient domestic refining capacity to meet local demand. As a result, the country does not always enjoy the full benefits of high world oil prices: while these high prices bring Ecuador greater export revenues, they also increase the country's refined product import bill.

In 2007, Ecuador re-joined the Organization of the Petroleum Exporting Countries (OPEC), after leaving the organization at the end of 1992. Ecuador is the smallest oil producer in OPEC, with an assigned production quota of 434,000 bbl/d. Despite an increasingly challenging investment environment, data available indicate that Ecuadorian production is increasing in 2011. A growing share of Ecuador's exports are going to China, which has secured fixed supply in exchange for loans from the China Development Bank.



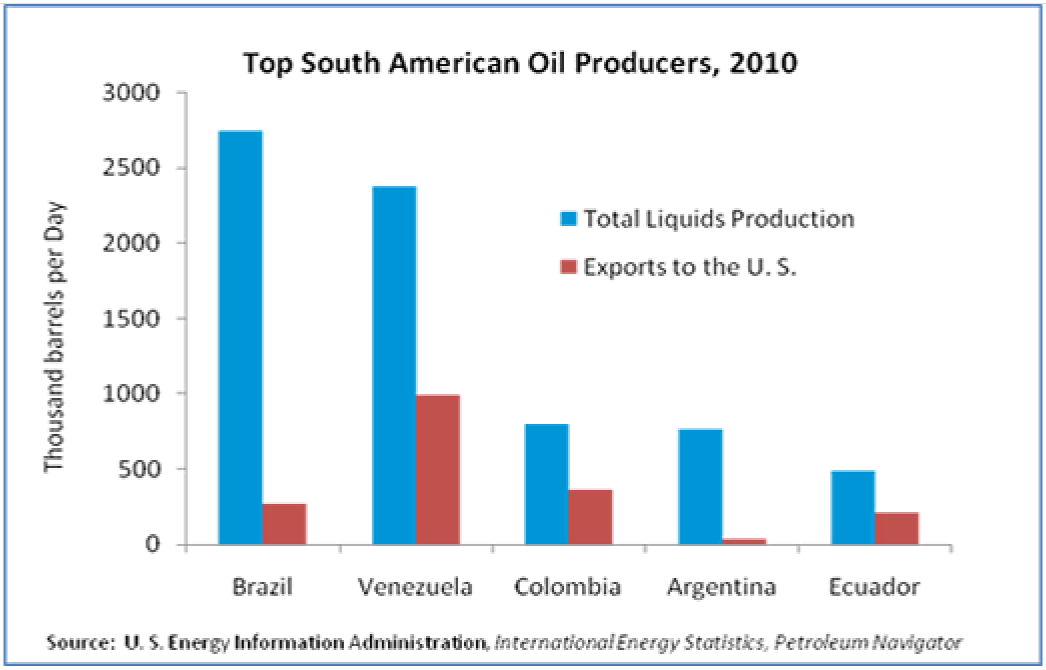
Ecuador's energy mix is largely dependent upon oil, which represented three quarters of the country's total energy consumption in 2008. Hydroelectric power represented 22 percent of total energy consumption in 2008, and accounts for about two thirds of power generation.

While urban electrification rates are close to 100 percent, droughts in late 2009, affecting the Paute River hydroelectric plant, caused the government to implement rolling blackouts from November 2009 to January 2010. Capacity shortages have again raised the risk of blackouts for the upcoming dry season from November 2011 to March 2012. To address this issue in the longer term, Ecuador plans to build six new hydroelectric power plants in the coming decade. Financing for all of the new projects will come from China.

Oil

Ecuador is the fourth-largest South American supplier of crude oil to the United States.

According to Oil and Gas Journal (OGJ), Ecuador held proven oil reserves of 6.51 billion barrels in January 2011 –the third largest reserves in South America after Venezuela and Brazil. Ecuador is the fifth-largest producer of oil in South America, producing 486,000 bbl/d of oil in 2010 (almost all of which was crude oil), down from a 2006 peak of 536,000 bbl/d. Data from the first half of 2011 show a rebound in production, which averaged 501,000 bbl/d through June.



In 2010, Ecuador consumed 201,000 bbl/d of oil, leaving 2010 net exports of 285,000 bbl/d. In 2010, Ecuador exported 212,000 bbl/d of oil to the United States, accounting for less than two percent of total U.S. oil imports. Other destinations for Ecuadorian crude in 2010 included Chile, Peru and China. Ecuador has begun to look towards the Asian market, namely China, as an alternative export market and source of investment.

Since 2009, Ecuador has agreed to three separate loan agreements with China which were explicitly backed by oil deliveries. Under these agreements, Ecuador is required to invest a share of the loaned amount in infrastructure projects involving Chinese companies and repay the loans in crude oil shipments. In addition to these formal arrangements, China has made numerous other large-scale loans to Ecuador that have coincided with oil supply agreements.

Sector Organization

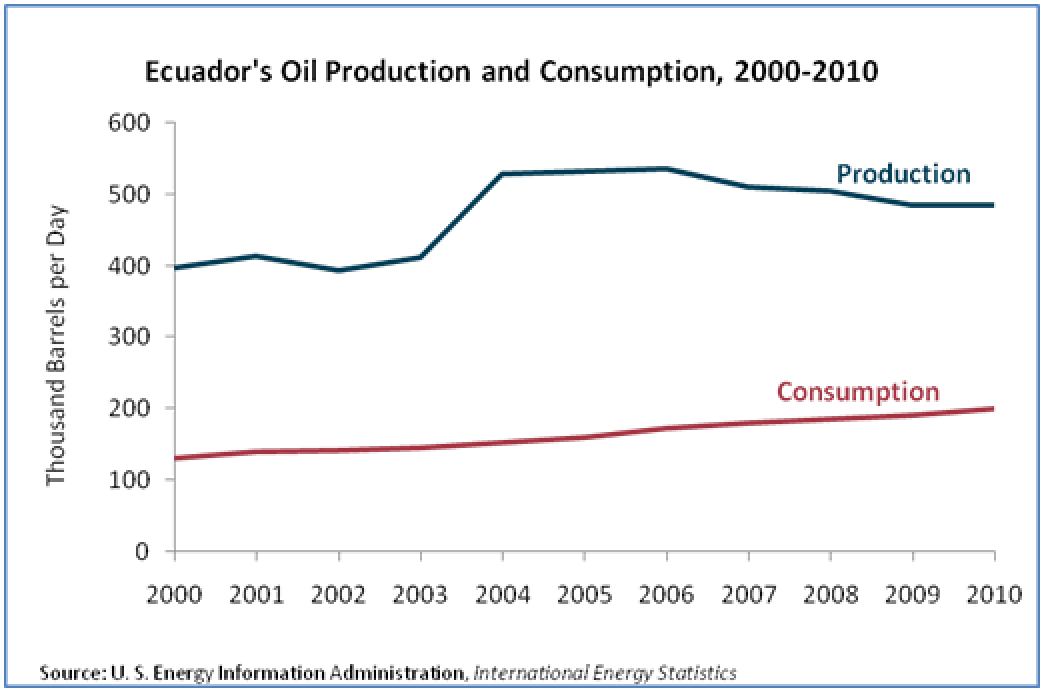
Petroecuador, the state-run oil company, controls most of the crude oil production in the country. Major foreign-owned oil companies operating in Ecuador include Repsol-YPF, Eni, and Andes Petroleum, a consortium of Chinese companies.

In November 2010 the government of Ecuador completed renegotiating its contracts with oil companies under a new hydrocarbons law. The new law mandates “service agreements,” in which oil companies will receive a fixed fee per barrel rather than shares of production, with the remainder of the revenue accruing to the government. This measure, designed to increase government revenue, led companies such as Petrobras and Noble Energy to exit the country. Negotiations over fair compensation for their assets continue.

These changes to Ecuador’s legal framework continue a trend towards nationalist policies in the oil sector. In 2006, Petroecuador took over the production assets of Occidental Petroleum as a result of expired contracts and in 2009, following a tax dispute, the government also appropriated two blocks belonging to Perenco. Most recently, in February 2011, an Ecuadorian court ordered Chevron to pay $8.6 billion in damages to indigenous Ecuadorians harmed by Texaco’s Ecuadorian operations between 1964 and 1990. Chevron is appealing.

Exploration and Production

Ecuador's most productive oil fields are located in the northeast corner of the country. Crude oil production increased sizably in 2003 with the opening of the Oelducto de Crudos Pesados (OCP) pipeline, which removed a chokepoint on crude oil transportation in the country (see below). However, production has leveled off in recent years, the result of natural decline, the lack of new project development, and operating difficulties at existing oil fields. Production levels have again surpassed 500,000 bbl/d in 2011 with the inauguration of the Panacocha field in the Ecuadorian Amazon – the first new production expansion since the current government took office in 2007.



Ecuador aspires to produce 600,000 bbl/d by 2013. To facilitate this expansion, Petroecuador is in the process of negotiating contracts with Schlumberger, Baker Hughes, Halliburton, and the Ecuadorian service company Sertecpet to carry out enhanced oil recovery projects in some of the country's large, mature fields that have been declining in recent years. Ecuador also plans to solicit bids to develop twelve blocks on the country's border with Peru in October of 2011.

In the longer term, production increases could come from the Ishpingo-Tambococha-Tiputini (ITT) Block located in the Yasuní National Park, which holds 850 million barrels of proven reserves. This development will be delayed in the near term due to a 2010 agreement between government of Ecuador and the United Nations Development Program (UNDP) in which the international community will pay Ecuador US $350 million per year for 10 years for not developing the ITT Block and preserve the park. Uncertainty surrounds the status of the agreement.

Pipelines

Ecuador has two major oil pipeline systems. The first is the Sistema Oleducto Trans-Ecuatoriano (SOTE), built in the early 1970s. The 310-mile, 400,000-bbl/d SOTE runs from Lago Agrio to the Balao oil terminal on the Pacific coast. The second oil pipeline is the Oleducto de Crudos Pesados (OCP). The 300-mile, 450,000-bbl/d OCP mostly parallels the route of the SOTE. The OCP began operations in September 2003, and its completion immediately doubled Ecuador's oil pipeline capacity and facilitated increases in production

Ecuador utilizes one international pipeline, the TransAndino. The 50,000-bbl/d pipeline connects Ecuador's oil fields with the Colombian port of Tumaco. The TransAndino pipeline has occasionally been the target of rebel forces in Colombia. Although the security environment has improved in recent years, the pipeline has been compromised as recently as February 2011.

Downstream Activities

According to *OGJ*, Ecuador has three oil refineries, with a combined capacity of 176,000 bbl/d. The largest refinery in Ecuador is Esmeraldas (110,000 bbl/d), located on the Pacific coast. Despite its status as a crude oil exporter, Ecuador is a net importer of refined oil products. In general, Ecuador exports heavy refined products, like fuel oil, and imports lighter products, such as gasoline, diesel, and liquefied petroleum gas (LPG), which dampens the country's benefits from high oil prices.

The Ecuadorian government is actively seeking ways to increase domestic production of lighter petroleum products. These plans include upgrading the Esmeralda refinery to operate at full capacity and better handle Ecuador's heavy domestic crude production. South Korea's SK Engineering is currently under contract to repair, overhaul and upgrade the Esmeraldas refinery, which had to be shut down last year following a major leak.

There have also been discussions between Ecuador and Venezuela about the construction of a new refinery in Ecuador. The two countries established a joint company to build the facility on the Pacific Coast in Manabi province with crude distillation capacity of the refinery at 300,000 bbl/d. Only a small portion of the project has been completed to date due to lack of external financing. According to recent industry reports China's Sinopec might fund a portion of the project.

Natural Gas

Ecuador has relatively small proven natural gas reserves and a limited natural gas market.

According to OGJ, Ecuador had 282 billion cubic feet (Bcf) of natural gas reserves as of January 2011. In 2009, Ecuador produced total of 49 Bcf of natural gas, almost all of which was associated gas from oil production. Ecuador's natural gas utilization rates are due mainly to the lack of infrastructure to capture and market natural gas. According to the National Oceanic and Atmospheric Administration, Ecuador flared the second largest amount of natural gas in South America behind Venezuela.

The only large-scale natural gas project in Ecuador is the Amistad field, located in the Gulf of Guayaquil, which produces an estimated 23.5 million cubic feet per day (MMcf/d). Petroecuador took over this project after U.S.-based Noble Energy opted to exit the country rather than renegotiate its production contract. All of Amistad's natural gas production flows to the Machala facility, a 130-megawatt (MW), onshore, gas-fired power plant that supplies electricity to the Guayaquil region.

Links

EIA Links

EIA - Ecuador Country Energy Profile
EIA – OPEC Revenues Factsheet

U.S. Government

CIA World Factbook - Ecuador
U.S. Embassy in Quito, Ecuador
U.S. State Department's Consular Information Sheet, Ecuador

General Information

International Monetary Fund (IMF) on Ecuador
Banco Central del Ecuador (Central Bank)
Instituto Nacional de Estadística y Censos (National Statistical Office)
Ministerio de Recursos Naturales No Renovables (Ministry of Non-Renewable Natural Resources)

Oil and Natural Gas

OCP-Ecuador
Petroecuador

Sources

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Latin America Oil and Gas Monitor
Oil and Gas Journal
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