



GOING GLOBAL PHASE 3





Peru

OVERVIEW

Peru produced around 360,000 boe/d per day in 2016, with two-thirds of that production natural gas.

It is the seventh largest crude oil reserve holder in Central and South America, with 741 million barrels of estimated proved reserves. Much of Peru's proved oil reserves are located onshore in the Amazon region.

Proved natural gas reserves are around 15 trillion cubic feet, the fourth largest reserves in Central and South America, following Venezuela, Mexico and Brazil.

Crude oil production in Peru has been declining since the mid-1990s, but the country's total liquid fuels production has been bolstered by increased output of natural gas liquids (NGLs). As a result, total liquid fuels production has steadily increased over the past decade to average 180,000 bbls/d in 2014, of which nearly 60 per cent was NGLs.

Dry natural gas production in Peru has grown rapidly since the Camisea Field went on stream in 2004, from 30 billion cubic feet that year to 431 billion cubic feet in 2013.

Peru became a natural gas exporter in 2010 when it commissioned South America's first LNG plant, Pampa Melchorita, owned by the Peru LNG project. The plant currently has a capacity of 215 billion cubic feet per year.

OIL & GAS RESERVES
4,272 (million boe)

RESERVE LIFE
36.7 years

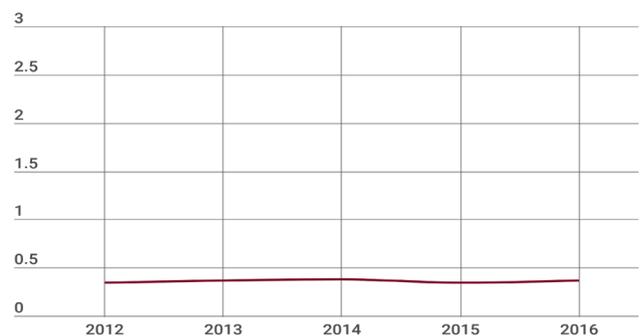
OIL & GAS PRODUCTION
1,521 (thousand boe/d)

PRODUCTION FIVE-YEAR CAGR
-0.82%

ACTIVE E&P COMPANIES/ACTIVE CANADIAN E&P COMPANIES
207/9



FIVE YEAR PRODUCTION (MILLION BOE/D)



Capital expenditures have been climbing for over a decade in Peru, reaching around \$2 billion in 2015.

OPPORTUNITIES

Peru ranks as a low-risk/low-return export market in our analysis. It has opportunities in heavy oil and natural gas development.

China's CNPC announced it will be spending \$2 billion developing 3.9 trillion cubic feet in gas reserves in the coming years, requiring around 60 wells annually.

Conventional oil and gas exploration and development

Peru has 18 sedimentary basins with hydrocarbon exploration potential. However, only three of them have been exploited. Peru is one of the few countries in the world whose territory is relatively underdeveloped, which means that it has an almost intact hydrocarbon potential.

Ten basins are located in the continental zone of Peru in the coast and in the southern and northern jungle, and the rest are located offshore.

In 2014, only 12 exploratory wells were drilled. Perupetro would like to see around 30–50 exploratory wells drilled each year.

There are currently 70 signed licence contracts, with 28 stalled awaiting environmental permits. This is a critical problem for the country's hydrocarbons industry. In these 28 blocks, at least another 20 exploratory wells could be drilled.

The size of the natural gas prize could be significant in the country, with estimates of resource in place up to 90 trillion cubic feet.

Heavy oil

A substantial portion of the oil produced in Peru is considered heavy oil with an average API gravity of 20 degrees. Peru's largest basin, the Marañón Basin in the northern part of the country, is home to the majority of all heavy oil produced in the country, with average production of 30,000 bbls/d in 2015.

The Marañón Basin forms part of the sub-Andean Basin that extends into the prolific Oriente Basin in Ecuador and the Putumayo Basin in Colombia. This large sub-Andean basin is a proven petroleum province with oil fields in all three countries. In Peru, the Marañón Basin is producing oil in the northern and central areas of the basin. Other heavy oil areas of interest include the Ucayali, Madre de Dios, Trujillo and Mollendo basins.

Peru has estimated heavy oil reserves of 690 million barrels and potential resources of 1.09 billion barrels in explored zones, according to Petroperu, the country's licensing agency.

Offshore

Peru has at least 10 basins with offshore potential, with only two tested for oil and gas. They are the Talara Basin, which has

already accumulated close to 300 million barrels from its offshore sector, and the Tumbes sub-Basin, with several shut-in gas fields discovered offshore.

Only one other basin has seen the drilling of offshore tests. Two wells were drilled 27 years ago, one of which was very shallow.

Two further basins have had limited testing onshore. One of these has commercial gas onshore, and the other was tested over 40 years ago with a single 3,100-foot well. The remaining five basins have never been tested.

Still other basins may be present on the lower continental slope, in areas not yet covered by modern multichannel 2-D seismic surveys. The total untested area is around 50 million acres.

Peru's 1,500-mile coastline is similar in length to the distance along the U.S. Gulf Coast from Brownsville, Texas, to the tip of Florida.

Unconventional resources

While a few test wells have been drilled in Peru, there has been little work on unconventional resources in the country.

Infrastructure

Northern Peruvian Pipeline: This pipeline has connected producing blocks of the northeastern jungle with the northern coast since 1972. The oil pipeline is operated by Petroperu, which charges a fee for its use. Production of heavy oil in recent years has highlighted the necessity of overhauling the pipeline. Petroperu has plans regarding this project, which could consist of two stages at a cost of approximately US\$1 billion.

Southern Peruvian Gas Pipeline project: This project consists of a pipeline system that will enhance the existent hydrocarbons transport system and will be able to transport natural gas and its associated liquids to Peru's southern region. The Southern Peruvian Gas Pipeline will increase the current transportation capacity of the national pipeline system by approximately 500 million cubic feet per day in the short term. It is scheduled for commissioning in 2018.

Northern Peruvian Gas Pipeline project: Currently, this project is under review by the government.

Oilfield service market

With respect to equipment, the main demand is for drilling rigs, compressors, pumps, filters, turbines, valves, treatment plants, tanks and alloy pipe and fittings. Services in demand include geophysical services, seismic data processing, directional drilling technologies, helicopter services, sour gas management, industrial safety standards management and environmental control management.

DOING BUSINESS IN PERU

The Canada-Peru Free Trade Agreement (CPFTA) sets out the rules for trade between the two countries.

The fiscal oil and gas regime in Peru for exploration and production is set under licences or service contracts with the government. Under a license contract, the investor pays a royalty, like in Alberta. Under a service contract, the government remunerates the contractor.

License and service contracts are approved by the Ministry of Economy and Finance of Peru, and the Ministry of Energy and Mining of Peru, and can only be modified by a written agreement signed by the parties.

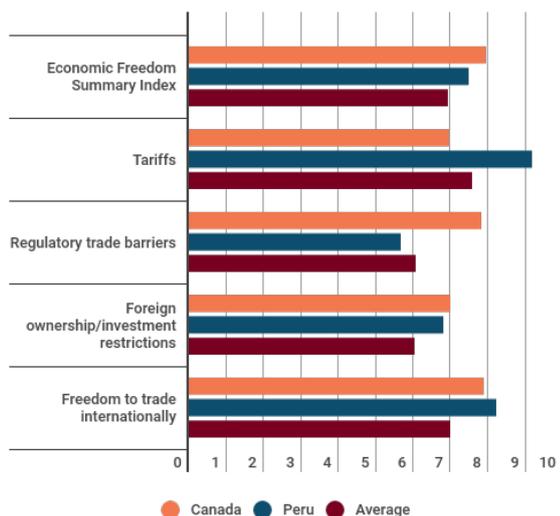
Before any negotiations begin, state oil company Perupetro must qualify companies.

Peru seeks to attract both domestic and foreign investment in all sectors of the economy. To achieve this, it has taken steps to establish a consistent investment policy that eliminates any barriers that foreign investors may face. As a result, Peru is considered to have one of the most open investment systems in the world.

Peru’s laws, regulations and practices do not discriminate between domestic and foreign companies. Foreign investors receive equal treatment. There are no restrictions on repatriation of profits, international transfers of capital or foreign exchange practices. The remittance of interest and royalties is also not restricted in any way. Foreign currency may be used to acquire goods or cover financial obligations, provided the operator complies with Peruvian tax laws.

The CPFTA has further strengthened a well-established and growing trade and investment relationship that in recent years has seen Canada become one of the top foreign direct investors in the country.

FRASER INSTITUTE FREEDOM TO TRADE SCORES COMPARED TO CANADA AND GROUP AVERAGE (SCORE OUT OF 10)

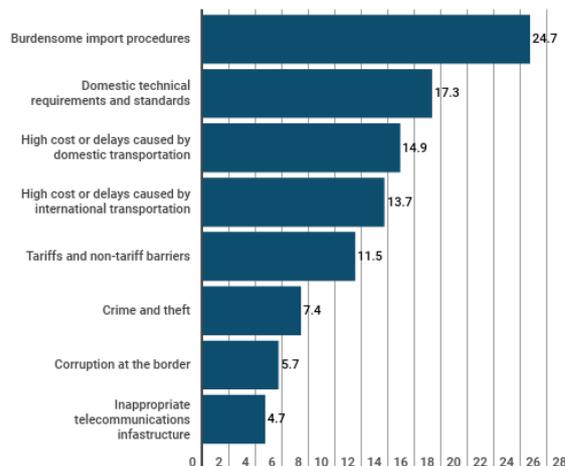


SOURCE: FRASER INSTITUTE

Peru ranks 42nd on the Fraser Institute’s economic freedom index, putting it in the second best quartile. On trade freedom Peru scored 8.2 out of 10, the best of the countries covered in this report.

WEF EXECUTIVES’ RANKING OF THE MOST PROBLEMATIC FACTORS FOR IMPORTING TO PERU

% OF RESPONDERS RANKING AS # 1 ISSUE

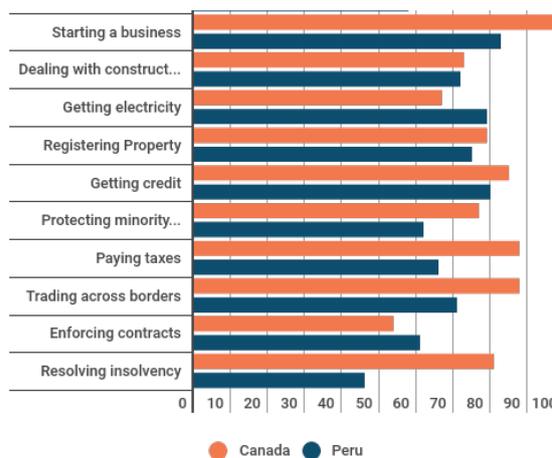


Note: From a list of factors, respondents were asked to select the five most problematic factors in their country and rank them. The scores correspond to the responses weighted according to their rankings

Peru ranks 54th out of 136 countries on the World Economic Forum Enabling Trade Index.

The World Bank Group’s Doing Business series currently ranks Peru 58th in the world and second in the Latin America and Caribbean region.

WORLD BANK DOING BUSINESS RANKING COMPARED TO CANADA



This distance to frontier score helps assess the absolute level of regulatory performance over time. An economy’s distance to frontier is reflected on a scale from 0 to 100, where 0 represents the lowest performance and 100 represents the best performance across all economies and across time.

SOURCE: 2018 WORLD BANK DOING BUSINESS REPORT

WORKING IN PERU

Work visas

There are two types of visas Canadians can access to work in Peru—a business visa or a work visa.

Business visas are valid for 90 days and can be renewed. Work visas are normally valid for the duration of the contract.

To obtain a work visa (applied for in Peru) the worker must have a contract signed and approved by the company, and legalized by a notary or authenticated by the Dirección General de Migraciones y Naturalización del Peru (DIGEMIN).

To obtain a business visa, the person must go to the nearest Peruvian embassy with a photocopy of the work contract between the foreigner and the Peruvian manager or firm and a document specifying the time period of work required. These will have to be authenticated by the DIGEMIN.

Business visa holders need to register with the Dirección General de Contribuciones when they arrive in Peru for taxation purposes.

The business visa is issued as a single entry visa and is valid for 90 days after the issued date. The visa can be renewed every three months at the Oficina de Migraciones.

RECOMMENDATIONS

- Opportunity for Canada’s oil and gas service sector lies in underexplored oil basins that require foreign investment as well as technological expertise.
- Another opportunity for the Canadian oil and gas service sector is the much needed gas pipelines in the south and north.

INSIGHTS

- From the exploration and production point of view, it is a very difficult place to operate in. A lot of helicopter transportation is required
- It is a big gas play, but not so good for oil extraction
- It is not a place for small companies to operate
- Operators work in remote areas within the jungle, which makes it hard to work there
- Lots of opportunity, especially if you sell services that may apply to mining

Taxes

After 183 days of living and working in Peru, the foreign worker will be taxed.

Salaries and remuneration received by non-residents for services provided in Peru are taxed at a rate of 30 per cent. Self-employed workers pay taxes equal to their gross income, minus a deduction of 20 per cent.

Residents of Peru are taxed on their worldwide income, while non-residents pay taxes on their Peruvian-source income only.

Canada has a double-taxation treaty with Peru to facilitate overseas business and trade, so Canadian workers will only pay taxes on income in Peru.

PESTEL ANALYSIS

Category	Analysis
POLITICAL	During the previous regimes, Peru saw three energy ministers in less than a year. However, the newly elected government has pledged to expand Peru’s energy sector and police the industry more effectively. However, there have been recent accusations of corruption surrounding a major pipeline project in the country.
ECONOMIC	Peru has a government focused on economic expansion and developing both local and export markets for oil and gas. It has an open economy and is receptive to foreign investment.
SOCIAL	Social licence to operate is not a major issue in Peru. However, some local communities are opposed to hydrocarbon development due to awareness of the environmental damage left in the 1990s.
TECHNOLOGICAL	Peru is an underexplored country with little native technology development.
ENVIRONMENT	Obtaining environmental permits for drilling can be a lengthy process, which has slowed exploration efforts in Peru. In 2015, only four exploratory wells were drilled. It is also home to a number of protected historical and environmental areas.
LEGAL	Peru has very strong environmental and public consent laws that can slow exploration and development significantly.