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COUNTRY ANALYSIS BRIEFS

Argentina

Last Updated: February 2006

Background

Argentina is a significant Latin American energy producer and consumer. It is a net energy exporter, primarily to neighboring Brazil and Chile.

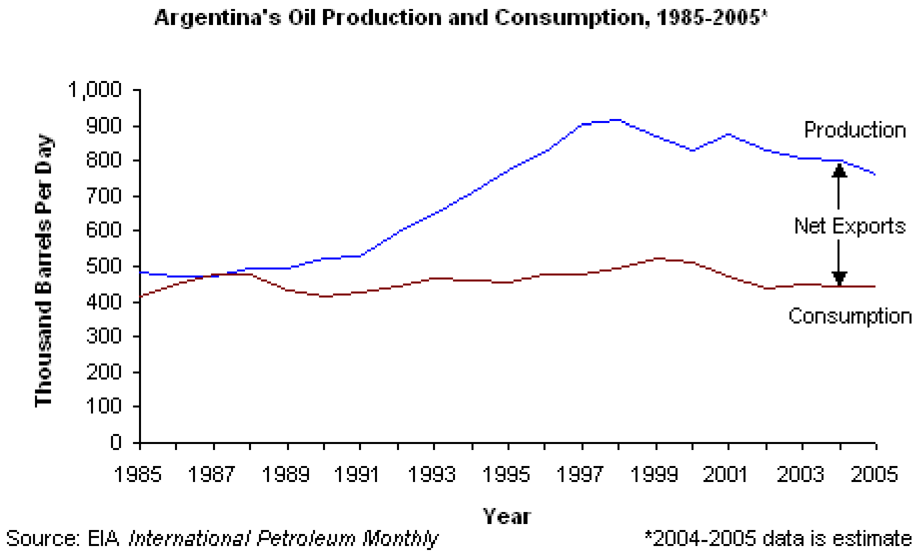
Argentina is one of South America's largest economies. Though it suffered through a severe financial crisis in 2001-2002, the country's economy has now fully recovered to pre-crisis levels. In 2005, Argentina's real gross domestic product (GDP) grew at an estimated rate of 8.7 percent, slightly lower than the 9.0 percent growth rate of 2004. Economic forecasts are for 5.0 percent real growth in 2006.

Argentina experienced an energy crisis in 2004. State-imposed caps kept energy prices low, which drove a dramatic increase in energy demand that outstripped supply. The government broke a natural gas export contract to Chile, began importing natural gas from Bolivia, and initiated energy rationing. The crisis threatened to stifle Argentina's nascent economic recovery and severely strained the country's relations with Chile. To prevent future crises, the Argentina government initiated a set of energy sector reforms, including the establishment of a new, state-owned energy company (Enarsa), incentives for greater investment in downstream infrastructure, and plans to eventually liberalize energy prices.

Oil

Argentina is a net oil exporter, though production has declined in recent years.

According to *Oil and Gas Journal* (*OGJ*), Argentina has 2.3 billion barrels of proven oil reserves as of January 2006, down from 2.7 billion barrels in 2005. The country produced an estimated 763,000 barrels per day (bbl/d) of oil in 2005; of this amount, 660,000 bbl/d was crude oil, the rest consisting of lease condensates, natural gas liquids, and refinery gain. Argentina's oil production has declined from a peak of 916,000 bbl/d in 1998, as oil producers have not brought enough new capacity online to replace declining production from mature fields. Argentina consumed an estimated 440,000 bbl/d of oil in 2005, leaving net oil exports of 323,000 bbl/d. The bulk of the country's oil exports go to Chile and Brazil.



Exploration and Production

In 1999, the Spanish oil company Repsol merged with Argentina's Yacimientos Petroliferos Fiscales (YPF), the formerly state-owned oil company. Repsol-YPF dominates oil exploration and production activities in Argentina, though the country's oil sector is legally open to the private sector. Other significant, oil-producing companies in Argentina include Pan American Energy, Chevron, and Petrobras Energía.

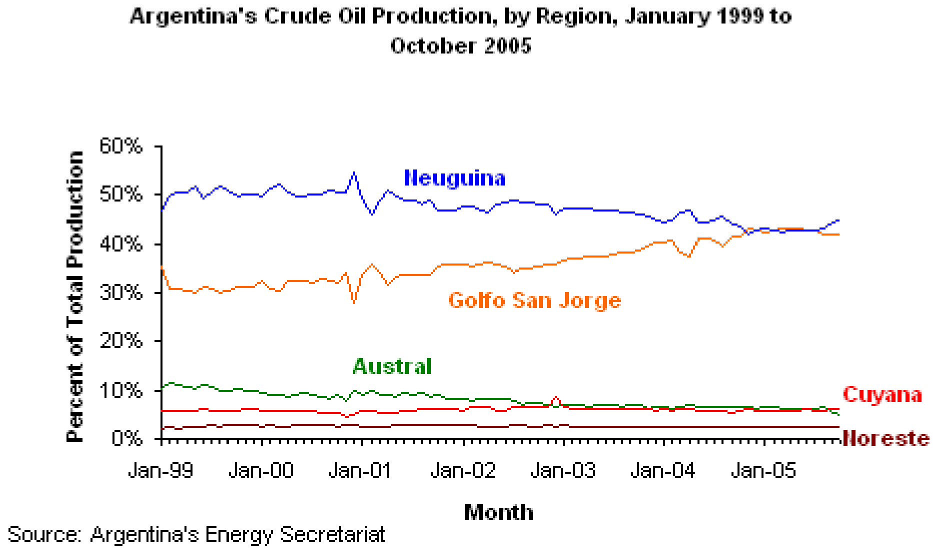
In October 2004, the Argentine government formed a new, state-owned oil company, Enarsa, to promote oil exploration in the country. Enarsa currently has few employees and no production assets, but it has pursued exploration agreements with foreign oil companies. According to financial statements released by the company in January 2006, Enarsa posted no revenues and had $500,000 in expenses in 2005.

Two onshore basins produced 87 percent of Argentina's oil during the first ten months of 2005: Neuguina, in western-central Argentina; and Golfo San Jorge, in the southeast. Outside these established zones, there has been interest in exploring offshore oil resources. In 2004, Petrobras acquired a license to explore the CAA-1 and CAA-8 blocks located off the country's central-east coast. These areas should also be a major center of exploration for Enarsa, which will have control over all offshore concessions not already licensed to private companies.

Downstream Activities

According to *OGJ,* Argentina has 625,000 bbl/d of crude oil refining capacity. Repsol-YPF dominates the downstream oil industry in Argentina, accounting for about half of the country's total refining capacity. Other companies with significant refining capacity include Shell (110,000 bbl/d) and Esso (85,000 bbl/d).

Argentina's three major crude oil pipelines all start at Puerto Hernandez in the Neuquen basin. Two pipelines are domestic, transporting crude oil north to the Lujan de Cuyo refinery near Mendoza and east to Puerto Rosales on the Atlantic. The 268-mile, 115,000 bbl/d Transandino pipeline is Argentina's only international oil pipeline, climbing over the Andes to a refinery in Chile.



Natural Gas

Argentina is the largest natural gas producer in South America.

OGJ reported that Argentina had 18.9 trillion cubic feet (Tcf) of proven natural gas reserves in January 2006, the third-largest amount in Latin America. Natural gas production in the country has steadily increased over the last decade; in 2003, Argentina produced 1.4 Tcf of natural gas, a slight increase from 2002, but 91 percent higher than 1993. In line with this increase in production, Argentina's natural gas consumption has also risen significantly in the past decade and is now the country's dominant fuel source, accounting for 46 percent of primary energy consumption in 2003.

Argentina exports natural gas to its neighbors, principally Chile. However, this relationship was strained by Argentina's 2004 energy crisis, when Argentina repeatedly reduced natural gas exports to Chile in order to make up for domestic shortages. Since then, Argentina has regularly cut exports to Chile in order to meet domestic demand. Argentina is Chile's sole source of natural gas imports, and the continuing supply disruptions have created tension between the two countries.

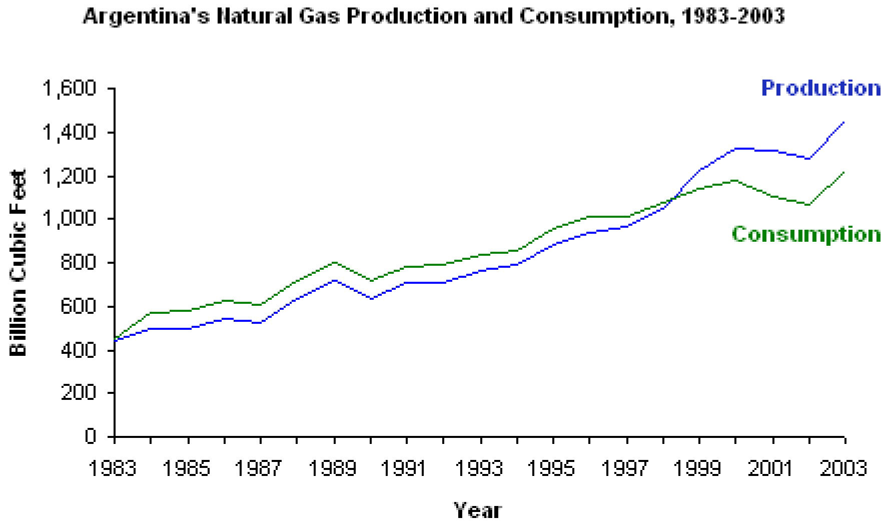
Sector Organization

Argentina began deregulating natural gas production in 1989 as part of its privatization of YPF. As with the oil industry, YPF (now Repsol-YPF) retains a dominant position in the upstream sector. The second-largest natural gas producer in Argentina is Total. Two companies, Transportadora de Gas del Sur (TGS) and Transportadora de Gas del Norte (TGN), control Argentina's natural gas transmission system. TGS, controlled by Petrobras, is South America's largest pipeline company. The company delivers about 60 percent of Argentina's total natural gas consumption, mainly in the greater Buenos Aires area.

Since the privatization of the system in 1992, the distribution portion of Argentina's natural gas market has become dominated by MetroGas SA, Gas Natural Ban SA, Camuzzi Gas Pampeana SA, and Camuzzi Gas del Sur SA, many of which have strong foreign ownership. Argentina's natural gas industry was at the center of the country's 2004 energy crisis. Government-imposed caps on natural gas prices led to a surge in natural gas usage, exceeding the country's gas supply. To prevent a similar crisis in the future, the Argentine government has promised to raise, and eventually liberalize, natural gas prices, though there is no firm timetable in place for this liberalization.

Exploration and Production

The Neuguina, Salta, Tierra del Fuego, and Santa Cruz regions contain most of Argentina's natural gas production. During the first eleven months of 2005, the Neuquen region accounted for 51 percent of the country's natural gas production, along with 14 percent for Salta, 10 percent for Tierra del Fuego, and 9 percent for Santa Cruz. In 2004, Repsol-YPF announced two new, major natural gas discoveries in the Rincon del Mangrullo and Piedra Chenque blocks of the Neuquen basin.



Source: EIA *International Energy Annual*

Upon the creation of Enarsa in 2005, the Argentine government transferred all unallocated offshore exploration blocks to the new company and authorized it to seek partnerships with foreign companies. In January 2005, Enarsa signed an agreement with Petrobras, Repsol-YPF, and Petrouruguay to explore three offshore blocks in the Colorado Marina Basin.

Pipelines

Domestic System

TGS operates the 2,130-mile San Martin pipeline, with a capacity of 1,020 million cubic feet per day (Mmcf/d) and connecting the southern part of the country with Buenos Aires. TGS also operates the Neuba I and II pipelines. TGN operates two main pipelines. The first, the 900-mile, 800-Mmcf/d Norte, runs from Campo Duran to the main compressor plant in San Jeronimo, eventually reaching Buenos Aires. The second pipeline, the 700-mile, 1,180-Mmcf/d Centro Oeste, runs from the Loma la Lata field, Neuquen province, to San Jeronimo.

One issue that emerged from the 2004 energy crisis was the inadequacy of Argentina's domestic natural gas transmission network to meet increasing demand. To remedy this situation, the Argentine government introduced several measures to promote investment in the system, including the creation of financial trusts that could raise money from international capital markets to build new transmission infrastructure. These financial trusts would then have authorization to charge higher tariffs in excess of government-established levels in order to repay any capital financing. The first two projects enacted under this new program were the $285 million expansion of TGS's San Martin, which will add some 10 percent to its capacity, and the $169 million expansion of TGN's Norte pipelines.

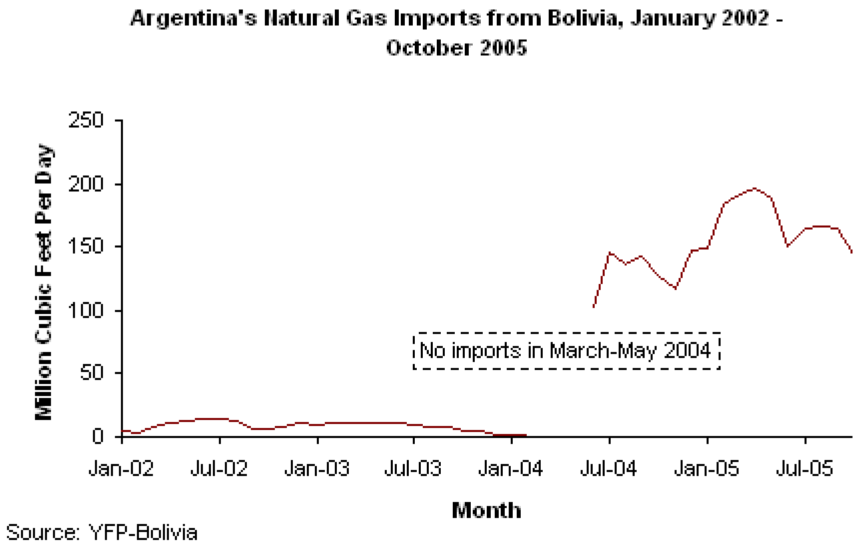
International Connections

Argentina has extensive pipeline linkages with its neighbors, including several pipelines connecting Argentine to Chile. Three in the south; Tierra del Fuego, El Condor-Posesion, and Patagonia supply methanol plants in Chile. In the north, the 578-mile, 300-Mmcf/d GasAtacama pipeline runs from Cornejo, Argentina to Mejillones, Chile. Owned by Endesa and U.S.-based CMS, GasAtacama supplies the companies' Nopel power plant. Also in the north, the 250-Mmcf/d NorAndino, operated by Belgium's Tractebel, runs parallel to GasAtacama. In the central region, the 288-mile, 307-Mmcf/d GasAndes pipeline, majority owned by TotalFinaElf, connects the Neuquen basin in Argentina to Santiago, Chile. Also in the central region, the 330-mile, 343-Mmcf/d Gasoducto del Pacifico connects Neuquen to central Chile. An international consortium, consisting of TransCanada, El Paso, and Gasco, operates Gasoducto del Pacifico, which supplies municipal distributors and gas-fired power plants.

The 275-mile, 100-Mmcf/d Parana-Uruguayana pipeline connects Argentina and Brazil. The pipeline provides natural gas to AES Brasil Energia's 600-MW power plant in Uruguayana. The Argentine section is operated by Transportadora de Gas de Mercosur; the 16-mile Brazilian section is operated by Transportadora Sul Brasileira de Gas. There are plans to construct a 384-

mile extension from Uruguayana to Porte Alegre, where the pipeline would supply thermal power plants.

In January 2003, Argentine natural gas began to flow to Montevideo, Uruguay, through the 250-mile, 190-Mmcf/d Gasoducto Cruz del Sur (GCDS, Southern Cross pipeline). The GCDS project also includes a concession covering a possible extension from Uruguay to Porto Alegre in southern Brazil. Major partners in the GCDS project are British Gas and Pan American Energy.



While Argentina is a net exporter of natural gas, it also imports natural gas from Bolivia through the 274-mile, 212-Mmcf/d Yacimientos-Bolivian Gulf (Yabog) pipeline. This pipeline serves Argentina's northern regions, which are not well supplied by the domestic natural gas transmission network. Argentina began importing natural gas from Bolivia during the 2004 energy crisis, which it had not done since 1999. Argentina continued to import gas from Bolivia following the end of the energy crisis, and the two countries made agreements to continue the trade through 2006. To facilitate these increased imports, the Argentine government solicited bids in 2004 for the construction of an additional pipeline between the two countries, the $1 billion, 600-mile Gasoducto Noreste Argentino.

Coal

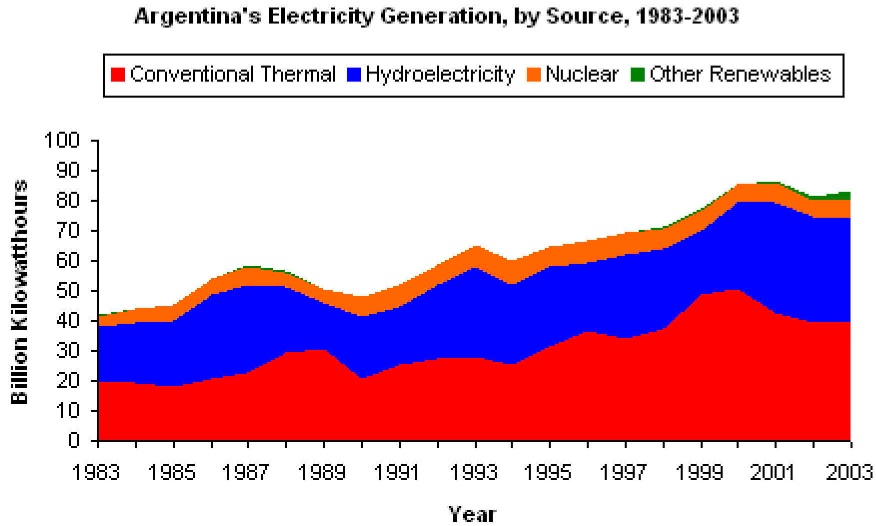
Argentina has limited coal production and consumption.

Argentina has very limited coal resources, and coal is not a major component of the country's fuel mix. With only 470 million short tons (Mmst) of coal reserves, the country produced 0.1 Mmst and consumed 0.7 Mmst in 2003. There is a small coalfield at Rio Turbio in southern Patagonia. Imports come from Australia, the United States, and South Africa.

Electricity

Argentina has the third-largest electricity market in Latin America.

Argentina has the third-largest power market in Latin America, relying mostly on hydropower and natural gas-fired thermal plants for most of its electricity supply. In 2003, Argentina had 27.8 gigawatts of installed generation capacity, of which 61 percent was fossil fuel-based (primarily natural gas) and 35 percent hydroelectric. Argentina generated 83.29 billion kilowatthours (Bkwh) and consumed 83.32 in 2003, with a small amount of net imports from neighboring countries. Demand has steadily grown since 1991, though the economic collapse of 2001-2002 caused a temporary decline in electricity production and consumption.



Source: EIA *International Energy Annual*

Sector Organization

Argentina has one of the most competitive, deregulated power sectors in South America. The functions of generation, transmission, and distribution are open to the private sector, but there are restrictions on cross-ownership between these three functions. Argentine law guarantees access to the grid in order to create a competitive environment and to allow generators to serve customers anywhere in the country.

Private and state-owned companies carry out generation in a completive, mostly-liberalized market. Power generates sell their electricity in a wholesale market operated by the Compania Administradora del Mercado Mayorista Electrico (CAMMESA). The distribution sector is more heavily regulated and less competitive, with three primary distribution companies (Edenor, Edesur and Edelap) controlling the market. In the transmission sector, the Compania Nacional de Transporte Energetica en Alta Tension (Transener) owns and operates the national electricity transmission grid under a long-term agreement with the Argentine government.

Hydroelectricity

The Yacyreta hydroelectric dam, with 3,200 megawatts (MW) of installed capacity, is the largest power plant in Argentina. Argentina and co-owner Paraguay share the electricity generated from Yacyreta evenly, with most of Paraguay's electricity exported to Argentina. The 1,890-MW Salto Grande is another bi-national project, owned by the governments of Argentina and Uruguay.

Industry observers believe that Argentina has the potential to significantly expand its hydroelectric generating capacity, as the country has only exploited an estimated 20 percent of its surveyed hydroelectric potential. It is likely, though, that investment will continue to favor gas-fired power plants over new hydroelectric ones, so long as government price controls keep natural gas prices artificially low.

Nuclear Power

Argentina has two nuclear power plants in operation: the 360-MW Atucha I and the 650-MW Embalse facilities. Nucleoelectrica Argentina SA owns and operates both plants. In addition, the 750-MW Atucha II plant is under construction. Work on Atucha II stopped in 1994, after the government was unsuccessful in privatizing the two existing facilities. The Argentine government has repeatedly made statements that it will complete construction of Atucha II, but there has been little progress in this regard.

Environment

Argentina is the third-largest energy consumer in South America.

Argentina faces urban air pollution and industrial pollution problems. While past commitments to the reduction of greenhouse gas emissions and towards increasing the use of renewable fuels augured well for environmental protection, recent political and economic turmoil has left the country's environmental future uncertain.

Please consult the full environmental report for Argentina more information.

Profile

Country Overview

President	Nestor Kirchner (since May 25, 2003)
Location	Southern South America, bordering the South Atlantic Ocean, between Chile and Uruguay
Independence	9 July 1816 (from Spain)
Population (2005E)	39,537,943
Languages	Spanish (official), English, Italian, German, French
Religion	nominally Roman Catholic 92% (less than 20% practicing), Protestant 2%, Jewish 2%, other 4%
Ethnic Group(s)	white (mostly Spanish and Italian) 97%, mestizo (mixed white and Amerindian ancestry), Amerindian, or other non-white groups 3%

Economic Overview

Minister of Economy and Production	Felisa Miceli
Currency/Exchange Rate (January 23, 2006)	1 Argentina Peso (ARS) = 0.329 USD
Inflation Rate (2004E, 2005E, 2006F)	4.4%, 9.6%, 11.0%
Gross Domestic Product (2005E)	$180.6 billion
Real GDP Growth Rate (2004E, 2005E, 2006F)	9.0%, 8.7%, 5.0%
Unemployment Rate (2005E)	11.1%
External Debt (2005E)	$119 billion
Exports (2005E)	$39.8 billion
Exports - Commodities	edible oils, fuels and energy, cereals, feed, motor vehicles
Exports - Partners (2004E)	Brazil 15.3%, Chile 10.7%, US 10.2%, China 8.7%, Spain 4.4%
Imports (2005E)	$26.5 billion
Imports - Commodities	machinery and equipment, motor vehicles, chemicals, metal manufactures, plastics
Imports - Partners (2004E)	Brazil 36.2%, US 16.6%, Germany 5.7%, China 4.3%
Current Account Balance (2005E)	$4.0 billion

Energy Overview

Proven Oil Reserves (January 1, 2006E)	2.3 billion barrels
Oil Production (2005E)	775.8 thousand barrels per day, of which 87% was crude oil.
Oil Consumption (2005E)	440.4 thousand barrels per day
Crude Oil Distillation Capacity (2006E)	624.6 thousand barrels per day
Proven Natural Gas Reserves (January 1, 2006E)	18.9 trillion cubic feet
Natural Gas Production (2003E)	1.4 trillion cubic feet
Natural Gas Consumption (2003E)	1,221.2 billion cubic feet
Recoverable Coal Reserves	467.4 million short tons

(2003E)	
Coal Production (2003E)	0.1 million short tons
Coal Consumption (2003E)	0.7 million short tons
Electricity Installed Capacity (2003E)	27.8 gigawatts
Electricity Production (2003E)	83.3 billion kilowatt hours
Electricity Consumption (2003E)	83.3 billion kilowatt hours
Total Energy Consumption (2003E)	2.7 quadrillion Btus*, of which Natural Gas (46%), Oil (34%), Hydroelectricity (13%), Nuclear (3%), Coal (1%), Other Renewables (1%)
Total Per Capita Energy Consumption (2003E)	69.5 million Btus
Energy Intensity (2003E)	6,349.7 Btu per $2000-PPP**

Environmental Overview

Energy-Related Carbon Dioxide Emissions (2003E)	129.5 million metric tons, of which Natural Gas (53%), Oil (46%), Coal (1%)
Per-Capita, Energy-Related Carbon Dioxide Emissions (2003E)	3.4 metric tons
Carbon Dioxide Intensity (2003E)	0.3 Metric tons per thousand $2000-PPP**
Environmental Issues	environmental problems (urban and rural) typical of an industrializing economy such as deforestation, soil degradation, desertification, air pollution, and water pollution note: Argentina is a world leader in setting voluntary greenhouse gas targets
Major Environmental Agreements	party to: Antarctic-Environmental Protocol, Antarctic-Marine Living Resources, Antarctic Seals, Antarctic Treaty, Biodiversity, Climate Change, Climate Change-Kyoto Protocol, Desertification, Endangered Species, Environmental Modification, Hazardous Wastes, Law of the Sea, Marine Dumping, Ozone Layer Protection, Ship Pollution, Wetlands, Whaling signed, but not ratified: Marine Life Conservation

Oil and Gas Industry

Organization	Open to private companies. The most important producer is Repsol-YPF. The Argentine government has recently created a new, state-owned energy company, Enarsa, which does not yet have any production assets.
Major Oil/Gas Ports	Bahia Blanca, Buenos Aires, La Plata
Foreign Company Involvement	Repsol-YPF, Petrobras, Pan American Energy, Chevron,
Major Oil and Natural Gas Basins	Neuguina, Golfo San Jorge, Salta, Tierra del Fuego
Major Pipelines (capacity)	Transandino (115,000 bbl/d), San Martin (1,000 Mmcf/d), Norte (800 Mmcf/d), Centro Oeste (1,180 Mmcf/d)
Major Refineries (capacity, bbl/d)	Repsol-YPF La Plata (189,000), Shell Buenos Aires (110,000), Repsol-YPF Lujan de Cuyo (105,500), Esso Campana (84,500)

* The total energy consumption statistic includes petroleum, dry natural gas, coal, net hydro, nuclear, geothermal, solar, wind, wood and waste electric power. The renewable energy consumption statistic is based on International Energy Agency (IEA) data and includes hydropower, solar, wind, tide, geothermal, solid biomass and animal products, biomass gas and liquids, industrial and municipal wastes. Sectoral shares of energy consumption and carbon emissions are also based on IEA data.
**GDP figures from OECD estimates based on purchasing power parity (PPP) exchange rates.

Links

EIA Links

EIA - Country Information on Argentina

U.S. Government

CIA World Factbook - Argentina
U.S. Department of Energy's Office of Fossil Energy's International section - Argentina
U.S. State Department Background Notes - Argentina
U.S. Embassy in Argentina
U.S. Trade and Development Agency - Latin America and the Caribbean
U.S. State Department's Consular Information Sheet - Argentina

Associations and Institutions
Argentine Energy Distribution Association (ADEERA)
Argentine Large-users of Energy Association (AGUEERA)

Foreign Government Agencies
Argentine National Statistic Office
Central Bank (Argentina)
Argentina's Ministry of Energy
ENERGAS

Oil and Natural Gas
Petrobras Energía
Repsol-YPF
Tecpetrol
TGN
TGS
Totalgaz Argentina
Transener SA
Vintage Petroleum

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