INTER-AMERICAN DIALOGUE'S
LATIN AMERICA ADVISOR ▶ ENERGY

FEATURED Q&A

How Are Development Prospects for Argentina's Shale Fields?

Q On May 15, U.S.-based Chevron Corp. announced an agreement for up to $1.5 billion of investment with Argentina's YPF to develop parts of the country's vast Vaca Muerta field, part of YPF's overall $37 billion development plan. Argentina has the world's third-largest shale reserves, but investors have had doubts about investing in them due to economic uncertainty and the regulation of hydrocarbons in the country, the *Financial Times* reported. What is the outlook for the development of Argentina's shale oil fields? What factors are shaping companies' investment decisions?

A Jose Valera, partner at MayerBrown LLP in Houston: "Argentina does indeed have world class shale resources. The outlook for their development, however, remains cloudy. After 10 years of spectacularly bad energy policy, Argentina has fewer oil and gas reserves, less production and ever-increasing imports. Argentina needs tens of billions of dollars to develop its own shale resources and eliminate the need for imports. But the problem is this: the needed money cannot be borrowed because the financial markets are shut to Argentina after the default of 2001. The money can only come in the form of investment and who is going to invest? You have state-owned YPF, on one hand, and the private sector, on the other. YPF is as constrained from borrowing as the country is, and it has not been capitalized by the treasury since the Repsol expropriation. So, YPF is largely limited to developing shale resources through joint ventures such as the one announced with Chevron (still 'preliminary'). In the end, it will all depend on what the private sector does. However, the private sector is not showing signs of being willing to invest at the scale necessary under current business conditions. The disincentives to investment are many: limitations on the ability to import

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Brazil to Provide 6.1 Billion Reais for Technology Research

Brazil's state-development bank, BNDES, and research-financing agency, Finep, which is headed by Alexandre Tanaka, announced Monday that they will provide 6.1 billion reais ($2.87 billion) for technology research. See story on page 2.

File Photo: Brazilian Government.

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ENERGY SECTOR BRIEFS

Endesa Chile, BG Group Reach Deal Over LNG Supply Contract

Electricity generator **Endesa Chile** and the United Kingdom's **BG Group** on Tuesday reached a deal to solve their dispute over volumes and prices in their liquefied natural gas supply contract, Reuters reported. The dispute, which had held up BG's planned sale of its stake in an LNG terminal in Chile, stems from BG production troubles in Egypt that have threatened supplies of LNG to Endesa Chile and state oil company **ENAP**. The deal sets new prices and strengthens "supply security clauses," among other changes.

Bolivia Building Thermoelectric Plant Along Argentine Border

Bolivian President Evo Morales traveled Sunday to the site of the Planta Termoeléctrica del Sul to inspect a parts shipment, EFE reported. The thermal plant, located near Bolivia's southern border with Argentina, is slated to be completed next year and will produce 160 megawatts of energy. Bolivia's energy demand rises approximately 80 megawatts per year, and rolling blackouts have affected the country in recent years. The country already has one thermoelectric plant functioning, with a third planned.

Equipment Begins Arriving for Panama Wind Farm

Spanish-owned **Unión Eólica Panameña** has started unloading and transporting parts of the towers that will hold wind turbines at its Penonome wind farm in central Panama, EFE reported. The $440 million farm is the first of its kind in Panama and the largest in Central America. Parts started arriving in the country on barges earlier this month and will be transported 230 kilometers (143 miles) to the farm.

Renewables News

Brazil to Provide 6.1 Billion Reais to Fund Technology Research

Brazil will increase funding for renewable power and biofuel research by providing 6.1 billion reais ($2.87 billion) to companies involved in technology development, Mercopress reported Tuesday. The country will triple funds available for companies such as **Bunge, Petrobras**, and **Dow Chemical** that are researching processes to turn sugar cane into specialty chemicals used in consumer products and that are developing methods to boost ethanol output. Brazil's research-financing agency, Financiadora de Estudos e Projectos (Finep), and the state-development bank BNDES will provide 5.2 billion reais of loans through the Plan for Supporting Industrial Technological Innovation in the Sugar-based Energy and Chemical Sectors (PAISS) and 600 million through the Inova Energia program, according to Bloomberg News. The loans will have interest rates of 3.5 percent, less than half of the current benchmark rate of 8 percent. Finep will also provide 300 million reais of grants. In the past, high levels of inflation in Brazil led to economic policies that reduced investment in research, but Brazil wants to lead development of fuel-production technologies instead of importing them from other countries. "Brazil has traditionally had a policy of substituting imported technology and prioritizing commodities in its trade balance," Finep official Alexandre Tanaka told Bloomberg News. Meanwhile, Bernardo Gradin, the CEO of São Paulo-based **GranBio**, which was approved by BNDES on May 7 to receive a 300 million real loan to build a plant that will produce ethanol from crop waste, said that "Brazil has the best conditions to lead a biotechnology revolution in second-generation ethanol." Last year, the government and businesses in Brazil invested $112.6 million in renewable energy technology research, a 15 percent increase since 2009, but still lagging behind the United States' $8.63 billion, China's $2.53 billion and India's $145.2 million.

> "Brazil has the best conditions to lead a biotechnology revolution in second-generation ethanol."
>
> *— Bernardo Gradin*

Oil & Gas News

Russian State Oil Company Halts Exploration off Cuba

Russian state oil company **Zarubezhneft** has announced that it will temporarily halt its drilling off of the northern coast of Cuba, adding another obstacle to the island nation's drive for energy self-sufficiency, *The Miami Herald* reported last Friday. Zarubezhneft's decision marked the end of Cuba's only active program to explore for oil. The island currently relies on subsidized oil from the government of Venezuelan President Nicolás Maduro. The Russian company said it was stopping work because of "geological" problems, but added that it would restart exploration next year, Reuters reported Thursday. The withdrawal was not a surprise, however, as the Norwegian company that owns the drilling platform that Zarubezhneft has been leasing previously said that it would pull out of Cuba in July in favor of work elsewhere, *The Miami Herald* reported. "This is the second geological area in Cuba that … seemed to be promising, Jorge Piñon, an expert on Cuba's energy sector at the University of Texas at Austin, told the newspaper. The Russian company's withdrawal amounts to "another disappointment" in Cuba's search for oil, he added. Cuban officials have estimated that the country has potential oil reserves of 20 billion barrels. The U.S. Geological Survey has said that the waters off Cuba's coast have "significant undiscovered conventional oil potential" amounting to between 4.6 billion and 9.3 billion barrels. In early 2012, Spain's Repsol invested $100 million in unsuccessful exploration in Cuban waters with its Scarabeo 9 drilling platform northwest of Havana. Malaysia-based **Petronas**, Russia's **Gazprom** and Venezuela's **PDVSA** later leased the platform but also came up empty handed. The rig was removed from Cuban waters late last year. Despite Zarubezhneft's failure to find oil using the Songa Mercur platform, the company is likely to fulfill its promise to return to Cuba next year as Russian President Vladimir Putin has been working to strengthen political and economic ties with Cuba.

PDVSA Signs $4 Billion Loan With China to Increase Orinoco Output

Petróleos de Venezula, the Venezuelan state-owned oil company, said Monday that it signed a loan agreement with **China's Development Bank Corp.** for $4.02 billion to boost production of a joint project with **Sinovensa** in the Orinoco Belt, Bloomberg News reported. PDVSA president Rafael Ramírez signed the agreement in Beijing along with Sinovensa President Erwin Hernandez and CDBD Vice president Wang Yongshen. The loan will be used to triple the current daily output of 140,000 barrels per day to 330,000 barrels a day. This agreement follows others with U.S.-based **Chevron** and Russia's **Rosneft,** meaning that PDVSA has secured $7.5 billion in financing from its joint-venture partners in recent weeks. PDVSA also announced two weeks ago that they had agreed to a $1.5 billion credit line with oil-services provider **Schlumberger**. The money will be used to meet production goals as the company has been concerned about stagnant production. **Eurasia Group** analyst Risa Grais-Targow said in a research note circulated to clients on Monday that "the deals with Chevron, Rosneft, and CNPC are a step in the positive direction that could help to enable production growth," but cautioned that "the impact on production will depend on how PDVSA and its partners mange the new resources, which has been a problem in the past." Grais-Targow also warned that these deals "do no necessarily reflect a broader shift towards more constructive policies toward the sector." On Wednesday, PDVSA announced that Venezuelan Oil Minister Rafael Ramírez was in China negotiating another $4 billion credit line from the **Export-Import Bank of China** to be used for oil field equipment, *The Wall Street Journal* reported Thursday.

Paraguay's Government Confirms Foreign Interest in Oil Reserves

Paraguay's minister of planning, Richard Kent, confirmed Monday at a meeting with the National Council of Energy that there are currently three firms engaged in oil exploration in the country and that more are interested in signing agreements with the state, local daily *Diario ABC Color* reported. Kent noted that "the subsoil wealth of Paraguay is gigantic" and that most of it is "easily exploitable" as it is located at a depth that is not significant. In November 2012, Paraguayan President Frederico Franco announced the discovery of high quality oil in the Pirity Basin in the Paraguayan Chaco and a recent report from **Schlumberger** speculated that the Chaco territory could hold reserves of about 14 trillion cubic meters, according to local daily *Diario 5 Días*. Kent noted that the government is working to improve the investment climate in the industry, especially considering concerns about the rule of law and a slow bureaucracy. President-elect Horacio Cartes will take power on Aug. 15 and Kent assured that all documents regarding oil prospecting, exploration and agreements will be smoothly transitioned to the new government.

Kent

File Photo: Paraguayan Government

Pemex Signs Deals With China for More Than $1 Billion in Loans

Mexican state oil company **Pemex** signed two agreements this week with Chinese companies for ships, equipment and technology, EFE reported Wednesday. One agreement, signed with the state-owned **Export-Import Bank of China**, will provide the company with a $1 billion credit line to be used "for the acquisition of ships and equipment for offshore maritime activities," Pemex said in a statement. The deal has a term of three years and the credit line gives Pemex the option to update and modernize maritime equipment and the Pemex fleet. This is Pemex's first deal with the Export-Import Bank of China, which has recently signed deals to finance infrastructure projects in Trinidad and Tobago and Costa Rica. Pemex's second agreement was signed with the **Xinxing Cathay International Group** and is focused on identifying opportunities for joint pipeline projects. Pemex CEO Emilio Lozoya's signing of the agreements coincides with a three-day visit to Mexico by Chinese President Xi Jinping this week. Mexico's president, Enrique Peña Nieto, on Wednesday urged Chinese businessmen to invest more in Mexico, noting China has become Mexico's second-largest source of imports, "but it is just our thirty-second largest investor," EFE reported.

Power Sector News

Peru's Electricity Production Up in April, More Projects Planned

Peru's electricity production in April was up 6.97 percent compared to the same month last year, the country's National Institute of Statistics and Informatics (INEI) announced Sunday, *América Economía* reported. The report noted that April marked 42 consecutive months of growth in the sector and that the growth in energy production was supported by the strong numbers reported by major energy companies such as **Electroperú**, **Electroandes**, **Egesur** and **Electro Oriente**. Annual demand for electricity is growing by 7.57 percent and some analysts are concerned that demand will outpace growth by 2017, especially as mining projects in the south of the country require large amounts of energy, according to Reuters. Late last month, Electroperú president Jaime Hanza said the firm will add 800 megawatts to the grid with a new gas-fired power plant and by expanding the Mantaro hydroelectric station, which currently provides around a third of the country's energy. Peru's Private Investment Promotion Agency (ProInversion) also announced on May 28 that it will award 10 infrastructure projects in electricity generation and hydrocarbons with an investment of 6.1 billion during 2013 through 2014, according to state news agency Andina.

Political News

Brazil Calls in Military to Restore Order in Indigenous Land Conflict

Brazil's government on Wednesday announced it will send military troops to a farm in the state of Mato Grosso do Sul while President Dilma Rousseff called for further negotiations "to avoid shocks, deaths and injuries" in a deadly land dispute with indigenous communities there,

Carvalho addresses Terena delegates

Photo: Associated Press.

Agência Brasil reported. Rousseff's minister of the general secretariat of the presidency, Gilberto Carvalho, said Wednesday he made a "mistake" by stating, during a meeting with indigenous leaders earlier, that President Rousseff would have suggested they ignore a federal court order which called for the withdrawal of a group of Terena Indians from a farm owned by a local politician. One Indian was killed there last week and at least three were injured during a police operation to evict them. Since the death, the Terena have re-occupied the farm and tensions remain high, with unidentified gunmen targeting the occupiers and several having gone missing. About 200 soldiers have been dispatched to the farm to prevent an escalation of violence. A judge has issued an eviction order for the indigenous group to leave the farm by Friday. The Terena say the ranch lies on their ancestral land. Rousseff's statements Wednesday sought a middle ground, noting that "We have an indigenous population in Brazil that we cannot deny an existence because it is the original population, but that does not mean other people are not entitled" to their rights, she stated. Meanwhile, Brazil's government sought on Tuesday to defuse mounting conflicts with indigenous groups in the Amazon region over its plans to build more hydroelectric dams there, Reuters reported. The Brazilian air force flew 144 Munduruku Indians to the capital for talks with Carvalho seeking to end a week-long occupation of the controversial Belo Monte dam project. The tribespeople live along the Tapajos, the only major river in the Amazon basin with no dams, according to the report. [Editor's note: See Q&A on Belo Monte in the Aug. 27-31 issue of the *Energy Advisor*.]

Venezuela, U.S. Seek to Mend Fences at OAS General Assembly

U.S. Secretary of State John Kerry said Wednesday that the United States and Venezuela have agreed to begin a high-level dialogue with the aim of restoring ambassador-level relations, the Associated Press reported. Kerry said his exchange with Venezuelan counterpart Elías José Jaua, on the sidelines of the annual Organization of American States general assembly taking place in Guatemala this week, was an attempt to find "a new way forward." The meeting followed the release just hours earlier Wednesday of American filmmaker Timothy Tracy, 35, who had been jailed in Venezuela on espionage charges. "The gringo, Timothy Tracy, caught spying in our country, has been expelled from national territory," Interior Minister Miguel Rodríguez wrote in a message on his Twitter account, according to media reports. Kerry thanked Foreign Minister Jaua for Tracy's release, calling it a "very positive development." The two met for 40 minutes and discussed plans to normalize ties and resume cooperation on antiterrorism, antinarcotics operations and energy, Calixto Ortega, Venezuela's chargé d'affaires in Washington, who attended the Guatemala meeting, told *The Wall Street Journal*. Some analysts worry that warmer ties could be short lived, however. "Venezuela is in such terrible shape that it needs the U.S., but at the same time the government has to keep up its anti-U.S. rhetoric" to appease factions of its supporters, Michael Shifter, president of the Inter-American Dialogue, told *The Wall Street Journal*. "The big question is whether [President Nicolás] Maduro is politically strong enough to carry it off."

Economic News

China's Xi Pledges Billions in Loans to Caribbean Nations, Costa Rica

Chinese President Xi Jinping on Monday pledged to deliver more than $3 billion in loans to 10 Caribbean countries and Costa Rica, Bloomberg News reported, citing an announcement by Trinidad and Tobago's prime minister. Xi, who is on a four-nation trip in the Western Hemisphere, promised approximately $296 million in loans to aid Costa Rica in expanding a highway. The pledge was among 13 accords Xi signed Tuesday with Costa Rican President Laura Chinchilla. Before arriving in Costa Rica, the Chinese president met with leaders of 10 Caribbean countries in Trinidad on Sunday and promised more than $3 billion in loans in total, said Trinidadian Prime Minister Kamla Persad-Bissessar. Loans from China are expected to be highly welcomed by Caribbean nations, most of which have suffered slowing economic growth and increasing levels of debt. The global economic downturn over the past years meant lower tourism revenues in the Caribbean. Of the island nations in the region, only the Bahamas is expected to experience more than 1.5 percent growth this year, as compared to 4 percent on average for Latin America, according to **Moody's Investors Service**. Also this week in Latin

Xi

File Photo: Chinese Government.

America, Xi visited Costa Rica and Mexico, where he met with President Enrique Peña Nieto. After joining the World Trade Organization in 2001, China passed Mexico in terms of its U.S. market share. The Asian giant accounts for 19 percent of the goods sold last year in the United States, an increase from 8 percent in 2000, according to the U.S. Commerce Department. Mexico's 12 percent share is little changed from 2000. After his visit to Mexico, Xi will head to the United States to meet with President Barack Obama in California on Friday.

Venezuela's Zulia State Begins Rationing Food, Consumer Products

Zulia state, Venezuela's most populous, is imposing restrictions on the sale of 20 basic food and consumer product staples, including chicken, rice, sugar and toilet paper, officials announced Tuesday. The plan is the latest sign of Venezuela's shortages and economic distress, but Raimundo Urrechaga, a spokesman for the government's Information Ministry, said the intent of the plan is to control contraband along the Colombian border. "This is only in Zulia state and it is not rationing," said Urrechaga. "It is focused only on Zulia, to control contraband." Beginning next week, Zulia state will issue cards with embedded computer chips that will limit consumers' purchases of various products. Blagdimir Labrador, the chief of staff to the state's governor, said officials have not yet determined how much of each product consumers will be able to buy. Officials will register purchases of products on remote computer servers so that "the same person can't go to a different store on the same day and purchase the same product," said Labrador, the AP reported. The system will initially apply to 65 supermarkets in the cities of Maracaibo and San Francisco. The program appears to mark the first time that Venezuelan officials have rationed food. Few economists believe that rationing will end Venezuela's shortages. Economists also believe Venezuela is headed for a recession. The country's economy grew just 0.7 percent in this year's first quarter amid a lack of capital inflows. Last week, Venezuelan Finance Minister Nelson Merentes said he would travel to the United States and Europe in an effort to find investment and bring dollars into the country. More than a decade ago, then-President Hugo Chávez imposed price controls on more than 100 products. All but government-run stores ignore the price controls, saying that following them would be disastrous for their businesses amid escalating prices. Annual inflation in Venezuela reached 29.4 percent in April. The shortage index tallied by Venezuela's central bank reached 21.3 percent in April, its highest level since the bank began tracking the scarcity of basic goods in 2009.

Merentes

File Photo: Venezuelan Government.

Argentina Rescinds Concessions for Rail Lines Held By Brazilian Firm

Argentina's government has rescinded two freight train concessions awarded to Brazilian rail operator **America Latina Logistica** on the grounds the company did not carry out promised investments and owed past-due fines, Reuters reported Wednesday. Argentina's minister of interior and transportation, Florencio Randazzo, announced the re-nationalization over a "serious breach of contract," the government said in a statement, which added that the administration will form a commission "to investigate damages to the state." The concessions for the privatized lines, which included passenger trains that connect Buenos Aires with the western province of Mendoza and another that reaches up to the border with Brazil and Paraguay, were awarded in 1999. ALL said in a statement it had already been looking for potential investors to buy a stake in its Argentine concessions due to the "current political and economic scenario" there, Reuters reported. Last month, Argentina's government took control of the Belgrano Cargas freight line, a railway important for hauling grains.

POLITICAL & ECONOMIC BRIEFS

Dominican Republic Opens Tender Process for Controversial Road

The president of the Dominican Republic, Danilo Medina, on Wednesday opened a call for tenders to build the Cibao-Sur cross-mountain highway, *Dominican Today* reported. The road would link Santiago in the north with San Juan in the south. The controversial highway, whose critics cite potentially disastrous damage to the ecosystems of two national parks, is expected to boost agriculture and ecotourism in the area, the government says.

Uruguay's Trade Deficit Climbs to More Than $1 Billion

Uruguay's trade deficit has grown to more than $1 billion for this year through April, Mercopress reported Monday. The figure compares to $975 million for the same period last year. In April, Uruguay's exports declined 6 percent and imports grew 11.6 percent, according to the central bank. The country's overseas sales in the manufacturing sector fell 3.7 percent in the first four months of the year while grain exports decreased by 35.1 percent and forestry products by 1.8 percent.

Haiti Holdsits First-Ever Mining Conference

Haiti opened a two-day mining conference on Monday, with experts from around the world, the Associated Press reported. Last year, two mining companies started drilling in the country for silver, gold and copper and reported that there could be $20 billion worth of precious minerals underground. Prime Minister Laurent Lamothe said he hopes to grow the Haitian mining industry and his government said in September that it would update the country's mining law in the next six months.

Featured Q&A

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goods and services, restrictions on the right to remit profits abroad in dollars, high labor costs and unavailability of sufficient skilled labor, very high domestic cost inflation, taxes on exports, and regulated prices domestically. These are the factors that are shaping companies' investment decisions. So far, there has not been much investment in shale and this will remain so until government policies take a fundamental turn."

A **Gianna Bern, president of Brookshire Advisory and Research Inc.:** "Vaca Muerta represents a significant potential growth opportunity for Argentina. As global oil and gas producers evaluate this developing situation, they will assess this investment across a number of parameters. Shale development is a very high cost and capital-intensive endeavor. Investors will first look for an energy policy that promotes growth. Investors will also evaluate the Argentine shale opportunity and compare it to other global investment opportunities. Essentially, Argentina will have to compete for those investment dollars. Today, many global oil and gas companies are investing in U.S. shales, Canadian oil sands, off the west coast of Africa and in Asian LNG projects, to name a few. Thus, Argentina will have to present a compelling investment case. Investors will also look to invest in countries that support infrastructure development, which is necessary for shales, and those that have relatively stable economies. That said, Argentina will have to assess its ability to promote infrastructure development and road construction. In addition, shale development requires considerable water, manpower and a plethora of related drilling services. This is a very long-term proposition and commitment is needed for success."

> "Argentina will have to present a compelling investment case."
>
> *— Gianna Bern*

A **Daniel Gustavo Montamat, founder and president of Montamat & Asociados in Buenos Aires:** "Shale gas in Argentina has a promising outlook for the future, but not in the short-term. Unconventional resources could change the energy picture of an Argentina that is currently importing 25 percent of the gas consumed in the country. But in order to produce a critical mass to compensate the natural decline of the conventional fields, the gas industry needs at least 10 years. There is a learning curve and a huge investment process in the mid-term. Both of those depend on a new institutional and political environment that is more market-friendly for the potential investors. YPF, now under government control, needs to recover access to the international financial markets and to negotiate deals with international players who have capital and technology. So, it needs to negotiate conditions with Repsol to overcome the expropriation handicap. A new energy policy has to recreate incentives in the oil industry in Argentina. It seems difficult to undertake these changes before 2015, when a new government takes over."

> "A new energy policy has to recreate incentives in the oil industry in Argentina."
>
> *— Daniel Gustavo Montamat*

The Advisor *welcomes reactions to the Q&A above. Readers can write editor Gene Kuleta at gkuleta@thedialogue.org with comments.*

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