INTER-AMERICAN DIALOGUE'S
LATIN AMERICA ADVISOR ▸ ENERGY

FEATURED Q&A

What is the Outlook for Wind Energy in Latin America?

Q With oil prices forecasted to remain at or above historic highs, wind energy may be becoming more viable as an alternative energy source, as indicated by the announcement last week by Spain's Grupo Enhol and Chile's Haciendas Talinay of a billion-dollar joint venture that would have a capacity to produce 500 megawatts of electricity for Chile. What is the outlook for wind energy in Latin America? Should governments in the region be doing more to encourage wind energy generation, and if so, what?

A Guest Comment: Mauricio Trujillo: "We are definitely seeing an interesting activation of the wind energy sector in all of Latin America. Week after week advances are made toward the implementation of massive wind parks in different countries, such as Brazil, Mexico, Chile, Argentina, and soon Peru. The case of Central America is also important, since it is a region on which oil prices are having a big impact and which at the same time has very good wind resources, factors that are driving the industry's development. There are several initiatives for the implementation of wind parks on a grand scale that for a long time have been trying to get off the ground but have only done so in recent years. This is thanks to wind energy's greater competitiveness, oil prices, the threat of climate change, and sustained economic growth and the resulting increase in energy needs, which have brought the region to look at renewable energy and wind in particular as a viable option to diversify their energy matrices and help satisfy their growing electricity needs. Several countries, like Brazil, Chile, the Dominican Republic, and Peru, are already taking steps in terms of regulation, and the rest [of the countries] should follow the same road to make way for this energy source, which every day is more profitable, although it still needs a push by governments to hasten its

Q&A continued on page 4

Blackout Hits Lima as Demand Puts Pressure on Generators

Cars traveled on darkened streets in Lima, Peru on Thursday after a blackout left hundreds of thousands without power. See story on page 3.

Photo: Agencia Andina.

Inside This Issue

ENERGY SECTOR BRIEFS

Brazilian Firm Signs MOU to Build Dam in Mozambique

Mozambique signed a memorandum of understanding with Brazilian construction and engineering firm **Camargo Correia** to build a $3.2 billion hydroelectric dam in the African country, Reuters reported. Camargo Correia may also operate the dam, which is expected to produce up to 1,500 megawatts of electricity. Camargo Correia still needs to find additional funding before a deal is finalized, said Mozambique's planning and development minister, Aiuba Quereneia.

Dominican Government Agrees to Buy Shell's Refinery Stake

The Dominican Republic's government on Tuesday reached an agreement for the purchase of **Royal Dutch Shell**'s stake in the Refidomsa refinery, EFE reported. The $110 million deal gives the government full control of the refinery. Finance Minister Vicente Bengoa and Shell representatives said the purchase would be closed within 90 days following an asset inventory and a financial audit of Refidomsa.

Venezuela's Citgo Grants $1.5 Million to Maryland Charity

Venezuelan-owned oil company **Citgo** is making a $1.5 million donation to a Maryland-based nonprofit group, the charity said Monday. The gift, which will be spread out over four years, will help fund programs for low-income and immigrant workers. Chavez is using Citgo to create a constituency in the United States and also to embarrass the Bush administration over its social policy shortcomings, Michael Shifter, the vice president for policy at Inter-American Dialogue, told the *Washington Post* Tuesday.

Oil & Gas News

Petrobras Agrees to Switch to Service Contract in Ecuador

Brazilian national oil company **Petrobras** has agreed to switch to a service contract with the Ecuadorean government under which it will be paid a fee for extracting oil rather than being allowed to keep and sell part of the oil itself, Ecuadorean Oil Minister Galo Chiriboga said Thursday, according to Reuters. Chiriboga said the government and Petrobras would meet immediately to work out details of the new service contract, including economic conditions, but he gave no details on when the deal would be signed, according to the report. Petrobras' executive director for energy, Decio Oddone, told reporters in Quito that the company plans to keep investing in the Andean nation after the contract switch and expects to increase output by 5,000 barrels per day this year. Ecuadorean President Rafael Correa is expected to meet today with Chinese consortium **Andes Petroleum** and Spain's **Repsol** to secure deals similar to the one reached with Petrobras. As part of negotiations with foreign oil companies, the government in June offered to lower a windfall tax on the companies' earnings for one year from 99 percent to 70 percent if they agree to drop lawsuits challenging the tax. Since the windfall tax was imposed last year, the companies have halted most investment in Ecuador's oil sector, and some have filed for arbitration in international court. Ecuador produces around 500,000 barrels per day, nearly half of which is produced by private firms.

Chiriboga

Ecuadorean government file photo.

Petrobras' executive director for energy told reporters in Quito that the company plans to keep investing in the Andean nation after the contract switch.

Oilworkers Agree to Call Off Strike After Reaching Deal With Petrobras

Brazilian state oil company **Petrobras** on Monday averted a strike by agreeing to compensate workers for time spent traveling from oil platforms to the shore, Reuters reported. The Norte Fluminense union had threatened to strike for five days starting on Tuesday and shut down the Campos Basin, which accounts for about 85 percent of Brazil's petroleum output. In the compromise reached earlier this week, Petrobras will count the days spent traveling back to shore as paid half days, and the compensation will be retroactive from January 2005. Petrobras platform staff currently work 14 days offshore followed by 21 days off, according to energycurrent.com. Last week, under the threat of a strike from the larger oil workers union FUP, Petrobras agreed to raise profit sharing terms for workers from 12.9 percent to 15.2 percent. In related news, Petrobras CEO Jose Sergio Gabrielli said last Friday the company plans to start production at its massive offshore Tupi oil field in the first quarter of next year, according to Bloomberg News. Initial output will be between 20,000 and 30,000 barrels per day (bpd), and will rise to 100,000 bpd in 2010, Gabrielli said.

Trinidad Seeks New Markets for its Oil in the Wake of PetroCaribe

Venezuela's PetroCaribe initiative, which provides subsidized oil to countries in the Caribbean, is pushing Trinidad and Tobago out of the Caribbean petroleum market, Reuters reported on Monday. Trinidad and Tobago's state oil company **Petrotrin** has seen its Caribbean sales fall to nearly half their normal level of 60,000 barrels per day (bpd) since Venezuelan President Hugo Chavez started PetroCaribe in 2005. Recent changes to

PetroCaribe, including Chavez's promise to allow 70 percent financing if oil prices top $150 per barrel, have further decreased Trinidad and Tobago's ability to compete, the report said. Petrotrin is expected to lose market share in Guyana, which recently joined PetroCaribe, and in Jamaica, where Venezuela is financing the expansion of a refinery owned by state oil company **Petrojam**. Petrotrin's vice president for refinery and marketing, Kenneth Allum, told Reuters the company plans to compensate by opening up new markets for its oil exports, especially in the United States. In 2007, the US imported on average 99,000 bpd from Trinidad and Tobago, a decrease compared to 2006, when the country exported 117,000 bpd and ranked as the 20th largest exporter of oil to the US, according the Department of Energy. In an interview with local daily *Newsday*, Trinidad and Tobago Energy Minister Conrad Enill said the country had nothing to fear from Venezuela's new dominance in the Caribbean oil market, and that Petrotrin's plans to upgrade its Pointe-a-Pierre refinery would create new products to market abroad.

Power Sector News

Blackout Hits Lima as Generators Struggle to Keep Up With Demand

As many as 240,000 homes were left without power in the Peruvian capital of Lima, as electricity generators struggle to keep up with demand amid torrid economic growth in the Andean nation, Reuters reported. An official from **Luz del Sur**, one of the two main power distributors in Lima, said at least 120,000 homes were without power on the south side of the city, and a similar number of homes was likely affected on the north side, according to the report. The blackout was caused by a failed valve on a gas line to the Etevensa power plant, shutting down a generator that can produce up to 10 percent of Peru's electricity. The country's power generators are struggling to keep up with demand as annual economic growth in the country approaches 10 percent. Generation has also been affected by a dry rainy season that has lowered output by hydroelectric plants. "Reserves have fallen and are very small. They aren't sufficient to guarantee that there won't be electricity interruptions when there are problems with generators," Cesar Butron, the head of power grid agency Coes, was quoted as saying. Peru has large natural gas reserves capable of feeding power plants, but it has few pipelines to transport the gas. A wider pipeline into Lima, which would increase power reserves, is not expected to be ready for another year, according to Reuters.

Research Alert

Dominican Republic's Electricity Sector Remains Troubled

Fitch Ratings on Monday released a special report suggesting that the Dominican Republic's electricity sector is "on the brink of financial distress," and stating that it will be up to the government of President Leonel Fernandez, recently re-elected in a landslide, to "fix the system."

Rolling blackouts and electricity shortages have become a way of life for people in the Dominican Republic, Fitch said. High electricity losses, the majority from theft, and low collections from end users have plagued the sector and resulted in perpetual electricity shortages, Fitch concluded.

"Although the country has more than sufficient generation capacity to meet total demand, the government's decision to cap electricity prices, tolerate theft by end users, and give free electricity has resulted in insufficient funds for state-owned electric distribution companies to cover their operating costs and pay private-sector generators for contracted capacity," Fitch analysts wrote.

Because the Caribbean nation's power companies depend upon increasingly expensive oil to generate electricity, a reduction or elimination of subsidies would only lead to increasing electricity shortages, unless the government also raises prices—thereby passing the variable cost of energy to end users—and enforces a new electricity law that punishes end users for electricity theft, Fitch said.

"While subsidies have allowed state-owned distribution companies to honor their contracts with private-sector generators, the situation is not sustainable over the longer term, as the government will continue to face pressure to prioritize investment in health and education at the expense of the electric sector," Fitch analysts wrote in the report.

As a result, investors in the sector will be increasingly turning to the Fernandez government "to fix the system." A stand-by agreement with the International Monetary Fund (IMF), which provided a framework for the sector to reach financial self-sustainability, expired in January and has yet to be renewed. "Unfortunately, little was achieved during the period the agreement was in place," Fitch said.

"So far, the re-elected government seems to be taking an approach that is likely to perpetuate the sector's instability, rather than to eliminate market distortions and enforce the new electricity law," Fitch stated.

While Fernandez is considered one of the most respected and internationally-minded heads of state in the Caribbean, he has come under increasing political pressure at home to deal with rising food and fuel costs, which have put the import-dependent Dominican Republic at relative economic disadvantage with other countries in Latin America.

Political News

Support for New Constitution in Ecuador Continues to Rise

Popular support in Ecuador for a new Constitution continues to increase, but still falls short of the level of approval needed to pass the draft charter in a referendum planned for next month, Reuters reported, citing a poll released Thursday. According to the **Cedatos-Gallup** survey, support for the proposed Constitution rose nine points from a poll last month to 41 percent, still short of the 50 percent majority needed to win approval in the referendum, which is scheduled for September 28. Cedatos pollster Carlos Cordova attributed the increase to "a series of popular moves" made by President Rafael Correa in recent weeks, according to the report. Last month, Correa announced the seizure of hundreds of companies owned by a powerful economic group linked to the 1998 collapse of Ecuador's biggest bank, **Filanbanco**. The bank's collapse cost the government and depositors hundreds of millions of dollars in losses. The proposed Constitution drafted by an assembly controlled by Correa's supporters would increase the presidential powers over democratic institutions and the economy. The Cedatos poll interviewed 1,500 people and had a margin of error of 3.2 points.

Featured Q&A

Continued from page 1

growth and compete with other sources that are cheaper still, such as hydroelectricity."

A Guest Comment: Jan Borchgrevink: "Wind energy has been notoriously slow in penetrating Latin America, at present not even reaching 0.2 percent of worldwide 100 GW installed capacity, despite a booming global market with a 30 percent-plus growth rate. We are now seeing a mix of market drivers, however, heating new project development activity, which would cause the forecast to be upgraded from the 'cautiously optimistic.' Such drivers include, of course, the pervasively volatile fossil fuel costs coupled with security of supply issues, dwindling hydro resources (also partially brought on by climate change), carbon finance, GDP growth, and the fact that in some regions substantial wind energy resources are being identified. The virtually virgin market furthermore means plenty of land available for development, where permitting, and NIMBY (not in my back yard) issues should play a less obstructive role than in higher population density areas of the developed and largely saturated markets of Europe and North America. The question nevertheless remains: how quickly can the region react, jump on the bandwagon, and catch up? Several things need to happen, most notably implementation of market incentives (preferably in the form of feed-in tariffs), which should be carefully designed to help create a more level playing field for renewable energy, with due consideration of wind. Governments in the region would do well to study and subsequently 'tropicalize' successful market models, such as the Spanish and German, which in addition to a substantial clean energy supply have fostered a quite substantial industrial base, moreover creating thousands of wind energy sector related jobs. Permitting regulations should be clear, transparent and environmentally sustainable. Secondly, national and regional grids must be expanded and equitable access ensured for all wind plants, so as to allow exploitation of the resource which in certain regions shows promise of abundance. Increased public mapping of wind resources would also contribute to accelerate market maturity. Needless to say the investment climate could also use improvement, in certain particular markets."

A Guest Comment: Vera Rechsteiner: "With the triple-threat combination of rising fossil fuel costs, a credit shortage hampering financing of new genera-

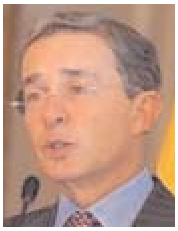
Q&A continued on page 6

Argentine,Venezuelan Presidents Cancel Visit to Bolivia over Violence

Venezuelan President Hugo Chavez and his Argentine counterpart, Cristina Fernandez, canceled a joint trip to southern Bolivia Tuesday after anti-government protests in different regions of the country led to two deaths and temporarily closed their destination airport, wire services reported. Two Bolivians died and 30 were injured in confrontations between miners and police forces in the western mining city of Oruro, according to EFE. Separate protests against President Evo Morales in Tarija also turned violent, closing the airport where Chavez and Fernandez planned to land. The two leaders were scheduled to meet with Morales to discuss energy cooperation. Tuesday's protests came just days before this Sunday's national referendum on whether Morales and eight regional governors should remain in office (editor's note: see related Q&A in the July 10, 2008 issue of the daily *Latin America Advisor*.) "These people are the enemies of our homeland," Morales told a crowd at a rally in the southern town of Villamontes, shortly after Chavez called him to cancel the visit, Reuters reported. "And because 150-200 people cause trouble at [Tarija] airport ... what are we losing? Bolivia is losing out on signing [energy] contracts," Morales added, according to Reuters. Chavez told reporters in Buenos Aires that "there will be other opportunities" to meet about energy with Morales and Fernandez.

ICRC Says Video Suggests Misuse of Red Cross Emblem in Colombia

The International Committee of the Red Cross (ICRC) on Wednesday said it was seriously concerned by what it called the Colombian government's apparent "deliberate misuse" of the ICRC's emblem in the July 2 rescue of 15 rebel-held hostages. In a press release, the ICRC said that new video footage of the rescue operation showed that a member of the rescue team was "wearing a tabard marked with the red cross emblem before the operation had even begun, suggesting intentional misuse." The humanitarian group's assertion appears to contradict the Colombian government's initial claim that the use of the emblem was an unapproved, last-minute decision by the individual who wore it. Colombian President Alvaro Uribe called the misuse of the emblem a "good faith" error, and said military officials who lied about its use as part of an investigation into the matter could be punished, local daily El Tiempo reported. In its press release, the ICRC noted that use of the emblem is a violation of the Geneva Conventions. "Complete and total respect for the red cross emblem is essential if the ICRC is to be able to bring assistance and protection to the people worst affected by armed conflicts and other situations of violence," it stated. "As a neutral and impartial humanitarian organization, the ICRC depends on the trust of all the parties to the conflict to be able to carry out its humanitarian work." In the dramatic July 2 rescue operation, a military team posing as rebels freed the 15 hostages, which included ex-Colombian presidential candidate and three US defense contractors, without firing a shot. The operation grabbed front page headlines around the world and was considered a major victory by the government in its campaign against the FARC rebel group.


Uribe.
Photo: Casa de Nariño

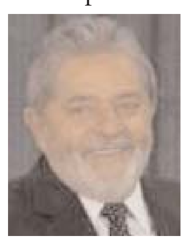
Economic News

Calderon Names Pro-Business Ally Mexico's Economy Secretary

Mexican President Felipe Calderon on Wednesday named his pro-business former chief of staff as secretary of the economy. Gerardo Ruiz, a top manager of Calderon's 2006 presidential campaign and former president of the Council of the Social Union of Mexican Businesses, will replace Eduardo Sojo, who was named president of the government's national statistics institute, INEGI. Sojo had come under fire amid rising inflation in Mexico. Amid soaring food prices, annualized inflation was 5.26 percent in June, the highest level in three and a half years, according to *The Los Angeles Times*. In announcing the change at the secretariat, Calderon said he chose Ruiz because "he has been a businessman who has lived and suffered the condition of businesses in Mexico and has been on the other side of the counter" from the government. "He knows what to do: deregulate the economy and free the country's productive forces to spark growth," Calderon added. Besides rising inflation, Ruiz will take office amid declining economic growth and a drop in remittances from Mexicans working abroad. Remittances are Mexico's second-largest source of foreign exchange after oil exports.

Lula Calls for Deeper Integration Between Brazil and Argentina

Brazilian President Luiz Inacio Lula da Silva on Monday called for deeper integration with neighboring Argentina, Bloomberg News reported. Lula, who traveled to Buenos Aires with more than 300 Brazilian business leaders to speak at a business seminar, said trade between Brazil and Argentina could rise to \$30 billion this year from \$24.8 billion last year and that he could imagine a future in which the two countries share the same currency. The Brazilian leader said the countries have the potential to increase production of agricultural goods, including biofuels, according to the report. Argentina and Brazil took opposite sides in the days and hours leading up to last week's collapse of global trade talks in Geneva. Brazil softened its position against wealthy countries' agricultural subsidies in order to support a deal, while Argentina joined India and other developing nations to oppose it, saying it would hurt farmers. But Lula and Argentine President Cristina Fernandez, speaking at the same business seminar, sought to minimize their differences, saying they could work together to promote the interests of developing countries.


Lula.
Brazilian government file photo.

POLITICAL & ECONOMIC BRIEFS

PRI, PAN Parties Have Same Level of Support Ahead of Midterm

Mexico's opposition PRI party has as much support as President Felipe Calderon's conservative PAN party ahead of next year's midterm congressional elections, Bloomberg News reported Monday, citing a poll published by local daily *El Universal*. The PRI and PAN would each take 30.3 percent of the vote if the elections were held today, according to the survey. The PRI has positioned itself as a centrist broker in Congress, and its support is key to passage of Calderon's oil reform bill, which aims to partially open investment in Mexico's oil sector to foreign firms.

Lula Launches International Fund to Protect Amazon

Brazilian President Luiz Inacio Lula da Silva launched an international fund last Friday to finance conservation and sustainable development in the Amazon, Reuters reported. The fund, which Lula declared would not diminish Brazil's sovereignty over the Amazon, will support forest conservation, scientific research and sustainable development projects, according to the report. Brazil hopes to raise \$1 billion within one year and as much as \$21 billion by 2021. Brazil's BNDES development bank will manage the fund.

Annual Inflation in Venezuela Rose to 33.7 Percent in July

Venezuela's annual inflation rate increased to 33.7 percent for July in metropolitan Caracas, the Associated Press reported. The figures released Thursday by Venezuela's Central Bank showed monthly inflation slowed to 1.9 percent from 2.4 percent in June, due to the elimination of price controls and an increase in food supplies.

Featured Q&A
Continued from page 4

tion facilities, and increasing demands for electric energy, Latin America could greatly benefit from greater amounts of energy produced by wind power. Although the number of countries that have adopted legislation for renewable energy projects (including wind) has increased, in many cases the regulatory schemes fall short of the reforms needed to attract new wind investments; governments will need to do more to support these investments. Perhaps two of the most important steps governments can take to promote financeable projects are to enact meaningful fiscal incentives for wind projects and adopt electricity market reforms that encourage or mandate long-term power purchase agreements and off-take pricing structures attractive to investors. A number of governments have taken steps in this direction with positive results. Fiscal incentives in Mexico (which experts indicate has identified sites with over 10,000 MW of wind resource potential) include 100 percent depreciation in the first year of capital costs for renewable investments and R&D credits. However, these fiscal incentives fall short of energy reforms to Mexico's power sector. Under Brazil's award-winning Proinfa program, two important incentives were combined: 1) access to financing by the Brazilian Social and Economic Development Bank and 2) a 20-year power off-take guarantee from Eletrobras. In 2008, Brazil projects the installation of over 107 MW of new wind capacity through Proinfa, and experts project installation of another 900 MW of new wind capacity by 2009, provided the Brazilian government continues to support the program. Governments seeking to attract new wind power investments will benefit from adopting market reforms that set clear policies aimed at making wind pricing competitive *vis-a-vis* other fuel sources (*e.g.*, through feed-in tariffs or other price structures). Well-developed strategies to deal with interconnection and transmission challenges—wind resources are often in remote locations—and regulatory measures aimed at ensuring 100 percent dispatch of wind energy will also contribute to achieving these goals. Ultimately, progress in attracting new wind capacity will depend on the level of political support by governments for continued reforms, through these (and other available) regulatory measures."

A **Guest Comment: Cristian Sainz:** "Latin America has great potential for renewable energy, above all with respect to wind and solar energy. However, the wind power generation industry is still in the development stage, and the primary cause is the lack of a regulatory framework that can offer legal certainty and establish clear and reliable conditions to attract investors interested in alternative energy for electricity generation. There have been a few efforts at the country level, such as the Ley Corta in Chile and the Proinfa program in Brazil, but on a regional level Latin American governments have not yet supported the development of this clean and renewable energy source in an effective way. Latin America should copy successful examples in the way of legislation, particularly the case of Germany. There, the application of the feed-in tariff guarantees a fixed sum per MW installed, which assures returns for investors, making investments more viable."

Mauricio Trujillo *is Executive Director of the Latin America Wind Energy Association.*

Jan Borchgrevink *is President of Costa Rica-based Nordteco.*

Vera Rechsteiner *is a Partner in the Business Transactions Section at Andrews Kurth LLP.*

Cristian Sainz *is President of Nowa Energias in Buenos Aires.*

Latin America Energy Advisor
is published weekly by the Inter-American Dialogue, Copyright © 2008

Erik Brand,
General Manager, Publishing
ebrand@thedialogue.org

Robert Simpson,
Editor
rsimpson@thedialogue.org

Matthew Schewel,
Reporter, Assistant Editor
mschewel@thedialogue.org

Danielle Jetton,
Computer Services Coordinator

Subscription Inquiries are welcomed at freetrial@thedialogue.org

Latin America Energy Advisor is published weekly, with the exception of some major US holidays, by the Inter-American Dialogue
1211 Connecticut Avenue, Suite 510
Washington, DC 20036
Phone: 202-822-9002 Fax: 202-822-9553