INTER-AMERICAN DIALOGUE'S
LATIN AMERICA ADVISOR ▸ ENERGY

FEATURED Q&A

How Significant is Carbon Financing for Latin America?

Q Energy projects in Latin America developed under the U.N.-administered Clean Development Mechanism could generate $3.9 billion worth of carbon credits by the time the Kyoto Protocol expires in 2012, Jem Porcaro, a senior vice president at CarbonNeutral, told *Business News Americas* last month. Will carbon markets provide a significant source of financing for project developers in Latin America? How effective have carbon markets been at promoting clean energy investment in the region, and what does the future hold?

A Roger Stark and Andrew Otis, partners at Curtis, Mallet-Prevost, Colt and Mosle LLP in Washington: "Carbon markets under the Kyoto Protocol are unlikely to provide a significant source of financing for Latin American project sponsors in the near term. Moreover, sponsors of renewable energy and other greenhouse gas (GHG) reduction projects in Latin America are running out of time to certify and register emission reductions under the Kyoto Protocol. Kyoto's emission reduction requirements expire in 2012 and the Conference of the Parties (COP) at Copenhagen confirmed that there is, at present, no international consensus on post-2012 emission targets. Although the Clean Development Mechanism (CDM) will remain in effect post-2012, the sunset date for emission standards means that there will likely be reduced demand for Certified Emissions Reductions (CERs) under the CDM. Reduced demand is likely to result in a less liquid CER market with lower CER prices. As of now, the December 2010 COP in Mexico City is unlikely to result in additional legally binding emission reduction requirements. On the whole, the absence of fully integrated international carbon reduction standards has reduced the potential for carbon pricing to support development of

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Regional Leaders Hit on Energy Issues In Rio Group Summit

Leaders lent support to Argentina in its spat with the U.K. over oil drilling near the Falkland Islands, while Mexico and Brazil announced a $2.5 billion petrochemical project. See box on page 3.

Photo: Mexican Government.

Inside This Issue

ENERGY SECTOR BRIEFS

Value of Venezuelan Exports to U.S. Fall by Over 45 Percent

Venezuela's exports to the U.S., which consist almost entirely of oil, fell 45.3 percent in 2009 from the previous year, according to figures from the Venezuelan-American Chamber of Commerce and Industry released Monday, Agence-France Presse reported. Oil exports, which account for 96.5 percent of Venezuelan goods arriving in the U.S., totaled $27.1 billion last year. The U.S. remains the top buyer of Venezuelan oil despite the efforts of President Hugo Chávez to diversify into other markets.

Switzerland's Noble in Talks With Pemex to Renew Rig Contracts

Switzerland-based drill rig provider **Noble** is in talks with Mexican state oil company **Pemex** to renew 10 rig contracts due to end soon, Noble chief executive officer David Williams said Monday, Bloomberg News reported. Noble currently has 13 of its 62 rigs leased to Pemex, including 12 jack-ups and one deepwater rig. Williams added that he expected state oil companies to ramp up utilization of the company's rigs due to lower costs and higher oil prices.

Energía Eólica Plans to Invest $280 Mn in Two Peru Wind Parks

A Peruvian-Spanish-owned company plans to invest $280 million to construct two wind farms in Peru, state news service Agencia Andina reported Sunday. **Energía Eólica** will build an 80 MW wind park in La Libertad region and a 30 MW project in the Piura region, both to start operations in July 2012, general manager Juan Coronado said. Peru's government recently approved contracts for renewable power projects totaling 412 MW.

Oil & Gas News

Officials Close to Signing New Bolivia-Argentina Gas Agreement

Bolivia and Argentina are close to signing an agreement that would extend a deadline for Bolivia to export more natural gas to the neighboring country, Reuters reported Monday. In 2006, the Andean country agreed to almost quadruple the limit on gas exports to Argentina from the current level of 7.7 million cubic meters daily. However, the countries have been in talks for months to amend the deal. "Our goal is to sign [the amendment] before the end of March with the presence of both presidents," Bolivian Vice President Álvaro García Linera told reporters Monday after meeting with Argentine Planning Minister Julio de Vido in Tarija, Bolivia. "There is agreement on the central points, but the technical details are still pending." The agreement would allow Bolivia to boost natural gas exports to Argentina to 16 million cubic meters a day by 2013 and to 27 million cubic meters daily by 2017. Initially, the countries had agreed that Bolivia would increase exports to up to 27.7 cubic meters a day by 2014. Bolivia plans to use the Margarita field, which Spain's **Repsol** operates, to supply the additional natural gas. In order for that to happen, the countries would need to build a 50-mile pipeline.

> "Our goal is to sign [the amendment] before the end of March with the presence of both presidents."
>
> *— Álvaro García Linera*

Anadarko Begins Work at Brazil Well That Could Become 'Mega Project'

U.S.-based **Anadarko Petroleum** has begun work on an offshore exploration well in Brazil that could become a "mega project," Bloomberg News reported Tuesday. Anadarko is working on the Wahoo South well and will test the well's first discoveries, said spokesman John Christiansen. The company is using **Transocean**'s Deepwater Millennium drillship for the exploration. Anadarko's CEO, James Hackett, told analysts during a Feb. 2 conference call that the well "has all the ingredients to become one of our next mega projects." Anadarko has a 30 percent stake in the project and has partnered with companies including **Devon Energy**.

Power Sector News

Brazil's Vale Joins Consortium to Bid on Belo Monte Project

Brazilian mining giant **Vale** said Monday that it has become part of a consortium in order to submit bids for construction of the Belo Monte hydroelectric dam, Reuters reported. The Amazon region project has a planned capacity of 11,000 megawatts and has been criticized as a costly project that could cause environmental damage. However, Brazil's government argues the project is needed to provide energy for the country's growing economy. Brazil's government has estimated the Belo Monte project will cost approximately 16 billion reais ($U.S. 8.8 billion), but industry leaders say the cost could approach 30 billion reais. It would be the world's third-largest hydroelectric dam. Vale, the world's largest miner of iron ore, said it struck a deal with construction company **Andrade Gutierrez**, conglomerate **Votorantim**'s energy division and holding company **Neoenergia** to form a consortium for bidding. Vale, which is among the country's largest energy consumers, also has begun exploring for natural gas.

Venezuela Establishes $1 Billion Fund for Power Projects

Venezuela on Tuesday established a $1 billion fund to pay for electricity-generation projects as the country faces severe power shortages, Dow Jones reported. The fund, which President Hugo Chávez established by decree, was created with $1 billion in capital and 1.1 billion bolivars ($U.S. 423

million at the government's preferential exchange rate). Venezuela, which relies heavily on hydropower, has faced power shortages because of the country's severe drought. The government has vowed to add as much as 4,000 megawatts of power this year and 11,768 megawatts of power within the next five years. Venezuela recently signed an agreement with

Chávez at the Rio Group summit this week.

Photo: Venezuelan Government.

General Electric to generate 880 megawatts of electricity this year. Venezuelan state oil company **PDVSA** would use its U.S. subsidiary, **Citgo**, to acquire the new generation plants because Citgo can offer its U.S. assets as loan guarantees, local newspaper *El Nacional* reported. The government is also examining proposals from countries including Brazil, Argentina and Russia to boost the electricity supply.

Rio Group Summit Proves Fertile Ground for Discussions on Energy

While the announcement of a new regional organization excluding the U.S. and Canada dominated headlines from the Rio Group summit this week in the Mexican resort town of Playa del Carmen (see more on page 4), Latin American and Caribbean leaders also weighed in on several regional and bilateral energy issues. Here's a roundup of energy-related talks:

- Leaders lent their support to Argentina in its spat with the United Kingdom over oil drilling near the British-controlled Falkland Islands, which Argentina claims as the Malvinas. In a joint statement, the leaders affirmed "their support of Argentina's legitimate rights in the sovereignty dispute involving the United Kingdom of Great Britain and Northern Ireland." Argentine Foreign Minister Jorge Taiana Wednesday urged the U.N. secretary general to intervene in the dispute, while the U.K. maintained that oil drilling in the Falklands' waters is legal.

- On Tuesday, Mexican President Felipe Calderón and Brazilian President Luiz Inácio Lula da Silva announced that Brazil's **Braskem**, which is partially owned by state oil company **Petrobras**, will invest with Mexican firm **IDESA** in a $2.5 billion petrochemical project in Mexico. The Ethylene 21 project, to be located in Coatzacoalcos, Veracruz, will produce one million tons of ethylene annually, which will be used to make polyethylene for industry and manufacturing. Braskem and IDESA also signed a 20-year contract to provide 66,000 barrels per day of ethane to state oil company **Pemex**.

- Countries also came out in support of Ecuador's Yasuni-ITT conservation project, under which international donors would pay Ecuador to refrain from extracting an estimated 846 million barrels of oil from beneath a national park. A joint statement called Yasuni an "effective, voluntary means of dealing with the problem of climate change and guaranteeing the preservation of one of the most biodiverse places in the world." [Editor's note: See related Q&A in the Jan. 25-29 issue of the *Energy Advisor*.]

- On the sidelines of the summit, Lula and Paragauayan President Fernando Lugo agreed to meet on April 23 in the Brazilian border city of Ponta Porá to discuss progress on a June deal giving Paraguay greater economic benefits from the shared Itaipú hydroelectric dam, according to wire reports. Last year's agreement, which will triple Paraguay's current $120 million annual compensation for electricity produced at the dam, is still pending approval in Brazil's Congress.

- Chile and Ecuador agreed to deepen ties in their oil and mining sectors, following a meeting between Ecuadorean President Rafael Correa and Chile's president-elect, Sebastián Piñera. The two leaders discussed the exchange of Ecuadorean crude for refined petroleum products from Chile and development of oil and gas reserves in the Gulf of Guayaquil, Ecuador's foreign ministry said in a statement.

Biofuels News

Indian Sugar Firm Paying $329 Mn for Stake in Brazil's Equipav

India-based **Shree Renuka Sugars** announced Sunday that it has agreed to take a controlling 51 percent stake in Brazil's **Equipav Azucar e Alcool** for 600 million reais (U.S. $329 million). The agreement with holding company Grupo Equipav involves primarily two large sugar/ethanol mills with integrated co-generation facilities in São Paulo state, the Indian company said in a press release. The facilities have a combined cane-crushing capacity of 10.5 million tons per year, with a cogeneration capacity of 203 MW. The mills will be expanded to a combined capacity of 12 million tons per year and 295 MW with a capital expenditure of 218 million reais, the company said. Equipav had net debt of approximately 1.5 billion reais at the end of last year. Shree Renuka's investment is expected to help fund capital expenditures, pay down debt and increase working capital. The deal is subject to approval of an acceptable debt restructuring package by Equipav's lenders. Closing is expected in 40 days. Global companies are jockeying for a presence in the global ethanol industry as the sector consolidates. Earlier this month, **Royal Dutch Shell** and **Cosan** announced a $12 billion joint venture for ethanol production and distribution in Brazil, with company executives touting the deal's potential for expanding the presence of Brazilian ethanol in global markets. **BP**, **Bunge** and **Louis Dreyfus**

The Dialogue Continues

Will the Shell-Cosan JV Raise Brazilian Ethanol's Profile?

Q Earlier this month, Royal Dutch Shell and Cosan announced a $12 billion joint venture for ethanol production and distribution in Brazil. What is the significance of the Shell-Cosan deal, both inside Brazil and globally? Will other oil majors seek to partner with Brazilian ethanol producers? What barriers still remain to creating an export market for Brazilian ethanol?

A Camila Ramos, manager at the Brazil office of Bloomberg New Energy Finance: "The JV will be the largest sugar cane group in the world, with the most ethanol production capacity in Brazil and the third-largest fuel distributor in the country. It will allow unprecedented growth in the fragmented Brazilian sugar cane market and aims to consolidate a leading market position in the global biofuels sector. The new company's improved cashflows and debt levels should enable it to shop for ethanol assets, domestically and abroad. Shell brings access to new technology to the deal, via Iogen and Codexis. The long-term goal of the JV is most likely to deploy next-generation biofuel technologies from sugar cane bagasse. Cosan's ethanol logistics assets and Shell's market access internationally bring potential synergy—access to foreign markets on a major scale. Just two days after the deal was announced, the U.S. unveiled final rules for its Renewable Fuels Standard, which will mandate 144 billion liters of biofuels by 2022, most of it in the form of "advanced biofuels," a category that sugar cane ethanol now qualifies for, thanks to its relatively low carbon-intensity. Increased focus on sustainability around the globe was a driver behind this deal. Brazilian ethanol still faces barriers such as high import tariffs, lack of product standardization internationally and a weak futures market, as well as blending walls. This is the latest and most significant move by an oil major into biofuels, following investments by Petrobras and BP. Bloomberg New Energy Finance expects this trend to continue at a larger scale than before, as biofuels' participation deepens in the global fuel matrix."

Editor's note: The above is a continuation of a Q&A published in the Feb. 15-19 issue of the Energy Advisor.

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renewable energy and cleantech. An alternative, 'bottom-up' approach, would rely on GHG emission limits imposed by national and sub-sovereign governments as a basis for trading carbon credits under Kyoto's ongoing certification and registration procedures (note, however, the need for reconciliation of differing national standards). In short, evolving Kyoto concepts provide a useful basis for future progress, but additional work is required to reap the full benefits of carbon trading."

A Luis Carneiro, climate change manager for Latin America at Lloyd's Register Quality Assurance in São Paulo: "Making climate change a mainstream issue within organizations is critical in order to facilitate actions and contributions to a low-carbon economy, clean-energy development, technology transfer and associated socioeconomic benefits. The Kyoto Protocol's Clean Development Mechanism can increase a project's internal rate of return by 5 to 30 percent,

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have made or announced significant Brazilian ethanol investments in hopes that export growth will soon materialize, exports wrote in last week's Energy Advisor. [Editor's note: See "The Dialogue Continues" at left.]

Political News

Latin American, Caribbean Leaders Agree to Create New Regional Bloc

Latin American and Caribbean heads of state at the Rio Group summit in Playa del Carmen, Mexico agreed Tuesday to create a new regional bloc that would exclude the United States and Canada. Many leaders have criticized the Washington-based Organization of American States as dominated by U.S. and Canadian interests. Mexican President Felipe Calderón, who hosted the two-day summit that ended Tuesday, said the new organization "will consolidate and globally project a Latin American and Caribbean identity," the Associated Press reported. However, the region's leaders had mixed views on whether the new bloc would replace the OAS. "It's very important that we don't try to replace the OAS," said Chilean President-elect Sebastián Piñera, BBC News reported. "The OAS is a permanent organization that has its own functions." Venezuelan President Hugo Chávez said the new organization would amount to a step away from the United States "colonizing" the region. U.S. State Department officials have expressed support for the new bloc. "Virtually all of the countries attending the unity summit are strong partners of the United States and we are working together with them on a broad range of initiatives," State Department spokesman P.J. Crowley said Tuesday, the AP reported. "So we consider the meeting in Mexico as consistent with our goals for the hemisphere."

Correa, Uribe Meet in 'Decisive Step' Toward Normalizing Relations

The presidents of Ecuador and Colombia met during the Rio Group summit in a move to normalize relations that were broken after Colombia attacked a rebel camp inside Ecuador in March 2008, EFE reported Tuesday. After meeting with Colombian President Álvaro Uribe on Monday, Ecuadorean President Rafael Correa said the meeting was a "decisive step" toward normalizing ties. The presidents confirmed their desire to normalize relations "as soon as possible," said Correa. The meeting between Correa and Uribe was their first formal bilateral discussion since the 2008 attack, which killed Raúl Reyes, a top leader of the Revolutionary Armed Forces of Colombia, and at least 25 other people. "There's no date, there's no timetable, but there is a roadmap with requisites and requirements," Correa added. Among the requirements are agreements for Colombia to share details of the military operation "to eliminate any suspicion of intervention by a third country," said Correa, referring to the United States. Uribe told reporters that "the meeting with President Correa was held in good spirits," EFE reported.

(L-R) Correa and Uribe

Photo: Ecuadorean Government.

OAS Report: Democracy, Human Rights Endangered in Venezuela

A blistering report released Wednesday by the human rights arm of the Organization of American States blasts the government of President Hugo Chávez, saying democracy and the rule of law in Venezuela have been weakened due to a lack of separation of government powers, intimidation of the government's political opponents, constraints on freedom of expression and a climate of impunity. The report, released by the OAS' Inter-American Commission on Human Rights, said "not all individuals are ensured full enjoyment of their rights irrespective of their positions on government policies. While recognizing Venezuela's achievements in areas including eradicating illiteracy, reducing poverty and increasing access to basic services such as health care, the commission said "observance of other fundamental rights cannot be sacrificed for the sake of realizing economic, social and cultural rights in Venezuela." Venezuela's ambassador to the OAS, Roy Chaderton, rejected the report, telling *The Washington Post* that the commission is a "confrontational political actor instead of an advocate for defending human rights." On Monday, a Venezuelan state governor aligned with Chávez resigned from the president's United Socialist Party and called for a new dialogue to resolve the country's problems, Bloomberg News reported. Gov. Henri Falcón of Lara state announced he was resigning from the PSUV party, saying regional leaders are unable to communicate with Chávez and are expected only to follow orders.

Economic News

Argentine Supreme Court to Rule on Government Plan to Tap Reserves

An Argentine court on Wednesday maintained a hold on a plan by the administration of President Cristina Fernández to use $6.6 billion in reserves to meet debt obligations and referred the case to the Supreme Court, Bloomberg News reported. The judges previously blocked Fernández from tapping the central bank's $47.8 billion in reserves in order to create the so-called Bicentennial Fund, leading the administration to seek a decision from the Supreme Court. The dispute between the administration and then-central bank chief Martín Redrado over using the reserves led Fernández to fire Redrado last month. In order for the government to use the reserves, at least one chamber of Argentina's Congress—which is controlled by opposition parties—would have to approve the measure. "Next week, Congress will discuss this decree and, given the current situation, I think we are going to reject it," opposition Sen. Rubén Giustiniani told reporters, according to Bloomberg News.

POLITICAL & ECONOMIC BRIEFS

Ally of Colombia's President Accused of Militia Ties

A former Colombian senator and close ally of President Álvaro Uribe was arrested Wednesday on charges of colluding with death squads, the Associated Press reported. Mario Uribe, a second cousin of the president's, was charged in connection with a scandal that has led to the imprisonment of dozens of current and former legislators. The former senator, who was arrested in Medellín, is accused of conspiring with far-right paramilitaries in the 1990's to acquire land in northeastern Colombia.

Fitch Expects Economic Growth of 5.5% in Brazil, 4% in Mexico

In a report released Wednesday, **Fitch Ratings** said it expects GDP to grow 5.5 percent in Brazil this year and 4 percent in Mexico. Brazil's economy will benefit from strong domestic consumption, rebounding investment and strengthening commodity prices, the report said. It added Mexico's economy will also recover, but at a slower pace due to sluggish U.S. growth.

Officials Deny Report That U.S. Will Embed Agents in Mexico

Mexican and U.S. officials on Wednesday denied a report by *The Washington Post* that said the U.S. would embed intelligence agents with Mexican police units. Mexico's Interior Secretariat said bilateral cooperation on fighting drugs "in no way implies that foreign officials in Mexico would carry out actions reserved by law for Mexican authorities." U.S. Ambassador to Mexico Carlos Pascual said the U.S. does not have field agents operating in Mexico, although it does have advisors there sharing intelligence information, CNN reported.

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depending on the nature of the project (hydropower, fuel switch, energy efficiency, wind power, landfill, etc.), additionality and methodology criteria. Considering overall industry size in Latin America, the 1,000 projects currently under validation or implementation phases are very minor. However, this low number of projects has still resulted in trading of Certified Emission Reduction credits (CER, also known as CDM carbon credits) equivalent to 895 million euros per year. As an example, one landfill project in Colombia has generated 10 million euros per year of income from the CERs, in addition to the income from the landfill operation and to its energy sales to the grid. Commercial and other banks have promoted financing in the form of loans and equity-share participation to project developers since the inception of such projects, facilitating the access to the capital necessary for clean-energy development. Looking ahead to the future, even moderate market trends predict a rapid expansion of the market, driven by the reduction targets to be achieved by 2020 as promised at the end of January 2010 by countries under the Copenhagen Accord. The result of these reductions is estimated to generate a target at least six times more stringent than that established by Kyoto (and consequently create a larger market). Project financing is available; and risks can be measured and mitigated. So it's up to all of us to take the first step towards a low-carbon economy."

"Investment in this milieu after 2012 has been limited given post-Kyoto uncertainties, and mixed to muddled signals from Copenhagen won't improve the situation markedly."

— William L. Thomas

A William L. Thomas, counsel in the Environmental and Climate Change practices of Skadden, Arps, Slate, Meagher & Flom LLP in Washington: "Carbon markets have provided a relatively modest catalyst for clean energy investment in Latin America to date, largely due to global market dynamics, transaction costs and strictures associated with the Clean Development Mechanism (CDM) and other factors. Investment in this milieu after 2012 has been limited given post-Kyoto uncertainties, and mixed to muddled signals from Copenhagen won't improve the situation markedly. Few carbon financiers can be expected to place long-term investments in the region without greater clarity on pricing, meaningful CDM reform and voluntary standards coherence. Estimates by Karan Capoor and Philippe Ambrosi of the World Bank's Carbon Finance Unit place CDM investment at around $6.5 billion in 2008, with $313 million flowing to Latin America. Other reports, such as one from TFS Green, identify 386 renewable energy CDM projects in Latin America as of last October, which would account for 48 percent of all CDM projects in the region and 8 percent of CDM projects worldwide. Due in part to their scale, however, such projects are expected to account for only 29 percent of all CER credits generated in Latin America through 2012. Bloomberg New Energy Finance projects total CER generation in the region could roughly double between 2008 and 2020, but such estimates could well prove optimistic. In any event, it remains unclear if clean energy-focused carbon finance will climb significantly until post-Kyoto credits can be valued with greater precision. Another wildcard could be burgeoning demand for forest carbon (i.e., REDD), which is likely to attract investment in Brazil, Mexico, Peru and other hotspots in the region, impacting carbon credit mix and value."

The Energy Advisor *welcomes responses to this Q&A. Readers can write editor Gene Kuleta at gkuleta@thedialogue.org with comments.*

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