INTER-AMERICAN DIALOGUE'S
LATIN AMERICA ADVISOR ▸ ENERGY

FEATURED Q&A

Will Hydropower Change Central America's Energy Landscape?

Q The announcement last week by Honduras that it granted a $600 million contract to Brazilian construction firm Odebrecht for two new hydroelectric projects comes as several other Central American nations, including Costa Rica, El Salvador and Nicaragua, have unveiled plans to expand hydropower capacity. Is hydropower the right choice for reducing Central America's dependence on fossil fuels? Is funding for these projects in jeopardy due to current lending constraints? Will greater production capacity lead to further integration among power grids in the region?

A Board Comment: Roger Tissot and Jeremy Martin: "Central America was severely impacted by last year's spike in oil prices. The challenges stemmed largely from a legacy of deregulation and privatization during a low-price oil environment in the 1990s that created an electricity matrix with a preference toward fossil fuel generation projects. Central America is endowed with plentiful water resources and there is significant room to increase hydroelectric capacity and potentially reduce their imported fuel dependency, as well as the added environmental benefit of relying on a renewable source that could potentially qualify for carbon credits. However, hydroelectricity is not free of economic, environmental and social challenges. Private investors have been reluctant to invest due to capital requirements and the extended term to recuperate their investments, and the huge challenges and difficulty to secure local communities' support or address environmental concerns. Many local populations remain suspicious due to the legacy of state-owned investments that focused on 'development' and little attention on environmental and indigenous issues. Hydro should be a tool

Q&A continued on page 3

Peru's Garcia Asks Congress for Inquiry into Petro-Tech Sale

During a visit to a hydroelectric dam, Peruvian President Alan Garcia said he warned Petro-Tech's buyers about fines they could face if bribery allegations are confirmed. See story on page 2.

Photo: Peruvian government.

Inside This Issue

FEATURED Q&A: Will Hydropower Change Central America's Energy Landscape? 1

Peru's President Asks Congress for Inquiry into Petro-Tech Sale 2

New Bolivian Energy Minister: Main Priority is Attracting Investment 2

Venezuela Receives New Tanker as PDVSA Faces Pressure on Debt..............2

Petrobras and Mitsubishi to Build $830 Mn Drilling Vessel 2

Analysts: Brazil Will Consume More Ethanol as Exports Fall 2

Report: Region's Wind Power Capacity Grew by 21 Percent in 2008 3

Advisor Q&A: How Will the Caribbean Weather the Stormy Economy? 4

Political and Economic News: Venezuela, Chile, WTO and more..............4-5

ENERGY SECTOR BRIEFS

Petrobras and Mitsubishi to Build $830 Mn Drilling Vessel

Brazilian state oil company **Petrobras** and Japanese conglomerate **Mitsubishi** will jointly invest in an $830 million ship to drill for oil and gas in deep waters, reported Bloomberg News on Tuesday. The vessel, slated for completion in 2010, will be built by an unspecified Korean shipbuilder, according to Mitsubishi. Each company will own half of the rig, which Petrobras will use to drill at home and abroad.

Chile's AES Gener Sells $248 Mn Worth of Shares in Cap Increase

Chile's second-largest electricity generator, **AES Gener**, said Monday it completed a successful $248 million capital increase last week. Investors subscribed 938 million new shares, 667 million of which were acquired by **Inversiones Cachagua Ltda.**, a unit of US-based **AES Corporation**, which will maintain roughly a 71 percent stake in AES Gener, the company said in a Web site statement. AES Gener said it plans to use the funds to finance projects already underway to cover energy needs in the country's grid.

Analysts: Brazil Will Consume More Ethanol as Exports Fall

Brazil's domestic demand for ethanol may continue to rise in 2009 despite a drop in exports, reported wire services on Wednesday. Netherlands-based **Rabobank** said ethanol consumption could increase by 12.2 percent, or 2.44 billion liters, over 2007 levels, reported Brazil's Estado news agency. Plinio Nastari of Brazilian ethanol consultancy **Datagro** said Monday that ethanol exports could fall to 3.75 billion liters in the 2009-2010 growing season, down 35 percent over last year's numbers, reported Reuters.

Oil & Gas News

Peru's President Asks Congress for Inquiry into Petro-Tech Sale

Peruvian President Alan Garcia on Tuesday asked the country's congress to investigate the sale of oil company **Petro-Tech**, Reuters reported. The $900 million sale, to South Korean oil company **KNOC** and Colombia's **Ecopetrol**, was announced Friday. The deal is happening at "a highly inopportune and inconvenient time," said Garcia. Petro-Tech is facing a probe in connection with a wiretapping scandal that has claimed jobs of Garcia cabinet members. Speaking on Wednesday, Garcia said Petro-Tech may have also benefited as far back as 1993 from links between the company and Peru's state oil company, **Petroperu**, according to an interview with state-owned TV Peru. "I summoned Ecopetrol … and the Korean company … and told them that the sale seemed inconvenient and even suspicious to the government," Garcia told reporters. He said the two companies decided to go ahead with the purchase and that under Peru's constitution, the state is not allowed to intervene in private contracts. "I told them that if there were any responsibility in that case of bribery there would be money to pay, as the responsible third party," he added. US-based **Offshore International Group** currently owns Petro-Tech, which controls more than 5 million acres of offshore oil blocks in Peru.

> "I told them that if there were any responsibility in that case of bribery, there would be money to pay."
>
> *— Alan Garcia*

New Bolivian Energy Minister: Main Priority is Attracting Investment

Coca

Photo: Hydrocarbons and Energy Ministry.

Bolivia's new energy minister, Oscar Coca, said his main priority is attracting investment, according to state news agency ABI, reported Bloomberg News on Monday. "Businesses haven't made the necessary investments, and today we're living with the effects," said Coca. "The great goal is to take care of that issue in the medium and long term." President Evo Morales on Sunday named Coca to the post, replacing Saul Avalos, after a legislative committee began a corruption investigation in Bolivia's state energy company **YPFB**. Avalos has not been accused of any wrongdoing. On Tuesday, Coca said the government plans to nationalize four power companies, reported Bloomberg News. "We're going to continue with these activities in the long term so that energy is guaranteed in this country from here on out," Coca said. Foreign investment in Bolivia has plummeted since Morales nationalized the country's oil and natural gas industries in October 2006. Investment had been at a record high of $580.8 million in 1999 but fell to $149 million in 2007. Morales also removed YPFB President Santos Ramirez on January 31 and replaced him with former energy minister Carlos Villegas. On Tuesday, Ramirez was taken into police custody after Bolivia's anti-corruption prosecutor deemed him to be a flight risk. Jose Santos Avilez, a lawyer for Ramirez, said the detention was illegal because officials failed to provide sufficient evidence implying Ramirez's legal responsibility in the case, reported ABI. Avilez also left open the possibility of filing a plea for *habeas corpus*. [Editor's note: look for a related Q&A in an upcoming issue of the *Energy Advisor*.]

Venezuela Receives New Tanker as PDVSA Faces Pressure on Debt

Venezuelan state oil company **PDVSA** said Monday it received the first of two oil tankers to facilitate crude transport to Cuba and other countries in the Caribbean. The 72,700 ton tanker, dubbed "Petion" after one of Haiti's founding fathers, is of Korean origin and will transport crude from eastern Venezuela to Cuba's Camilo Cienfuegos refinery, the company said in a Web site statement. **Transalba**, PDVSA's 50-50 joint venture with Cuban oil firm **Internacional**

PDVSA's unpaid invoices totaled $7.86 billion in September.

Maritima, will operate both ships, the second of which is set for March delivery. The tankers are being financed with a $122 million loan from BANDES, Venezuela's development bank, according to a BANDES statement released last March. In related news, PDVSA has settled a $26 million debt with drill operator **Neptune Marine & Drilling Ltd.**, Neptune's parent company **Jasper Investments** said on Monday, reported Bloomberg News. The Venezuelan state oil company is under pressure to pay off its debts to service contractors including US companies **Helmerich & Payne** and **Ensco International**. Tulsa-based Helmerich, which is owed $100 million by PDVSA, said in January that due to the outstanding debt, it would stop drilling on two rigs in Venezuela when contracts expire. PDVSA's unpaid invoices totaled $7.86 billion in September, after increasing by 39 percent in the year's first nine months, reported Venezuelan daily *El Universal*.

Featured Q&A

Continued from page 1

used by the region to redress its exposure to the volatility of oil prices. A key challenge is to create projects attractive enough not only to the local market but to the entire region."

A **Guest Comment: Tonci Bakovic:** "If SIEPAC (the Central American Interconnected System) succeeds in interconnecting Central America and thus operates as a single market with one set of trading arrangements, large 'anchor' plants like hydro and coal could make sense especially if oil hovers at or above $70 per barrel. At an expected long run marginal cost of $90 to $100 per MWh for the region, hydro plants should be competitive depending on construction costs and hydrological characteristics. Fuel oil plants are the threat in Central America if oil prices are below $70 per barrel, but environmental issues together with the economies of scale of a larger interconnection should make hydro plants competitive. Unfortunately, unlike construction companies, not too many private generators (operators) are willing to invest in hydroelectric power plants given the construction and environmental/social risks associated with these projects. On top of these risks, the current financial market conditions could indeed put some of these projects in jeopardy. Multilateral lending institutions like IFC, IDB and CABEI together with other bilateral lending institutions like Germany's DEG and the Netherland's FMO, among others, should be able to help with the mobilization of financing for hydroelectric projects in the region these next two years of crisis. IFC has been able to prove that project finance for greenfield-private hydroelectric projects is possible in countries that have private off-takers and clear rules of the game such as Chile. We have faced serious construction and environmental challenges in those projects but we have also learned from them and hence we hope to take such experience to Central America. Key for all this to happen will be the correct implementation of the trading arrangements (trading rules) in the SIEPAC market. It would be a shame to have such a network built and not to have exchange due to a lack of rules of the game. The benefits of interconnection and investment in hydroelectric projects will not only be reflected in lower prices for the region once exchange and competition are implemented but also in terms of carbon dioxide reductions due to the hydro-thermal, seasonal and peak/off-peak complementarity brought by the interconnection."

A **Guest Comment: Aaron Goldzimer and Monti Aguirre:** "Central America, like all regions, needs to reduce its dependence on fossil fuels. But new large hydroelectric projects are not the answer. Despite big plans, financing difficulties and local opposition have stopped or slowed construction of most new dams in recent years; and those that have been built, such as Panama's Esti, have provoked serious negative impacts. Guatemala's proposed Xalala Dam found no bidders in a third try in November. The project was identified as a high-risk investment by some companies; almost 90 percent of voters from the area had said no to the project. Similarly, 97 percent of Costa Rica's Turrialba County voters rejected plans to dam the Pacuare. As for its new Odebrecht contracts,

Continued on page 6

Power Sector News

Report: Region's Wind Power Capacity Grew by 21 Percent in 2008

Worldwide wind energy capacity increased by 29 percent in 2008, but many Latin American markets showed continued stagnation, according to a World Wind Energy Association report issued Thursday. The only major Latin American countries to install wind farms in 2008 were Brazil and Uruguay, which contributed to a 21 percent increase in the region's installed capacity, closing out the year at 667 MW. "This slow wind deployment is especially dangerous for the economic and social prospects of the region as in many countries people are already suffering from power shortages and sometimes do not have access to modern energy services at all," the report said. The WWEA noted that a number of projects underway in Argentina, Brazil, Chile, Costa Rica and Mexico could bode well for wind power development in 2009. Latin America still only accounts for 0.5 percent of global capacity, trailing every region except Africa. Brazil is Latin America's top wind producer, and ranked 25th worldwide, with a total installed capacity of 338.5 MW at the end of 2008. Other top producers from the hemisphere include Mexico, Costa Rica and Argentina. The WWEA said that wind

Wind Energy In Latin America
Total Capacity End-2008 (MW)

Brazil	338.5
Mexico	85.0
Costa Rica	74.0
Argentina	29.8
Jamaica	20.7
Guadeloupe	20.5
Uruguay	20.5
Chile	20.1
Colombia	19.5
Guyana	13.5
Region Total	667.0

Source: WWEA.

energy continues to offer a "domestic, reliable, affordable and clean energy supply" in the midst of the three major global challenges—energy, financial, and environmental—but added it was difficult to predict the short-term effects of the credit crunch on wind energy investment. "However, currently smaller projects under stable policy frameworks like well-designed feed-in tariffs are less affected by the credit crunch than higher-risk investments, *e.g.* in large offshore wind farms or under unstable political frameworks and in countries which are seen as not offering sufficient legal stability," according to the report.

Political News

Regulator: Chavez Violating Law in Pushing Referendum

Venezuelan President Hugo Chavez is violating the law by making liberal use of the country's state-run media and even Caracas' subway system to push for approval of this Sunday's referendum, said a Venezuelan elections regulator, Bloomberg News reported Wednesday. Vicente Diaz, one of the National Electoral Council's five directors, said Chavez's government is packing rallies with state employees, plastering government web sites with advertisements and filling the air inside the capital's subway system with jingles telling Venezuelans to

Advisor Q&A

How Will the Caribbean Weather the Stormy Economy?

Excerpted from the February 6, 2009 issue of the Dialogue's daily **Advisor**

Q Countries in the Caribbean faced fiscal challenges even during relatively good times for Latin America over the past few years, and the current external crisis adds a downturn in tourism receipts and remittances. Which countries in the Caribbean are better prepared and why? Which nations face the toughest outlook and how bad might it get?

A Guest Comment: Dan Erikson: "The Caribbean today faces a challenging economic environment that demands new ways of thinking about how to guarantee the region's continued economic viability and lay the foundation for prosperous societies—but the present economic landscape appears increasingly bleak. Cuba has been forced to radically lower its growth projections to 4 percent, itself an optimistic projection, and most other Caribbean countries are likely to be even lower. The value of mineral commodities like Jamaican bauxite, Cuban nickel, and Trinidadian oil and gas has plunged, and the outlook for remittances and tourism are weak. The Dominican economy is witnessing downturns in virtually every sector. Islands that have been heavily dependent on financial services in recent years, such as the Bahamas and Barbados, are likely to be especially hard hit. In the short term, resource-based strategies do not offer much in the way of long-term prospects. In most islands, agriculture faces limited prospects due not only to the traditional North American and European Union subsidies, but increasingly, as a result of the fierce competition coming from Latin American producers. As the old saying goes, 'When the US sneezes, the Caribbean catches a cold.' Now that the American economy is seized by downright pneumonia, the Caribbean countries will be hard-pressed to keep an even deeper economic malaise at bay."

A Guest Comment: Winston Dookeran: "The recent 'bailout' of CLICO and CL Financial, the largest conglomerate in Trinidad and Tobago will put new pressures on the government's already strained revenues (due to falling oil and gas prices), increase the country's debt and perhaps put pressures on the foreign exchange market. The move can better be described as a 'buy out,' as the state will take governance control of the assets of the group, which includes 55 percent of the shares of Republic Bank, the methanol company and some portions of the media in Trinidad and Barbados. Now the question of parliamentary scrutiny of the regulatory authorities should be placed on the agenda in order to build a process for confidence and transparent governance of the financial sector. Confidence in the financial system will not be helped with the news that the energy sector will have zero growth in 2009 and the outlook looks bearish. Trinidad and Tobago's foreign reserves and relatively small external debt give it a much better buffer than the rest of the Caribbean countries, all of whom are caught in twin deficits in their fiscal and external accounts. With the world recession at the doorsteps of the regional economy, the expectations that Trinidad and Tobago will provide foreign exchange and petroleum to the region looks bleak. Caribbean countries must get ready for difficult times, just when President Obama is expected to visit in April."

Dan Erikson *is Senior Associate of US Policy at the Inter-American Dialogue.*

Winston Dookeran *is the leader of Trinidad and Tobago's Congress of the People party and a former Governor of the Central Bank of Trinidad and Tobago.*

vote "Yes" on the referendum. "We're seeing an unbalanced campaign without precedent," said Diaz. "Government ministries are openly involved." In the referendum, voters will decide whether to eliminate term limits for all elected officials, including the president. Voters rejected a similar ballot question in 2007 and Chavez has said that if voters defeat it again, his supporters can always try again.

Bachelet Begins Visit to Cuba, First By Chilean President Since 1972

Chilean President Michelle Bachelet began a three-day visit to Cuba on Tuesday, the Voice of America and wire services reported. Bachelet's visit marks the first time a Chilean president has visited the island since Salvador Allende's trip in 1972. During her time in Havana, Bachelet met Wednesday with Cuban

Bachelet

File Photo: Chilean Government.

President Raul Castro and may meet with ailing former President Fidel Castro. Bachelet is traveling to Cuba with several business leaders, government officials and cultural leaders. Among the members of her delegation are Chilean Foreign Minister Alejandro Foxley and Chile's agricultural and cultural ministers. Bachelet's political opponents have criticized the visit because the Chilean president is not scheduled to meet any Cuban dissidents.

Economic News

WTO Members Say Risks of Protectionism Increasing

World Trade Organization members said Monday in Geneva that the global financial crisis is increasing the risks of trade protectionism, but added that countries' measures to mitigate the effects of the crisis are not amounting yet to major steps toward protectionism, Reuters reported. The 153 members of the WTO said they would be increasingly vigilant about countries' actions to stimulate exports or block imports. "Whilst there was an appreciation that so far we don't appear to be deep in the mire, I think everybody expects things to get worse before they get better," said the director of the WTO's trade policies review division, Richard Eglin. Earlier, WTO members reviewed a report from WTO Director-General Pascal Lamy, who said countries have not heeded the G-20's plea to refrain from raising barriers to trade. "The report has a clear unequivocal pattern: one of emerging protectionism," said Brazil's WTO ambassador, Roberto Azevedo. He also pointed out the report covered only the fourth quarter of last year. The WTO will release an updated report on protectionism next month in time for members to discuss it at their April 2 meeting in London. Economists fear countries could worsen the global crisis by building trade barriers, which would make it more difficult for countries to export their goods. [Editor's note: see related Q&A in the February 12, 2009 issue of the *Advisor*.]

Mexican Labor Minister Plays Down Slim's Economic Views as Alarmist

Mexican Labor Minister Javier Lozano on Tuesday rebuked multi-billionaire Carlos Slim, saying the businessman's views on the economy are alarmist and may discourage investment, Bloomberg News reported. Slim on Monday told members of Mexico's Congress that he expects the country's gross domestic product to "plunge" and unemployment to soar to record levels as oil prices and exports fall. Lozano told Mexican television network Televisa that Slim's forecasts are the most "grave" he's seen. "All the headlines refer to this catastrophic scenario that the most powerful man and businessman we have is giving," Lozano said. Mexico's Finance Ministry expects the country's GDP to remain unchanged this year, a more optimistic view than that of the Central Bank.

POLITICAL & ECONOMIC BRIEFS

Mexico's Carstens Travels to Washington to Meet Geithner

Mexican Finance Secretary Agustin Carstens met with US Treasury Secretary Timothy Geithner during a visit to Washington on Monday to discuss the global economic crisis and ways to strengthen bilateral cooperation between the US and Mexico. Carstens said Mexico would keep a close eye on the actions being taken in Washington, according to a release on the Finance Secretariat's Web site. Carstens also held separate meetings with Obama's chief economic advisor, Lawrence Summers, in addition to IDB President Luis Alberto Moreno and World Bank President Robert Zoellick.

Authorities Detain 11 Suspects in Venezuela Synagogue Attack

Venezuelan authorities on Sunday arrested 11 suspects, including five policemen, one forensic detective and one police official in addition to one of the temple's own security guards, in connection with the January 30 attack on a synagogue in Caracas, reported the BBC. Elias Farache, president of the Venezuelan-Israelite Association, thanked the authorities for the "quick" arrests, the AP reported.

Colombian Agricultural Minister Resigns to Seek Presidency

Colombian Agricultural Minister Andres Arias has stepped down from his position to run for president, Bloomberg News reported Saturday. Arias, 35, referred to President Alvaro Uribe's fight against Colombia's FARC, saying, "I have the strength to fight in the battle against terrorism, but will leave the doors open to peace." Uribe appointed Andres Fernandez Acosta of Colombia's Institute of Agriculture to succeed Arias.

Featured Q&A

Continued from page 3

Honduras may well want to ponder the experience of Ecuador, where a one year-old Odebrecht hydroelectric project had to shut down because of shoddy workmanship. Ecuador kicked Odebrecht out of the country, canceling $800 million in infrastructure contracts—but is still stuck with the debt, which sparked a diplomatic spat with Brazil. Today, almost every big dam planned or built in Central America faces strong, organized local opposition, causing delays and further increasing costs for what are already expensive, risky, and capital-intensive projects. In most countries, there are better options, including energy efficiency, that are cheaper, lower-risk, and faster to come online. If countries do push ahead with dams, they should follow the World Commission on Dams guidelines and recommendations, which show what is really necessary to develop dams in a sustainable, economically beneficial, and equitable manner."

A **Guest Comment: José Antonio Muñoz:** "The Costa Rican experience has proven hydropower is the right choice for reducing dependence on fossil fuels. Costa Rica's electric power generation and distribution is monopolized by the Costa Rican Electricity Institute (ICE) and a few other public entities and cooperatives. ICE's framework statute expressly states that the electricity production must be based mainly on hydraulic means. This requirement has considerably reduced the dependence on fossil fuel in Costa Rica to the extent that 80 percent of the country's electricity is produced by hydropower and only less than 11 percent is produced by fossil fuel. Hydropower capacity is woefully underexploited in the rest of Central America, leading to a heavy dependence on fossil fuels. ICE has had success by financing through multilateral financial institutions for a very long time, and only recently has resorted to vehicles to tap into national savings, through placement of participation in special project trusts. The efficiencies of hydro and the Keynesian bent of the Arias administration of trying to make 2009 the year of new infrastructure projects is sure to keep major projects like Diquis hydropower in the pipeline. ICE's public nature and sovereign guarantee may allow it to opt for financing from a major regional development bank, making the current troubles of commercial international banks irrelevant to ICE's plight. We believe greater production capacity will lead to further integration for two reasons. First, ICE's General Law allows the institution to sell energy to other countries and create alliances. Second, every time ICE has historically had enough capacity to supply Costa Rica's demand, it tends to turn to neighboring countries to sell the remnants. Cheaper, cleaner hydro energy in an integrated regional grid is a strong incentive for national grids to integrate. Moreover, the SIEPAC project has advanced significantly and now has a proposed start date for operation of the first semester of 2010."

> "As for its new Odebrecht contracts, Honduras may well want to ponder the experience of Ecuador."
>
> — ***Aaron Goldzimer and Monti Aguirre***

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