

INTER-AMERICAN DIALOGUE'S

LATIN AMERICA ADVISOR ► ENERGY

BOARD OF ADVISORS

Jeffrey Davidow President, Institute of the Americas	James R. Jones Co-chair, Manatt Jones Global Strategies LLC
Ramon Espinasa Consultant, Inter-American Development Bank	Jorge Kamine Counsel, Skadden, Arps, Slate, Meagher & Flom LLP
Luis Giusti Senior Adviser, Center for Strategic & International Studies	Everett Santos President, DALEC LLC
David Goldwyn President, Goldwyn International Strategies LLC	R. Kirk Sherr CEO, Arrakis Geodynamics Ltd.
Jonathan C. Hamilton Partner, White & Case LLP	Garrett Soden CFO, PetroFalcon Corporation
Raul Herrera Partner, Corporate and Securities Practice Arnold & Porter LLP	Roger Stark Partner, Curtis, Mallet-Prevost, Colt & Mosle LLP
William Irwin Manager, International Government Affairs Chevron Corporation	Mark Thurber Partner, Andrews Kurth LLP
Paul Isbell Director, Energy Program Elcano Royal Institute	Roger Tissot Associate Consultant, Gas Energy Latin America
	Max Yzaguirre Chief Executive Officer, The Yzaguirre Group LLC

FEATURED Q&A

Is 'Microenergy' a Viable Strategy for Rural Electrification?

Q Last month, 300 participants primarily from Central America and Europe gathered in Nicaragua to share experiences in developing electrification projects in rural areas not connected to national grids. What is the potential for so-called "microenergy" projects—efforts to electrify rural areas through loans for small-scale hydro, wind and solar generators—to improve rural access to electricity in the hemisphere? What portion of resources should governments, investors and multilateral development banks devote to these types of projects?

A Board Comment: Mark Thurber: "Delivering electricity to rural areas in many Latin America markets has traditionally faced challenges due to high grid expansion costs for governments. Most utility-driven models rely on economic decisions made at the point of generation, transmission or distribution, as a result of which electricity may be directed to end users in industrial or tourism areas rather than more remote, low-population areas. Given projected capacity and demand requirements for most Latin American economies, as well as scarce government resources for funding rural electrification, there is, however, growing potential for microenergy projects that utilize renewable technologies if technical and financing barriers can be overcome. Renewable technology

microenergy projects must be sized correctly in order to be viable—e.g., small-scale hydro and biomass projects may be better suited to larger population clusters in rural areas, while solar technologies have been successfully implemented in areas where the population is more widely dispersed. Overcoming technical barriers associated with end users who buy and operate these technologies for off-grid use often requires investments in training and

Q&A continued on page 3



At Qatar Summit, Chavez Proposes Petro Currency

Venezuelan President Hugo Chavez (R) greets Lebanese President Michel Suleiman (L) at the Arab-South American Summit on Wednesday in Doha, Qatar. Chavez proposed an OPEC bank and a joint currency for oil-producing countries.

Photo: Venezuelan Communications Ministry.

Inside This Issue

FEATURED Q&A: Is 'Microenergy' a Viable Strategy for Rural Electrification?.....1	Argentina Extends Apache Corp.'s Neuquen Concessions Through 20272	Subscriber Notice: Is Hemispheric Energy Cooperation Viable?4
At Qatar Summit, Chavez Calls For OPEC Bank and New Currency.....2	Eletropaulo Reports 4.7 Percent Net Revenue Increase for Q4.....3	Lobao Says Brazil Will Boost Wind Power to Increase Energy Security.....4
Pemex Sells 10 Bn Pesos in Bonds to Finance Largest-Ever Capital Budget2	Ecuador to Begin Construction of Mega Hydro Plant in 10 Months3	Political and Economic News: US, Cuba, Mexico and More.....4-5

ENERGY SECTOR BRIEFS

Three Japanese Banks to Lend \$428 Mn for Petrobras Oil Project

Japan Bank for International Cooperation and two other Japanese banks on Tuesday agreed to provide a loan of up to \$428 million for a joint offshore project between Japanese companies and Brazilian state oil company **Petrobras**, reported Dow Jones. Japanese firms **Mitsui**, **Mitsubishi** and **Modec** all have minority stakes in the project. In related news, Petrobras on Friday reached an agreement with the country's main oil workers' union, FUP, ending a five-day strike. The agreement included increased profit sharing, overtime payments and additional worker safety provisions.

Fate of Brazil's Second-Largest Sugar Company Still Up in the Air

An exclusivity deal for French commodities trader **Louis Dreyfus** to acquire Brazil's second-largest sugar and ethanol company, **Santelisa Vale**, expired on Monday without a deal being reached, reported Brazilian newspaper *Gazeta Mercantil*. Louis Dreyfus was one of seven bidders for Santelisa, which is currently 3 billion reais in debt. Santelisa was slated to hold a meeting of its board of directors this week to present all of the offers, according to the report.

Venezuela Begins Requiring Sale of Natural Gas Equipped Vehicles

Venezuela on Wednesday began mandating that vehicle importers, manufacturers and assemblers begin selling vehicles that allow the use of both vehicular natural gas and gasoline in internal combustion engines, the government's energy ministry said in a statement. By next year, 40 percent of vehicles sold must have the new fuel systems. Half of those sold must have the systems by 2011.

Oil & Gas News**At Qatar Summit, Chavez Calls For OPEC Bank and New Currency**

Venezuelan President Hugo Chavez on Tuesday called upon OPEC countries to create their own common bank and a new currency that would end the "tyranny and dictatorship of the dollar," reported state-news agency ABN. Speaking at an Arab-

Chavez proposed a common monetary unit for oil-producing countries called the "petro."

South American summit in Doha, Qatar, Chavez said an "OPEC bank"—an idea he originally proposed in 2000—would provide economic security by allowing oil-producing countries to avoid placing money in northern banks. "If we would have created [the bank] when I first proposed it, now we would have a great weapon against the current crisis," he said. Chavez reiterated his support for a new international reserve currency backed by China and supported by Russia, but said he was also proposing a common monetary unit for oil-producing countries called the "petro." "We need to speed up the shaping of a multipolar world," Chavez said on the eve of the summit. He added that the one-day Arab-South American summit provided a good moment to start building that new structure and he called for greater energy and food-producing alliances between the two regions. Chavez said the price of oil had stabilized since the "catastrophic scenario" forecast at the end of 2008, and predicted a steady climb until it reaches its fair price around \$80 a barrel.

Pemex Sells 10 Bn Pesos in Bonds to Finance Largest-Ever Capital Budget

Mexico's state oil monopoly **Pemex** on Wednesday sold 10 billion pesos (\$US 719.4 million) worth of bonds, Bloomberg News reported. The sale of the fixed-rate and floating-rate bonds will

finance Pemex's largest-ever capital budget. The company sold 6 billion pesos in three-year bonds, which yield 1 percent above the 28-day interbank equilibrium interest rate (TIIE). Pemex also sold 4 billion pesos of seven-year bonds yielding 9.15 percent, Mexico's stock exchange said in a statement. In February, Pemex registered to sell 70 billion pesos worth of bonds locally over the next five years. The company this year plans to issue local and international

bonds and also secure commercial bank loans to raise \$10.5 billion in order to finance its \$19.5 billion capital budget. In related news, Pemex on Monday awarded a \$646 million contract to a local unit of **Weatherford International** to drill 500 wells at the Chicontepec oil field, according to a Pemex press release. Switzerland-based Weatherford beat out six other bidders—including **Constructora y Perforadora Latina**, **Halliburton** and **Baker Hughes**—for the contract, which runs through July 2012. Pemex said it hopes the Chicontepec basin will produce an average of 600,000 to 700,000 barrels of oil per day by 2017.

Argentina Extends Apache Corp.'s Neuquen Concessions Through 2027

Houston-based **Apache Corp.** announced Monday that the Argentine province of Neuquen has agreed to extend eight federal oil and gas concessions for 10 additional years. Apache will pay a bonus of approximately \$23 million in exchange for production that would have reverted to the province beginning in six years, as well as the right to explore for 10 additional years, the company said in a press release. The deal also increases the provincial royalty to 15 percent from 12 percent, and includes plans for Apache to spend up to \$320 million in a future work program. Since acquiring the blocks in 2006, Apache says it has increased gas produc-

tion 25 percent to 106 million cubic feet per day and increased oil production 9 percent to 5,500 barrels per day. The province provides about half of Apache's total output in Argentina. The concessions, which were scheduled to expire between 2015 and 2017, encompass approximately 590,000 acres, including exploratory areas totaling 514,000 acres. Rob Johnston, region vice president at Apache, said in the release that the company plans to pursue similar extensions for concessions on the islands of Tierra del Fuego. In related news, Apache announced Thursday that Johnston will be relocating to Tulsa, Oklahoma, and that Jon Graham, the company's vice president for reservoir engineering in Canada, will move to Buenos Aires to become Apache's region vice president. The two executives were among seven managers to be reassigned in a leadership shake-up at the company this week.

Power Sector News

Eletropaulo Reports 4.7 Percent Net Revenue Increase for Q4

Eletropaulo Metropolitana Eletricidade de Sao Paulo last Thursday reported a net revenue increase of 7.53 billion reais for the fourth quarter of 2008, a 4.7 percent increase from the same quarter a year earlier, the company said in a press release. Eletropaulo, Latin America's largest electricity distribution company, said the consumption of its captive customers in Eletropaulo's concession area was 33,859.8 GWh, amounting to a growth of 3.9 percent year on year. For the quarter, Eletropaulo's EBITDA was 1.66 billion reais and net income was 1.03 billion reais, an 8.3 percent and a 44.1 percent increase respectively from the fourth quarter of 2007. The company said the increases were due to market growth and an 8.01 percent tariff readjustment that the Brazilian Electricity Regulatory Agency approved in July. Also, favorable decisions in lawsuits disputing increases in contributions to social investment fund Finsocial and the Cofins social security tax helped the company's net income last year.

Featured Q&A

Continued from page 1

small business enterprise. These functions can be accomplished in different ways by local governments (by adopting regulatory frameworks for these industries and promoting investment in renewables technologies) and by NGOs that often have on-the-ground resources and training experience. For example, in Honduras and other countries, the experience of Adesol in teaching rural populations to operate and pay for their own solar panel investments in rural households led to growth of small businesses selling these systems. Funds for technical assistance grants are also available through various multilateral agencies for qualifying small-scale renewables projects. Well-structured microenergy projects that are technically viable may still face significant barriers to financing, particularly in the current economic climate. Equity capital (a prerequisite for debt financing) is much in demand. Financing structures that 'cluster' smaller renewables projects to achieve economies of scale offer prospects for financing, but to be successful they will likely require commitment from multilateral agencies with specific goals for the renewables markets in participation with the private sector."

Ecuador to Begin Construction of Mega Hydro Plant in 10 Months

Construction of Ecuador's largest hydroelectric power plant could begin in as little as 10 months, according to the country's minister of strategic areas, Galo Borja, Dow Jones reported Tuesday. Construction of the Coca Codo Sinclair plant could start after talks are concluded with the project's Ecuadorean-Chinese partnership, **Sinohydro-Andes**. China's **Sinohydro** owns an 89 percent stake in the partnership and Ecuador's **Coandes** has an 8 percent stake., while consulting companies **Yellow River** and **Geodato** own the remaining 3 percent. The consortium is expecting to finance as much as 85 percent of the project from the Export-Import Bank of China. The project's referral cost is \$2 billion, but the govern-

A Guest Comment: Fernando Alvarado: "Based on our experience financing renewable energy SMEs since the early 1990s, we tend to believe that there's good potential for microenergy and even small- and medium-size enterprise projects through renewable energy (RE) technologies. E+Co and more recently E+Co Capital, a subsidiary managing the Central American Renewable Energy and Cleaner Production (Carec) venture capital fund, have financed SMEs that develop solar-PV for rural electrification, small-scale hydro, biomass, small-scale wind, energy efficiency and biogas projects. SME enterprises have been supported through advisory services, seed and growth capital financing, including pre-investment loans, construction loans and equity and quasi-capital (mezzanine) investments. However, to precisely define potential and support it with numbers, at least a brief market study is needed. Each country has different RE resources and different rural electrification needs. In addition, each country has different plans for providing access to electricity (including grid extensions that would compete with off-grid microenergy projects).

Continued on page 6

ment is seeking to close the contract for \$1.8 billion. While four companies registered with the Ecuadorean government to bid on the project, only two bidders, **Sinohydro-Andes** and a consortium headed by China's **Gezhoubu** turned in offers. Construction of the 1,500 MW plant is expected to take five years. The plant's owner would be **Coca Codo Sinclair SA**, which is jointly owned by Ecuador's state power company **Termopichincha**, with a 70 percent stake, and Argentina's state energy company **Enarsa**, which owns 30 percent.



Borja

Photo: Ecuadorean Government.

Lobao Says Brazil Will Boost Wind Power to Increase Energy Security

Brazilian Mining and Energy Minister Edison Lobao traveled to Spain this week to meet with wind energy executives a day after Brazil announced it will hold its first licensing round exclusively for wind energy in November. In a meeting on Wednesday with Miguel Sebastian, Spain's minister for industry, tourism and trade, Lobao said even though Brazil already has a portfolio based on other renewable energy sources, he considered wind energy important for ensuring the country's energy security, according to a release on the ministry's Web site. "With our current energy resources, with one of the cleanest energy matrices in the world, theoretically we don't need wind energy right now," Lobao said. "But we're plan-



Lobao

File Photo: Itaipu Binacional.

ning for the future." Sebastian proposed "an effective partnership" between Spain and Brazil that would exchange Spanish expertise in wind energy for Brazilian knowledge of biofuels. Brazil currently has 400 MW of wind power, but the energy ministry said the country's potential is close to 140,000 MW. The window to submit bids for the wind licensing round closes on May 15. In related news, Lobao on Monday signed a memorandum of understanding with Argentine planning minister Julio de Vido for Brazil to send up to 2,100 MW of surplus electricity to Argentina during the southern hemisphere winter, according to a ministry statement. From May to August, Brazil will send energy originating in hydroelectric facilities to Argentina, which its neighbor will repay in kind during the months of September, October and November. In addition, Argentina will

purchase thermoelectric energy from Brazil between April and December.

Political News

US Lawmakers Introduce Measure to End Cuba Travel Restriction

US lawmakers on Tuesday introduced leg-

islation to put an end to the ban on almost all US travel to Cuba. "We allow Americans to travel to communist China and we allow Americans to travel to communist Vietnam, because we believe engagement with trade and travel is the best way to promote democracy and open up those countries," said Sen. Byron Dorgan (D-N.D.), the legislation's chief sponsor. "It's long past the time to change

Subscriber Notice

Inter-American Dialogue Event on

Is Hemispheric Energy Cooperation Viable?

with featured speakers

Ramon Espinasa,

Senior Oil and Gas Analyst, Inter-American Development Bank,
Former Chief Economist, PDVSA
and Advisory Board Member, *Energy Advisor*

Paul Isbell,

Director, Energy Program,
Elcano Royal Institute for International and Strategic Studies,
Visiting Senior Fellow, Inter-American Dialogue
and Advisory Board Member, *Energy Advisor*

Sidney Weintraub,

William E. Simon Chair in Political Economy, CSIS
and Editor, *Energy Cooperation in the Western Hemisphere*

Friday, April 10, 2009

8:30 – 10:00 a.m.

Inter-American Dialogue
1211 Connecticut Ave., NW, Suite 510
Washington, DC

RSVP to meetings@thediologue.org

Please include your name and affiliation.

this ill-advised policy." The legislation would also ease restrictions on US agricultural exports to Cuba. Critics of the bill say the travel ban should remain in place, arguing that allowing American tourists to visit the island would only enrich Cuba's communist



Dorgan

Photo: Office of Sen. Byron Dorgan.

regime, *The Miami Herald* reported Tuesday. "We should be siding with the oppressed, not the oppressor," said Sen. Mel Martinez (R-Fla.), an opponent of the legislation. Sen. Richard Lugar (R-Ind.), ranking member of the Senate Committee on Foreign Relations and a supporter of Dorgan's bill, sent a letter to President Barack Obama this week asking him to use the upcoming Summit of the Americas as an opportunity to move ahead with a change in Cuba policy. According to a copy of the letter posted on his Web site, Lugar suggested appointing a special envoy for Cuba and lifting US opposition to a discussion of Cuba's inclusion in the Organization of American States, although he warned it was "too early to allow Cuba back into the OAS outright." Lugar cited statements by Vice President Joseph Biden, who during a visit to Chile last weekend said a "transition" is needed in the US' Cuba policy. On Saturday, when asked by reporters if the US plans to end the embargo, Biden replied "no." Biden added that he and Obama "think that Cuban people should determine their own fate and they should be able to live in freedom." Biden said the US is committed to Latin America, adding that his trip to Chile was "just the beginning of the renewal of a partnership with the Americas."

Economic News

Mexico Asks International Monetary Fund for \$47 Billion Credit Line

Mexico on Wednesday asked the International Monetary Fund for a \$47 billion credit line and also said it will use a

\$30 billion currency swap from the US Federal Reserve in order to aid the peso, Bloomberg News reported. The IMF credit line is the largest assistance Mexico has sought from the international lender since Mexico's 1994 economic crisis. Mexico considers the credit line "preventative" and has not made any decision about whether to use it, said Mexico's currency commission, which is made up of Central Bank and finance ministry officials. "Given the preventative nature of this instrument, the financial authorities don't have the intention to utilize these resources," the commission said. "Nevertheless, the financing under this line can be used at the discretion of the Mexican authorities." The IMF credit line will help Mexico "bullet proof" its finances and will likely lead to interest rate cuts, Mexican Finance Minister Agustín Carstens said in London. Mexico also will tap a \$30 billion currency swap line with the Federal Reserve and will auction dollars in the next several days with both

Carstens said the IMF credit line will help Mexico "bullet proof" its finances.

development and commercial banks, said Central Bank Governor Guillermo Ortiz. He said banks would then be able to make financing in dollars available to companies in Mexico.

IDB Considers Capital Increase of Up to \$180 Billion

The directors of the Inter-American Development Bank are considering whether to boost the multilateral lender's capital base by up to \$180 billion, reported Dow Jones on Sunday. During the bank's annual meeting in Medellín, former Peruvian Prime Minister Pedro Pablo Kuczynski announced that a special commission had recommended the increase, which would be the first in 15 years. US Treasury Secretary Timothy Geithner, who addressed the bank's governors Sunday, said the US would support increased IDB lending.

POLITICAL & ECONOMIC BRIEFS

Former Argentine President Raul Alfonsín Dies at 82

Former Argentine President Raul Alfonsín, 82, who led the country's return to democracy after military dictatorship, died of lung cancer Tuesday at his home in Buenos Aires, reported Argentine daily *La Nación*. Alfonsín was an emeritus member of the Inter-American Dialogue. As president from 1983 to 1989, he ordered the trial of Argentina's former military leaders and created a national commission to investigate human rights violations during the Dirty War. He was later forced to cede the presidency early to Carlos Menem in the midst of hyperinflation. President Cristina Fernandez declared three days of mourning to honor Alfonsín.

Biden Asks Central America for Patience on Deportations

US Vice President Joseph Biden told Central American leaders Monday that slowing the rate of deportations from the US would take time amidst the current economic crisis, reported the Associated Press. Biden, who met with Central American presidents in Costa Rica, asked the leaders for patience regarding the deportation issue. In 2008, a record 80,000 Central Americans were deported from the US.

Chavez Doubts Obama Can Improve Relations With Iran

Venezuelan President Hugo Chavez on Wednesday arrived in Iran for a state visit, where he expressed doubts the US would be able to improve its relations with Iran, reported the Associated Press. Chavez and Iranian President Mahmoud Ahmadinejad on Thursday are expected to inaugurate a joint development bank, with each country contributing \$100 million.

Featured Q&A*Continued from page 3*

Moreover, not only are loans often needed; equity is also very necessary. SMEs and to a larger extent microenergy projects tend to be family-owned and therefore, often lack an equity base in order to leverage debt. As far as what resources should be devoted to these projects, there are differences in the nature and purposes of funds from governments, private investors and development banks. Governmental funds could support incubation and early stages of renewable energy projects. Perhaps even some seed capital is needed to properly capitalize those projects so that an effective leverage of debt from either local, regional, commercial and developmental banks can happen. Private investors are only going to invest in viable and sustainable projects, whether they are microenergy or larger. In general, the impression is that not enough funding is flowing to support microenergy projects, but supporting this with objective data is not so easy to do. I discourage initiatives with public funds that donate systems (*i.e.* solar-PV home systems) as those types of 'pilot-projects' often lack sustainability and a business-like and sustainable approach. An alternative approach to government participation to support SMEs could be a guarantee facility that could partly cover the investment risk assumed by banks and investors."

A **Guest Comment: Claire Casey:** "The traditional model of large-scale, centralized power generation and distribution has failed to reach nearly 40 million people living in rural areas in Latin America and the Caribbean. The emerging microenergy model that makes use of small-scale renewable power generation technologies and new financial instruments offers rural consumers a chance to leapfrog past the conventional grid extension paradigm and access improvements in education, public health, small business development and communication. Microenergy initiatives have found success by utilizing end-user financing schemes, allowing users to pay for systems through affordable microfinance

loans or leases. These types of programs offer a more sustainable economic basis from which to scale, increasing the attractiveness of these types of investments for donors, multilateral financial institutions and private sector investors. Programs that engage local end-users and businesses also offer an opportunity to develop ongoing technical support

“Dedicating \$1.5 billion over the next 5 years could halve the number of people in the region living without electricity.”

— *Claire Casey*

and maintenance relationships, increasing long-term effectiveness. The monetization of emission reductions from the use of renewables (in place of traditional biomass or fossil fuels) can also enhance and diversify microenergy enterprise revenues. The primary hurdle to the widespread deployment of microenergy platforms is a lack of capacity for local entrepreneurs and utilities to develop, finance, and manage these businesses. Governments, development banks and private investors can address these challenges by providing capacity building and financing services side-by-side, particularly through the support of intermediary financiers with on-the-ground resources, local understanding and energy expertise necessary for the identification and development of viable microenergy investments. Dedicating \$1.5 billion over the next five years could halve the number of people in the region living without electricity."

Mark Thurber *is a member of the Energy Advisor board and a partner at Andrews Kurth LLP.*

Fernando Alvarado *is general manager of E+Co Capital in Costa Rica.*

Claire Casey *is senior vice president at Garten Rothkopf.*

Latin America Energy Advisor

is published weekly by the Inter-American Dialogue, Copyright © 2009

Erik Brand,

General Manager, Publishing
ebrand@thedialogue.org

Gene Kuleta,
Editor

gkuleta@thedialogue.org

Matthew Schewel,

Reporter, Assistant Editor
mschewel@thedialogue.org

Inter-American Dialogue:

Peter Hakim,
President

Michael Shifter,
Vice President, Policy

Joan Caivano,
Director, Special Projects

Dan Erikson,
Senior Associate, US Policy

Paul Isbell,
Visiting Senior Fellow

Claudio Loser,
Visiting Senior Fellow

Manuel Orozco,
Executive Director, Remittances and Rural Development Project

Tamara Ortega Goodspeed,
Senior Associate, Education

Marifeli Perez-Stable,
Vice President, Democratic Governance

Jeffrey M. Puryear,
Vice President, Social Policy

Viron Vaky,
Senior Fellow

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

The opinions expressed by the members of the Board of Advisors and by guest commentators do not necessarily represent those of the publisher. The analysis is the sole view of each commentator and does not necessarily represent the views of their respective employers or firms. The information in this report has been obtained from reliable sources, but neither its accuracy and completeness, nor the opinions based thereon, are guaranteed. If you have any questions relating to the contents of this publication, contact the editorial offices of the Inter-American Dialogue. Contents of this report may not be reproduced, stored in a retrieval system, or transmitted without prior written permission from the publisher.