

# PRIVATE PARTICIPATION IN INFRASTRUCTURE DATABASE

PPI data update note 82

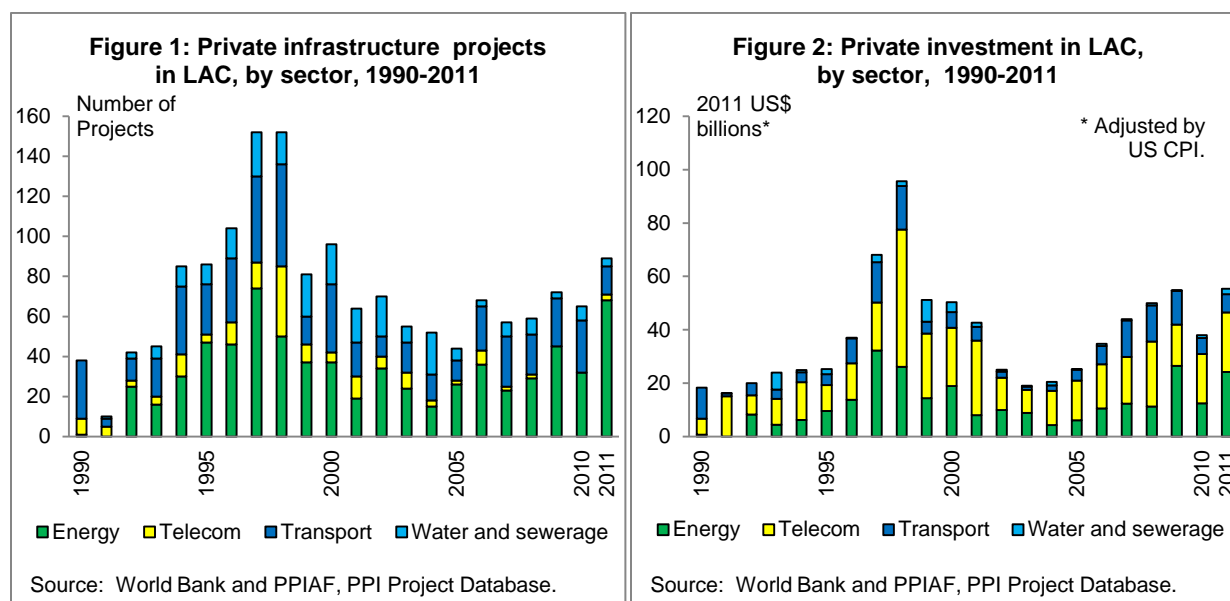
September 2012

## Private investment in Latin American Infrastructure grows in the energy sector and in Brazil

### Overview

In 2011, 89 new infrastructure projects reached financial or contractual closure in 12 low and middle income countries in Latin America and the Caribbean (LAC) region: Argentina (3), Brazil (53), Chile (5), Colombia (1), Costa Rica (2), Dominican Republic (2), Honduras (2), Mexico (9), Nicaragua (1), Panama (2), Peru (8), St. Kitts and Nevis (1).<sup>1</sup> Total investment commitments (hereafter, *investment*) in all infrastructure projects reached US\$55.4 billion, of which US\$26 billion were investments in new projects and US\$29.4 billion were investments in existing projects (Figure 2). Compared with 2010 investment levels, total investment increased by 46%, while the number of projects increased by 37% (Figure 1).

### Sector focus



A total of 68 **energy** projects closed in LAC in 2011, a 113% increase compared to 2010 activity levels. The amount of investment in energy projects demonstrated a similarly upward trend, increasing by 94% to total \$24.2 billion. The higher investment level was driven by both the increase in the number of projects and the expansion of existing projects which reached US\$6.1 billion. Approximately 2/3 (67%) of these were expansions of *electricity distribution* networks or vertically integrated utilities. All 68 projects were in the

This note was written by Alexander Nicholas Jett, task team leader, PPI Database, Finance Economics and Urban Development Department, Sustainable Development Network, World Bank

<sup>1</sup> Data on transport projects with private participation include primarily medium-size and large projects in low and middle income countries as reported by the media and other public sources. Small-scale projects are generally not included because of lack of public information. More information is available at <http://ppi.worldbank.org/>.

electricity subsector, with no new natural gas projects. In *electricity generation*, 51 out of 59 new projects used **renewable** technologies. In *electricity transmission*, Brazil had eight high-voltage lines that reached financial closure. The transmission projects in Brazil benefitted from reduced taxes under the incentive program Regime Especial de Incentivos para o Desenvolvimento da Infra-Estrutura (REIDI). In Peru, Interconexión Eléctrica S.A.(Colombia) closed a \$230 million financing for the 517km, 500kv Zapallal-Trujillo Transmission Line.<sup>2</sup>

In 2011, 14 **transport** projects reached financial closure in LAC, a 46% decrease compared with 2010 levels. However, total investment in new and existing projects increased 16% to US\$6.8 billion, indicating a larger average project size than in 2010. In the *road* sector, six projects reached financial closure in Argentina (1), Brazil (2), Chile (1), and Mexico (2). The three largest projects were in Brazil and Mexico. Brazil signed the \$2.2 billion, 103.8km Sao Paulo Rodoanel Sul e Leste (SPMar) highway concession which consisted of constructing the western access and rehabilitating the southern accesses to the city of Sao Paulo. In Mexico, IDEAL (Mexico) and OHL (Spain) closed financing on two urban elevated highways in Mexico City, \$524 million Autovia Urbana Sur and \$801 million Autovia Urbana Norte.

Four seaport terminals reached financial closure in Brazil (2), Peru and Mexico with investments totaling \$1.9 billion. Three of the seaports were greenfield terminals and one was a brownfield expansion; there were two multi-purpose terminals, a dry bulk terminal and a container terminal. Two airport concessions were signed in Chile after the previous concession contracts had expired for El Loa de Calama and Cerro Moreno Airport. In Peru, Aeropuertos del Sur - a package of six regional airports in the south of the country - was signed with sponsors Corporacion America (CASA) (50% / Argentina), Andino Investment Holding (50% / Peru). Peru also had the only railway (metro) project in LAC, the Lima Electric Train Line 1.

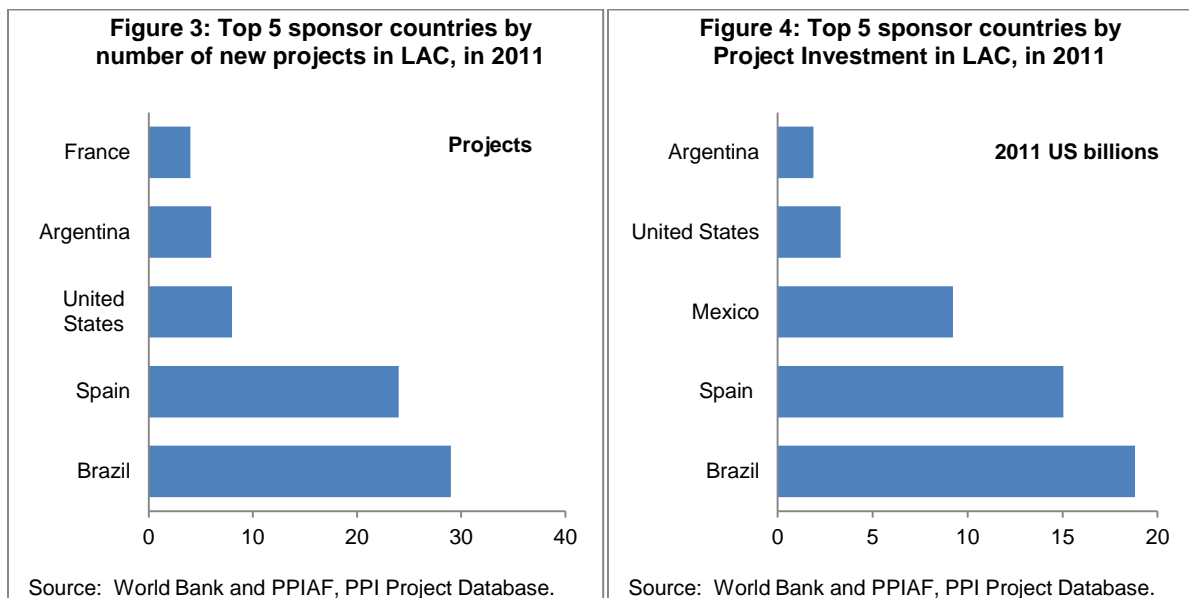
Four **water and sewerage** projects reached financial closure in Brazil (2), Mexico and Peru with investments of \$491 million. This represents a decrease of 43% in number of projects. Despite this decrease in the number of projects, total investment in the sector increased by 80% from 2010 and amounted to \$2 billion. This was due to additional share sales in three Chilean utilities totaling \$1.5 billion, the largest of which was the second phase divestiture of the Aguas Andinas (\$986 million), where the Chilean government sold 30% of its shares to institutional investors (private pension fund managers). In terms of new projects, the states of Rio Grande do Sul and Sao Paulo signed two concession contracts with Odebrecht (Brazil) to upgrade their water and sewerage utilities. In Mexico, sponsors ICA (Mexico) and FCC (Spain) closed financing of the the El Realito aqueduct with a \$214.8 million syndicated loan arranged by Banco Santander. The project was structured as a 25 year BOT with a capital grant from infrastructure fund FONADIN. In February 2011, ACS (Spain) closed a soles/942 million (\$340 million) local currency bond financing for the Taboada Wastewater Treatment Plant in Peru.

In 2011, three new **telecom** projects were implemented after a year without new projects in 2010. This was the highest number of projects since 2006 in the saturated LAC telecom market. Brazil signed a \$844.2 million contract with Nextel after a competitive bid involving eight bidders.. Nextel, a subsidiary of NII Holdings Inc. (Sprint) had been operating in Brazil since 1997, but the company was only authorized to provide radio based services to corporate clients. In Costa Rica, large operators Telefonica SA (Spain) and America Movil (Mexico) signed two 15-year mobile spectrum concessions with telecom regulator Sutel.

---

<sup>2</sup> Countries listed in parentheses after a sponsor name indicate the sponsor's country of origin

## Sponsor focus



In terms of new projects, **Brazilian** sponsors were the most active in 2011 participating in 29 projects in energy (25), transport (3), and water (2), all in Brazil (Figure 3). Brazil has implemented policies encouraging domestic participation in Brazil's renewable energy sector and local investors have invested in 16 new renewable projects. Top sponsors included Odebrecht SA and Jackson Empreendimentos Ltda with three projects each, but there was a great variety of sponsors for the remaining projects. Sponsors from **Spain** were the next most active with 24 projects, mostly in the energy sector (18 projects) and located in Brazil and Mexico. Active Spanish sponsors included Acciona, Abengoa and Grupo T Solar. After Brazil and Spain, the remaining players had a much lower share of total projects. The **United States** was active in eight new projects in Brazil, Mexico, Peru and St. Kitts and Nevis with sponsors Assured Guaranty and Contour Global playing the most active roles. **Argentina** followed with six new projects split evenly domestically and abroad, with Energias Sustenables S.A. as the only sponsor with two projects. **France** sponsored four projects in Brazil, Chile and Panama through Suez, Tereos and Electricité de France.

In 2011, **Brazilian** investors topped the list with project investment totaling US\$18.8 billion. This includes expansions of existing projects which accounted for \$6.7 billion, mostly in telecom projects (Figure 4). **Spain** followed with overall investments of \$15.1 billion, half of which were from additional investment by Telefonica SA in telecom projects. Gas Natural and Iberdrola were active in expansions of their gas and power networks. Sponsors from **Mexico** ranked third with \$9.2 billion, mostly due to telecom giant America Movil SA, with ICA SA de CV following in the transport sector. Mexico was followed by the **United States** with \$3.3 billion and **Argentina** with \$1.9 billion.

## **Featured project**

### **Taboada Wastewater Treatment Plant (Peru) | Wastewater Treatment Plant | Greenfield BOT | PPP**

The Taboada Wastewater Treatment Plant was a 25-year BOT to provide wastewater services under an off-take agreement with Sedapal, the state-owned utility serving Lima and Callao provinces. The project was to be implemented in three phases: an initial capacity of 7m<sup>3</sup> per second, rising to 10.5m<sup>3</sup> per second, and finally 14m<sup>3</sup>. The final phase was the equivalent of 1,210 m<sup>3</sup> per day. It was to treat the wastewater produced by 4 million people from 27 districts, or roughly 56% of the population of Lima and Callao provinces and increase the percentage of treated water from 9% to 72% in those provinces. The project, together with the Huasacocha Wastewater Treatment Plant, was to treat 100% of the wastewater in the provinces.

The project was awarded to ACS [Spain] in February 2009 through a competitive tender launched by Proinversion, Peru's private investment promotion agency. There were three final bidders. Bidding was based on a formula that included several variables, principally: number of months to complete the project, the amount of subsidy for capital expenditure (RPI) and operation and maintenance of the plant (RPMO). ACS was selected after submitting the lowest rate for wastewater treatment at 0.2277 soles/m<sup>3</sup> of treated water, equivalent to 33% less than the amount established in the bidding rules. ACS formed Planta de Tratamiento de Aguas Residuales Taboada SA as the project company.

### **Financial Information and Government Support**

The total project cost was US \$149.5 million. In February 2011, ACS closed a soles/942 million (\$340 million) local currency bond financing for the project. The issuance used RPICAOs, certificates with payment obligations for completed construction milestones up to 2013, as collateral for the issuance. The certificates were ultimately backed by Sedapal, the state-owned utility. The bonds stretched the ACS payment obligations by maturing in 2025. The financing was led by BNP Paribas, and received a AAA local and BBB global rating from Fitch. Bonds had a coupon rate of 5.965%, and could be adjusted for inflation.

**Table 1 Projects with private participation reaching financial or contractual closure in LAC in 2011**

Energy						
Country	Project Name	Type of PPI	Subtype of PPI	Segment	Total Investment (US\$ millions)	Sponsors
Argentina	Renova Energia Wind Farms	Greenfield project	Build, own, and operate	Electricity generation	695.6	Renova Energia S.A. (100% / Brazil)
Argentina	Queiroz Galvao HPPs	Greenfield project	Build, operate, and transfer	Electricity generation	81.8	Construtora Queiroz Galvao (100% / Brazil)
Brazil	Fairways St. Kitts Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	16.5	Fairways Equities LLC ( United States), MAS St. Kitts Wind (St. Kitts and Nevis), North Star Bellevue (St. Lucia)
Brazil	Zapallal-Trujillo Transmission Line	Greenfield project	Build, operate, and transfer	Electricity transmission	230.0	Interconexion Electrica SA (ISA) (60% / Colombia), Empresa de Energia de Bogota S.A. ESP (40% / Colombia)
Brazil	Santo Domingo de los Olleros TPP (Phase I)	Greenfield project	Build, operate, and transfer	Electricity generation	128.4	Larrain Vial (50% / Chile), SCL Energia (50% / Chile)
Brazil	Grupo T Reparticion Solar Plant	Greenfield project	Build, own, and operate	Electricity generation	87.3	Grupo T Solar (Spain), Solarpack (Spain), Assured Guaranty ( United States)
Brazil	Grupo T Arequipa Solar	Greenfield project	Build, own, and	Electricity	87.3	Grupo T Solar (Spain), Solarpack (Spain), Assured Guaranty ( United States)

	Plant		operate	generation		States)
Brazil	HSL Fonseca SHPP	Greenfield project	Build, operate, and transfer	Electricity generation	10.5	Grupo Cuerva (Spain)
Brazil	GDF Dos Mares HPP	Greenfield project	Build, own, and operate	Electricity generation	450.0	SUEZ (100% / France)
Brazil	La Fe San Martin Wind	Greenfield project	Build, own, and operate	Electricity generation	110.0	Construcciones Lacayo Fiallos S.A. ( Nicaragua), M & Block, S.A. ( Panama)
Brazil	Renovalia Piedra Larga I Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	187.0	Renovalia Energy (100% / Spain)
Brazil	Oaxaca IV Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	200.0	Acciona (100% / Spain)
Brazil	Oaxaca III Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	200.0	Acciona (100% / Spain)
Brazil	Oaxaca II Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	200.0	Acciona (100% / Spain)
Brazil	Norte II Combined Cycle Power Plant	Greenfield project	Build, operate, and transfer	Electricity generation	420.0	Korea Electric Power Company (KEPCO) (56% / Korea, Rep.), Samsung Corporation (34% / Korea, Rep.)
Brazil	Sociedad Eléctrica Mesoamericana Mezapa SHPP	Greenfield project	Build, own, and operate	Electricity generation	18.5	Sociedad Eléctrica Mesoamericana, (SEMSA) S.A (100% / Honduras)

Brazil	CHER Humuya HPP	Greenfield project	Build, operate, and transfer	Electricity generation	126.0	Adolfo Larach Foster (100% / Honduras)
Brazil	Inveravante Bani Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	76.0	Inveravante Inversiones Universales, S.L (Spain)
Brazil	Gamesa PECASA Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	126.7	Gamesa (57% / Spain), Grupo BHD (29% / Dominican Republic)
Brazil	Emgesa El Quimbo HPP	Greenfield project	Build, operate, and transfer	Electricity generation	684.0	Emgasud S.A. (Argentina)
Brazil	Vestas Talinay Oriente Wind Farm	Greenfield project	Build, own, and operate	Electricity generation	100.0	Vestas Wind Systems (100% / ..)
Brazil	GDF Laja SHPP	Greenfield project	Build, operate, and transfer	Electricity generation	112.0	International Power (30% / United Kingdom), SUEZ (70% / France)
Brazil	Wobben Mangue Seco III & V Wind Farms	Greenfield project	Build, own, and operate	Electricity generation	106.0	Enercon GmbH (49% / Germany)
Brazil	Umoe Paranapanema Cogeneration Plant	Greenfield project	Build, own, and operate	Electricity generation	62.8	Umoe AS (100% / Norway)
Brazil	Transenergia Sao Paulo	Greenfield project	Build, operate, and transfer	Electricity transmission	46.0	J. Malucelli Construtora de Obras LTDA (51% / Brazil)
Brazil	Teles Pires HPP	Greenfield project	Build, operate, and transfer	Electricity generation	1,760.0	Iberdrola SA (51% / Spain), Odebrecht SA (1% / Brazil)
Brazil	Suzlon Eolica Faisa Wind Farms	Greenfield project	Build, own, and operate	Electricity generation	277.8	Suzlon Group (100% / India)

Brazil	Serveng Civilsan Rio Grande do Norte Wind Farms	Greenfield project	Build, own, and operate	Electricity generation	444.0	Serveng Civilsan S.A. (100% / Brazil)
Brazil	Serra do Japi Transmission Line	Greenfield project	Build, operate, and transfer	Electricity transmission	90.0	Interconexion Electrica SA (ISA) (100% / Colombia)
Brazil	Sao Jose da Estiva Biomass Plant	Greenfield project	Build, own, and operate	Electricity generation	64.0	Grupo W.J. de Biasi (100% / Brazil)
Brazil	Sao Jose Colina Biomass Plant	Greenfield project	Build, own, and operate	Electricity generation	125.0	Tereos (69% / France)
Brazil	Santander Ceara & Rio Grande do Norte Wind Farms	Greenfield project	Build, own, and operate	Electricity generation	213.0	Santander Bank (100% / Spain)
Brazil	Renuka Biopav II & Chapadao Biomass Plants	Greenfield project	Build, own, and operate	Electricity generation	236.0	Grupo Equipav (50% / Brazil), Renuka Sugars (41% / India)

Transport						
Country	Project Name	Type of PPI	Subtype of PPI	Subsector	Total Investment (US\$ millions)	Sponsors
Argentina	Santa Fe-Rosario Highway	Concession	Rehabilitate, operate, and transfer	Roads	6.0	Arssa (100% / Argentina)



Brazil	Sao Paulo Rodoanel Sul e Leste	Concession	Build, rehabilitate, operate, and transfer	Roads	2,221.5	Grupo Bertin (100% / Brazil)
Brazil	MT 130 Highway	Concession	Build, rehabilitate, operate, and transfer	Roads	73.5	Construtora Locatelli (50% / Brazil), Argasil Armazens Gerais e Silos Itaquere (50% / Brazil)
Brazil	Embraport	Greenfield project	Build, own, and operate	Seaports	800.0	Odebrecht SA (26% / Brazil), Dubai Holding (26% / United Arab Emirates), Coimex (16% / Brazil)
Brazil	Brasil Terminal Portuario	Greenfield project	Build, lease, and transfer	Seaports	845.0	AP Moller - Maersk Group (50% / Denmark), Terminal Investments Limited (50% / Netherlands)
Chile	Iquique Highway Access Project	Concession	Build, rehabilitate, operate, and transfer	Roads	220.0	Sacyr Vallehermoso SA (SyV) (100% / Spain)
Chile	El Loa de Calama Airport II	Concession	Build, rehabilitate, operate, and transfer	Airports	34.0	Agunsa (100% / Chile)
Chile	Cerro Moreno Airport II	Concession	Build, rehabilitate, operate, and transfer	Airports	28.0	Gestion e Ingenieria IDC ( Chile), Unique (Flughafen Zurich AG) (15% / Switzerland)
Mexico	Guaymas Fertilizer Terminal	Greenfield project	Build, operate, and transfer	Seaports	4.1	Dune Company of Yuma, LLC (100% / United States)
Mexico	Autovia Urbana Sur	Greenfield project	Build, operate, and transfer	Roads	524.0	ICA SA de CV (30% / Mexico), Impulsora Del Desarrollo Y El Empleo En América Latina SA de CV (IDEAL)

						(70% / Mexico)
Mexico	Autovia Urbana Norte	Greenfield project	Build, operate, and transfer	Roads	801.0	Obrascon Huarte Lain (OHL) (100% / Spain)
Peru	Lima Electric Train “ Line I	Greenfield project	Build, operate, and transfer	Railroads	290.0	Grana y Montero SA (Peru)
Peru	Callao Terminal Norte (Phases I and II)	Concession	Build, rehabilitate, operate, and transfer	Seaports	313.0	AP Moller - Maersk Group (51% / Denmark)
Peru	Aeropuertos del Sur	Concession	Build, rehabilitate, operate, and transfer	Airports	257.0	Corporacion America (CASA) (50% / Argentina), Andino Investment Holding (50% / Peru)

Water and Sewerage						
Country	Project Name	Type of PPI	Subtype of PPI	Segment	Total Investment (US\$ millions)	Sponsors
Brazil	Uruguaiana Water and Sewerage Services	Concession	Build, rehabilitate, operate, and transfer	Water utility with sewerage	104.2	Odebrecht SA (100% / Brazil)
Brazil	Porto Ferreira Water and Sewerage Services	Concession	Build, rehabilitate, operate, and transfer	Water utility with sewerage	23.3	Odebrecht SA (100% / Brazil)

Mexico	El Realito Aqueduct	Greenfield project	Build, operate, and transfer	Potable water treatment plant	214.8	ICA SA de CV (51% / Mexico), Fomento de Construcciones y Contratas SA (FCC) (49% / Spain)
Peru	Taboada Wastewater Treatment Plant	Greenfield project	Build, operate, and transfer	Sewerage treatment plant	149.5	ACS Group (Actividades de Construccion y Servicios) (100% / Spain)

Telecom						
Country	Project Name	Type of PPI	Subtype of PPI	Segment	Total Investment (US\$ millions)	Sponsors
Brazil	Nextel	Greenfield project	Build, operate, and transfer	Mobile access	844.2	Sprint (100% / United States)
Costa Rica	Telefonica Costa Rica	Greenfield project	Merchant	Mobile access	95.0	Telefonica SA (100% / Spain)
Costa Rica	Claro Costa Rica	Greenfield project	Merchant	Mobile access	75.0	America Movil (100% / Mexico)

Note: .. denotes missing data; N/A means not applicable. Investment commitments include payments to the government and investment in physical assets. \*in current US\$ millions

Source: World Bank and PPIAF, PPI Database.

