



PRIVATE PARTICIPATION IN INFRASTRUCTURE DATABASE

PPI data update note 40

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Private activity in energy reaches a record high

In 2009, 139 energy projects with private participation reached financial or contractual closure in 21 low- and middle-income countries, involving investment commitments of US\$58.5 billion¹. In addition, energy projects implemented in 1990–2008 attracted new investment of US\$10 billion, bringing total investment commitments to the energy sector to US\$68.5 billion in 2009.

That investment represents an increase of 26% compared with 2008, and the highest level for the sector in 1990–2009 period. By number of projects, activity in 2009 grew by 20% compared with 2008.

Private activity, however, was concentrated on a few countries and electricity generation projects. Brazil and India accounted for 67% of investment and 43% of new projects, and for all of the growth in private activity in 2009. Electricity generation accounted for 79% of investment and 80% of new projects.

In **East Asia and the Pacific**, two countries (China and the Philippines) implemented 22 new projects representing US\$7.6 billion investments (table 1). China had 7 natural gas distribution projects and 5 power plant projects with a total investment of US\$3.1 billion. The Philippines implemented 9 power plants (mainly divestitures) and the concession for the national electricity transmission company with a total investment of US\$4.5 billion.

In **Europe and Central Asia**, seven countries (Albania, Bulgaria, Georgia, Poland, Romania, the Russian Federation and Turkey) implemented 31 new projects representing US\$7.4 billion investment. Twenty-six of these projects were power plants, four were electricity distribution companies, and the remaining one was a natural gas distribution company. Private activity was mostly concentrated on Turkey (16 projects), Bulgaria (5) and Poland (4). In addition, US\$3.0 billion investments were committed to previously implemented projects.

In **Latin America and the Caribbean**, four countries (Brazil, Chile, Costa Rica, and Peru) implemented 43 new projects representing US\$20.5 billion in investment commitments. Thirty-one of these projects were for electricity generation and 12 for electricity distribution. Most of the projects and investment were located in Brazil: 26 power plant projects and 11 electricity transmission projects representing US\$19.4 billion investment. In addition, investment commitment to previously implemented projects in the region totaled US\$4.6 billion.

In the **Middle East and North Africa**, there was only one new project: the US\$465 million, Al Qatarna power plant which reached financial closure in Jordan.

In **South Asia**, four countries (Bangladesh, Bhutan, India, and Pakistan) implemented 38 new projects with a total investment commitment of US\$22.4 billion. Thirty-five of these projects were power plants and three electricity transmission lines. Most of the activity took place in India with 23 projects and US\$21.0 billion in investment. In Pakistan, 11 power plant projects reached financial closure, eight of which were emergency rental power plants. Additional investment in previously implemented projects in the region totaled US\$2.2 billion.

In **Sub-Saharan Africa**, four countries (Ethiopia, Kenya, Liberia, and Uganda) implemented four electricity generation projects representing US\$212 million in investment. Three of these projects were emergency rental power plants in Ethiopia and Kenya while the other two were Kakata power plant (a waste to energy project) in Liberia and Buseruka hydro power plant in Uganda.

In addition to the 139 projects that reached financial or contractual closure in 2009, at least 124 projects were awarded throughout the year but did not reach closure by December 2009. Those projects were distributed across the regions with 41 in East Asia and the Pacific, 19 in Europe and Central Asia, 44 in Latin America and the Caribbean, 16 in South Asia and 4 Sub-Saharan Africa.

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¹ Data on energy 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/>.

Table 1 Energy projects with private participation reaching financial or contractual closure in 2009

East Asia and Pacific				
Country	Project Name	PPI Subtype	Segment	Total Investment*
China	Changzhou City Wujin District Natural Gas Project	BOT	Natural gas distribution	478
China	China Longyuan Power Group Corporation Ltd	Partial divestiture	Electricity generation	2,270
China	Dalian Zhuanghe City Natural Gas Project	BOT	Natural gas distribution	21
China	Fengdu County Biomass Power Plant	BOT	Electricity generation	73
China	Gaizhou City LPG Project	BOT	Natural gas distribution	33
China	Liaoning Linghai City Pipeline Gas Project	BOT	Natural gas distribution	4
China	Liaoyang City Natural Gas Project	Concession (ROT)	Natural gas distribution	11
China	Linjiang Incineration Plant Phase II	BOT	Electricity generation	46
China	Linqu Towngas Co., Ltd.	Concession (ROT)	Natural gas distribution	22
China	Nanchang City Quanling Household Waste Incineration Power Plant	BOT	Electricity generation	70
China	Tianshui City Four Biomass Power Plant Projects	BOT	Electricity generation	469
China	Xinmi Towngas Co., Ltd.	BOT	Natural gas distribution	30
Philippines	Amlan Hydroelectric Power Plant	Full divestiture	Electricity generation	0
Philippines	Calaca coal-fired power plant	Full divestiture	Electricity generation	481
Philippines	Limay Combined Cycle plant	Full divestiture	Electricity generation	14
Philippines	Naga Land-Based Gas Turbine Power Plant	Full divestiture	Electricity generation	1
Philippines	Palinpinon and Tongonan Geothermal Power Plants	Full divestiture	Electricity generation	220
Philippines	Panay and Bohol power plants	Full divestiture	Electricity generation	6
Philippines	Power Barge #117 and #118	Full divestiture	Electricity generation	30
Philippines	Tiwi-Makban power plants	Full divestiture	Electricity generation	447
Philippines	Toledo Coal Power Plant II	BOO	Electricity generation	450
Philippines	Transco Philippines National Grid	Concession (BROT)	Electricity transmission	2,888

Europe and Central Asia				
Country	Project Name	PPI Subtype	Segment	Total Investment*
Albania	Ashta Hydro Power Project	BOT	Electricity generation	244
Albania	Electricity Distribution Company of Albania (OSSH)	Partial divestiture	Electricity distribution	420
Bulgaria	Blatets Solar Project	BOO	Electricity generation	4
Bulgaria	Bobov Dol Power Plant	Full divestiture	Electricity generation	127
Bulgaria	Botevo I Solar Park	BOO	Electricity generation	11
Bulgaria	Kamen Briag Wind Project	BOO	Electricity generation	Not available
Bulgaria	Kavarna Wind Farm	BOO	Electricity generation	132
Georgia	Ortachala HEPS	Full divestiture	Electricity generation	32
Poland	Czestochowa CHP Plant	BOO	Electricity generation	181
Poland	Jarogniew-Moltowo Wind Farm	BOO	Electricity generation	Not available
Poland	Suwalki Wind Farm	BOO	Electricity generation	112
Poland	Tychowo Wind Farm	Merchant	Electricity generation	111
Romania	Brazi Power Plant	Merchant	Electricity generation	695
Romania	Dobrogea Wind Project - Phase 1	BOO	Electricity generation	862
Russian Federation	Noyabrsk Combined Cycle Power Plant	Merchant	Electricity generation	150

Turkey	AkfenHES - 11 hydro power plants	Merchant	Electricity generation	309
Turkey	Alkumru Hydroelectric Project	Merchant	Electricity generation	466
Turkey	As Makinsan Bandirma Wind Power Plant Project	BOO	Electricity generation	50
Turkey	Ayyildiz Wind Farm	BOO	Electricity generation	32
Turkey	Bagistas II Hydroelectric Project	Merchant	Electricity generation	72
Turkey	Baskent Elektrik Dagitim A.S. (BEDAS)	Concession (BROT)	Electricity distribution	1,225
Turkey	Belen Wind Power Project	BOO	Electricity generation	71
Turkey	Essentium Hydroelectric Plants	BOO	Electricity generation	78
Turkey	Izmit Gas Distribution Corporation (Izgaz)	Concession (BROT)	Natural gas distribution	232
Turkey	Meram Elektrik Dagitim A.S. (MEDAS)	Concession (BROT)	Electricity distribution	440
Turkey	Niksar Hydropower Plant	BOO	Electricity generation	170
Turkey	Osmaniye Wind Power Plant	BOO	Electricity generation	306
Turkey	Resadiye-3 Hydroelectric Power Plant	BOO	Electricity generation	Not available
Turkey	Sakarya Elektrik Dagitim A.S. (SEDAS)	Concession (BROT)	Electricity distribution	600
Turkey	Samsun Gas-Fired Power Plant	Merchant	Electricity generation	105
Turkey	Soma Wind Energy Power Plant	Merchant	Electricity generation	159

Latin America and the Caribbean				
Country	Project Name	PPI Subtype	Segment	Total Investment*
Brazil	Alegria Wind Park	BOO	Electricity generation	147
Brazil	Anhanguera Small Power Plant	BOT	Electricity generation	50
Brazil	ATE IV - Sao Mateus Transmissora de Energia	BOT	Electricity transmission	78
Brazil	ATE V - Londrina Transmissora de Energia S.A.	BOT	Electricity transmission	64
Brazil	ATE VI - Campos Novos Transmissora de Energia	BOT	Electricity transmission	59
Brazil	ATE VII Foz do Iguacu Transmissora de Energia	BOT	Electricity transmission	27
Brazil	Barra do Brauna Hydro Power Plant	BOT	Electricity generation	96
Brazil	Bons Ventos Wind Farm Portfolio	BOO	Electricity generation	377
Brazil	Centrais Elébricas da Paraíba (EPASA)	BOO	Electricity generation	304
Brazil	Chapadao - Jatai Transmission Line	BOT	Electricity transmission	154
Brazil	Codora Thermal Power Plant	BOO	Electricity generation	33
Brazil	Companhia Nacional de Acucar e Alcool (CNAA)	BOO	Electricity generation	Not available
Brazil	ETH Bioenergia	BOO	Electricity generation	Not available
Brazil	Gargau Wind Power Plant	BOO	Electricity generation	65
Brazil	Geradora de Energia do Norte S.A.	BOO	Electricity generation	300
Brazil	Guaira Thermal Power Plant	BOO	Electricity generation	50
Brazil	Impsa Wind Farm Portfolio	BOO	Electricity generation	720
Brazil	Iracema Transmissora de Energia	BOT	Electricity transmission	131
Brazil	Itaqui Power Plant	BOO	Electricity generation	900
Brazil	Jauru Transmissora de Energia	BOT	Electricity transmission	202
Brazil	Jirau Power Plant	BOT	Electricity generation	5,300
Brazil	Juba-Jauru-Maggi-Nova Mutum Transmission Line	BOT	Electricity transmission	109
Brazil	Malagone Hydroelectric Power Plant	BOT	Electricity generation	46
Brazil	Pipoca Small Power Plant	BOT	Electricity generation	58
Brazil	Pocos de Caldas Transmissora de Energia	BOT	Electricity transmission	154
Brazil	Porto do Pecem I Power Plant	BOO	Electricity generation	1,400
Brazil	Porto do Pecem II Power Plant	BOO	Electricity generation	640
Brazil	Ribeirao Preto Transmissora de Energia	BOT	Electricity transmission	119
Brazil	Santo Antonio Power Plant	BOT	Electricity generation	6,800
Brazil	Sao Domingos II Hydro Power Plant	BOT	Electricity generation	68
Brazil	Sao Fernando Thermal Power Plant	BOO	Electricity generation	Not available

Brazil	Sao Simao-Itaguacu-Barra dos Coqueiros Transmission Line	BOT	Electricity transmission	50
Brazil	Serra do Facao Power Plant	BOT	Electricity generation	708
Brazil	Sykue Thermal Power Plant	BOO	Electricity generation	50
Brazil	Vale do Paracatu Thermal Power Plant	BOO	Electricity generation	Not available
Brazil	Vale do Sao Simao Thermal Power Plant	BOO	Electricity generation	32
Brazil	Viana Thermal Power Plant	BOO	Electricity generation	150
Chile	Chacayes Hydro Project	BOO	Electricity generation	428
Chile	Monte Redondo Wind Farm	BOO	Electricity generation	100
Chile	Totoral Wind Farm	Merchant	Electricity generation	140
Costa Rica	Consortium Planta Eolica Guanacaste	BOT	Electricity generation	110
Peru	La Joya Hydroelectric Plant	BOO	Electricity generation	Not available
Peru	Transmission Line Carhuamayo - Carhuaquero	BOT	Electricity transmission	329

Middle East and North Africa				
Country	Project Name	PPI Subtype	Segment	Total Investment*
Jordan	Al Qatarna Power Project	BOT	Electricity generation	465

South Asia				
Country	Project Name	PPI Subtype	Segment	Total Investment*
Bangladesh	Energis Power Corporation Rental Project	Rental	Electricity generation	38
Bangladesh	Regent Power IPP	BOO	Electricity generation	19
Bangladesh	Saiham Power IPP	BOO	Electricity generation	8
Bhutan	Dagachhu Hydro Power Project	BOO	Electricity generation	201
India	Acciona Wind Energy Private Limited	BOO	Electricity generation	45
India	Adani Maharashtra Power Limited	BOO	Electricity generation	1,913
India	Bina Power Supply Company- Phase I	BOO	Electricity generation	569
India	Coastal Energen Private Limited	Merchant	Electricity generation	888
India	Corporate Power Limited	Merchant	Electricity generation	599
India	Dhariwal Infrastructure Private Limited	Merchant	Electricity generation	599
India	EMCO Energy Limited	Merchant	Electricity generation	719
India	Essar Power MP Limited	BOO	Electricity generation	1,104
India	Indiabulls Power Limited- Amravati Phase-I	BOO	Electricity generation	1,423
India	Jaigad Power TransCo Limited	BOO	Electricity transmission	120
India	Jhajjar Power Limited	BOO	Electricity generation	1,504
India	Kamalanga Thermal Power Plant	BOO	Electricity generation	1,053
India	Korba West Power Company Limited	BOO	Electricity generation	593
India	Lanco Mandakini Hydro Energy Private Limited - Phata Bhyung HEP	BOT	Electricity generation	107
India	Meenakshi Energy Private Limited	BOO	Electricity generation	286
India	National Hydroelectricity Power Corporation	Partial divestiture	Electricity generation	827
India	RKM Powergen Private Limited	BOO	Electricity generation	331
India	Sasan Ultra Mega Power Plant	BOO	Electricity generation	3,986
India	Sterlite Jharsuguda Power Project	BOO	Electricity generation	1,707
India	Talwandi Sabo Power Limited	BOO	Electricity generation	1,925
India	Vidarbha Industries Power Limited	BOO	Electricity generation	428
India	Western Region Transmission (Gujarat) Private Limited	BOO	Electricity transmission	97
India	Western Region Transmission (Maharashtra) Private Limited	BOO	Electricity transmission	188

Pakistan	Guddu Rental Power Project	Rental	Electricity generation	26
Pakistan	Gulf Rental Power Project	Rental	Electricity generation	25
Pakistan	HUBCO Narowal Power Project	BOO	Electricity generation	274
Pakistan	Karkey Karachi Rental Project-I	Rental	Electricity generation	92
Pakistan	Liberty Power Tech Project	BOO	Electricity generation	240
Pakistan	Naudero-I Rental Power Project	Rental	Electricity generation	20
Pakistan	New Bong Escape Hydropower Project	BOT	Electricity generation	233
Pakistan	Reshma Rental Power Project	Rental	Electricity generation	79
Pakistan	Satiana Road Rental Power Project	Rental	Electricity generation	47
Pakistan	Techno Rental Power Project-I	Rental	Electricity generation	36
Pakistan	Techno Rental Power Project-II	Rental	Electricity generation	47

Sub-Saharan Africa				
Country	Project Name	PPI Subtype	Segment	Total Investment*
Ethiopia	Aggreko 30MW temporary power plant	Rental	Electricity generation	2
Ethiopia	Encom 30MW Temporary power plant	Rental	Electricity generation	2
Kenya	Aggreko 140 MW temporary rental power plant	Rental	Electricity generation	11
Liberia	Kakata power plant	BOO	Electricity generation	170
Uganda	Buseruka Hydropower Plant	BOT	Electricity generation	27

Note: BOT= Build, Operate, and Transfer; BOO = Build, Own, and Operate; Concession (ROT) = Rehabilitate, Operate, and Transfer; Concession (BROT) = Build, Rehabilitate, Operate, and Transfer.

*in current US\$ millions

Source: World Bank and PPIAF, PPI Database.