



PRIVATE PARTICIPATION IN INFRASTRUCTURE RESEARCH GROUP

Note 90

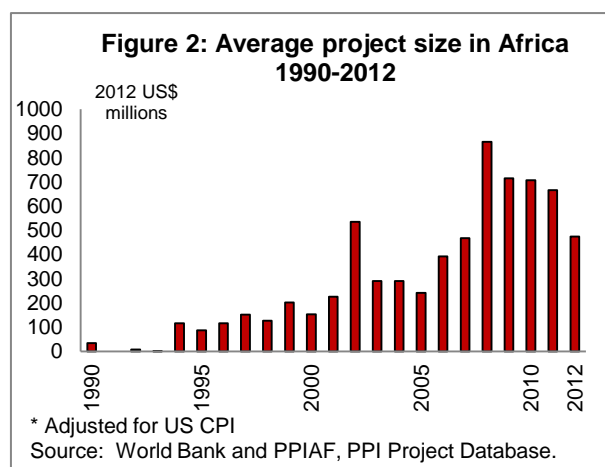
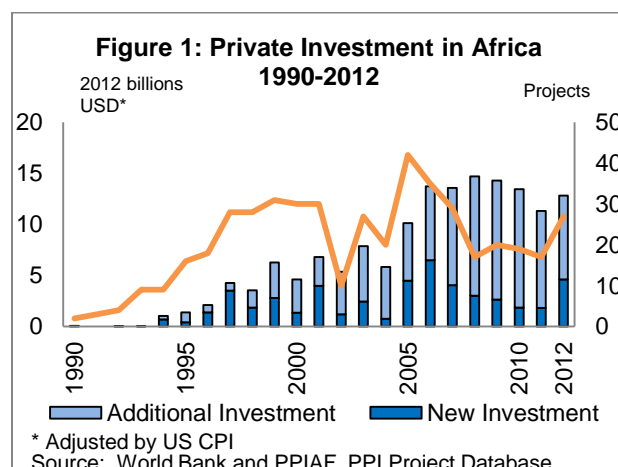
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Infrastructure Policy Unit 2012 Africa PPI Data Update

Private investment commitments in Africa's energy sector rise to highest level since 1990

In Africa, private investment commitments in infrastructure projects in developing countries (hereafter: *investments*) rose to \$12.8 billion in 2012, which was 13 percent higher in real terms than the figure for 2011.¹ The number of projects reaching financial closure in Africa saw a slump in the aftermath of the global financial crisis, but by 2012 activity had bounced back above the pre-crisis level of 2007. In total, 27 projects reached financial closure in Africa, up from 17 in 2011: in the Democratic Republic of Congo (1), Ghana (1), Kenya (2), Somalia (1), South Africa (18), Uganda (2), and Zambia (1).² Just over one third, 36 percent, or \$4.6 billion of investments, went to new projects while nearly double this amount (\$8.2 billion) went to the expansion of existing projects.

Investments in Africa were mostly concentrated in the telecom sector, with \$7.7 billion, followed by energy with \$5.0 billion. The share of investments in transport projects has dwindled from a peak in 2006, while water and sewerage projects have only marginally contributed to the overall investments in infrastructure in Africa (figure 3). Eighty two percent of new projects in Africa were in the energy sector. South Africa led regional investment in renewable energy projects with \$4.1 billion supported by PPAs from the national power utility ESKOM and payment guarantees from the government.

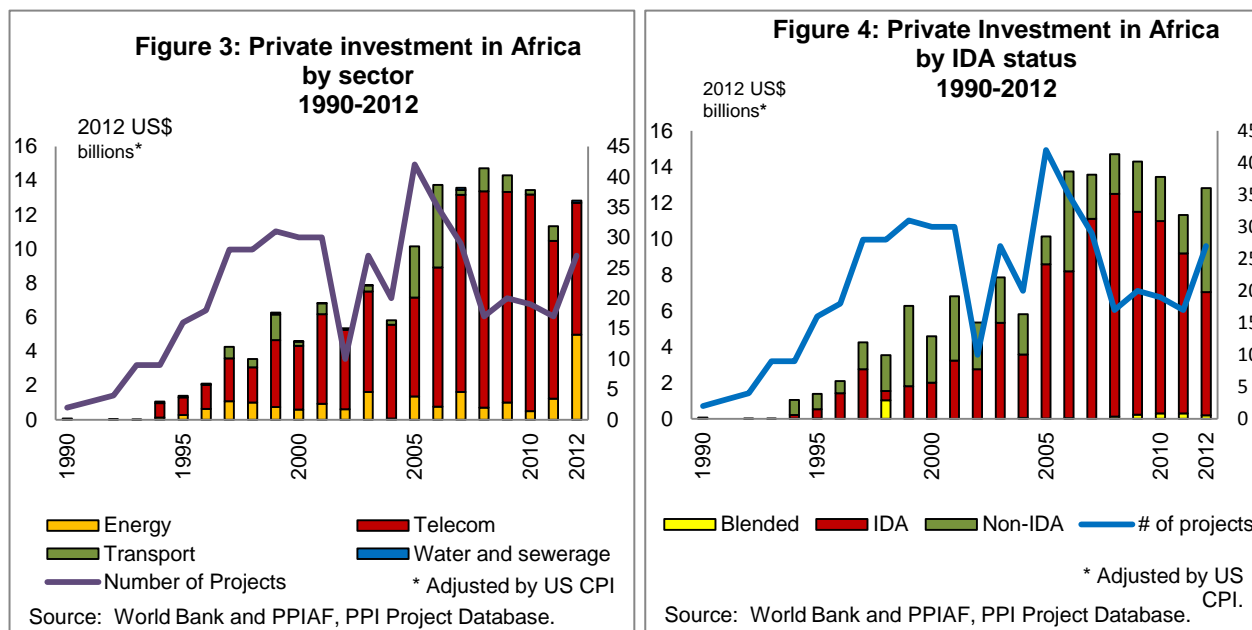


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¹ This note uses the World Bank country classification released in July 2012. 'Africa' refers to the Africa region of the World Bank, and includes all of sub-Saharan Africa but not North Africa (for North African countries, see the MENA note). Investment data are in real 2012 US dollar (nominal values were adjusted using US CPI).

² Data on water 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. Additional investment in some projects may have been omitted for the same reason. For more information: <http://ppi.worldbank.org/>

The majority of investments (53%) in 2012 went to countries in the International Development Association³ (figure 4). An average annual growth in private investment of 8.3 percent since 2002 has outpaced regional growth during the same period of 4.5 percent annually. Private investment comprised 1.0 percent of regional GDP. The Africa region's share of global investments in low- and middle-income countries was seven percent.



Sector Overview

The **energy** sector saw the strongest growth in 2012. Investments increased to \$5.0 billion, the highest amount since 1990 (figure 5). There were 22 new energy projects reaching financial closure: Kenya (2), South Africa (18), Uganda (1) and Zambia (1).

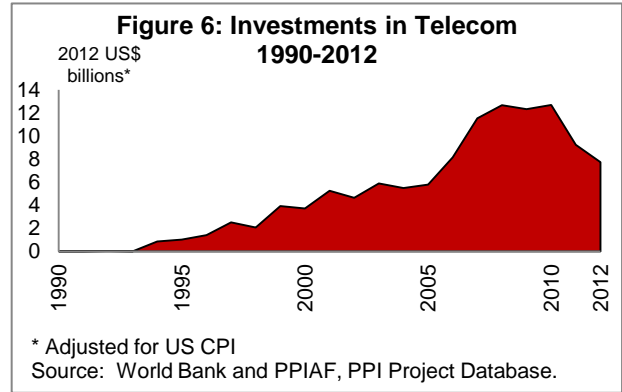
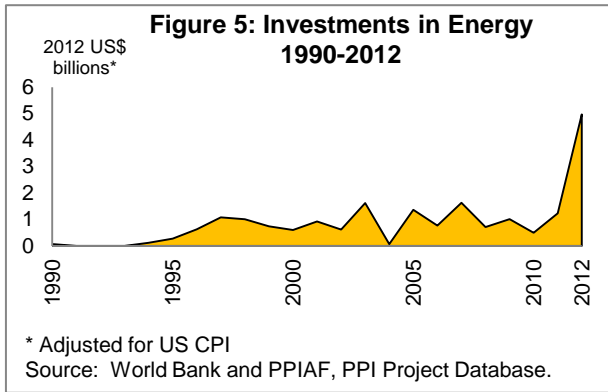
All energy projects were greenfield projects and 20 out of 22 were Build-Own-Operate (BOO) contracts. Only the Ugandan project SAEMS Nyamwamba SHPP, a small hydropower plant, and the project in the Zambia, the Itezhi-Tezhi Power Corporation transmission line, were built under the Build-Operate-Transfer (BOT) model.

Two projects near Nairobi, Kenya were diesel projects, while the other nineteen projects were all renewable energy projects in South Africa: solar PV (9), wind farms (7), solar-SCP (2), and small hydro (1).

Most projects (18) had a contract period of twenty years. The Zambian Itezhi-Tezhi Corporation transmission line and the ACED Cookhouse Wind Farm on the Eastern Cape, South Africa, had a contract period of 25 years. In total, all new energy projects added 1260MW to the African grid, representing \$4.4 billion of investments. The average power project was 60MW and cost \$208 million, approximately \$3.5 million per megawatt. The transmission line in Zambia was built for \$110 million, or \$0.77 million per kilometer.

All South African projects were awarded through competitive bidding with the lowest tariff as the bid criteria and most projects received over 50 bids. The 14MW Ugandan hydro project and the 142 kilometer Zambian transmission line project were awarded through a license scheme.

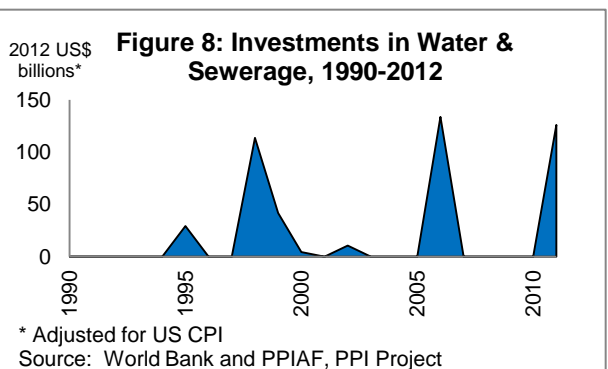
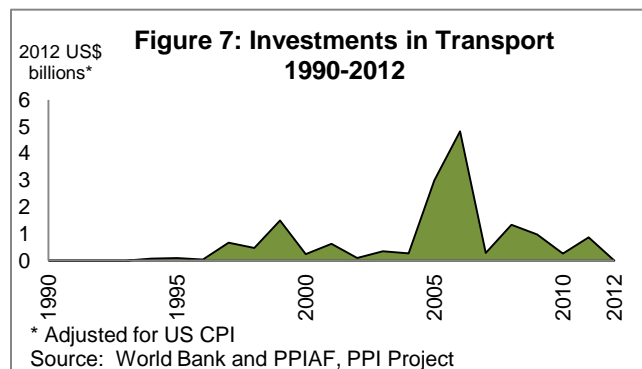
³ IDA: International Development Association, is the World Bank's Fund for the Poorest. Eligibility for IDA-support depends on a country's relative poverty, defined as GNI per capita. The threshold in 2013 was \$1,205.



The African **telecommunications** sector received \$7.7 billion of investment in 2012, 60 percent of the total infrastructure investments (figure 6). Although this amount is much larger than any of the other sectors, there has been a downward trend in the last couple of years. In the period 2007-2010, the average amount invested in telecom in Africa was over \$12 billion. The current level of investment is almost 40% below the peak of \$12.7 billion in 2010.

Three new telecom projects closed in 2012, the lowest number since 1994. This is a reflection of Africa's increasing of competition in telecom markets, with most countries now boasting three or more mobile telecom providers. All new projects were greenfield merchant mobile access providers: Africell (Lintel) in the Democratic Republic of the Congo, Haatif Telecom in Somalia, and Smile Telecoms in Uganda. Both Smile Telecoms and Lintel had obtained a license from the Uganda Communications Commission and the DRC line ministry respectively. Smile Telecoms and Lintel had planned a rollout of the network over a period of three years, first starting in their respective nations' capitals, to be followed by the rest of the country. By the end of 2012, Africell listed 765,000 subscribers; Smile Telecoms, 2,000 4G subscribers; and Haatif Telecom, 110,000 subscribers. Public information on investments in these projects was limited at publishing.

Private activity in the **transport** sector was limited in Africa (figure 7). The average amount invested during the 2007-2011 period (five years) was \$750 million, and an average of three projects per year reached financial closure. In 2012, only one project reached financial closure: the Blaise Diagne International Airport in Dakar, Senegal. The project is a 25-year management contract awarded to Fraport AG from Germany, after a competitive bidding process. Dakar's old airport had a capacity of 1.5 million, while the new airport was expected to reach a capacity of five million passengers per year. Construction was nearing 50 percent completion by September 2013, while operations were projected for 2014. Fraport was to be in charge of the management, operation, and maintenance of the platforms and terminal area as soon as the airport was opened.

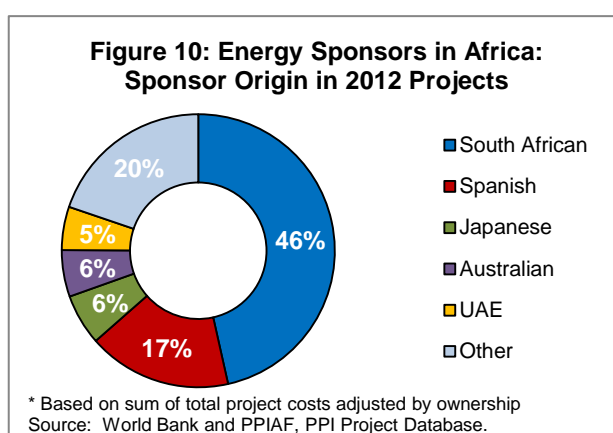
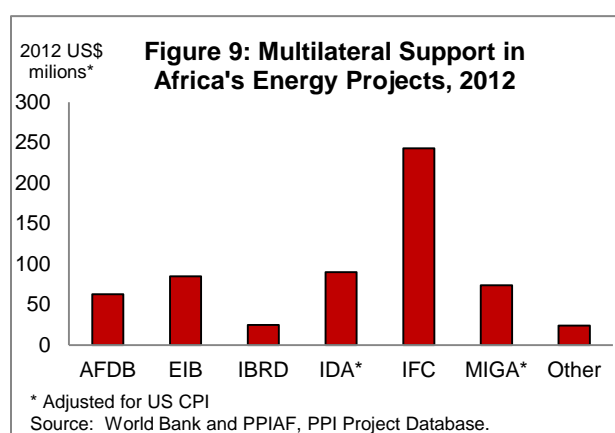


The **water and sewerage** sector historically has had limited investments in Africa. Only six projects closed in the ten years before 2012, bringing \$144 million of investments to the region. In 2012, one project reached financial closure: the Befesa Desalination Plant in Ghana, a build-own-operate (greenfield) project in the Greater Accra region. The project represented an

investment of \$126 million for a capacity of 60,000 cubic meters per day, and included a 25-year service contract with the government of Senegal. The project was a joint-venture between Abengoa of Spain (50 percent) and Sojitz Corporation of Japan (44 percent) and smaller investors. The Multi-Lateral Investment Guarantee Agency (MIGA) supported the project with a \$180 million guarantee in 2012.

Sponsor Overview & Multi-lateral Support

In the energy sector most sponsors originated in South Africa, and sponsors from this country were involved with 46 percent of all investment commitments in the sector in 2012. There were 14 different South African sponsors, including: Industrial Development Cooperation, Rainmaker Energy, Solar Capital, and Standard Bank. The second most active group was Spanish sponsors, dominated by Abengoa and to a lesser extent the Gestamp Corporation. Japanese sponsors Itochu Corporation and Sumitomo Corporation as well as Australian Macquarie Infrastructure Group also invested actively in the African energy sector. The Abu Dhabi National Energy Company (TAQA) was a sponsor in one project.



Six projects in the energy sector received support from multilateral institutions. The Thika Power Plant in Kenya received loans from the African Development Bank (AFDB) and the International Finance Corporation (IFC) of \$28 million each. The project also benefited from a \$45 million IDA partial risk guarantee, and a MIGA guarantee of \$62 million. Zambia's Itezhi-Tezhi Power Corporation Transmission line also received an AFDB loan as well as a loan from the European Investment Bank, of \$35 million each. Two South African power plants, Abengoa KaXu and Khi Solar Plants, received loans from the IBRD (\$25 million), the IFC (\$125 million and \$90 million respectively), and EIB (\$50 million). The Triumph HFO Power Plant was received a MIGA guarantee (\$12 million) and an IDA partial risk guarantee (\$45 million).

Regional Outlook

Sub-Saharan Africa is expected to continue its steady growth into 2013 and beyond. The IMF predicted that the region was to grow with 5.7 percent in 2013 and 6.1 percent in 2014. Investments in infrastructure continued to be seen as the main impediment to growth. Private investments in infrastructure are also hampered by an unstable political environment in some countries. South Africa for example, Africa's largest economy, saw a slowing of private investment due to industrial strikes. In spite of the difficulties described, the story of Sub-Saharan investments is mainly a positive one. The recent growth in energy projects is likely to continue, as governments and multilateral agencies resume their efforts of the electrification of the continent. Government guarantees to state utilities for energy (Eskom) or roads (South African National Roads Agency Sanral) have been responsible for catalyzing a number of deals in the energy and, to a lesser extent, the transport sector. However, the South African government's exposure to debt incurred by parastatals is growing in the coming years and this may hinder the issuance of guarantees in the future. In Kenya, risk guarantees from multilaterals

are expected to continue to contribute towards private investments in the power sector. The Kenyan government announced the ambition to triple its power supply by 2018 to 3000MW. Investments in the telecom sector are likely to dwindle since the continent is reaching a saturation rate. Most countries have three, four, or more service providers. Some new projects can be expected, but the early 2000s which saw mass privatizations are over. Because of Africa's large infrastructure needs, investments in the transport sector (airports, ports, railroads, roads, and urban rail) are expected to pick up as governments try to close the infrastructure gap. It should be noted, however, that some very large infrastructure projects are announced without private participation, for example the large railroads that have been built or announced by Chinese companies, in which they do not usually take on operational risk of the asset. In Kenya, for example, the Chinese announced a new railroad to connect Mombasa port to the East African hinterland, without private participation. Private investment in water is more isolated, as it proves difficult to recover investments through user fees unless in large urban areas.

Featured Project: ACED Cookhouse Wind Farm (South Africa) | Greenfield (BOO) | 25 years

African Clean Energy Developments (ACED) was a project company created to build, own, and operate renewable energy projects in Sub-Saharan Africa, including the 139 MW Cookhouse Wind Project, to be located in the Eastern Cape Province of South Africa. The developer was a joint-venture, 50 percent owned by African Infrastructure Investment Fund (AIIF), a 50/50 joint-venture between Macquarie Africa (Pty) Ltd and Old Mutual Investment Group South Africa (Pty) Ltd (OMIGSA); and the remaining 50 percent by AFPOC Limited, a Mauritian registered company specifically incorporated for this investment. Construction equity was to be provided by Globeleq, AFPOC Limited, AIIF II, IDEAS, and the Industrial Development Corporation. AIIF and IDEAS were funds partly owned by Old Mutual. The local community was to own part of the project (15%) through the Cookhouse Wind Farm Community Trust.

Contract information

The project was awarded in a tender administered by the Department of Energy. A critical factor in the decision was the projected price of power. Contractual negotiations on the PPA and financing were completed by June 2012. The tender was open to all technologies; 53 bids were submitted, 28 of which made it to preferred bidder status. These 28 projects will account for a total of 1416MW if all are implemented. Suzlon had been selected as the EPC contractor, scheduled to supply 68 of its 2.1 MW S88 turbines. Suzlon was also to maintain the project for 25 years.

Financial information

Total project cost was estimated at ZAR 2.4 billion (USD 300 million), with Standard Chartered and Nedbank selected as the lead arrangers. Expected commissioning was for 2014. The project applied for UNFCCC CDM financing. The project reached financial close in November 2012. Precise details of the financing were not released, however Standard Bank and Nedbank were the mandated lead arrangers on the deal.

Table 1 – Projects with private participation reaching financial or contractual closure in Africa in 2012

Energy	Country	Project name	Project status	Segment	PPI Type (subtype)	Investment commitment (US\$ millions)	Capacity (MW)	Sponsors (% ownership)
1	Kenya	Triumph HFO Power Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	140	83	Broad Holding (..% / Kenya), Interpel Investments (..% / Kenya), Taceflex (..% / Kenya), Southern Inter-trade (..% / Kenya)
2	Kenya	Thika Thermal Power Project	Construction	Electricity generation	Greenfield project Build, own, and operate	112	87	Melec Group (90% / Lebanon)
3	South Africa	Old Mutual - Herbert Solar PV	Construction	Electricity generation	Greenfield project Build, own, and operate	96	20	Old Mutual (50% / South Africa)
4	South Africa	Old Mutual - Greefspan Solar PV	Construction	Electricity generation	Greenfield project Build, own, and operate	48	10	Old Mutual (50% / South Africa)
5	South Africa	Biotherm - Dassiesklip Wind	Construction	Electricity generation	Greenfield project Build, own, and operate	68	27	BioTherm Energy (60% / South Africa)
6	South Africa	Biotherm - Aries Solar PV	Construction	Electricity generation	Greenfield project Build, own, and operate	34	10	BioTherm Energy (90% / South Africa)
7	South Africa	Konkoonsies Solar PV	Construction	Electricity generation	Greenfield project Build, own, and operate	34	10	BioTherm Energy (60% / South Africa)

Energy	Country	Project name	Project status	Segment	PPI Type (subtype)	Investment commitment (US\$ millions)	Capacity (MW)	Sponsors (% ownership)
8	South Africa	Gestamp Karoo Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	185	75	Gestamp Corporation (60% / Spain), Shanduka Group (25% / South Africa), Others (15% / ..)
9	South Africa	Mainstream Droogfontein Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	150	50	Mainstream Renewable Power (..% / Ireland), Genesis Eco-Energy (..% / South Africa), Globeleq (..% / United Kingdom)
10	South Africa	Scatec Kalkbult Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	259	72,5	Scatec (38% / Norway), Itochu Corporation (23% / Japan), Others (..% / ..)
11	South Africa	Kathu Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	394	81	Building Energy (..% / Italy)
12	South Africa	Solar Capital De Aar Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	259	75	Solar Capital (90% / South Africa), Others (10% / ..)
13	South Africa	SolarReserve Letsatsi Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	280	75	Solar Reserve (..% / United States), Kensani Holdings (..% / South Africa), Oakleaf Investments (..% / South Africa), Intikon Energy (..% / South Africa)
14	South Africa	Sumitomo Dorper Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	258	100	Sumitomo Corporation (60% / Japan), Rainmaker Energy (15% / South Africa), Others (..% / ..)

Energy	Country	Project name	Project status	Segment	PPI Type (subtype)	Investment commitment (US\$ millions)	Capacity (MW)	Sponsors (% ownership)
15	South Africa	ACED Cookhouse Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	300	139	Macquarie Infrastructure Group (MIG) (25% / Australia), Old Mutual (25% / South Africa), AFPOC (50% / Mauritania)
16	South Africa	Standard Bank Kouga Oyster Bay Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	222	77,6	Standard Bank (35% / South Africa), Inspire Evolution Investment Management (27% / South Africa)
17	South Africa	Old Mutual Hopefield Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	173	78	Macquarie Infrastructure Group (MIG) (39% / Australia), Old Mutual (39% / South Africa)
18	South Africa	Metro Wind Van Staadens Wind Farm	Construction	Electricity generation	Greenfield project Build, own, and operate	50	26	Metrowind (65% / South Africa), Basil Read (35% / South Africa)
19	South Africa	Abengoa KaXu Solar I CSP Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	844	100	Abengoa (51% / Spain), Industrial Development Corporation (49% / South Africa)
20	South Africa	Abengoa Khi Solar I CSP Solar Plant	Construction	Electricity generation	Greenfield project Build, own, and operate	430	50	Abengoa (51% / Spain), Industrial Development Corporation (49% / South Africa)
21	Uganda	SAEMS Nyamwamba SHPP	Construction	Electricity generation	Greenfield project Build, operate, and transfer	34	14	South Asia Energy Management Systems (SAEMS) (100% / United States)

Energy	Country	Project name	Project status	Segment	PPI Type (subtype)	Investment commitment (US\$ millions)	Capacity (MW)	Sponsors (% ownership)
22	Zambia	Itezhi-Tezhi Power Corporation Transmission line	Construction	Electricity transmission	Greenfield Build own transfer	110	142 (KM)	Tata Enterprises (50% / India), Zambia Electric Supply Corporation (ZESCO) (50% / Zambia)

Telecommunications	Country	Project name	Project status	Segment	PPI Type(subtype)	Investment commitment	Sponsor
1	Congo, Dem. Rep.	Lintel	Operational	Mobile access	Greenfield (merchant)	N/A	Lintel (100% / Lebanon)
2	Somalia	Hatif Telecom	Operational	Mobile access	Greenfield (merchant)	N/A	Haatif Telecom (100% / Somalia)
3	Uganda	Smile Communications	Operational	Mobile access	Greenfield (merchant)	N/A	Smile Communications (SAF) (100% / Uganda)

Transport	Country	Project Name	Project status	Segment	PPI Type	Total Investment*	Sponsors
1	Algeria	Société des Eaux d'Assainissement d'Alger (SEAL)	Construction	Water utility with sewerage	Management and lease contracts (Management contract)	N/A	Suez (100%)

Water & Sewerage	Country	Project Name	PPI Type and Subtype	Segment	Capacity (cubic meters per thousands)	Total Investment*	Sponsors
1	Ghana	Befesa Desalination Plant	Greenfield (Build, own, and operate)	Potable water treatment plant	60	N/A	Abengoa (50% / Spain), Sojitz Corporation (44% / Japan)

Note: Investment commitments include payments to the government and investment in physical assets in 2012 US\$ millions.

Source: World Bank and PPIAF, PPI Database.