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Private Power Projects

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The Private Participation in Infrastructure (PPI) Project Database tracks infrastructure projects owned or managed by private companies in energy (electricity and natural gas transmission and distribution), telecommunications, transport, and water and sewerage. For more information on the database, see the Web site at http://ppi.worldbank.org.

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Annual Investment Flows Grew by 44 Percent in 2003

Drawing on the World Bank's Private Participation in Infrastructure Project Database, this Note reviews developments in the electricity sector in 2003. Data for the year show that total investment in electricity projects with private participation amounted to US$14 billion. Private activity grew strongly in East Asia and Pacific, but remained stable or fell in other regions.

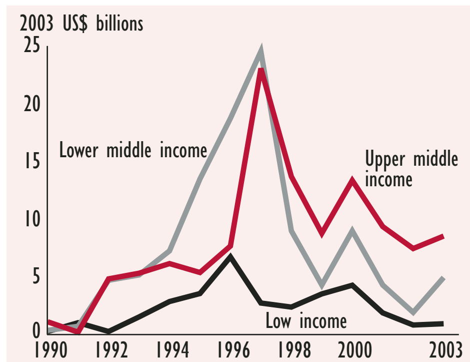
In 2003, 19 developing countries implemented 37 new electricity projects with private participation, under schemes ranging from management contracts to concessions, divestitures, and greenfield build-operate-transfer (BOT) or build-operate-own (BOO) projects.[1] Although the number of projects reaching financial closure was the lowest since 1993, investment flows recovered strongly, returning to a level similar to that of 2001. Even so, investment flows were still just 28 percent of the 1997 peak.[2]

Most of the recovery occurred in lower-middle-income countries, where investment flows rose from US$1.7 billion in 2002 to US$4.8 billion in 2003, reaching the highest level since 2000 (figure 1). Private activity in upper-middle-income countries also recovered, rising by 17 percent to US$8.4 billion, similar to the level in 1999. Investment flows to low-income countries also grew by 17 percent, to more than US$730 million, yet remained at the fourth lowest level in 1990–2003.

Regional trends

Private activity grew or remained stable in all regions except Europe and Central Asia. East Asia had nine new projects and investment flows of US$5.5 billion, the highest since 1998 (table 1). The recovery was driven mainly by a few large greenfield power plants in Malaysia, the Philippines, Thailand, and Vietnam and the partial divestiture of China's

Figure 1 **Investment in electricity projects with private participation in developing countries, by income group, 1990–2003**



Source: World Bank, PPI Project Database.

Yangtze Electric Power, the company created to raise private funding for the Three Gorges hydropower project.

Latin America had 17 new projects—11 fewer than in 2002—but investment flows remained stable. Most investment went to greenfield power plants in Brazil and Mexico. Among the largest power plants were Norte Fluminense and Peixe Angelical in Brazil and Altamira V and Tuzpan III and IV in Mexico. Smaller economies such as Bolivia, Ecuador, and Honduras also had new projects. As in 2000–02, greenfield projects dominated private activity in the region. Earlier, divestitures had dominated.

In Europe and Central Asia new activity was limited to six projects. The biggest was Bulgaria's Maritza East III power plant, the country's first electricity project with private participation and its largest foreign direct investment by 2003. The other projects were in Armenia (two power plants transferred to the Russian Federation's Unified Energy System through a management contract and a divestiture), Georgia (a management contract for the transmission network), Lithuania (a power plant sold to Russia's RAO Gazprom), and the Slovak Republic (a distribution network divested to Germany's RWE).

In the other regions private activity dwindled to a few projects. The Middle East and North Africa had just one project: the Tahaddart greenfield power plant in Morocco. Sub-Saharan Africa had four small projects: a management contract for the electricity and water utility in Rwanda, a small hydropower plant in Angola, and two rural electrification projects in Uganda. In South Asia private activity was limited to the expansion of an existing power plant.

A focus on new generation

Private activity in electricity focused primarily on generation. Stand-alone power plants, or independent power producers (IPPs), accounted for 85 percent of the investment flows in 2003, with the rest going mainly to distribution companies. This trend mirrored those in earlier years (figure 2). Of the total investment in electricity projects with private participation in 1990–2003, 70 percent went to stand-alone power plants, and 15 percent to distribution companies.

Private activity in generation was concentrated in greenfield projects, ranging from BOT and BOO schemes in nonliberalized markets to merchant schemes in liberalized ones. Greenfield power plants accounted for 78 percent of the investment in IPPs with private participation in 1990–2003. Existing power plants, transferred to the private sector mainly through divestitures, absorbed the rest.

Private participation spreading

Private activity in electricity expanded geographically, with 10 countries opening their electricity sector to private participation in 2001–03. Those in Europe and Central Asia—Armenia, Azerbaijan, Bulgaria, the Slovak Republic, and Ukraine—primarily transferred existing assets to the private sector through divestitures and concessions. The countries in Sub-Saharan Africa completed a range of transactions: greenfield power plants in Angola and Nigeria, a concession for the national utility in Cameroon, a management contract for a utility in Rwanda, and rural electrification projects in Uganda.

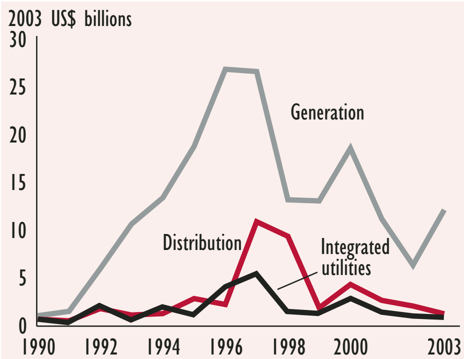
Table 1 Investment in electricity projects with private participation in developing countries, by region, 1990–2003 (2003 US$ billions)

Region	1990	1991	1992	1993	1994	1995	1996	1997	1998	1999	2000	2001	2002	2003
East Asia and Pacific	0.1	0.5	5.2	6.4	8.1	8.2	12.4	14.5	5.9	1.7	3.2	3.2	0.9	5.5
Europe and Central Asia	0.1	—[a]	1.2	—[a]	1.5	3.8	3.6	2.4	0.7	0.8	4.8	1.2	1.8	1.5
Latin America and the Caribbean	0.9	—[a]	2.8	3.8	3.2	6.6	10.2	24.9	15.8	9.5	14.1	6.5	6.8	6.2
Middle East and North Africa	—[a]	—[a]	—[a]	—[a]	0.3	—[a]	0.2	5.3	—[a]	1.0	0.2	2.3	—[a]	0.4
South Asia	—[a]	0.8	0.0	1.3	2.6	3.4	4.8	1.7	1.5	2.6	3.2	0.9	0.1	0.2
Sub-Saharan Africa	0.1	—[a]	0.0	—[a]	0.1	0.0	0.8	1.3	0.8	0.6	0.8	0.9	0.0	0.1
Total	1.1	1.3	9.2	11.5	15.8	22.0	32.1	50.1	24.6	16.1	26.2	15.0	9.7	13.9

a. No private participation in electricity occurred.
Source: World Bank, PPI Project Database.

Figure 2

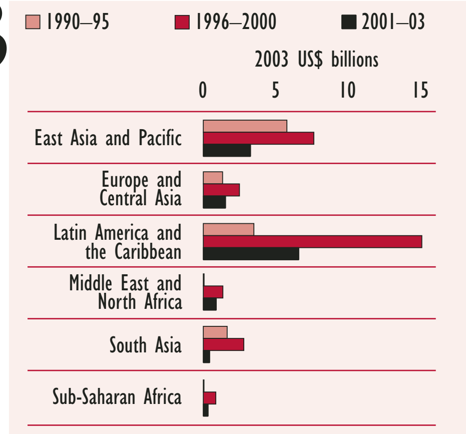
Investment in electricity projects with private participation in developing countries, by segment, 1990–2003



Source: World Bank, PPI Project Database.

Figure 3

Average annual investment in electricity projects with private participation in developing countries, by region, 1990–2003



Source: World Bank, PPI Project Database.

After the boom of 1996–2000

Investment flows to electricity fell significantly after peaking in 1997, but are still comparable to preboom levels. Annual investment flows in 2001–03 averaged US$12.9 billion, slightly higher than the US$12.2 billion in 1990–95. During the boom of 1996–2000 annual flows averaged US$29.8 billion.

The decline in private activity played out differently across the developing regions. Latin America, the most active region in the late 1990s, sustained investment flows at levels higher than those of the early 1990s, while East and South Asia saw annual flows fall below those levels (figure 3).

But trends were similar across the main types of private participation. In the boom period of 1996–2000 annual investment flows reached peak levels for greenfield projects (US$13.4 billion) and divestitures (US$14.8 billion), then receded to levels close to those of the early 1990s (US$8.4 billion and US$3.8 billion). Concessions followed a similar trend.

Table 2

Top 10 sponsors of electricity projects with private participation in developing countries, by region, 2001–03

			Projects by region					
Sponsor	Investment (2003 US$ billions)[a]	Projects	East Asia and Pacific	Europe and Central Asia	Latin America and the Caribbean	Middle East and North Africa	South Asia	Sub-Saharan Africa
Electricité de France	2.6	9	0	4	1	1	1	2
Malakoff	2.3	2	2	0	0	0	0	0
CPFL Energia	1.4	4	0	0	4	0	0	0
China Light and Power	1.4	2	2	0	0	0	0	0
PSEG Global	1.4	7	3	2	1	1	0	0
AES Corporation	1.3	8	0	3	1	1	1	2
Iberdrola	1.3	3	0	0	3	0	0	0
Banpu of Thailand	1.3	1	1	0	0	0	0	0
Commonwealth Development Corporation	0.9	5	0	0	0	0	3	2
Enelpower	0.8	2	0	0	1	1	0	0
Total[b]	13.0	41	7	9	10	4	5	6

a. Investment from all sources in projects in which sponsor has a stake of 15 percent or more.
b. Data may not sum to totals because of projects involving more than one sponsor.
Source: World Bank, PPI Project Database.

Difficult times

There are several reasons for the subdued interest in private projects, the main ones being the deteriorating financial situation of many sponsors; growing concerns over renationalization, renegotiation, or disappointing returns from some projects; and pessimism about emerging markets following the East Asian, Russian, and Argentine crises (Harris 2003).

Of the 932 electricity projects with private participation implemented in 1990–2003, around 50—involving investment commitments of more than US$26 billion—had been canceled or were under distress by the end of 2003.[3] These commitments represent 10.5 percent of total investment flows to the sector.[4]

Who is investing?

Regional and local sponsors have become more active in developing countries. Four of the top 10 electricity sponsors in 2001–03 were companies from developing economies: Malaysia's Malakoff, Brazil's CPFL Energia, Hong Kong–based China Light and Power, and Thailand's Banpu (table 2).

The emergence of regional and local sponsors reflects in part the withdrawal of global sponsors from developing countries. Actively looking for new investments until 2001, many global sponsors have since become less interested in, or less able to pursue, infrastructure projects in developing countries. And some have sought to improve their financial situation by selling nonstrategic or underperforming assets. Among the more visible examples are bankrupted Enron and Mirant, which have been actively selling their assets. Similarly, AES Corporation disposed of assets in Bangladesh, Georgia, and Tanzania and discontinued operations in Colombia, the Dominican Republic, and Honduras. In their few acquisitions in the past two years global sponsors have been selective, focusing on large developing economies with strong growth in electricity demand, such as Brazil, China, Mexico, and Thailand.

The changes in sponsors' strategies and profiles have reduced the concentration of private activity in electricity. The top 10 sponsors' share of investment flows dropped from more than 40 percent in 1990–2001 to 34 percent in 1990–2003—and their share of projects from 24 percent to 19 percent. Nevertheless, the main sponsors in the 1990s remained the largest investors in 1990–2003.[5]

Notes

1. The Private Participation in Infrastructure (PPI) Project Database includes only low- and middle-income countries, as classified by the World Bank. For the country income classification used in the 2003 update, see http://ppi.worldbank.org/wbclassification.asp. Project information and country classifications in the database are updated annually. The 2003 update includes significant upward revisions for 2001 and 2002. For more information, go to http://ppi.worldbank.org/faq.asp.

2. All dollar amounts are in 2003 U.S. dollars. Nominal figures have been deflated using the U.S. consumer price index. The PPI Project Database records total investment in infrastructure projects with private participation, not private investment alone. Investment commitments include expenditures on facility expansion, divestiture revenues, and license or canon fees.

3. Canceled projects are those in which private sponsors sell or transfer their economic interest back to the government; remove all management and personnel; or cease operation, service provision, or construction. Distressed projects are those under international arbitration or for which cancellation has been formally requested.

4. These figures may underestimate international arbitration cases because most arbitration bodies do not disclose information about cases (see Peterson 2004). It can also be difficult to find out which projects are under arbitration because private sponsors rather than project companies are usually the claimants.

5. The 10 largest investors were AES Corporation, Electricité de France, SUEZ, Endesa (Spain), Endesa (Chile), Iberdrola, Enersis, CPFL Energia, Siemens, and PSEG Global.

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