



## PRIVATE PARTICIPATION IN INFRASTRUCTURE RESEARCH GROUP

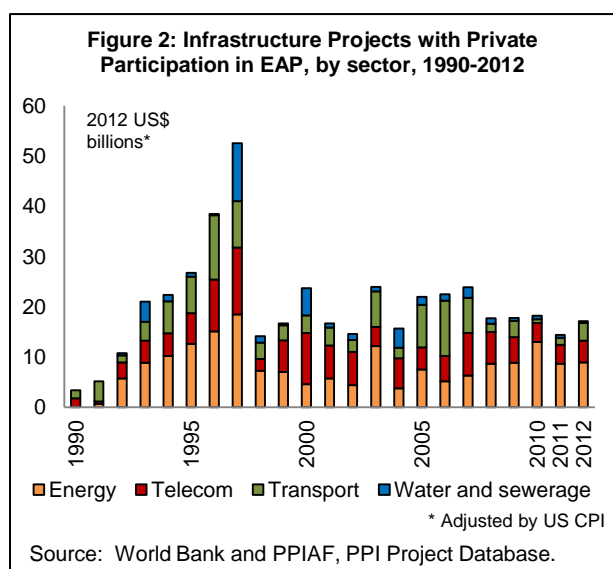
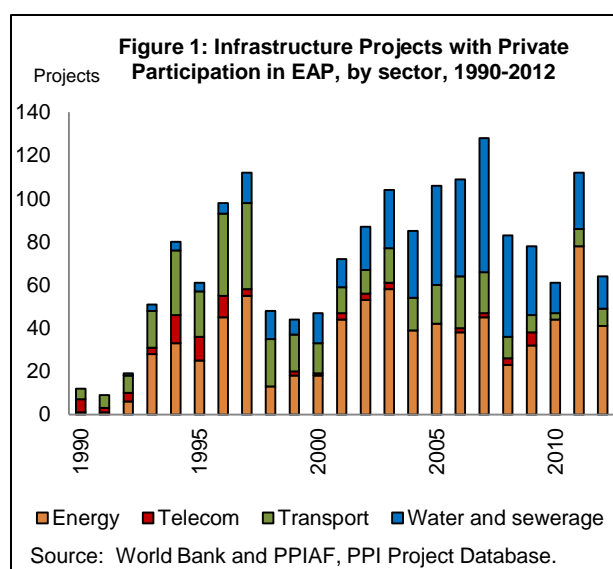
Note 91

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# Infrastructure Policy Unit 2012 East Asia and the Pacific PPI Data Update

### Investment in infrastructure with private participation in East Asia and the Pacific increased by 19%

In 2012, 64 new infrastructure projects reached financial or contractual closure in upper and lower-middle income countries in the East Asia and the Pacific (EAP) region China (33), Indonesia (8), Lao PDR (2), Malaysia (3), Mongolia (1), Philippines (4), Thailand (9) and Vietnam (4). Total investment commitments (hereafter, *investment*) in all infrastructure projects reached US\$17.1 billion, of which \$10.2 billion were investments in new projects and \$6.9 billion were additional investments in existing projects. Compared to 2011 investment levels, 2012 witnessed an increase of 19 percent over the previous year and comprised nine percent of global investment in 2012. However, the number of newly closed projects dropped from 112 to 64.<sup>1 2</sup>



Considering that private investment in infrastructure in developing countries rose by 4 percent in 2012 to \$181.4 billion, the region's PPI growth rate outperforms the global average. But historical data show that

This note was written by Jay JangHo Park, Infrastructure Finance Analyst to the Private Participation in Infrastructure Research Group, Infrastructure Policy Unit, Sustainable Development Network, World Bank Group.

<sup>1</sup>The PPI Project Database currently uses the FY12 World Bank country classification released in July 2012. Investment data are in 2012 US dollar using the US CPI to adjust to 2012 values. Data at <http://ppi.worldbank.org/> are reported in millions of current U.S. dollars unless otherwise indicated.

<sup>2</sup>Data on 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/>.

investment in the EAP region at a compound growth rate of 1.5 percent since 2002 did not keep pace with 8.3 percent regional GDP growth. Private investment in 2012 comprised just 0.2 percent of regional GDP.

### **Sector Overview**

In East Asia and the Pacific region, eight countries implemented 41 new **energy** projects: China (16); Indonesia (3); Lao PDR (2); Malaysia (3); Mongolia (1); Philippines (3); Thailand (9); Vietnam (4). This represents a 47 percent decrease compared to 2011 activity levels. Investment in energy projects was the exception, with a slight increase of 2.7 percent, totaling \$8.9 billion. All 41 projects were generation facilities and added 4.2GW. Of these, 32 were **renewable** energy projects with a total capacity of 1.5GW.

Thailand added the most generation capacity, a total of 1.8GW to the grid through its nine projects, mainly driven by the 1600MW Gulf Utai Power Plant, which was the largest new energy project of the region in 2012 by generation capacity. Malaysia increased its generation capacity by 1.0GW with the financial closure of three projects. Of these, 1000MW Tanjung Bin Power Plant Expansion project with an investment of \$2.2 billion was the largest in the region by investment. The Philippines expanded its generation capacity by 483MW, while China added 394MW to its grid with the largest number of new energy projects (16). Indonesia financially closed three projects totaling 99MW generation capacity. Lao PDR saw two projects of 239MW reach financial closure. Mongolia implemented one 50 MW project 50MW and Vietnam financed four projects of 121MW in total.

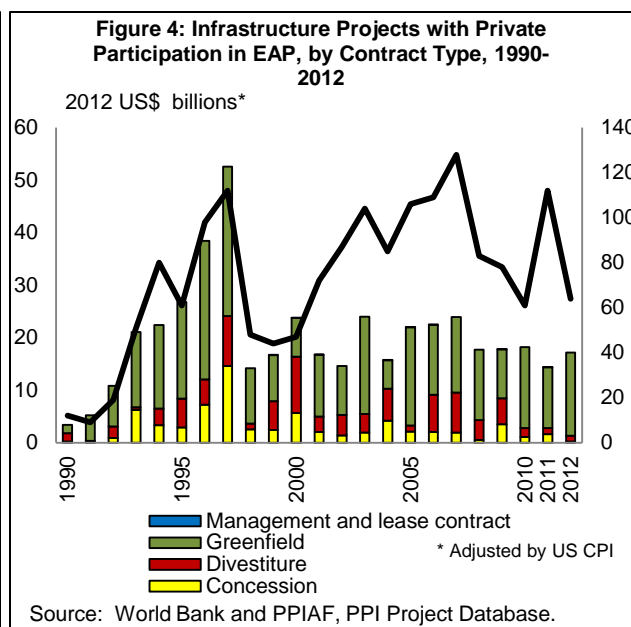
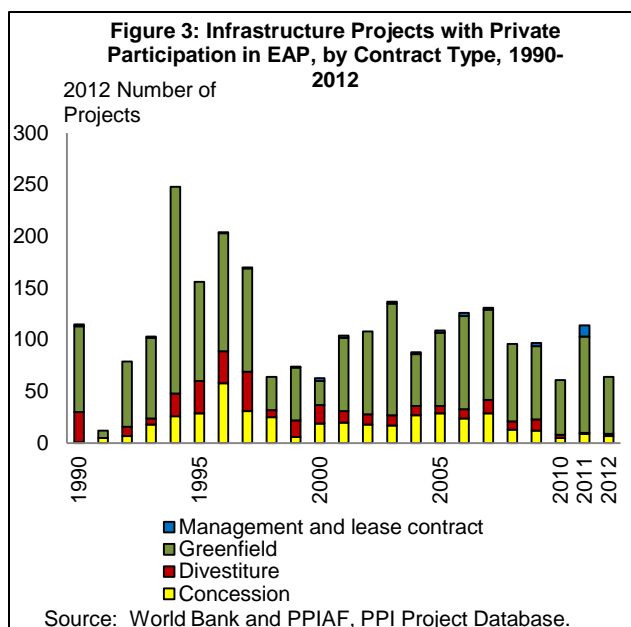
No new **telecom** projects reached financial closure in 2012. However, 12 existing projects expanded their operations with additional investments of \$4.3 billion. XL Axiata in Indonesia made the largest additional investment of \$904 million in 2012, and also in 2011 with \$813 million. The 2012 expansion of XL Axiata accounted for 21 percent of total investment in existing telecom projects in the region, followed by Globe Telecom (Philippines), Smart Communications (Philippines), True Move (Thailand) with their respective investment sizes of \$570 million (13%), \$543 million (13%), and \$537 million (12%).

Eight **transport** projects reached financial closure in 2012 with total investment of \$3.5 billion. All were greenfield projects and were distributed as follows: Indonesia (4), China (3), and the Philippines (1). Indonesia's projects were all roads. China added two seaport container terminals and one passenger railroad project. The Philippines closed one seaport terminal worth of \$50 million. The project with the most investment was the 53km long Hangzhou Metro Line One passenger railway, with \$1.31 billion investment comprising 37 percent of the total investment for new transport projects in 2012 in the region. The Cikampek Palimanan Toll Road from Indonesia ranked second, with investment commitment of \$1.30 billion.

In the **water** sector, 15 new projects with total investment of \$177 million closed in East Asia and the Pacific, of which 14 projects (8 greenfield, 6 concession) were from China. Indonesia implemented one 25 year water treatment plant concession, the Bekasi Water Project, involving US\$15 million investment. Total investment for new water projects in China amounted to \$162 million, or 91 percent of the total investment made in the region in new water projects in 2012.

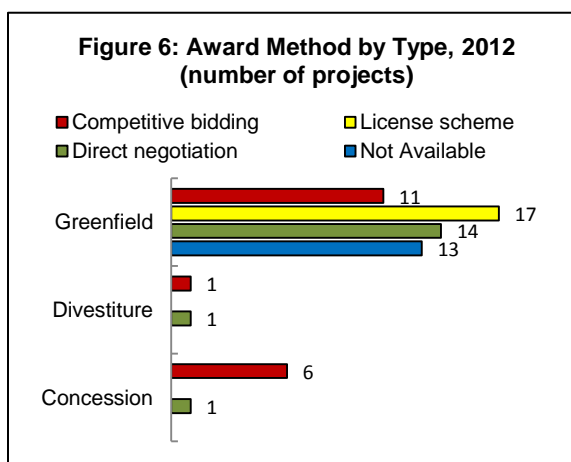
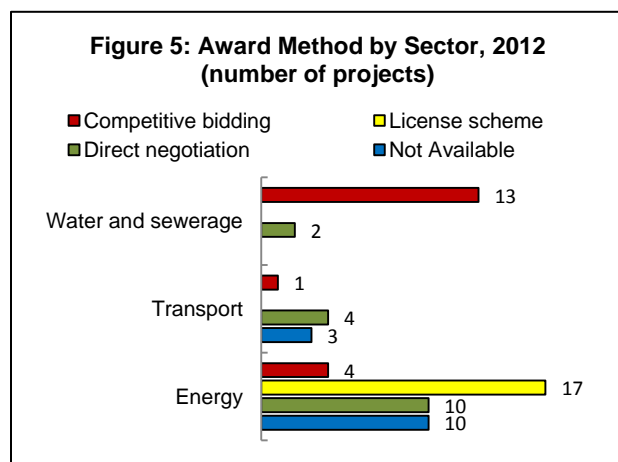
## Contract Type

The greenfield project was the most active type of PPI in 2012, with 55 projects accounting for 86 percent, followed by concessions (7 projects, 11%) and divestitures (2 projects, 3%). There were no management and lease contracts. With regards to investment size, greenfield projects were also the most active type of PPI involving 92 percent of the total new investment in the region, or \$15.8 billion. Divestitures were larger than concessions by \$0.9 billion, taking up 7 percent of total investment commitments for new projects in the region. Even though the number of new PPI projects decreased from the previous year, the total investment amount has increased distinctively in 2012.



## Award Method

The most popular award method of the projects of all sectors in the East Asia and the Pacific was competitive bidding. In 2012, 18 new projects were awarded through competitive bidding. Also license schemes (17) and direct negotiations (16) were actively used. By industry, license schemes were employed the most for energy, while direct negotiation and competitive bidding were used the most for transport and water respectively. As for the type of PPI, for greenfield projects, the license scheme was the most popular, while concessions were mostly awarded through competitive bidding in 2012.



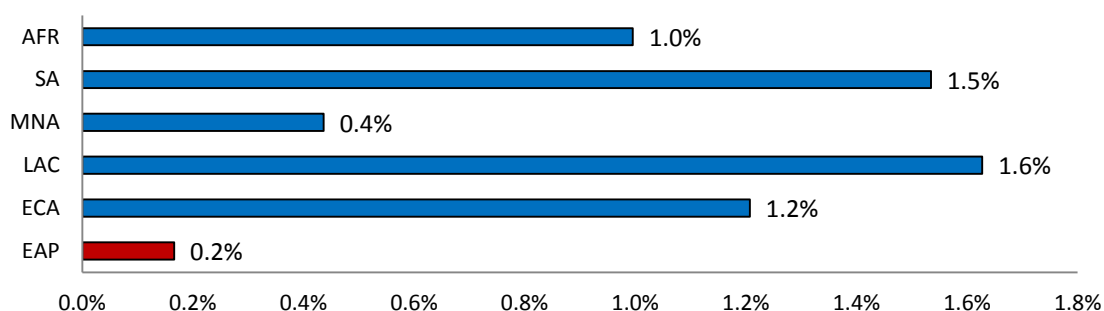
## Regional Outlook

China has been traditionally made a distinctively large contribution to PPI activities in the region. Since 1990 East Asia and the Pacific region has attracted total accumulated amount of \$460 billion (CPI adjusted) investment commitment for infrastructure projects. For those 23 years, China has made the largest contribution of 33 percent with accumulated investment amount of \$154.1 billion to the region, followed by Malaysia (17 percent, \$79.4 billion), Philippines (16 percent, \$74.7 billion), Indonesia (15 percent, \$69.9 billion), and Thailand (11 percent, \$51.6 billion).

Recently the smaller economies such as Malaysia, the Philippines, Indonesia, Thailand, Vietnam, Cambodia, and Lao PDR and have emerged with increasing influence on the region, and high cumulative infrastructure demand of around \$60 billion per year, driven by urbanization and high rates of growth. The historical data for the last five years show that there have been significant changes (in terms of the contribution to the PPI activities) in the region by these countries. For the period of 2008-2012, the region has committed accumulated investment of \$85 billion for PPI projects, in which the largest contribution was made by the Philippines (or \$17.8 billion), followed by Indonesia (20 percent, \$17.4 billion), China (19 percent, \$16.3 billion), Malaysia (11 percent, \$9.8 billion), Thailand (11 percent, \$9 billion), Lao PDR (7 percent, \$6.1 billion), and Vietnam (7 percent, \$5.6 billion). It is also notable that the main driver for this change in the region was deepened private sector engagement in energy sector. For instance, 98 percent of the growth of PPI in Lao PDR was based on energy sector the, followed by Vietnam (81 percent), Cambodia (73 percent), the Philippines (64 percent), Thailand (64 percent), Malaysia (47 percent), and Indonesia (35 percent). In Indonesia and Malaysia, telecom was the most active sector for PPI activities, contributing 52 percent, and 45 percent respectively.

Furthermore, in the coming years, it seems that energy generation may not to be the only sector to accelerate PPI activities in the region, as the need of PPI in the region is not only driven by domestic demand but also by the objective of regional integration and enhanced connectivity through transport, electricity transmission and natural gas pipelines . In support of this goal, the Association of Southeast Asian Nations (ASEAN), the member countries launched several initiatives, including the Master Plan on ASEAN Connectivity (MPAC), the ASEAN Infrastructure Financing Mechanism (AIFM) and the ASEAN Infrastructure Fund (AIF). These initiatives involve the private sector as a source of capital and expertise in developing sustainable infrastructure projects.

**Figure 7: 2012 PPI Investments as Percentage of GDP**



Over the next five years, according to the IMF World Economic Outlook, the economic growth rates are expected to slow down from 7.6 percent and 6.8 percent in 2013 for China and the Philippines to 7.0 percent and 5.5 percent in 2018. These countries were the leading players in private infrastructure during the last five years, investing an accumulated amount of \$3.3 billion and \$2.4 billion respectively. The slowing economic growth rates of the major players may reduce the opportunities for the private participation in infrastructure projects going forward. But it may also lead the governments to designing alternative options to finance the infrastructure projects by leveraging the private capital, as East Asia and the Pacific has significantly lower PPI investments as percentage of GDP compared to the other regions (figure 7), meaning that there is potential for

increased PPI in the region. The result would depend on the level of resolution of policy reform and willingness to create enabling environment for PPI by the region's governments.

### **Featured project - Tanjung Bin Power Plant Expansion (Malaysia) | Greenfield (BOO) | 25 year PPA**

#### **Project Description**

Tanjung Bin Energy Sdn Bhd, a project company, was formed by Malakoff Corporation Berhad (Malaysia) to develop the 1,000MW Tanjung Bin Coal-fired power plant, Pontian, Johor. The project consisted of a 1x 1,000MW turbine. The project company was formerly known as Transpool Sdn Bhd. The project is an expansion of the existing 2,100MW Tanjung Bin power plant. Malakoff is a 51 percent subsidiary of MMC Corporation Berhad (Malaysia), which is a utilities and infrastructure group with diversified businesses under three divisions, namely energy & utilities, ports & logistics and engineering & construction.

The steam turbine (STF100), Generator (GIGATOP turbogenerator) and boiler (supercritical) were supplied by Alstom (France). Alstom held the EPC contract with the project valued at EUR830 million (\$1,090 million). The project was awarded to Malakoff in June 2011 through competitive bidding by the Energy Commission. Construction was expected to last four years. Project commissioning was expected for March 2016 and construction started in August 2012. The off-taker is Tenaga Nasional Bhd (TNB) the largest utility company in Malaysia, under a 25 year PPA contract. The operation and maintenance contract was awarded to Teknik Janakuasa Sdn Bhd, a wholly-owned subsidiary of Malakoff.

#### **Financing Information**

The total project cost was \$2,211 million (RM 6.7 billion), and was the largest project to reach financial closure in the region during 2012. Financing was provided by a combination of domestically-issued Sukuk bonds (RM3.29 billion/\$1086 million, 12 year); ringgit senior tranche (RM700 million/\$231 million, 12 year); uncovered international tranche (\$400 million, 15 years); an equity loan (junior) (RM1.29 billion/US\$426 million, 5 year 100 percent balloon).

It appears the Sukuk bonds were provided by the Employees Provident Fund (EPF) a government-run fund. The Islamic project bonds have been rated at AA3 by RAM Holdings Hdb. Other participating banks were: RHB Bank (syndicated facilities lender) and RHB Investment Bank (lead arranger) (RM1.38 billion). RHB Banking Group is 41 percent owned by the Employees Provident Fund (EPF). RHB Bank is a subsidiary of RHB Capital Bhd (Malaysia).

**Table 1 Projects with private participation reaching financial or contractual closure in EAP in 2012**

Energy	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions )	Capacity type	Capacity	Sponsors
1	China	Baicheng County Ahebulong 1st Cascade Hydropower Station	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	21.08	MW	15.4	Xinjiang Taisheng Energy Development Co., Ltd. (100% / China)
2	China	Binzhou Tiandiyuan Biomass Power Plant	Operational	Electricity generation	Greenfield project	Build, operate, and transfer	69.57	MW	48	Shandong Tiandiyuan Industrial Co., Ltd. (100% / China)
3	China	Chibi City Liushanhu Town Biomass Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	51.69	MW	30	Kaidi Electric Power (100% / China)
4	China	China WindPower Gaoyouhu Wind Farm Phase I	Operational	Electricity generation	Greenfield project	Build, operate, and transfer	64.43	MW	49.5	China Windpower Group Limited (100% / China)
5	China	De'an Biomass Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	47.5	MW	30	Kaidi Electric Power (100% / China)
6	China	Deqing Jianeng Solid Waste Power Plant Acquisition	Operational	Electricity generation	Divestiture	Full	0	MW	12	Mizuda Group (100% / China)
7	China	Jiangsu Changzhou Trina PV Plant	Operational	Electricity generation	Greenfield project	Build, operate, and transfer	0	MW	2	Trina Solar Ltd (100% / China)
8	China	Kai County Solid Waste Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	48.75	MW	12	Beijing Sound Environment Industry Group (100% / China)
9	China	Neijiang Solid Waste Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	101.43	MW	18	Herrel Environmental Protection Industrial Co. Ltd. (100% / China)
10	China	Pingyang County Jinan Qiquan Biomass Power Plant	Operational	Electricity generation	Greenfield project	Build, operate, and transfer	35.6	MW	30	Jinan Qi Quan Thermolectricity Co. Ltd. (100% / China)
11	China	Qimo County Yutian 6MW PV Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	28.53	MW	6	Xinjiang Yutian New Energy Investment Co (100% / China)
12	China	Yangjiang Hanergy Roof PV Plant Demonstration Project	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	12.96	MW	27	Herrel Environmental Protection Industrial Co. Ltd. (100% / China)

Energy	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions )	Capacity type	Capacity	Sponsors
13	China	Yili Zhenfa 30MW PV Plant Phase I	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	63.39	MW	30	Jiangsu Zhenfa Solar Power Technological Development Co., Ltd. (100% / China)
14	China	Yongshun County Biomass Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	48.65	MW	30	Kaidi Electric Power (100% / China)
15	China	Yongxin County Biomass Power Plant	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	44.37	MW	30	Kaidi Electric Power (100% / China)
16	China	Zhuzhou Solid Waste Power Plant Phase I	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	79.98	MW	24	Jinliy Group (Chuangzhi Group) (100% / China)
17	Indonesia	Bina Puri Desa Patteneteang SHPP	Construction	Electricity generation	Greenfield project	Build, own, and operate	10	MW	4.2	Bina Puri Group (80% / Malaysia)
18	Indonesia	KOMIPO Wampu SHPP	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	174	MW	45	Korea Midland Power Corporation (KOMICO) (.. / Korea, Rep.), Daewoo E&C (.. / Korea, Rep.)
19	Indonesia	SGI-Mitabu Solar Plant Phase I	Construction	Electricity generation	Greenfield project	Build, own, and operate	104	MW	50	Solar Guys International (SGI) (.. / Australia), Mitabu Australia (.. / Australia)
20	Lao PDR	HAG Nam Kong II HPP	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	71.42	MW	66	Hoang Anh Gia Lai Group (100% / Vietnam)
21	Lao PDR	Sinohydro Nam Khan II & III HPP	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	430	MW	173	Sinohydro (85% / China)
22	Malaysia	Cypark Pajam Solar/Biogas Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	17.2	MW	7	Cypark Resources BHD (.. / Malaysia), LG Electronics Inc. (.. / Korea, Rep.)
23	Malaysia	Felda Global Jenka Biomass Plant	Operational	Electricity generation	Greenfield project	Build, own, and operate	36	MW	12.5	Tenaga Nasional Bhd. (40% / ..), Felda Holdings BHD (60% / Malaysia)
24	Malaysia	Tanjung Bin Power Plant Expansion	Construction	Electricity generation	Greenfield project	Build, own, and operate	2211	MW	1000	Malakoff Bhd (100% / Malaysia)

Energy	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions )	Capacity type	Capacity	Sponsors
25	Mongolia	Newcom Salkhit Wind Farm	Construction	Electricity generation	Greenfield project	Build, own, and operate	120	MW	50	Newcom (75% / Mongolia)
26	Philippines	Angat HPP Turbine IV & V	Operational	Electricity generation	Divestiture	Full	440.9	MW	246	Korea Water Resources Corporation (100% / Korea, Rep.)
27	Philippines	ASEA Aklan Biomass Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	12	MW	12	ASEA One Power Corporation (AOPC) (.. / Philippines), LG Group (.. / Korea, Rep.)
28	Philippines	Tranzen Agus III HPP	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	500	MW	225	Lanao Hydropower Development Corporation (LHDC) (20% / Philippines), Tranzen Group Incorporated (80% / Philippines)
29	Thailand	EGCO SPP5 Solar Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	27.8	MW	8	Electricity Generating Company (EGCO) (100% / Thailand)
30	Thailand	EGCO SunWat 1-4 Solar Plants	Operational	Electricity generation	Greenfield project	Build, own, and operate	52.7	MW	36	Electricity Generating Company (EGCO) (100% / Thailand)
31	Thailand	GPS Nakhon Sawan & Chai Nat Solar Plants	Operational	Electricity generation	Greenfield project	Build, own, and operate	54.6	MW	19.5	Gunkul Engineering (40% / Thailand), Electricity Generating Company (EGCO) (60% / Thailand)
32	Thailand	Gulf Utai Power Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	1280	MW	1600	J-POWER (90% / Japan), Others (10% / ..)
33	Thailand	Korat 3-5 & 7-9 Solar Plants	Construction	Electricity generation	Greenfield project	Build, own, and operate	39.2	MW	36	SPCG Public Company Ltd (100% / Thailand)
34	Thailand	Ratch Sao Thien-A Flared Gas Plant	Operational	Electricity generation	Greenfield project	Build, own, and operate	6.2	MW	4.2	Ratchaburi Electricity Generating Holding Plc (100% / Thailand)
35	Thailand	Solarta Nakhon Pathom Solar Plant	Operational	Electricity generation	Greenfield project	Build, own, and operate	18.6	MW	12.4	Yanhee Group (51% / Thailand), Ratchaburi Electricity Generating Holding Plc (49% / Thailand)



Energy	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsors
36	Thailand	Songkhla Biomass Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	20.2	MW	9.9	Ratchaburi Electricity Generating Holding Plc (40% / Thailand), Precise Power Producer Company (40% / Thailand), Assiddeek Savings Cooperative (20% / Thailand)
37	Thailand	SPCG Khon Kaen 3, 4, 5, 8	Construction	Electricity generation	Greenfield project	Build, own, and operate	26.1	MW	24	SPCG Public Company Ltd (.. / Thailand)
38	Vietnam	Lang Bang SHPP	Construction	Electricity generation	Greenfield project	Build, own, and operate	3.6	MW	3.6	Van Yen Exploitation Production and Construction JSC (100% / Vietnam)
39	Vietnam	Nam Na 3 Hydropower Plant	Construction	Electricity generation	Greenfield project	Build, own, and operate	120.2	MW	78	Hung Hai Construction Limited Company (100% / Vietnam)
40	Vietnam	Nam Xay Noi II SHPP	Operational	Electricity generation	Greenfield project	Build, own, and operate	12.8	MW	12	Song Da General Construction Company (100% / Vietnam)
41	Vietnam	VRG Dak Sin I SHPP	Construction	Electricity generation	Greenfield project	Build, operate, and transfer	32.2	MW	27	Vietnam Rubber Group (VRG) (100% / Vietnam)

Transport	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsors
1	China	Hangzhou Metro Line One	Operational	Passenger	Greenfield project	Build, operate, and transfer	1313.79	KM	53	MTR Corporation (49% / Hong Kong, China)
2	China	Jiaxing Container Terminal Extension Project	Operational	Terminal	Greenfield project	Build, operate, and transfer	10.94	Through put	200	Paul Y.-ITC Construction Holdings (90% / Hong Kong, China)

Transport	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsors
3	China	Ningbo Meilong Port Project	Operational	Terminal	Greenfield project	Build, operate, and transfer	158.48	Through put	400	AP Moller - Maersk Group (25% / Denmark)
4	Indonesia	Bali Nusa Dua Benoa Toll Road	Construction	Bridge and highway	Greenfield project	Build, operate, and transfer	263.5	KM	11	PT Jasa Marga (60% / Indonesia)
5	Indonesia	Cikampek – Palimanan Toll Road	Construction	Highway	Greenfield project	Build, operate, and transfer	1300	KM	116	PLUS Expressways Berhad (PEB) (55% / Malaysia)
6	Indonesia	Gempol Grati Pasuruan Highway	Construction	Highway	Greenfield project	Build, operate, and transfer	295	KM	34	PT Jasa Marga (80% / Indonesia)
7	Indonesia	Gempol Pandaan Toll Road	Construction	Highway	Greenfield project	Build, own, and operate	130	KM	13.6	PT Jasa Marga (53% / Indonesia)
8	Philippines	Davao International Container Terminal (DICT) Project	Construction	Terminal	Greenfield project	Merchant	49.7		Not Available	ANFLO Management & Investment Corporation (100% / Philippines)

Water	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions )	Capacity type	Capacity	Sponsors
1	China	Anshan City Dagushan Wastewater Treatment Plant	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	14.9	Cubic meters per day (thousands)	30	Beijing Sound Environment Industry Group (100% / China)
2	China	Anshan City Dongtai Wastewater Treatment Plant	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	36	Cubic meters per day (thousands)	100	Beijing Sound Environment Industry Group (100% / China)

Water	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsors
3	China	Anshan City Ningyuan Wastewater Treatment Plant	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	30.11	Cubic meters per day (thousands)	80	Beijing Sound Environment Industry Group (100% / China)
4	China	Bozhou Wastewater Treatment Plant Concession Agreement	Operational	Potable water and sewerage treatment plant	Concession	Rehabilitate, operate, and transfer	0	Cubic meters per day (thousands)	80	Anhui Guozhen Environmental Protection Science & Technology Co. Ltd. (100% / China)
5	China	Chuzhou City No. 2 Wastewater Treatment Plant	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	23.77	Cubic meters per day (thousands)	50	BerlinWasser (100% / Germany)
6	China	Dangtu County No. 2 Wastewater Treatment Plant	Construction	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	5.03	Cubic meters per day (thousands)	15	Shuguang Group (100% / China)
7	China	Emeishan City Wastewater Treatment Plant Concession Agreement	Operational	Sewerage treatment plant	Concession	Rehabilitate, operate, and transfer	13.31	Cubic meters per day (thousands)	50	Haitian Group (100% / China)
8	China	Funing County Wastewater Treatment Plant Concession Agreement	Operational	Sewerage treatment plant	Concession	Rehabilitate, operate, and transfer	2.06	Cubic meters per day (thousands)	10	Anhui Guozhen Environmental Protection Science & Technology Co. Ltd. (100% / China)
9	China	Hailun City Wastewater Treatment Plant	Operational	Sewerage treatment plant	Concession	Rehabilitate, operate, and transfer	4.75	Cubic meters per day (thousands)	20	Beijing Sound Environment Industry Group (100% / China)
10	China	Shifang Wastewater Treatment Plant	Operational	Sewerage treatment plant	Concession	Rehabilitate, operate, and transfer	5.72	Cubic meters per day (thousands)	30	MWH Global Inc (60% / United States)
11	China	Suizhou City Wastewater Treatment Plant Phase II	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	8.69	Cubic meters per day (thousands)	50	Suizhou City Yulong Water Supply Company Ltd (100% / China)

Water	Country	Project name	Project status	Segment	Type of PPI	Subtype of PPI	Investment commitment (US\$ millions)	Capacity type	Capacity	Sponsors
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12	China	Wuxue City Wastewater Treatment Plant Phase I Concession Agreement	Operational	Sewerage treatment plant	Concession	Rehabilitate , operate, and transfer	3.8	Cubic meters per day (thousands)	15	Xingyuan Kongjian Environmental Technology Co., Ltd. (100% / China)
13	China	Wuxue City Wastewater Treatment Plant Phase II	Construction	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	4.75	Cubic meters per day (thousands)	20	Xingyuan Kongjian Environmental Technology Co., Ltd. (100% / China)
14	China	Xian City Changan District Wastewater Treatment Plant Phase II	Operational	Sewerage treatment plant	Greenfield project	Build, operate, and transfer	9.29	Cubic meters per day (thousands)	50	Beijing Sound Environment Industry Group (100% / China)
15	Indonesia	Bekasi Water Project	Operational	Potable water treatment plant	Concession	Build, rehabilitate, operate, and transfer	15	Cubic meters per day (thousands)	19	Moya Holding Company (95% / Bahrain)

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

Source: World Bank and PPIAF, PPI Database.