ASIAN DEVELOPMENT BANK CLEAN ENERGY INVESTMENTS

ADB Total Loan/Investment ($ million) = 3,023

ADB Total Clean Energy Investment ($ million) = 1,693

PRIVATE SECTOR INVESTMENTS

Loan No.	Country	Project Name	Project Description	ADB	Loan /Investment ($million)	% CE Component	CE Investment ($million)	Board Approval Date
RENEWABLE ENERGY								
7285	PRC	Inner Mongolia Wind Power Project (Datang Sino-Japan Renewable Power Corp)	This project involves construction and operation of 49.5 MW wind power generation facilities which will generate an average of 133 Gwh of electricity annually. The project avoids generation of 140,000 tons CO2 annually		24.082	100%	24.082	4-Sept.-2008
7277 /2417	IND	Gujarat Paguthan Wind Energy Financing Facility (a.ka. Samana Wind Power Project)	The Samana Wind Power Project involves the construction and operation of 100.8 MW of wind power generation facilities. The Project is physically a part of a larger wind energy farm currently being developed by Enercon (India) Limited (EIL) for GPEC and other interested power producers. Upon completion, the Samana wind farm as a whole will have 450 wind turbine generators (WTGs) with a combined power generation capacity of 360 MW (0.8 MW per WTG). Power from each WTG will be transmitted at 33kV to a power collection system at the Sadodar substation located inside the wind farm. The substation will be owned and operated by EIL and is proposed to have four 100 million volt-amp (MVA) transformers to step up the power from 33 kV to 220kV.		45.0	100%	45.0	17-Apr-2008
7277 /2417	IND	CLP Wind Farms Private Limited (Samana Phase 2 Project & Saudatti Project)	The Saundatti Wind Power Project involves the construction and operation of 82.4 MW of wind power generation facilities (103 units of 0.8 MW each). This project is also being developed by EIL exclusively for GPEC. Power generated at the wind farm will be pooled through a power collection system and fed into the Karnataka Power Transmission Corporation Limited (KPTCL) substation located near Saundatti town.	RE	60.0	100%	60.0	17-Apr-2008
DEMAND SIDE ENERGY EFFICIENCY								
NONE								
SUPPLY SIDE ENERGY EFFICIENCY								
7279	PRC	Municipal District Energy Infrastructure Development Project (Dalkia Asia Pte Ltd.)	Guidelines-Estimating-ADB-Investments		400.0	75%	300.0	2-Jun-2008
OTHER								
7275	REG	Asian Clean Energy Private Equity Funds	Under the project ADB is encouraging the growth of risk capital in the Asian clean energy sector by investing equity in several private equity funds, which will, in turn, invest equity in clean energy projects and companies. ADB hoped to make both the private equity sector and the clean energy sector aware of its commitment to increasing equity funding to clean energy investments, and to motivate other sectors to merge their expertise to catalyze increased equity investment in clean energy projects in ADB's DMCs. Qualified projects include renewable energy, energy efficiency and greenhouse gas abatement projects.		100.0	100%	100.0	17-Apr-2008
Sub Total					**569.1**		**529.1**	
LARGE HYDROPOWER								
NONE								
EFFICIENCY IN FOSSIL FUELS								
7276	IND	Mundra Ultra Mega Power Project (Coastal Gujarat Power Ltd)	The Project is to construct, operate, and maintain a 4,000 MW coal-fired power plant with five units of 800 MW each, incorporating more energy efficient supercritical technology near Tundawanda village, Mundra Taluka in Kutch district, in the state of Gujarat.		450.0	20%	90.0	17-Apr-2008
7273	PHI	Masinloc Coal-Fired Power Project (Masinloc Power Partners Co, Ltd.)	The Project involves acquisition, rehabilitation, and operation of the existing 600 megawatt (MW) Masinloc coal-fired thermal power plant in Zambales province by Masinloc Power Partners Co. Ltd. (MPPC), an indirect subsidiary of AES Corporation of the United States. The Project will increase the electricity supply, improve the operating efficiency of the plant to its original level, and bring the plant's environment, health, and safety standards up to global standards.		200.0	5%	10.0	15-Jan-2008
Private Sector Total					**1,279.1**		**629.1**	

ASIAN DEVELOPMENT BANK CLEAN ENERGY INVESTMENTS

PUBLIC SECTOR INVESTMENTS

Loan No.	Country	Project Name	Project Description	AD	Loan /Investment ($million)	% CE Component	CE Investment ($million)	Board Approval Date
RENEWABLE ENERGY								
2428	PRC	Integrated Ecosystem & Water Resources Mgt. in the Bayangdian Basin Project	The clean energy development component of this project will use geothermal space-heating to replace coal-fired space heating boilers. The use of geothermal heat will eliminate 60,000 tons of coal each winter; and will reduce emissions of CO2, COD, SO2 and ash that pollute both air and water.		100.0	7%	6.6	24-Jun-2008
2498	IND	Uttarakhand Power Sector Investment Program (sub-project II)	Clean energy development involving new small hydroelectric power plants; development of hydrometerological monitoring network; capacity building for Uttaranchal Energy Department; upgrading of information technology system		62.4	100%	62.4	23-Dec-2008
2415	IND	MFF - National Power Grid Development Investment Program (Tranche 1)	The investment program will finance dedicated electricity transmission lines to evacuate power from renewable sources to replace thermal generation at the demand sites. It will (i) provide long-term and predictable financing for POWERGRID's huge investment requirements; (ii) reduce 821 million t of carbon dioxide (CO2)-equivalent emissions over the lifetime of two proposed projects primarily by replacing thermal generation at the demand site with transmitted, clean hydropower; (iii) introduce best practices, such as state-of-the-art HVDC transmission technologies; and (vi) ensure sound environmental and social safeguard policies are followed.		400.0	100%	400.0	28-Mar-2008
DEMAND SIDE ENERGY EFFICIENCY								
2410	IND	MFF - Uttarakhand Urban Sector Development Investment Program (Tranche 1)	The investment program covers urban infrastructure and services improvements which include the rehabilitation, improvement, and expansion of water supply which will replace inefficient equipment and will eliminate leaks to reduce unaccounted-for water (UFW). Each cubic meter of UFW saved results in kwh of electricicty saved from pumping and production processes.		60.0	35%	21.1	1-Feb-2008
2426	PRC	MFF - Guangdong Energy Efficiency and Environment Improvement (Tranche 1)	The Investment Program is to finance an efficiency power plant (EPP) in Guangdong province, that will save the equivalent to 107 megawatts, using the financial intermediation loan (FIL) modality. Nine subprojects have been selected for the first financing tranche. The energy savings will result from retrofitting existing equipment with more efficient equipment, which in aggregate will reduce the need to construct and operate a conventional coal-fired power plant.		35.0	100%	35.0	9-Jun-2008
2420	PRC	Xinjiang Municipal Infra. & Env. Improvement	The project will reduce non-revenue water (NRW) by 20% and will result in an improved municipal infrastructure and a better living and ecological environment in Alashankou land port, Kanas scenic region, and Yining City. Each cubic meter of NRW saved has an equivalent energy savings from pumping and other water production processes.		105.0	9%	9.8	23-Apr-2008
2424	PAK	Preparing Lahore Rapid Mass Transit System	The TA project will improve the urban rapid mass transportation network in Lahore. The rapid mass transport system is about 10 times more energy-efficient than conventional road transport. The outcome of the TA is a structured design for the Lahore RMTS Project feasible for ADB financing. The Lahore RMTS, once implemented, will benefit large numbers of people day-in and day-out in Lahore. Other road users will benefit from reduced congestion and pollution.	6	6.0	20%	1.2	4-Jun-2008
2466	UBZ	Surkhandarya Water Supply and Sanitation	The project will reduce unaccounted-for water (NRW) from over 50% to less than 40% by rehabilitating water supply and sanitation systems and facilities. Each cubic meter of NRW saved has an equivalent energy savings from pumping and other water production processes.		30.0	25%	7.5	3-Nov-2008
SUPPLY SIDE ENERGY EFFICIENCY								
2437	AZE	Power Transmission Enhancement Project	The project will construct a 280-km double-circuit 220 kV transmission line from a hydroelectric plant, the Agdash substation with two 125 MVA transformers and associated 110 kV transmission lines, and will expand the Absheron substation. It will also provide project management support and institutional strengthening. The project will remove transmission bottlenecks, increase transmission and distribution capacity and reduce transmission line losses by 25 GWh, from 6% in 2007 to 3% in 2012. It will reduce CO2 emissions by about 1.3 metric tons annually.		160	7%	11.2	10-Sept.-2008
2438/9	PAK	Power Distribution Enhancement Investment Program	The Investment Program will enhance the efficiency of the overall power distribution system; and provide an adequate and reliable power supply to a greater number of industrial, commercial, and residential customers. Tranche-1 under the Investment Program will include (i) addition of circuit and transformer capacity to enable the already overloaded systems to deliver present demand reliably and meet the expected load growth, (ii) loss reduction, and (iii) refurbishment of distribution networks. As a result of the project, commercial and technical losses are to be reduced each year by 10% of the previous year's loss figure.		252	7%	42.8	12-Sept. 2008
2407	PRC	Gansu Baiyin Urban Development Project	The Project will provide support to facilitate economic transformation in Baiyin by strengthening urban services and infrastructure, and promoting capacity development. Through the district heating services component, the Project will replace 63 small polluting coal-fire heating boilers with a more efficient and environment-friendly centralized district heating system. By the year 2015, the heating service area will expand by 2.6 million square meters and benefit about 20,000 households among whom about 10% are low-income families. The district heating services component will also help reduce the emission of sulfur dioxide by 185 tons per year, reduce consumption of coal by 5,700 tons per year, and improve public health and indoor air quality by eliminating numerous indoor coal-burning stoves and switching to district heating, particularly for the poor.		80.0	15%	12.2	23-Jan-2008
		Sub Total			**1,198.0**		**539.9**	
LARGE HYDROPOWER								
2408	PRC	MFF - Gansu Heihe Rural Hydropower Development Investment Project- Project 2	The Investment Program will finance the construction of 60 MW Dagushan hydropower plant to provide renewable power supply to support economic growth in the rural areas of Gansu.		28.0	100%	28.0	29-Jan-2008
2429	VIE	Song Bung 4 Hydropower Project	The Project consists of the construction of a 156 megawatt (MW) hydropower plant in the Vu Gia-Thu Bon river basin in Quang Nam province, central Viet Nam.		196.0	100%	196.0	26-Jun-2008
2461	IND	Himachal Pradesh Clean Energy Development Investment Program - Tranche 1	This tranche includes clean power development via construction of the 111 MW Sawra Kuddu Hydroelectric Project located on the Pabber river in Shimla district of Himachal Pradesh. Construction activities include underground powerhouses, associated civil works, river diversion, electromechanical works, and power evacuation systems. This tranche also includes the civil works for the 65 MW Kashang I Hydroelectric Project, including the common power house for the Kashang I, II and III Projects, located on tributary streams of the Sutlej river in Kinnaur district. These subprojects, as well as all other subprojects earmarked for future tranches, are run-of-river design. The first tranche loan will also include the $12 million capacity development component.		150.0	100%	150.0	27-Oct-2008
2463/4	BHU	Green Power Development	The Green Power Development Project has two components: (i) regional clean power trade, and (ii) renewable energy access for the poor. Under the first component, the Dagachhu hydropower development (a 114-megawatt [MW] run-of-river type) aims to export power from Bhutan to India through the existing grid to India. The rural electrification component will provide access to electricity sourced from hydropower to 8,767 households and facilities with grid extensions, and electricity sourced from solar energy to 119 remote public facilities (e.g., schools, health clinics, and other community facilities) on an offgrid basis.		80.0	100%	80.0	29-Oct-2008
EFFICIENCY IN FOSSIL FUELS								
NONE								
		Public Sector Total			**1,744.4**		**1,063.8**	