

PROJECT PORTFOLIO SUMMARY ENERGY

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CODE	TECHNOLOGY	PROJECT NAME AND DESCRIPTION	EMISSION REDUCTION (TCO2E/YEAR)	INVESTMENT IN MILLIONS US\$	DNA APPROVAL (LOA)	STATUS	SALE SITUATION
H-1	Hydropower	"Poechos I" Hydropower Project: Located in Piura, has an installed capacity of 15.4 MW and a projected installed capacity of 58.5 GWh.	31,878	16.5	YES	Registered	ERPA with Prototype Carbon Fund of the World Bank
H-2	Hydropower	"Poechos II" Hydropower Project: Is the second phase of an existing Hydropower plant, and would have an installed capacity of 10 MW and an annual production of energy is 40,5 GWh.	23,437	10.5	YES	PDD under elaboration	CERs will be sold in spot market
H-3	Hydropower	"Tarucani" Hydropower Project: Located in Arequipa, its installed capacity and estimated yearly energy generation is 49 MW and 282.5 GWh, respectively.	153,957	55.7	YES	Registered	Looking for CERs buyers
H-4	Hydropower	"Quitaracsá" Hydropower Project : Located in Ancash, would have an installed capacity of 112 MW and an average annual energy production of 595.65 GWh.	249,463	101.1	YES	Request Registration	Looking for CERs buyers
H-5	Hydropower	"Santa Rita" Hydropower Project: Located in La Libertad, would have an installed capacity of 173 MW and will have 1100 GWh of annual energy production.	644,512	183.0	YES	PDD	ERPA with EEA
H-6	Hydropower	"Central Gratón" Hydropower Project: Located in Lima, is a small scale project with an installed capacity and projected average generation of 5 MW and 3.6 GWh, respectively.	20,286	5.8	YES	PDD under elaboration	Looking for CERs buyers
H-7	Hydropower	"Carhuaquero IV" Hydroelectric Power Plant: Located in Cajamarca, its a small scale project with an installed capacity of 9.8MW and projected generation of GWh-year.	24,609	6.4	YES	At Validation	Comercialization Contract with AHL Carbono
H-8	Hydropower	"Caña Brava" Hydroelectric Power Plant: Located in Cajamarca, is a small scale project with an installed capacity of 5MW and average generation of 37 GWh-year.	22,622	8.6	YES	At Validation	Looking for CERs buyers
H-9	Hydropower	"San Diego" Hydroelectric Power Plant: Is going to be located in Ancash. Its installed capacity and projected average energy generation is 3.8 MW and 21 GWh per year, respectively.	12,304	3.3	NO	PIN	Looking for CERs buyers
H-10	Hydropower	"Santa Rosa" Hydroelectric Power Plant: Is a bundle of 3 small run-of-river hydroelectric power plants, located in Lima, in the Santa Rosa Irrigation in the Sayan District. The installed capacity and projected average generation is 4.1 MW and 30.2 GWh per year.	17,378	3.6	YES	Registered	ERPA with Community Development Carbon Fund
H-11	Hydropower	"La Virgen" Hydropower Plant: The project would be located in Junin, and would have 64 MW of installed capacity and it will produce an average net annual generation of 386.8 GWh.	226,568	11.9	YES	At Validation	Looking for CERs buyers
H-12	Hydropower	"La Joya" Hydroelectric Power Plant : located in Arequipa and it would have an install capacity of 9.6 MW and an annual average generation of 69.81 GWh.	40,903	11.4	YES	PDD under elaboration	Looking for CERs buyers
H-13	Hydropower	"San Gaban I" Hydroelectric Project: Located in Puno, consists of a seasonal regulated hydroelectric power plant of 150 MW capacity and it will produce an average net annual generation of 932 GWh.	546,077	221.6	NO	PIN	Looking for CERs buyers
H-14	Hydropower	"Rehabilitation of Callahuanca hydroelectric power station": Is located in Lima, currently the plant has a total installed capacity of 72.7 MW. This refurbishment will increase the plant's capacity up to 82,5 MW without dam enlargements nor new water inlets are necessary.	18,438	13.8	YES	At Validation	CERs will be sold to ENDESA

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H-15	Hydropower	"PARIAC CH 5-6" Hydropower Project: Will be built in Ancash, upstream of the existing PARIAC mini hydro facilities The project would have an installed capacity of 7.7 MW and an estimated energy annual production of 53.4 GWh.	31,276	12.0	File under elaboration	PDD under elaboration	Looking for CERs buyers
H-16	Hydropower	"PARIAC CH 2-3" Hydropower Optimization Project: will optimize the operation of four small hydro power plants, concentrating the facilities in only two hydro power plants and increasing the effective power output in 0.7 MW.	2,929	1.0	File under elaboration	PDD under elaboration	Looking for CERs buyers
H-17	Hydropower	"COPA" Hydropower Project: Located in Lima, will be built downstream of the RAPAY Project. Is expected to have an installed capacity of 77 MW and an estimated annual energy production of 411 GWh.	240,772	76.6	File under elaboration	PDD under elaboration	Looking for CERs buyers
H-18	Hydropower	"RAPAY" Hydropower Project: This project plans to have an installed capacity of 89 MW and an estimated annual energy production of 428 GWh.	250,762	100.0	File under elaboration	PDD under elaboration	Looking for CERs buyers
H-19	Hydropower	"Yaupi" Hydropower Expansion Project: Located in Junin, the project would increase the plant's generating capacity by approximately 35 MW.	110,738	10.2	NO	PDD under elaboration	Looking for CERs buyers
H-20	Hydropower	"Aobamba Hydroelectric Project": Will be Located in Cusco, its installed capacity and projected average generation is 10 MW and 130 GWh per year, respectively.	76,169	17.3	NO	PIN	Looking for CERs buyers
H-21	Hydropower	"Rehabilitation of the Hydroelectric of Machupicchu": The project is located in Cusco and would have an installed capacity of 75 MW with 518 GWh of annually energy production.	281,792	57.5	YES	PDD under elaboration	Looking for CERs buyers
H-22	Hydropower	"Santa Teresa" Hydropower Project: will be located in Cusco, its installed capacity would be 87.57 MW that will deliver 679 GWh per year to the National Interconnected Grid (SEIN).	397,840	77.9	NO	PIN	Looking for CERs buyers
H-23	Hydropower	"Yuncan" Hydropower Project: Located in Pasco, it has an installed capacity of 136 MW, and the estimated electric generation is 901 GWh per year.	527,914	NA	NO	PDD under elaboration	Contract with AHL Carbono
H-24	Hydropower	"Chirhuain" Hydropower Project: Will be located in Cerro de Pasco. The installed capacity is planned to be around 5 MW and is estimated an average of 33 GWh of electric generation.	19,335	NA	NO	PIN	Looking for CERs buyers
H-25	Hydropower	"El Platanal" Hydropower Project: It will be located in Lima region , The project's installed and firm capacity is 220 MW. The estimated yearly average generation is 1,063 GWh.	622,833	186.3	NO	PDD under elaboration	Contract with AHL Carbono
H-26	Hydropower	"Pías I" Hydroelectric Power Plant: Is located in La Libertad Region. The Project installed capacity would be 12.6 MW, from a 245 meters jump.	46,231	16.5	File under elaboration	PIN	Looking for CERs buyers
H-27	Hydropower	"Mancahuara" Hydropower Project: Located in Apurimac, its a small project that consists in a rehabilitation of an old abandoned hydro plant. the total power will be 2.5MW.	8,920	2.3	File under elaboration	PDD under elaboration	Looking for CERs buyers
H-28	Hydropower	"Hercca" Hydropower Project: Is located in the city of Sicuani in Cusco. The hydropower plant will have 6.7 MW of installed capacity.	22,717	NA	NO	PIN	Looking for CERs buyers
H-29	Hydropower	"Huanza" Hydroelectric Project: The proposed project is located 130 kilometers north east of Lima. It consists of a 90.6 MW run-of-river hydroelectric power plant. The annual average generation is estimated at 369.8 GWh.	215,809	80.0	YES	PDD	Looking for CERs buyers
H-30	Hydropower	"Centaurus I-III" Hydroelectric Project: The purpose of this project is to build a new 30 MW Hydroelectric using run of water from two rivers. The estimated annual production of energy will be 223 GWh which will be delivered to the national grid (SEIN).	130,660	14.0	NO	PIN	Looking for CERs buyers
H-31	Hydropower	"Chaglla" Hydropower Project: will be implemented in Huallaga River, in the central region of Peru. This project would consist in the construction of a new power plant with a power of 360 MW and the estimated annual production of energy would be 2,475 GWh.	1,450,152	283.7	NO	PIN	Looking for CERs buyers

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H-32	Hydropower	"San Gaban III Hydroelectric Power Station": The Project is located in Puno Region , its installed capacity is estimated in 174 MW, and annual electric energy production of 1189 GWh.	696,659	182.1	NO	PIN	Looking for CERs buyers
H-33	Hydropower	Rehabilitation of "Calca Hydropower Plant": The plant shall be located in the region of Cusco and will have an installed capacity of 3.00 MW, with two turbine-generator groups, and an annual electric energy production of 19.85 GWh.	11,630	2.6	NO	PIN	Looking for CERs buyers
H-34	Hydropower	"Aricota 3" Hydropower Project: The project plans to have an installed capacity of 19 MW and an estimated annual energy production of 52.5 GWh.	30,760	20.4	NO	PIN	Looking for CERs buyers
TL-1	Transmission Line	"Grid Connection of isolated electricity systems San Gabán - Puerto Maldonado": The project consist in the implementation of a Transmission Line named "San Gaban Puerto – Maldonado", that would bring energy from the interconnected grid to Puerto Maldonado City, contributing in rural electrification.	14,346	20.1	YES	PDD under elaboration	Contract with DEUMAN
TL-2	Transmission Line	"138 kV Transmission Line Majes – Camana": The project extends 65,58 km of the 138 KV transmission line, from Majes to Camana, constructs 1 substation, and supplies electrical energy to the Camana province.	2,303	3.5	NO	PIN	Looking for CERs buyers
TL-3	Transmission Line	"138 kV Transmission Line Tayabamba – Llacubamba": The project prolongs 31,5 km, the government 138 KV transmission line from Tayabamba to Llacubamba, and constructs 5 substations and 11,5 km of primary 22.9 kV lines towards Retamas and San Andrés.	18,000	9.3	NO	PIN	Looking for CERs buyers
W-1	Wind Power	"Los Perros / Bayovar" Wind Energy Project: Located in Sechura - Piura, this wind energy project of 20 MW of installed capacity will replace energy generated by the oil fired thermo-electrical power plants, mainly operating in the northern part of Peru's national grid system.	24,000	26.4	NO	PIN	Looking for CERs buyers
W-2	Wind Power	"Nordwind" Wind Farm Project: This project will be located in Paita - Piura, and would have an installed power capacity of 30MW comprised of either 20 wind turbines of 1.5 MW each or 12 wind turbines of 2.5 MW each.	53,247	45.0	NO	PIN	Looking for CERs buyers
SWM-1	Solid Waste Management	"Portillo Grande" Landfill Gas Recovery Project: Is located in the south part of Lima City. This landfill is 15 years old and has accumulated 4.2 million tons of MSW. This landfill has the capacity to receive 2000 tons per day for the next 30 years.	151,646	1.6	File under elaboration	PIN	Looking for CERs buyers
SWM-2	Solid Waste Management	"El Zapallal" Landfill Gas Recovery Project: located in the north zone of Lima City. This landfill is 17 years old, has accumulated 3 million tons of MSW and has the capacity to receive 2000 tons per day for the next years.	54,213	1.6	NO	PIN	Looking for CERs buyers
SWM-3	Solid Waste Management	"Ancon – EcoMethane Landfill Gas Project": Located in the north part of Lima, the objective is to replace the existing ineffective passive venting system by an active gas collection and flaring system in order to destroy the methane contained in the LFG.	75,939	3.6	YES	At validation	Contract with Ecosecurities
SWM-4	Solid Waste Management	"Huaycoloro" Landfill Gas Recovery Project: The project is located in Huarochiri - Lima and it consists of the installation of a methane collection and flare system, to be placed in the cells of Huaycoloro's landfill.	379,440	2.0	YES	Registered	ERPA with Netherlands Clean Development Mechanism Facility
T-1	Transportation	"Rapid Bus Transport System based on High Capacity Buses using Exclusive Roads": The project aims to develop a massive public transportation system in the city of Lima, which will be more economic, faster, and more ordered than the current system.	199,744	214.5	NO	PIN	Looking for CERs buyers
T-2	Transportation	"Electric Mass Transit System Project for Lima and Callao": The project aims to endow an electric mass transit system, for peripheral zones in the Cities of Lima and Callao with high population density.	725,585	275.0	NO	PIN	Looking for CERs buyers
T-3	Transportation	"Integrated Transport System in Lima" project will displace around 2,182,715.0tCO2e/UNTIL (2012) which otherwise will be emitted by small diesel transportation units.	436,543	335.6	NO	PIN	Looking for CERs buyers

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B-1	Biomass	Cogeneration with Biomass at "Complejo Agroindustrial Cartavio SAA": Is located in La Libertad. The Project consist in replace the current energy generation system to another modern system with more efficient combustion that will use bagasse instead of residual oil.	28,821	6.1	YES	PDD Under elaboration	ERPA with PLAC - CAF
B-2	Biomass	"Avoid methane emissions using biodigester for Vinasse Treatment at Cartavio S.A.A.": Consists in a vinasse treatment facility as well as a cogenerating facility, it involves the design, construction, installation, start-up and operation of biodigesters and co-generating facility. It's expected to have 4 MW of capacity.	70,000	5.0	NO	PIN	Looking for CERs buyers
B-3	Biomass	"Paramonga" CDM Bagasse Boiler Project: will replace the existing boilers with a new bagasse one, displacing the use of residual fuel oil with renewable energy and zero net greenhouse gas emissions.	87,339	5.4	YES	At Validation	Contract with CAEMA
B-4	Biomass	"HEAVEN" Biodiesel Production and Distribution for Automobile Transportation: This project will take place in Lurin - Lima; it consists in the construction of a plant for a production of 120,000 gallons of biodiesel per day.	446,995	15.0	NO	PDD under elaboration	Comercialization Contract with AHLCarbono
B-5	Biomass	"Garodi" Biodiesel Plant: Located in Lima, the project consists in the construction of a Biodiesel plant for a production of 10,000,000 liters per year.	26,960	0.6	NO	PDD under elaboration	Comercialization Contract with AHL Carbono
B-6	Biomass	"COMISA" Sugar cane ethanol project: the project is going to be located in Sullana Province, Piura Region and consists in the implementation of 12 000 hectares of sugar cane crops with the propose to generate ethanol.	192,000	81.0	NO	PIN	Looking for CERs buyers
B-7	Biomass	"Palmas del Espino – Biogas recovery and heat generation from Palm Oil Mill Effluent": The project involves a biogas recovery system which covers lagoons with floating plastic membranes.	27,000	1.3	File under elaboration	At Validation	Contract with Ecofys
B-8	Biomass	"Boiler Optimization in Agroindustrial Laredo": The project is located in La Libertad, consists in the optimization and repotiation of an old boiler, displacing the use of residual fuel oil through the use of bagasse to feed this boiler.	75,979	2.0	NO	PIN	Looking for CERs buyers
B-9	Biomass	"Chiclayo Rice Hull Power Plant": The objective is to generate electricity by burning rice hulls, a biomass fuel. The initial stated aggregate power output from the plant will be 9.2 MW.	14,891	16.6	NO	PIN	Looking for CERs buyers
B-10	Biomass	"Sugar Cane Foliage for Steam and Green Power Generation": Based on Swedish technology, whole cane harvesting and subsequent separation and use of cane foliage will facilitate a fossil fuel free production of sugar, paper (from bagasse), ethanol (from molasses) and other products.	296,000	20.0	NO	PIN	Looking for CERs buyers
B-11	Biomass	"La Calera" Biogas project: The project consists in the installation of two biodigesters to produce methane gas, this gas will be recovery to use in the chicken farm.	NA	0.4	NO	PIN	Looking for CERs buyers
FS-1	Fuel Switching	"Fuel Switching at Atocongo Cement Plant and Natural Gas Pipeline Extension - Cementos Lima": The project considers the construction of a 3.5 km natural gas pipeline and the installation of new natural gas burners.	432,762	5.4	YES	At Validation	Contract with DEUMAN
FS-2	Fuel Switching	"REX S.A." Fuel Switching Project: contemplates fuel switching from coal to natural gas in brickworks furnaces through the installation of new burners for natural gas.	32,000	0.5	YES	PDD under elaboration	Contract with A2G
FS-3	Fuel Switching	"Peruvian Fuel-Switching Project": the project is located in Lima, and consists in the substitution of fuel that consists in investment in order to replace the use of liquid fuels of petroleum for natural gas.	25,577	0.7	YES	At Validation	Contract with MGM Int.
TOTAL			11,099,660	2,891.8			