



Philippines: Mitigation of Climate Change through Increased Energy Efficiency and the Use of Clean Energy

Project Name	Mitigation of Climate Change through Increased Energy Efficiency and the Use of Clean Energy
Project Number	43207-012
Country	Philippines
Project Status	Closed
Project Type / Modality of Assistance	Technical Assistance
Source of Funding / Amount	TA 7754-PHI: Mitigation of Climate Change through Increased Energy Efficiency and the Use of Clean Energy Japan Special Fund US\$ 700,000.00 Technical Assistance Special Fund US\$ 225,000.00
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth
Drivers of Change	Governance and capacity development
Sector / Subsector	Energy - Energy efficiency and conservation
Gender Equity and Mainstreaming	Some gender elements
Description	<p>This will cover activities under the broad umbrella of energy efficiency and clean energy, where large investment are needed to support government's plan. The project's concept paper was approved last year and ADB recruit a range of individual consultants to prepare the proposed components. The proposed components for study are:</p> <p>(i) energy efficiency: distribution (as hire purchase) of energy efficient appliances (TV, air-conditioners, fridges and fans). These component may also finance scaling up the public-lighting and efficient buildings components of the Philippine Energy Efficient project. However, in September 2012, after extensive consultations with the civil society, the Efficient Appliances Project was dropped and a solar rooftop project, with a revised scope, was agreed and included in the updated Country Investment Plan for the Philippines.</p> <p>(ii) market for electric vehicle: distributing (lease or hire purchase) about 20,000 electric tricycles replacing 2 stroke and 4 stroke tricycles that are common in metro-Manila (200,000 units) and across the country (3,500,000 units). Tricycles produce about 10 million tons of CO2 in the Philippines. The ensuing loan, Market Transformation through Introduction of Energy-Efficient Electric Vehicles Project (the e-trike project) was approved on 11 December 2012. The balance of the TA fund is being used to assist the EA in: (i) promoting and marketing the e-Trikes to the local government units; (ii) launching industry meeting/s on the technical aspects of the project; (iii) strengthening capacity of DOE staff on procurement and implementation; (iv) preparing a report and outline of an Operations Manual highlighting procedural flows, timelines, documentary and other requirements, procurement, financial, and logistical plans; (v) providing technical support in the establishment and pilot operation of the charging infrastructure including the installation of solar charging stations; and (vi) providing technical and administrative support to secure UNFCCC registration.</p>

Project Rationale and Linkage to Country/Regional Strategy	<p>The Philippines is a net importer of energy, mostly in the form of fossil fuels; the demand for energy is also growing with increased population, rapid urbanization, improved lifestyle and overall economic growth. Use of fossil fuels is causing climate change and will severely impact this archipelago country of more than 7000 islands. Hence the Governments main policy challenges are: tackling climate change, reduce reliance on imported fossil fuels, and improve energy security ensure reliable, stable and sustainable supply of energy at affordable prices and at an acceptable social cost. Investments in indigenous renewable energy and energy efficiency (clean energy) will address all these challenges, but the market in its current form is unable to attract necessary investments in clean energy.</p> <p>As most fossil fuels are imported, increased CO2 emission is a proxy for greater reliance on imported energy. Under a business as usual scenario, between 2007 and 2030: the total greenhouse gas emissions for the power sector will increase by 400% (from 26 MtCO2e to 140 MtCO2e); and for the transport sector by more than 200% (from 29 MtCO2e to 95 MtCO2e) driven by substantial increase of import of crude oil (for transport) and coal (for power generation). Despite large potentials for renewable energy, new coal power plants are being planned, as a least cost solution, and by 2030, coal power plants will contribute more than 90% of the total CO2 emissions. Emissions from the transport sector represents 30% of all pollution, and a large part is contributed by the inefficient old form of public transport tricycles (3.5 million) and Jeepneys (250,000) with poor quality engines. CO2 Emission from the motorcycles and tricycles alone accounts for more than 10 million tons per year.</p> <p>An alternative scenario with net increase of emission by only about 15% to 30% by 2030 is possible with about 10% to 15% increase in energy efficiency across all sectors and increased use of renewable energy. Energy efficiency, the key component of this alternative scenario, is also an essential tool for lessening the impact of possible increase in electricity prices, caused by the universal charge that may be imposed on all customers to finance the proposed incentives for renewable energy . The Government is committed to energy efficiency, and has developed the energy efficiency roadmap during the 2008 Philippine Energy Summit through extensive consultation with all stakeholders. Although relatively speaking, because of the high electricity price, clean energy projects are financially more attractive in the Philippines, unfortunately, without broad market transformation new technology, policy, institutions, investors, incentives, consumer awareness and wider consumer acceptance the alternative scenario cannot be achieved.</p> <p>This will study a range of options for energy efficiency and energy efficient electric vehicles.</p>
Impact	The loan project will reduce power sector's CO2 emissions through (i) efficient use of energy, and (ii) identification of the best technology for solar power (either stand alone or hybrid) and by development of a working model for net metering and feed in tariff allowed by the new Renewable Energy Law.

Project Outcome

Description of Outcome	The investment project will contribute the Government's ongoing initiatives to: (a) improve energy security, (b) increase access to power (c) reduce consumers energy cost through energy efficiency, (d) lower peak demand, and (e) increase society's awareness of energy efficiency and solar generation.
Progress Toward Outcome	
Implementation Progress	
Description of Project Outputs	The expected outputs are sector studies, design of pilot projects with complete technical, financial and economic analysis and implementation arrangements for scale up.
Status of Implementation Progress (Outputs, Activities, and Issues)	
Geographical Location	Nationwide

Summary of Environmental and Social Aspects

Environmental Aspects	
Involuntary Resettlement	
Indigenous Peoples	
Stakeholder Communication, Participation, and Consultation	
During Project Design	ADB has organized various workshops and consultation meetings involving local industry players and interested overseas investors.
During Project Implementation	Project team have undertaken various stakeholders consultations and organized industry meetings and workshops.

Business Opportunities

Consulting Services Several consultants have been engaged to support the preparation of the e-Trike Project and to assist the executing agency, Department of Energy, during the early start-up of project activities while waiting for the project implementation consultants to be engaged. These consultants were also assisted the EA in (i) promoting and marketing the e-Trikes to the local government units; (ii) launching industry meeting/s on the technical aspects of the project; and (iii) strengthening capacity of DOE staff on procurement and implementation.

Responsible Staff

Responsible ADB Officer	Hasnie, Sohail
Responsible ADB Department	Southeast Asia Department
Responsible ADB Division	Energy Division, SERD
Executing Agencies	<i>Department of Energy PNPC Complex Merritt Road, Fort Bonifacio Makati, Metro Manila</i>

Timetable

Concept Clearance	-
Fact Finding	-
MRM	-
Approval	16 Dec 2010
Last Review Mission	-
PDS Creation Date	21 Dec 2009
Last PDS Update	26 Sep 2014

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Milestones					
Approval	Signing Date	Effectivity Date	Closing		
			Original	Revised	Actual
16 Dec 2010	24 Feb 2011	24 Feb 2011	31 Aug 2011	31 Aug 2014	-

Financing Plan/TA Utilization						Cumulative Disbursements		
ADB	Cofinancing	Counterpart				Total	Date	Amount
		Gov	Beneficiaries	Project Sponsor	Others			
925,000.00	0.00	175,000.00	0.00	0.00	0.00	1,100,000.00	16 Dec 2010	842,260.12

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