Project Data Sheet

Project 50371-001

Project Name	Municipal Waste-to-Energy Project					
Project Number	50371-001					
Borrower / Company	CHINA EVERBRIGHT INTERNATIONAL LIMITED					
Country / Economy	Viet Nam					
Location	Mekong Delta					
Type or Modality of Assistance	3607	Loan	Ordinary capital resources	USD	100.00 million	Committed
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth Regional integration					
Drivers of Change	Private sector development					
Sector / Subsector	**Energy** / Renewable energy generation - biomass and waste					
Gender	Some gender elements					
Responsible ADB Department	Private Sector Operations Department					
Responsible ADB Division	Portfolio Management Division, PSOD					
Responsible ADB Officer	Wong, Yee To					
Project Sponsor(s)						

Description	Rapid urbanization coupled with population growth have led to an increase in municipal solid waste (MSW) generation in Viet Nam to unmanageable levels. During the period 2004 2015, waste generation increased by about 87% from 15 million tons per year (MT/y) to about 28 MT/y by 2015. Significant portion of the waste collected are disposed at landfills within 200-500 meters of residential areas. Less than 30% of those sites are classified as engineered or sanitary landfills. This poses a significant threat for public health in areas where there is high level of waste generation due to the contamination of the ground and surface water by untreated leachate; emissions of airborne pollutants, and the spread of flies, mosquitoes, rodents and dust. To address the increasing problems of MSW management, the Government of Viet Nam issued a series of laws and regulations requiring immediate attention to the management and disposal of waste in an environmentally sustainable manner. Waste-to-energy (WTE) was recognized as an effective method to reduce waste volume by 90% and to eliminate methane (CH4) emissions. WTE technologies use the waste heat from incineration to produce electricity and heat. By substituting for fossil fuel combustion and avoiding CH4, WTE technologies reduce greenhouse gas emissions (GHG) and mitigate climate change. Despite the recent policy shift in favor of WTE and the increased interest of municipal governments in clean technologies, market barriers still limit private sector participation in WTE. However, through ongoing discussions with stakeholders, the project team identified that China Everbright International Limited (CEIL) can effectively burn MSW in Viet Nam without the need to use supplemental fuel (such as coal) and enter a municipal level public-private partnership (PPP) arrangement. The Project will support the construction and operation of a series of WTE plants with advanced clean technologies including flue gas emission control to meet EU standards in multiple municipalities throughout Viet Nam. The design of the proposed Project in Viet Nam took careful consideration of the experience from previous WTE projects. ADB supported municipal and agricultural waste to energy projects in the PRC in 2009 and 2012. ADB's portfolio approach has also facilitated the financing of multiple subprojects too small to be financed alone. This has contributed to PPP developments in municipal environmental infrastructure sector and has effectively mitigated GHG emissions.
Objectives and Scope	CEIL aims to develop and invest in WTE projects with a combined capacity of up to 7,500 tons of MSW daily in Viet Nam. Each WTE plant will treat MSW, recover waste heat for power generation and supply to the local grid, purify waste gas, and treat leachate. By 2028, 2.5 million tons of MSW will be treated per year, 790 GWh of electricity will be generated annually, and approximately 787,300 tons of carbon dioxide equivalent (tCO2e) emissions will be avoided on average per year.
Status of Development Objectives	Developing
Status of Operation/Construction	The first project, Can Tho Project, has been fully operational since November 2019. ADB is working towards making further disbursements under the facility.

Linkage to Country/Regional Strategy	ADBs Midterm Review of Strategy 2020 outlined 10 strategic priorities of ADB operations to address the development challenges in Asia and the Pacific Islands. The project supports three of those priorities: (i) environment and climate change, (ii) infrastructure development, and (iii) private sector development and operations. ADBs country partnership strategy for Viet Nam, 2016-2020 aims to foster inclusive and environmentally sustainable growth. The project is aligned with two of the three pillars of the strategy; (i) increasing the inclusiveness of infrastructure and service delivery; and (ii) improving environmental sustainability and climate change response. The project aligns with ADBs energy policy which encourages interventions designed to shift reliance on fossil fuel sources for energy to renewable forms of energy to slowdown the growth of greenhouse gas emissions (GHG) and help countries achieve energy self-sufficiency. The project is aligned with the commitments made by Viet Nam to the United Nations Framework Convention on Climate Change.

Safeguard Categories

Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects

Environmental Aspects	The project entails a loan for general corporate finance and although specific subprojects have not yet been identified they are expected to be category B for environment, as the technologies and systems that will be used in the subprojects are technologically mature and proven capable of minimizing emissions to meet the stringent EU2010 emission standards. The subprojects are unlikely to have significant adverse environmental impacts that are irreversible, diverse, or unprecedented.
Involuntary Resettlement	The project is classified as category B involuntary resettlement. CEIL is planning smaller MSW WTE plants in Viet Nam than those it owns and operates in the PRC, which have variously caused major, non-major and no involuntary resettlement impacts. While subproject facilities in Viet Nam are not expected to require significant involuntary economic and physical displacement, government land grants for each concession in the form of land use rights may still produce non-major involuntary displacement impacts on residents or land users.
Indigenous Peoples	The project is classified as category C for indigenous peoples. The project is not expected to directly or indirectly affect the dignity, human rights, livelihood systems, or culture of the country's 53 recognized ethnic minority groups, which are concentrated mostly in the country's mountainous rural areas. Subprojects will be in urban and peri-urban areas where no distinct or vulnerable ethnic minority groups are expected to be adversely or beneficially affected.
Stakeholder Communication, Participation, and Consultation	

Timetable for assistance design, processing and implementation

Concept Clearance	13 Dec 2016
Credit Committee Meeting	20 Oct 2017
Approval	01 Dec 2017
Last PDS Update	09 Aug 2022