



Viet Nam: Floating Solar Energy Project

Project Name	Floating Solar Energy Project		
Project Number	51327-001		
Borrower/Company	Da Nhim - Ham Thuan - Da Mi Hydro Power Joint Stock Company		
Country	Viet Nam		
Location	Ham Thuan Bac District		
Approval Number	7571/3723		
Type of ADB Assistance / Amount	Ordinary capital resources	USD 20.00 million	Proposed
Strategic Agendas	Environmentally sustainable growth Inclusive economic growth		
Drivers of Change	Gender Equity and Mainstreaming Private sector development		
Sector / Subsector	Energy - Renewable energy generation - solar		
Gender Equity and Mainstreaming	Some gender elements		
Responsible ADB Department	Private Sector Operations Department		
Responsible ADB Division	Infrastructure Finance Division 2		
Responsible ADB Officer	Gabisch, Michael		
Project Sponsor(s)	Da Nhim - Ham Thuan - Da Mi Hydro Power Joint Stock Company		
Description	The project entails the Asian Development Bank (ADB) providing financing to DHD to install 47.5 megawatt peak (MWp) of floating solar photovoltaic (PV) power generation panels, on the man-made reservoir of its existing 175 megawatt (MW) Da Mi hydro power plant.		
Objectives and Scope	Da Mi Ham Thuan Da Nhim Hydro Power (DHD) plans to install 47.5 megawatt peak (MWp) of floating solar photovoltaic (PV) power generation panels, on the man-made reservoir of its existing 175 megawatt (MW) Da Mi hydro power plant. Additional facilities include a floating central inverter, a grounded substation and a new 3.5 kilometer (km) 110 kilovolt (kV) transmission line to connect with the national grid. The average capacity utilization factor of the Da Mi hydropower plant is relatively low at 46% due to low water availability during Viet Nam's dry season, resulting in intermittent usage of the hydro turbines and the associated grid transmission line. Co-locating solar PV generation will simultaneously increase the installed renewable energy capacity and better utilize the existing hydro plant's transmission line. DHD will enter into a 20-year power purchase agreement with the national utility, Vietnam Electricity (EVN), to sell power generated by the solar facility to the grid using the solar power feed-in tariff (FIT) regime. This project will be one of first, utility-scale floating solar power projects in Viet Nam, and one of the first outside PRC		
Linkage to Country/Regional Strategy	<p>ADB's Strategy 2030 outlined 7 operational priorities to address the development challenges in Asia and the Pacific. The project supports three of those priorities: (i) accelerating progress in gender equality, (ii) tackling climate change, building climate and disaster resilience, and enhancing environment sustainability, and (iii) making cities more livable. The project is one of the country's first independent power producers (IPPs) in renewable energy infrastructure.</p> <p>ADB's country partnership strategy for Viet Nam, 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. Under the strategy, ADB will increase the focus on renewable energy, including through public-private partnerships (PPP), to promote sustainable growth.</p> <p>The project aligns with ADB's energy policy, which encourages interventions designed to shift reliance on fossil fuel sources for energy to renewable forms of energy to slow down the growth of greenhouse gas (GHG) emissions and help countries achieve energy self-sufficiency. The project will increase Viet Nam's use of renewable energy, reducing reliance on higher emission sources of power such as coal and thereby mitigating GHG emissions. The project is also aligned with Viet Nam's commitments to the United Nations Framework Convention on Climate Change, and will contribute to ADB's target of providing \$6.0 billion per year in climate finance by 2020.</p>		

Safeguard Categories

Environment	B
Involuntary Resettlement	B
Indigenous Peoples	C

Summary of Environmental and Social Aspects

Environmental Aspects	The project is classified as Category B for environment. The project footprint is not located within national or internationally recognized protected areas and has been confirmed as Modified Habitat through the biodiversity assessment. The potential environmental impacts during construction include dust generation, air emission, noise, waste, water pollution from civil works, reservoir sediment disturbance from deployment of anchor and shore blocks, and occupational and community health and safety for workers and fishing households residing in proximity to the project area, respectively. These impacts are however expected to be short-term and localized. The Engineering, Procurement and Construction (EPC) contractor will be required to adopt the construction phase environmental and social management plan (ESMP) of the Initial Environmental and Social Examination (IESE) as part of its contractual obligations.
Involuntary Resettlement	The project is classified as Category B for Involuntary Resettlement. Non-major involuntary economic displacement impacts that will occur along the 3.5 km transmission line alignment are being managed by local government with DHD's support. DHD plans to ensure affected households can maintain their livelihoods through a supplementary livelihood restoration plan (LRP).
Indigenous Peoples	The project is classified as Category C for Indigenous Peoples. Of the forty-two households impacted by the transmission line, three are members of the area's dominant ethnic minority Kh'o group, and two are from the Muong group who migrated into the area. Impacts on these households will be managed through the LRP and a community development plan that is part of the IESE.
Stakeholder Communication, Participation, and Consultation	

Timetable for assistance design, processing and implementation

Concept Clearance	08 May 2018
Due Diligence	
Credit Committee Meeting	14 Aug 2018 to 14 Aug 2018
Approval	04 Oct 2018
Last PDS Update	24 Aug 2018

Project Page	https://www.adb.org/projects/51327-001/main
Request for Information	http://www.adb.org/forms/request-information-form?subject=51327-001
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