



ADB-58245-001
Geothermal Resource De-Risking Facility



Quick Facts

Countries	Philippines
Financial Institutions	Asian Development Bank (ADB)
Status	Proposed
Bank Risk Rating	U
Borrower	Government of the Philippines
Sectors	Energy
Investment Type(s)	Loan
Investment Amount (USD)	\$ 190.00 million
Loan Amount (USD)	\$ 190.00 million
Project Cost (USD)	\$ 250.00 million



Project Description

As stated by the ADB, the Geothermal Resource De-Risking Facility (GRDF) aims to reactivate greenfield investment in geothermal, which has been stranded since 2001, by mitigating investment risk at pre-development stage through sharing resource exploration cost and risk with the private developers. ADB extended technical assistance (TA) to assess investment constraints in entire geothermal development chain, and to prepare GRDF concept design in consultation with DOE and the National Geothermal Association of the Philippines (NGAP).

GRDF manages operation by mitigating technical and financial risks in geothermal resource exploration, while eliminating moral hazard and adverse selection, for financial and operational sustainability. GRDF adopts a stringent two stage selection process to select technically and financially capable GSC holders. Selected GSC holders will be required to submit the drilling plan for resource exploration for GRDF review and approval. GRDF provides sub-loan to cover 50% of the total cost of exploration drilling while the selected GSC holders are required to contribute to the remaining 50%. To avoid piling up the credit loss due to huge uncertainties in resource exploration, GRDF sets the benchmark to maintain resource confirmation success rate at 75% or above. Additional new sub-loan approval will be suspended in case the actual success rate falls below the benchmark, allowing GRDF to review the adequacy of the selection and internal appraisal process for enhanced risk control.

GRDF is established in the Power Sector Assets and Liabilities Management Corporation (PSALM) . It comprises two main components (i) the resource risk mitigation window which supplies a convertible loan to the selected GSC holder that covers 50% of total exploration drilling cost for geothermal resource confirmation, and (ii) the refinancing window which allows longer term repayment while enabling a fund revolving in the resource risk mitigation window to support wider geothermal investments to accelerate resource exploration. Upon successful resource confirmation, the selected GSC holder will have the following repayment options to choose from, (a) bullet payment, (b) refinancing, or (c) equity conversion with put option. If exploration is unsuccessful and no geothermal resource is confirmed for the development stage, the loan is converted to grant (footnote 6).

GRDF will target to support up to 16 geothermal projects with 431 MW of assumed total generation capacity, which requires \$431 million of total cost for exploration drilling. Due to the different levels of uncertainties among the targeted projects, GRDF will extend convertible loans up to 10 lower-risk projects with \$131 million of cost sharing finance as the initial batch. Given that the initial batch successfully controls success rate in resource confirmation at 75% or above, GRDF will utilize the repaid loan proceeds in the initial batch to proceed to the second batch which will support 6 projects with \$84 million of cost sharing finance.

The proposed project is estimated to cost \$250 million which will be funded by \$60 million from ASEAN Catalytic Green Finance (ACGF) concessional funds and \$190 million from ADB's ordinary capital resources. To reduce weighted average cost of capital for favorable loan pricing to the private developers and wider credit risk absorption, additional concessional financing including grant is being sought. The project executing agency will be DOE and the project implementing agency will be PSALM.

The proposed project entails transformational impact to reactivate greenfield geothermal investment while mobilizing the private risk capital to develop non-variable indigenous clean energy sources in the Philippines. It is also the first-of-its-kind in both ADB and the Philippines. ADB has been involved in designing GRDF in collaboration with DOE (footnote 7), while incorporating lessons learned from the similar geothermal derisking supports in Indonesia, the United States, Japan, and the other countries. GRDF design including cost sharing limit and repayment options have been extensively discussed with NGAP and ADB's Private Sector Operations Department to adequately stimulate the private sector's interest in proceeding resource exploration. Upon successful completion of the project, GRDF will catalyze up to \$2.6 billion of downstream geothermal investment by de-risking 431 MW of greenfield geothermal power, thereby saving (i) 1.7 million tons of annual tCO2e, and (ii)



Early Warning System Project Analysis

The ADB categorized the project E&S risks as 'FI'.



Investment Description

- Asian Development Bank (ADB)



Private Actors Description

As stated by Bloomberg, Power Sector Assets & Liabilities Management Corporation provides financial services. The Company provides existing generation assets management, sale, privatization, and other services. Power Sector Assets & Liabilities Management provides its services to communities in Philippines.



Early Warning System

Geothermal Resource De-Risking Facility

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Private Actor 1	Private Actor 1 Role	Private Actor 1 Sector	Relation	Private Actor 2	Private Actor 2 Role	Private Actor 2 Sector
-	-	-	-	Power Sector Assets and Liabilities Management Corporation (PSALM)	Contractor	Energy



Contact Information

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ACCESS TO INFORMATION

You can submit an information request for project information at: <https://www.adb.org/forms/request-information-form>

ADB has a two-stage appeals process for requesters who believe that ADB has denied their request for information in violation of its Access to Information Policy. You can learn more about filing an appeal at: <https://www.adb.org/site/disclosure/appeals>

ACCOUNTABILITY MECHANISM OF ADB

The Accountability Mechanism is an independent complaint mechanism and fact-finding body for people who believe they are likely to be, or have been, adversely affected by an Asian Development Bank-financed project. If you submit a complaint to the Accountability Mechanism, they may investigate to assess whether the Asian Development Bank is following its own policies and procedures for preventing harm to people or the environment. You can learn more about the Accountability Mechanism and how to file a complaint at: <http://www.adb.org/site/accountability-mechanism/main>.