INTEGRATED SAFEGUARDS DATA SHEET CONCEPT STAGE

Report No.: ISDSC13124

Date ISDS Prepared/Updated: 29-Jul-2015

Date ISDS Approved/Disclosed: 04-Dec-2015

I. BASIC INFORMATION

A. Basic Project Data

Country:	Indonesia		Project ID:	P15504	7	
Project Name:	Indonesia: Geothermal Energy Upstream Development Project (P155047)					
Task Team	Peter Johansen					
Leader(s):						
Estimated 31		31-Mar-2016		Estimated	28-Jul-2	2016
Appraisal Date:			Board Date	e:		
Managing Unit:	GEE02		Lending	Investn	nent Project Financing	
			Instrument	t :		
Sector(s):	or(s): Other Renewable Energy (100%)					
Theme(s):Infrastructure services for private sector development (40%), Climate change					%), Climate change	
	(30%), Other environment and natural resources manageme nt (30%)					
Financing (In USD Million)						
Total Project Cost:		360.30		Total Bank F	ll Bank Financing: 0.00	
Financing Gap:		0.00				
Financing Source						Amount
Borrower					300.00	
International Bank for Reconstruction and Deve				elopment		0.00
Climate Investment Funds						50.00
FRANCE French Agency for Development					0.30	
Global Environment Facility - Cofinancing Trust Funds				st Funds	6.25	
NEW ZEALAND, Govt. of (Except for Min. of Foreig				f Foreign		3.75
Affairs)						
Total					360.30	
Environmental	Environmental A - Full Assessment					
Category:						
Is this a	No					
Repeater						
project?						

B. Project Objectives

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18. The Project Development Objective (PDO) is to facilitate investments in geothermal-based electricity.

C. Project Description

Key results indicators to monitor progress toward achievement of the PDO are:

- Financial closure on geothermal power plant projects securing investments in new capacity (MW)
 - Private capital mobilized (US\$)
 - Estimated GHG emission reduction compared to a business-as-usual baseline (tCO2/year)

20. In addition, the following intermediate result indicator will be adopted to track Citizen Engagement:

• Villages located next to exploration sites with at least one public consultation held (%)

21. Project Design: The proposed intervention complements GoI's efforts to reform the country's energy sector, supported through a wider WBG assistance program including a Development Policy Loan which is expected to include specific prior actions and indicative triggers related to geothermal development.

22. The Project will specifically address:

(i) the need for continued support for implementation of geothermal policy, tariff and licensing reform building on recently completed and ongoing technical assistance (TA) engagements ; and

(ii) development of an effective risk mitigation tool in support of geothermal exploratory drilling using successful elements from international best practice.

23. The Project will target current and prospective geothermal business permits holders across the Indonesian archipelago, including the main geothermal markets of Java and Sumatra. For prospective licensees, the Project will target both high and medium enthalpy resources. Emphasis will be on the utilization of medium-enthalpy resources to displace high-cost fossil alternatives outside the main load centers in Eastern Indonesia – where electrification rates are lowest and poverty rates are highest.

24. The proposed Project consists of two components. Component 1 would target the operationalization of the revamped GFF through a risk-sharing arrangement with a CTF US\$50 million convertible loan. Support eligibility would apply to both prospective and existing license holders.

Prospective Licensees:

25. If the exploration – to be funded by GFF with support from the Project and executed by a service company on behalf of GoI – is successful, a development and operation license will be issued to a developer through a competitive auction. At the time of financial closure, the developer will be required to refund the total costs of the exploration to GFF plus a risk premium to be paid to a dedicated facility. This replenishment of the GFF and CTF support would ensure sustainability in the risk mitigation scheme.

26. If the project does not come to financial closure, the licensee will not pay the full cost of the

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exploration back to the GFF. At this point the GFF will be refunded from the funds accumulated in the CTF-backed dedicated facility from payment of risk premiums. If the funds are insufficient, part (tentatively 50%) of the shortfall will be covered through a WB/CTF contingent loan pay-out, which could be partially or fully refunded if the dedicated facility receives additional funds from risk premiums.

27. Finally, it is suggested that the CTF funds will be given as a loan, and that the loan be converted into a grant if there is an unpaid balance in favor of the WB/CTF after 15 years of operation.

Existing Licensees:

28. In order to provide an incentive for exploration drilling to existing license holders the CTF and GFF funds could be used to reduce the cost of an insurance scheme for instance by entitling licensees to sell the geotechnical data obtained through "dry-hole drilling" related to a given field to the Geological Agency (Badan Geologi) at a price that would cover some of the drilling costs. In case where existing licensees abandon field development all together the returned license could then be re-auctioned and, upon new licensing, the GFF/CTF facility procedures and conditions for prospective license holders would apply.

29. Component 2 would comprise a coordinated multi-donor technical assistance package for which the key partners and areas of support have been identified as follows:

• Geothermal Up-Stream Development (US\$6.25 million): Building on the previous GEF engagement with the Indonesian geothermal sector, GEF support will mainly be focused on strengthening the indigenous capabilities for geothermal development by providing the resources needed in order to establish an efficient and effective exploration and tendering program. This effort will be supported by the Ministry of Finance with an indicative US\$5 million allocation. The partnership is key to attracting CTF financing (US\$50 million) and ultimately unlocking government and private sector investment commitments of about US\$2.5 billion.

• The Government of New Zealan d: (US\$3.75 million): The resources put forward by the Government of New Zealand will support: (i) the effective collation and analysis of existing and new resources data through establishment of an effective, GIS based database, probably to be housed within Badan Geologi; (ii) the establishment of a robust resource and reserve estimation and reporting protocol to an internationally acceptable standard; (iii) the prioritization of potential sites for geothermal development; and (iv) capacity building for tendering as well as executing an exploration program.

30. Building on previous engagement with the Climate Change Development Policy Loans, additional support (tentative US\$300 thousand) for Component 2 may be provided by Agence Française de Développement (AFD). Further details will be provided during preparation following AFD's internal technical discussions.

31. In a later phase it is envisaged that an IBRD loan in the amount of US\$300 million could support mid-stream investments such as production drilling of steam fields. Furthermore, a partnership with the Carbon Partnership Facility (CPF) on "New Scaled-up Crediting Mechanisms" for emission reductions will be explored. A detailed description of the project design is provided in the supplementary Information Note.

D. Project location and salient physical characteristics relevant to the safeguard analysis (if known)

32. The Project will target current and prospective geothermal business permit holders across the Indonesian archipelago, including the main geothermal markets of Java and Sumatra. For prospective licensees, the Project will target both high and medium enthalpy resources. Emphasis will be on the utilization of medium-enthalpy resources to displace high-cost fossil alternatives outside the main load centers in Eastern Indonesia – where electrification rates are lowest and poverty rates are highest.

E. Borrowers Institutional Capacity for Safeguard Policies

33. The Project Management Unit (PMU) will be a newly-constituted body under the Ministry of Energy and Mineral Resources (MEMR). It will engage consultants to prepare an Environmental and Social Management Framework (ESMF) including a Resettlement Policy Framework (RPF), since specific exploration sites will not have been identified prior to appraisal or Board approval. Similarly, since sites are unknown, the presence or attachment of indigenous peoples in each sub-project area must be screened, following an Indigenous Peoples Planning Framework (IPF) to be included in the ESMF.

34. The ESMF will assess existing experience with environmental and social safeguards in the sector, and make recommendation for the safeguards capacity that will need to be developed in and/ or available to the PMU. Prior to project effectiveness, MEMR will ensure that these recommendations have been implemented, whether by direct hiring, secondments from government agencies or academic institutions, or consultancies. The TA component will support training, equipment, and, to the extent that Bank procurement policies and government regulations allow, staffing. The PMU will contract for the site-specific ESIAs and/or ESMPs for green-field sites. Existing IUP holders will be responsible for preparing their own ESIAs and/or ESMPs, under the oversight of PMU.

F. Environmental and Social Safeguards Specialists on the Team

Safeguard Policies Triggered? **Explanation** (Optional) Exploration involves construction of access roads, Environmental Assessment Yes **OP/BP 4.01** mobilization and operation of large, heavy drilling rigs, construction of work camps. Potential impacts include: (i) impacts on soils, vegetation, biodiversity and the surface water network due to the construction of access roads and drilling platforms during the exploration phase, and production drillings, steam pipelines, powerhouses, road networks, and transmission lines during the operational phase; (ii) potential damage to, or conversion of natural habitats, as a significant percentage of geothermal resources is located in or near terrain on which forest cover is to be maintained for watershed protection; (iii) temporary and permanent land acquisition, or

II. SAFEGUARD POLICIES THAT MIGHT APPLY

1	damage to, or loss of assets or livelihoods; (iv)
	damage or disturbances to physical cultural
	resources; (v) damage or disturbances to geothermal
	features, water supplies, community infrastructure;
	and (vi) production, handling, storage and disposal of
	drilling mud and fluids during the exploration phase;
	(vii) production, storage and handling of brines,
	noise and visual impacts during the production
	phase. The project is accordingly assigned to
	Category A for environmental assessment. The
	ESMF will provide three stages of screening: (1)
	desk review of the long list of potential sites to
	exclude non-starters such as sites within biodiversity
	reserves: (2) document review/field reconneissance
	to identify any fotal flaws in sites proposed for
	for identify any fatal flaws in sites proposed for
	Turiner consideration, such as no way to evacuate
	power except through a protected area; and (3)
	screening to determine what level of environmental
	assessment should be prepared for a site where
	exploration is planned. The ESMF will include
	model terms of reference for ESIAs and ESMPs. In
	addition to assessment of exploration impacts, ESIAs
	and ESMPs will identify the key potential impacts of
	site development and operation along with mitigation
	requirements and approximate costs, as this
	information will be relevant to the decision whether
	or not to explore. OP 4.01 and the other policies
	triggered are also triggered for the technical
	assistance on regulations for geothermal energy
	development to ensure that proposed regulatory,
	tariff and licensing reforms: (i) do not result in
	consequences inconsistent with the requirements and
	principles of Bank safeguards policies; (ii) do
	incorporate those principles as well as the
	requirements of Indonesian laws and regulations; and
	(iii) are exposed to stakeholders including
	environmental, civil society, and indigenous peoples
	organizations. The project team will review and
	approve the TORs for TA activities. The ESMF will
	provide guidelines for assessing environmental and
	social consequences of proposed reforms to be
	applied by the entities conducting the TA and the
	team will review the results of such assessments
	neigr to implementation of the reforme. The WDC
	EUS Guidalings will ambridge the maximum haft the
	Ens Guidelines will apply to the project, both the
	general guidelines and those for geothermal power
	generation.

Natural Habitats OP/BP 4.04	Yes	In Indonesia, some of the geothermal resources are found in terrain that is designated as hutan lindung (HL), to remain in forest cover for watershed protection. While human activities have modified some of the HL, much of it remains as natural habitat. Exploration involves construction of access roads, well pads, and accommodations; transport and operation of heavy drilling rigs; and management of drilling fluids. Development adds further drilling, construction of above-ground steam-gathering systems and brine storage and reinjection systems, workshops, power plants and power transmission lines. The impacts of exploration will be assessed in ESIAs as described under OP 4.01 above. The ESIAs will also consider the key potential impacts of development in order to inform decision-makers about the "developability" of a site prior to the decision to explore. Degradation of critical natural habitat will be avoided. This policy is also triggered for the technical assistance component as explained under OP 4.01 above.
Forests OP/BP 4.36	Yes	Offsets are required under OP 4.04 for conversion of natural habitat and under Indonesian law for removal of forest in HL. Indonesian law requires new forest planting in a ratio of 2:1, hence the project will involve forest management. This policy is also triggered for the technical assistance component as explained under OP 4.01 above.
Pest Management OP 4.09	No	The project does not involve pest management.
Physical Cultural Resources OP/BP 4.11	Yes	It is likely that PCR will be found near some exploration projects. In some cases in Indonesia, the manifestasi of geothermal energy have themselves been considered sacred by local communities. This policy is also triggered for the technical assistance component as explained under OP 4.01 above.
Indigenous Peoples OP/BP 4.10	Yes	Because the project is national in scope and has a focus on islands in eastern Indonesia, the possibility exists that sites considered for exploration will be on lands of indigenous peoples. For this reason, an IPPF will be prepared prior to appraisal, based on a social assessment of the potential impacts and risks concerning indigenous peoples (and other local communities) experienced from existing geothermal developments. The IPPF will define the procedure to be followed in determining whether indigenous

		peoples may be affected, and guidelines for preparing IPPs.
Involuntary Resettlement OP/ BP 4.12	Yes	The Bank's experience with geothermal projects in Indonesia indicates that land acquisition can often be carried out by means of commercial transactions rather than expropriation, and involuntary resettlement does not occur. However, and LARPF will be prepared to establish the principles and procedures for land acquisition and resettlement in case there are instances when an agency with the power to expropriate is doing the acquisition. The LARPF will provide guidance for preparation of LARAPs.
Safety of Dams OP/BP 4.37	Yes	The policy is triggered as a precautionary measure to ensure that storage and settling ponds for drilling fluids and brine storage ponds are designed by qualified professionals and properly inspected and maintained in accordance with the policy's principles for small dams.
Projects on International Waterways OP/BP 7.50	No	Exploration will not affect the quality or quantity of international waterways or groundwater.
Projects in Disputed Areas OP/ BP 7.60	No	The project will not operate in disputed areas.

III. SAFEGUARD PREPARATION PLAN

- A. Tentative target date for preparing the PAD Stage ISDS: 30-Sep-2015
- B. Time frame for launching and completing the safeguard-related studies that may be needed. The specific studies and their timing¹ should be specified in the PAD-stage ISDS:
 tbd

IV. APPROVALS

Task Team Leader(s):	Name: Peter Johansen			
Approved By:				
Safeguards Advisor:	Name: Peter Leonard (SA)	Date: 03-Dec-2015		
Practice Manager/ Manager:	Name: Dejan R. Ostojic (PMGR)	Date: 04-Dec-2015		

¹ Reminder: The Bank's Disclosure Policy requires that safeguard-related documents be disclosed before appraisal (i) at the InfoShop and (ii) in country, at publicly accessible locations and in a form and language that are accessible to potentially affected persons.