



# Renewable Energy Program (REP)

Country / Region: **Indonesia** | Project Id: **PCTFID018A** | Fund Name: **CTF** |

MDB : **International Finance Corporation**

Comment Type	Commenter Name	Commenter Profile	Comment	Date
Comment 1	Katharina Stepping	Germany	<p>As submitted by email on July 17, 2017: Thank you for the opportunity to comment on the Renewable Energy Program (REP) Proposal for Indonesia.</p> <p>The presented concept to encourage private sector participation in the development of RE in Indonesia seems plausible and suitable to address the main challenges and to lower the barriers for private sector investments in this subsector.</p> <p>However, we understand that the REP aims to focus on PV and wind power and therefore IFC proposes to reallocate USD 30 million from the Geothermal Electricity Finance Program (IGEF) to REP. Given the high geothermal energy potential in Indonesia (underlined also by IFC) and the priority of the GoI to unlock this geothermal potential for private sector investment, could you please explain the rationale to shift resources away from the IGEF?</p>	Jul 17, 2017
Response 1	Andrey Shlyakhtenko	IFC	<p>The rationale for shifting resources away from the IGEF and into the RE program is built around two points: (1) relatively modest expected need for the CTF resources in the geothermal segment within the next 12-18 months; (2) significant need for concessional funds in newly-emerging high priority RE segments that are actively promoted by the Government of Indonesia (GoI) and are expected to move quickly.</p> <p>1) At the Country Investment Plan (CIP) level, the CTF work in Indonesia remains largely focused on geothermal development, even after the reallocation. By far the largest proportion of the CTF funds (over 86 percent of the CTF CIP) continues supporting progress in the geothermal sector through different means, channels, and instruments. All MDBs are working to improve the enabling environment and establish replicable project structures:</p> <ul style="list-style-type: none"> <li>• The ADB, through its Private Sector Operations Department, utilized CTF funds to provide support to three geothermal power plants: Sarulla, North Sumatra (330MW, first 110MW already commissioned), Muara Laboh, West Sumatra (80MW, achieved financial close) and Rantau Dedap, South Sumatra (96MW, post ADB-CTF exploration financing and now arranging long term financing).</li> <li>• The WB continues to work with Pertamina Geothermal Energy (PGE) – a subsidiary of state-owned company Pertamina – to boost power generation capacity by up to 150 MW in geothermal fields in Ulubelu, South Sumatra (110MW capacity expansion) and Lahendong, North Sulawesi (40MW capacity expansion). More recently the WB also approved the Geothermal Energy Upstream Development Project, which includes risk mitigation component (USD 98 million, of which USD 49 million is from CTF and USD 49 million is from the GoI) provided to the newly created Infrastructure Fund for Geothermal Sector (IFGS) in PT Sarana Multi Infrastruktur (PT SMI) for mitigation of geothermal exploration drilling risks in areas where development prospects are clearly uneconomical for private sector.</li> <li>• IFC maintains a clear window of funds—commensurate with project pipeline—to help support early stage risks and upstream geothermal challenges, as well as inform ongoing policy initiatives targeting geothermal sector development. It is currently engaged with two existing private developers launching early stage drilling operations and is reviewing development plans, financing, and resource viability for both concessions.</li> </ul> <p>These activities as well as further regulatory developments will continue promoting private sector participation in the geothermal sector. In the short- to medium-term, however, ongoing review of geothermal tariff framework and the slow pace of concession awards continue to limit the number of opportunities for impact. In addition, limited commercial bank appetite for upstream geothermal risk-sharing and nascent domestic technical capacity remain critical roadblocks to accelerating the pipeline. With all that, IFC believes that the amount of CTF funds under the IGEF (USD 20 million) that will remain available to support geothermal activities within the next 12 to 18 months is adequate and will allow continue moving the</p>	Aug 03, 2017



geothermal agenda forward, while efficiently rationing precious CTF resources.  
 2) Emerging priority areas in solar, wind, and hydro (and other RE) technologies present lower technology risk, significantly faster deployment, and potentially greater replication and transformation effect. Recognizing that, the GoI has recently expanded its focus to include promotion of solar and wind (and other) technologies in its immediate high-priority objectives. The GoI aims at facilitating a rapid scale-up of these technologies within the next three years. However, a direct concessional support will likely be required to support a few first-mover projects and jump-start the project pipeline.

While the GoI has clear national policies to scale up RE in Indonesia, it also maintains a strong competing priority to pursue low cost power generation. Coal continues to be a default choice for Indonesia because PLN perceives it to be the cheapest, abundant, and most readily available fuel source for power generation. Being under significant pressure to improve its own financial sustainability, PLN will only accept long-term offtake obligations against a private sector RE project if it is competitive with other least-cost options. Though new RE developments can take advantage of falling technology costs globally, the RE tariffs that have been established by the recent regulatory changes are set at the very cost-competitive levels – that may not be possible to meet by first-mover RE projects without concessions support.

Nevertheless, with its inherent modularity and flexibility in size and configuration as well as shorter lead times (comparing to conventional utility-scale projects), power from RE projects such as solar and wind has the potential to be scaled-up quickly, adapt to geography of demand (including serving some remote areas across 17,508 Indonesian islands), and play a significant role in improving the efficiency and sustainability of Indonesian power generation. The GoI understands the opportunity to leverage RE's suitability to contribute to meeting the country's growing energy demand at scale and across a variety of financing and development models, but demonstration of RE potential is key to catalyze political will, domestic technical capacity, and stimulate financing.

Comment 2 Douglas Gibb United Kingdom

Dear Mafalda,  
 Thank you for circulating the details and providing an opportunity to comment on the Indonesia Renewable Energy Program (REP).  
 We agree with our German colleagues in needing to better understand the rationale behind the transfer of resources within the Country Investment Plan. Given that Indonesia has 40% of the world's geothermal resource, could the project team please give more of a rationale for transferring funding from geothermal to a project that is likely to provide concessional finance to Solar PV and Hydropower projects?  
 Further to this, given that all total key indicators in the Results Framework (Table 2, Amendment to the Indonesia CIP) will fall with this proposal, including total GHG savings despite the same amount of CTF funding being employed, why is this proposal the best use of CTF support?  
 We note that the capacity factor for hydropower is quite high at 0.7, what is the evidence this is based on? Is it under the assumption that the projects expected to be financed will adhere to the "low capacity high capacity factor" as opposed to "high capacity low capacity factor" theories?  
 The Development Impact notes that the programme will generate local employment in the construction and operation of the projects. However this benefit is not captured in the performance indicators. Could the project team provide additional information on the number of jobs it expected to be generated from this proposal, and could this be disaggregated by gender.  
 Indonesia, with its unique geography, is very well suited to a more decentralised energy infrastructure, which the proposal begins to address.  
 We look forward to hearing from the project team.  
 Many thanks  
 Doug

Jul 21, 2017

Response 1 Andrey Shlyakhtenko IFC

1. "...why is this proposal the best use of CTF support?"  
 Please see response to a question from Germany.  
 The reallocation will allow deploying CTF funds to support the GoI's transformational efforts in more than one energy sector. While the direct results framework numbers do become smaller, IFC expects that the additional transformational impact in the non-geothermal sector will have an important and significant indirect effect, as it implies a more disparate impact across the country and energy mix. In addition, the effective use of the CTF resources will be manifested through shortened project cycles. The physical construction and commissioning of plants for non-geothermal RE technologies are typically happening within noticeably shorter timeframes. By supporting both geothermal and non-geothermal pipelines, IFC will aim to multiply the impact, while diversifying the risk of slower ramp up.

Aug 03, 2017



2. "...capacity factor for hydropower is quite high at 0.7, what is the evidence this is based on?"

Capacity factors for hydro projects vary wildly, depending on hydrological regime, technical specifications, set up, size, etc. For example, IRENA's analysis of 142 CDM projects reports capacity factors in the range between 23 and 95 percent and many modern plant designs can deliver fairly high capacity factors (provided the hydrological regimes are stable across seasons). Based on the existing pipeline, IFC expects the capacity factor to be somewhere within 60-70 percent, of which 70 percent was used for the calculation in the CTF program proposal. These numbers are based on the original project design projections and will be reviewed and possibly revised over the course of project preparation, feasibility, and due diligence.

3. "...additional information on the number of jobs it expected to be generated from this proposal, and could this be disaggregated by gender."

The project pipeline (across various technologies) is in the initial stage of development and at this stage it is not possible to link the job indicators to specific projects. The indicative numbers can, however, be calculated based on the overall project experience and assuming the same indicative composition of the pipeline, as was done for the purpose of calculations of core results framework numbers. With that, it is estimated that the Program can generate around 700 jobs during the construction and around 60 jobs during the operation stages. At this moment, it is not possible to disaggregate these estimates by gender, but IFC, as part of its development impact reporting, will endeavor to track the numbers of jobs disaggregated by gender.

Comment 3 Daniel Morris United States

1. We would like to know more about the implementing structure for this project. This is expected to be a private sector led project, but from our reading the documents didn't identify an actual entity or how the funds will be deployed. Recognizing that many of these details may not be finalized at this stage, please explain how funds will be deployed from the program and provide some examples of likely private sector partners.

Jul 24, 2017

2. We did not see any discussion in the documents of potential E&S impacts at all. We have encountered a number of these type of projects have had significant E&S issues previously. What are the likely E&S risks, and what is the proposed system to manage these risks?

Response 1 Andrey Shlyakhtenko IFC

1. "...implementing structure for this project."  
The funds are likely to be deployed as secured senior debt or simple secured subordinated debt (without conversion features) in project financed transactions. The size of the CTF component in the financing package will never exceed that of IFC's on its own account, resulting in an approximate leverage ratio (to all other project parties) of at least 1:3 or, likely, higher. The CTF financial instruments, pricing, and terms of the CTF funds will be tailored for each individual transaction to address the specific needs of each sub-project, while providing only the minimal amount of concessionality needed and achieving the most effective use of the CTF funds.

Aug 03, 2017

Private sector partners are likely to include the largest foreign IPP developers in Indonesia, including European, American, Korean and Japanese developers (similar to those seen in the other CTF Indonesia programs), such as Engie, Ormat, Sumitomo Corporation, Itochu Corporation, Marubeni Corporation, as well as growing local partners with a track record in power sector project development.

2. "What are the likely E&S risks, and what is the proposed system to manage these risks?"

At the moment, none of the projects in the pipeline present significant E&S risks as they have relatively small footprints (with respect to mini-hydro) and relatively short construction times (limited disruption for neighboring communities).

All RE projects will be screened according to IFC performance standards during the due diligence process as early on in the development cycle as feasible and efficient, with the objective to identify potential risks (i.e. biodiversity, conservation, watershed sustainability) and develop a mitigation strategies through adjustments to project design etc.

Comment 4 Douglas Gibb United Kingdom

Dear Mafalda,  
Thank you for circulating the responses to our comments on the proposal entitled, Indonesia Renewable Energy Program (REP), submitted by the International Finance Corporation (IFC).

Aug 08, 2017

Following due consideration and noting that the project will continue to update the pipeline and the relevant capacity factors ensuring best value for CTF funding, and that as part of its development impact reporting, the project will track the impact on gender including the numbers of jobs created disaggregated by gender, we are content to approve the proposal.

With regards,



Doug