Scientific and Technical Advisory Panel

The Scientific and Technical Advisory Panel, administered by UNEP, advises the Global Environment Facility
(Version 5)

STAP Scientific and Technical screening of the Project Identification Form (PIF)

Date of screening: September 26, 2015 Screener: Lev Neretin

Panel member validation by: Ralph E. Sims
Consultant(s):

I. PIF Information *(Copied from the PIF)*
FULL SIZE PROJECT GEF TRUST FUND
GEF PROJECT ID: 9115
PROJECT DURATION : 5
COUNTRIES : Indonesia
PROJECT TITLE: IBRD Geothermal Energy Upstream Development Project
GEF AGENCIES: World Bank
OTHER EXECUTING PARTNERS: Ministry of Finance
GEF FOCAL AREA: Climate Change

II. STAP Advisory Response *(see table below for explanation)*

Based on this PIF screening, STAP's advisory response to the GEF Secretariat and GEF Agency(ies):
Concur

III. Further guidance from STAP

1. This is a project concept note (PCN) from World Bank that is reasonably straight forward. Funding is to be used for under-writing the risk of geothermal exploration and drilling in order to encourage greater private investment in further projects. This links closely with the US$300M Geothermal Fund Facility. STAP acknowledges innovative blending of financial resources between GEF and CTF as well as potential follow up investments from the IFC and MIGA in the proposal which is encouraging.
2. STAP also notices that this project is a high-risk project that will trigger a range of safeguards policies of the GEF and WB group.
3. A good geothermal resource exists in the country and 4.6 GW of new capacity is the Government's target by 2025 with over 90% to be developed by independent power producers. Geothermal is expected to contribute around one third of the Government's "renewable energy target of 23% by 2025". It is assumed this is in fact "renewable electricity". In that regard, the direct use for geothermal heat does not seem to have been included in the PCN. For fields that are unsuitable for power generation, depending on the location, there could still be useful application for the heat â€“ for food processing, sterilization, laundries etc. It is also assumed that the fields are located within reasonable distance of the electricity load in order to minimize transmission costs and hence make the development of a power plant economically viable.
4. Project proponents are advised to provide detailed justification for emissions savings reported in the submitted package, e.g., 76.4 million metric tons CO2e, which appears to be approximately equivalent to displacing one coal powered power plant for 25 years. When making calculations please also consider potential for CO2 leakage emitted during the drilling which varies from field to field but can be significant. However, since the project is mainly involving resource assessment and the provision of support for exploratory funding and drilling, it is not clear how the emissions potential can be assessed. This number does not appear in the PCN and the response from World Bank is unknown. Paragraph 48 states that "emissions calculations will be calculated following the World Bank standard greenhouse gas (GHG) accounting methodology." Is this methodology compatible with the recently released GEF GHG accounting guidelines (https://www.thegef.org/gef/node/11187). It is not known whether this method accounts for CO2 leakage emitted during the drilling which varies from field to field but can be significant. However, since the project is mainly involving resource assessment and the provision of support for exploratory funding and drilling, it is not clear how the emissions potential can be assessed.
5. New Zealand has world-class expertise in geothermal power so it is appropriate that the NZ government is funding production of a resource assessment, GIS database, site prioritisation and capacity building (probably by research staff from GNS Science from the Institute of Geological and Nuclear Sciences Limited).

STAP advisory response	*Brief explanation of advisory response and action proposed*
1. Concur	In cases where STAP is satisfied with the scientific and technical quality of the proposal, a simple "Concur" response will be provided; the STAP may flag specific issues that should be pursued rigorously as the proposal is developed into a full project document. At any time during the development of the project, the proponent is invited to approach STAP to consult on the design prior to submission for CEO endorsement.
2. Minor issues to be considered during project design	STAP has identified specific scientific /technical suggestions or opportunities that should be discussed with the project proponent as early as possible during development of the project brief. The proponent may wish to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised. (ii) Set a review point at an early stage during project development, and possibly agreeing to terms of reference for an independent expert to be appointed to conduct this review. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.
3. Major issues to be considered during project design	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical methodological issues, barriers, or omissions in the project concept. If STAP provides this advisory response, a full explanation would also be provided. The proponent is strongly encouraged to: (i) Open a dialogue with STAP regarding the technical and/or scientific issues raised; (ii) Set a review point at an early stage during project development including an independent expert as required. The GEF Secretariat may, based on this screening outcome, delay the proposal and refer the proposal back to the proponents with STAP's concerns. The proponent should provide a report of the action agreed and taken, at the time of submission of the full project brief for CEO endorsement.