

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: April 16, 2014

Screeners: 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: 5727

PROJECT DURATION : 4

COUNTRIES : Thailand

PROJECT TITLE: Reduction of GHG Emission in Thai Industries through Promoting Investments of the Production and Usage of Solid Bio-fuel

GEF AGENCIES: UNIDO

OTHER EXECUTING PARTNERS: 1. Ministry of Industry (Mol),

2. Foundation of Institute for Small and Medium Enterprises Development (ISMED)

3. Energy Research Institute (ERI)

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):
Consent

III. Further guidance from STAP

1. STAP welcomes this project which aims to encourage the uptake of solid biomass including pellets as an energy source for heat and power generation. Investments are encouraged by soft loans for plant investment. Most of the budget is for supporting pellets-either by incentives (over half of GEF funding and two thirds of co-financing) and for pelleting systems.
2. The PIF provides little detailed information and does not specify which particular biomass sources will be targeted and for which industries. Barriers and how to respond to them will vary depending on the biomass source and industries. Envisaged during PPG EIA might not be sufficient to answer these questions. Assessment of biomass stocks including their mitigation potential, barriers, supply chains, technologies, and cost-effectiveness should be conducted during project preparation. This assessment could be done concurrently with the analysis of Thai industries in terms of technological feasibility, acceptability and financial viability of switching to use of agricultural and organic industrial wastes.
3. The overall national biomass resource has been quantified and is to be characterized during the PPG stage. It is commendable that the sustainable use could be evaluated using the UNEP/GEF Guidelines (although these are targeted mainly at liquid biofuels) (http://www.globalbioenergy.org/uploads/media/1202_-_IFEU_UNEP_UNIDO_-_Global_Assessments_and_Guidelines_for_Sustainable_Liquid_Biofuel_Production_in_Developing_Countries.pdf).
4. The suitability of the agricultural wastes and organic industry wastes as feedstocks for pelleting will also need evaluation through liaison with pellet manufacturers. Table 2 lists them but what is their moisture content? Is this wet tonnes or dry tonnes quoted? (It is assumed wet biomass sources should be better to be digested to biogas and not pelleted). Is drying (natural or artificial) needed to achieve a suitable moisture content for processing?
5. Assessment of the mitigation potential is constrained but it seems pellets are considered to have zero CO₂/t emissions. If this is the case, it is not correct and must be reflected in the full project proposal.
6. Training and capacity building is critical and seems well considered as a means of overcoming barriers. It is commendable that lending bank staff will be recipients of this training programme.
7. Many pellet systems exist internationally. Thailand could benefit from learning from this experience.

8. During project implementation, STAP stresses the need for careful consideration of the indicators that will be measured to assess project success and impact.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	<p>STAP acknowledges that on scientific or technical grounds the concept has merit. However, STAP may state its views on the concept emphasizing any issues where the project could be improved.</p> <p>Follow up: The GEF Agency is invited to approach STAP for advice during the development of the project prior to submission of the final document for CEO endorsement.</p>
2. Minor revision required.	<p>STAP has identified specific scientific or technical challenges, omissions or opportunities that should be addressed by the project proponents during project development.</p> <p>Follow up: One or more options are open to STAP and the GEF Agency: (i) GEF Agency should discuss the issues with STAP to clarify them and possible solutions. (ii) In its request for CEO endorsement, the GEF Agency will report on actions taken in response to STAP's recommended actions.</p>
3. Major revision required	<p>STAP has identified significant scientific or technical challenges or omissions in the PIF and recommends significant improvements to project design.</p> <p>Follow-up: (i) The Agency should request that the project undergo a STAP review prior to CEO endorsement, at a point in time when the particular scientific or technical issue is sufficiently developed to be reviewed, or as agreed between the Agency and STAP. (ii) In its request for CEO endorsement, the Agency will report on actions taken in response to STAP concerns.</p>