

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: February 11, 2010

Screener: Guadalupe Duron

Panel member validation by: N.H. Ravindranath

I. PIF Information

Full size project **GEF Trust Fund**

GEFSEC Project ID: 3921

Country: **Pakistan**

Project title: **Promoting sustainable energy production and use from biomass in Pakistan**

GEF Agency: UNIDO

Other executing partners: Alternate Energy Development Board (AEDB) and Small and Medium Enterprise Development Authority, Government of Pakistan

GEF Focal Areas: Climate Change

GEF-4 Strategic Program: SP4 – Promoting sustainable energy from biomass

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

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

III. Further guidance from STAP

2. STAP welcomes this proposal on "Promoting sustainable energy production and use from biomass in Pakistan", and would like to offer the following suggestions to strengthen its technical and scientific characteristics.
3. Technology choice: The proposal states that gasification technology will be used, and it is assumed that closed-coupled gasification will be used because it is more commercially viable than two-stage gasification. However, for clarity purposes, it would be helpful to define more specifically the type of gasification technology that will be used in the CEO endorsed document. The CEO endorsed document should also specify what other biomass technologies (if applicable) will be used in the demonstration projects. The risks and risk management strategies should be outlined per technology. Technology assessment is necessary to select the appropriate design, capacity and feedstock. The design may vary with the feedstock.
4. Source and opportunity cost of biomass feedstock: Which biomass feedstock will be targeted for the pilot projects as well as for National Assessments. It is very important to consider the opportunity cost of biomass feedstock even if the biomass feedstock is currently inefficiently used.
5. Pilot Projects: STAP understands the project will test biomass energy technologies in three demonstration sites. Further details on these sites, including what criteria was used to select these sites, could be included in the CEO endorsed document. Which type of SMEs will be selected for the pilot project? Further will pilot projects aim at generating the process heat or power generation or both? It is suggested to have a rationale for selection of pilot projects. The rationale could include mitigation potential of the SME, technological maturity and cost effectiveness. It would also be helpful if UNIDO could include the costs for each pilot project. STAP is aware that the economic efficiency of the project will depend on the cost of alternative fossil fuels (example, natural gas), as well as biomass costs. Thus, it would be helpful to estimate what could be the payback period (return on the investment) in order to assess the economic feasibility of using biomass technologies for small and medium enterprises.
6. Baseline Scenario: It is suggested to identify the dominant SMEs, estimate the energy used according to different feedstocks (fossil fuel as well as biomass), GHG emission trends.
7. Policy regulatory framework: How important is national policy framework for promoting bioenergy in SMEs? Is it a barrier currently?

8. Risks: The PIF recognizes all the technical, economic policy and price risks. Many of the risks are rated as low but the risks are high indeed.

<i>STAP advisory response</i>	<i>Brief explanation of advisory response and action proposed</i>
1. Consent	STAP acknowledges that on scientific/technical grounds the concept has merit. However, STAP may state its views on the concept emphasising any issues that could be improved and the proponent is invited to approach STAP for advice at any time during the development of the project brief prior to submission for CEO endorsement.
2. Minor revision required.	STAP has identified specific scientific/technical suggestions or opportunities that should be discussed with the proponent as early as possible during development of the project brief. One or more options that remain open to STAP include: <ul style="list-style-type: none"> (i) Opening a dialogue between STAP and the proponent to clarify issues (ii) Setting a review point during early stage project development and agreeing 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 revision required	STAP proposes significant improvements or has concerns on the grounds of specified major scientific/technical omissions in the concept. If STAP provides this advisory response, a full explanation would also be provided. Normally, a STAP approved review will be mandatory prior to submission of the project brief for CEO endorsement. 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.