



# REQUEST FOR MSP APPROVAL (1-STEP PROCEDURE)

TYPE OF TRUST FUND: GEF Trust Fund

## PART I: PROJECT IDENTIFICATION

Project Title:	GEF UNIDO Cleantech Programme for SMEs in Pakistan		
Country(ies):	Pakistan	GEF Project ID: <sup>1</sup>	
GEF Agency(ies):	UNIDO (select) (select)	GEF Agency Project ID:	130063
Other Executing Partner(s):	PCST, in cooperation with NPO, CCCD, PCRET, PIM, and PPDB	Submission Date:	15/08/2013
GEF Focal Area (s):	Climate Change	Project Duration (Months)	36
Name of parent program (if applicable):		Agency Fee (\$):	130,137

### A. FOCAL AREA STRATEGY FRAMEWORK<sup>2</sup>:

Focal Area Objectives	Trust Fund	Indicative Grant Amount (\$)	Indicative Co-financing (\$)
CCM-1 Technology Transfer: Promote the demonstration, deployment, and transfer of innovative low-carbon technologies.	GEFTF	1,369,863	4,000,000
(select) (select)	(select)		
(select) (select)	(select)		
(select) (select)	(select)		
Total Project Cost		1,369,863	4,000,000

### B. PROJECT FRAMEWORK

**Project Objectives:** The project aims at promoting clean energy technology innovations and entrepreneurship in selected SMEs in Pakistan through the Cleantech innovation platform and entrepreneurship acceleration programme.

Project Component	Grant Type	Expected Outcomes	Expected Outputs	Trust Fund	Indicative Grant Amount (\$)	Indicative Cofinancing (\$)
1. National Cleantech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits	TA	1. A coordination mechanism/platform established at the national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during and beyond the Cleantech competition.	1.1. SME associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating platform at the national level established  1.2. Annual Cleantech business competitions held across selected SME clusters covering four clean energy sectors (Energy Efficiency,	GEFTF	557,467	1,500,000

<sup>1</sup> Project ID number will be assigned by GEFSEC.

<sup>2</sup> Refer to the reference attached on the [Focal Area Results Framework](#) when filling up the table in item A.

			Renewable Energy, Waste to Energy and Water Efficiency)			
2. Capacity enhancement initiative for clean technology innovations	TA	1. National institutional capacity build for mentoring and training programmes as part of the competition and accelerator programme.	2.1. Capacity building of national industrial associations to host the Cleantech programme  2.2. Mentor Program launched, and 100+ mentors identified and trained regionally and online  2.3. Extensive advocacy and outreach activities including training programmes, seminars, corporate and PPP Forums held regionally by NCTP and online	GEFTF	393,000	1,600,000
3. Policy and regulatory framework strengthened for scaling up of Cleantech competition, innovations and acceleration activities across Pakistan	TA	1. Policies and institutional framework strengthened to promote Cleantech innovations in SMEs and support the local innovation ecosystems in the country.	3.1. Policy and regulatory environment affecting Cleantech innovation in SMEs reviewed and proposals for improvements presented to decision makers  3.2. Regional stakeholder meetings held and partnerships developed with leading institutions, agencies and universities across the country, i.e. UET Lahore, Texila, Karachi, Peshawar, Faisalabad, UAF,	GEFTF	244,863	550,000

			IUB, QAU, BZU NUST, PCRET, PCSIR			
4. Monitoring and Evaluation Management	TA	1. Adequate monitoring of all project indicators together with regular evaluations to ensure successful project implementation.	4.1. Mid-term and final project review/evaluation conducted  4.2. Documentation of best practices and dissemination	GEFTF	50,000	50,000
Subtotal					1,245,330	3,700,000
Project Management Cost <sup>3</sup>				GEFTF	124,533	300,000
Total Project Cost					1,369,863	4,000,000

**C. INDICATIVE CO-FINANCING FOR THE PROJECT BY SOURCE AND BY NAME IF AVAILABLE, (\$)**

Sources of Cofinancing	Name of Cofinancier	Type of Cofinancing	Amount (\$)
GEF Agency	UNIDO	Grant	50,000
GEF Agency	UNIDO	In-kind	50,000
National Government	PCST <sup>4</sup>	Grant	900,000
National Government	PCST	In-kind	300,000
National Government	NPO <sup>5</sup>	Grant	1,150,000
National Government	NPO	In-kind	350,000
National Government	PIM <sup>6</sup>	Grant	750,000
National Government	PIM	In-kind	250,000
CSO	CCCD <sup>7</sup>	In-kind	200,000
<b>Total Cofinancing</b>			<b>4,000,000</b>

**D. CONSULTANTS WORKING FOR TECHNICAL ASSISTANCE COMPONENTS:**

Component	Grant Amount (\$)	Cofinancing (\$)	Project Total (\$)
International Consultants	150,000	200,000	350,000
National/Local Consultants	40,000	120,000	160,000

**E. DOES THE PROJECT INCLUDE A “NON-GRANT” INSTRUMENT? No**

(If non-grant instruments are used, provide an indicative calendar of expected reflows to your Agency and to the GEF/LDCF/SCCF/NPIF Trust Fund).

<sup>3</sup> PMC should be charged proportionately to focal areas based on focal area project grant amount in Table D below.

<sup>4</sup> Pakistan Council for Science and Technology

<sup>5</sup> National productivity Organization

<sup>6</sup> Pakistan Institute of Management

<sup>7</sup> Center for Climate Change and Development

## **PART II: PROJECT JUSTIFICATION**

### **PROJECT OVERVIEW**

**A.1. Project Description: Briefly describe the project, including ; 1) the global environmental problems, root causes and barriers that need to be addressed; 2) the baseline scenario and any associated baseline projects, 3) the proposed alternative scenario, with a brief description of expected outcomes and components of the project, 4) incremental cost reasoning and expected contributions from the baseline , the GEFTF, LDCF/SCCF and co-financing; 5) global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF); 6) innovativeness, sustainability and potential for scaling up.**

In 2011, the Government of South Africa, with the support of the Global Environmental Facility (GEF) and the United Nations Industrial Development Organization (UNIDO), successfully implemented the ‘Greening the COP17’ project. One of the four components of the project focused on the design and implementation of the first South Africa Clean Technology Competition (2011 SA Cleantech) for green entrepreneurs and small and medium-size enterprises (SMEs) with innovative ideas and concepts in the areas of energy efficiency, renewable energy and green building practices. This competition was a great success and it uniquely drew the interest of policy makers, private sector etc. on the interlinked issues of employment, green growth, and the role of science and innovations.

Building on this success and the lessons learned, the GEF and UNIDO have agreed to develop a global flagship Cleantech programme. The global Cleantech programme is in line with the GEF Council’s Revised Strategy for Enhancing Engagement with the Private Sector, Modality 3, namely “SME Competition Pilot: Encouraging Entrepreneurs and Innovators.” This strategy, in particular, seeks to support entrepreneurs and innovators seeking to establish commercial ventures in the field of clean technologies.

For 2013, around 10 countries, including Malaysia, India, Armenia, South Africa, Turkey, Pakistan, Brazil, Thailand and the Russian Federation have been identified to work together with UNIDO in developing this type of project to seek GEF funding. The flagship programme has the potential to create an extensive network of clean energy entrepreneurs originating from countries participating in this global programme. In March 2013, the GEF Operational Focal Point of Pakistan endorsed the GEF UNIDO Cleantech Programme for SMEs in Pakistan with a GEF grant of US\$1,500,000.

### **A.1. 1) The global environmental problems, root causes and barriers that need to be addressed**

Pakistan’s contribution to total global greenhouse gas emissions is 0.8%. However, Pakistan is among the countries most vulnerable to climate change and has a very low technical and financial capacity to adapt to the adverse impacts of climate change (CC). Pakistan has a population of over 180 million and has exhibited a continuously high rate of population growth. When measured by population size it has moved from the thirteenth largest country in 1950 to the sixth largest country in 2011. According to World Bank projections it will become the fifth largest country by 2050.

The country, historically a net energy importer, is confronting imminent energy shortages as its economy and population grow while global fossil fuel prices continue their upward spiral<sup>8</sup>. Energy sector issues and development continue to severely constrain Pakistan’s economy since 2009-2010. Primary commercial energy supplies in Pakistan comprise of oil, natural gas, coal, hydro and nuclear electricity. During the fiscal year 2008-09 these were 37.3 million tons of oil equivalent (MTOE) consisting of natural gas (32.3%), oil (35.3%), hydro power (30.3%), coal (0.1%) and nuclear (2.0%). Based on an expected GDP growth rate of 3.5%-5%, the total energy demand is expected to increase to 122 MTOE in the next 15 years. Given the current constraints, the country will have to face an

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<sup>8</sup> AEDB (2006) Pakistan’s “Policy for Development of Renewable Energy for Power Generation”. Islamabad

unprecedented dependence on energy imports and will need to develop local conventional and alternative energy sources. According to studies by ENERCON the cost to the country from both scheduled and unscheduled outages has been estimated to cause a reduction in annual GDP of 1.8%. Within the industrial sector, the reduction in value added was estimated at 8.2%. In addition, power shortages were estimated to reduce the national export of manufactured goods by 7.2% resulting in a loss of foreign exchange of \$675 million.

Regarding the energy sector, it is widely recognized that reforms are needed to promote energy efficiency in the industry. Today, 30% of the population has no access to electricity, and around 80% has no access to pipeline gas. Pakistan ranks 165th out of 218 countries in per capita access to electricity. During 2009, energy deficits were met by around 18.5 MTOE oil import plus 3 MTOE of coal import at a cost of around \$10 billion (an additional burden on national exchequer). The energy sector is characterized by a lack of institutional capacity to undertake effective integrated planning, policy development, and implementation. The issues faced by the energy sector are not related primarily to capacity i.e. implying a need to expand the infrastructure but to management and organizational difficulties that result in cash flow constraints.

According to the New Growth Framework, Pakistan's economic strategy document adopted by the Planning Commission of Pakistan, the small and medium-sized enterprise (SME) sector plays a vital role in Pakistan's economy. SMEs contribute to about 30% of GDP, Rs. 400 billion to exports, and generate 25% of exported manufactured goods. Pakistan's SME sector recorded an impressive growth of 14.7% during 1987/88 – 1996/97 when the estimated value of its output increased from Rs. 19,683 million to Rs 67,541 million. Meanwhile, the number of Small and Household Manufacturing Industries recorded growth of 5.8% in the same period. Therefore, the use of natural resources, water, and energy are bound to increase with the growth of the SME sector.

There is a general concern about the inefficiency of energy usage and environment degradation in industry. At the ground level SMEs and the large firms need to be made aware of their role in environmental degradation in Pakistan. There is a strong case for putting in place policy-guided mechanisms for raising awareness of entrepreneurs and effective management of the environmental consequences of the operations of SMEs. Moreover, the barriers to the national innovation and acceleration programmes for clean energy technologies in SMEs in Pakistan include the following:

1. The institutions promoting clean energy in the country require institutional capacity enhancement and policy guidance initiatives to accelerate their efforts;
2. There is a lack of an enabling policy and regulatory environment to support innovations in SMEs;
3. There is a lack of trained experts for mentoring start-ups and entrepreneurs involved in Cleantech innovations;
4. There is a lack of information about technology options, best practices, and benchmarks within SMEs, and linkages between research institutes and industry remain weak;
5. There is limited awareness of financial schemes, requirements and procedures to access financing for clean energy investment projects and limited government financial incentives to support industrial enterprises on the uptake of innovation in clean energy technology;
6. The lack of adequate institutional capacity and awareness leads to less participation and support by key stakeholders and the public.

### **A.1. 2) The baseline scenario and any associated baseline projects**

Pakistan, despite having a large market, has weak market efficiency indicators, showing a very low level of innovation. Even though the cost of doing business is low in comparison to the regional economies, Pakistan ranked 103 out of 125 countries in the global innovation index. The lack of innovative spirit in the public sector and even in the country's larger private enterprises is not just a matter of insufficient resources or ill-conceived policies, but more the lack of a supportive culture. Moreover, Pakistan needs the required Critical Mass "technological and research bedrock."<sup>9</sup> It is, therefore, the leveraging of sectoral differential advantages and the adoption<sup>10</sup> and adaption<sup>11</sup> of technologies and best practices that would lead towards the development of competitive industries. However, in some sectors, such as engineering, the SMEs have shown significant progress in adopting and innovating production processes. What is missing, however, is the institutionalized search for more innovations with the development of R&D facilities and basic research. More important is the absence of systematic commercialization of innovations.

The energy audit studies of various SME clusters conducted by SMEDA and National Productivity Organization (NPO) mention that there is a large number of energy-intensive SME clusters in the manufacturing sectors (Gujranwala, Wazirabad, Sialkot, Faisalabad, Lahore, and Karachi) that require urgent energy efficiency measures for economic and environmental sustainability. Realizing the importance of this segment of industry, the NPO has marked energy efficiency improvements among SMEs as a high priority on the agenda. The Government of Pakistan, through ENERCON, the Ministry of Industries, SMEDA, and NPO has launched programmes/schemes to promote innovations in clean energy focusing on energy efficiency and the enhanced use of renewable energy among SMEs. Recently, energy efficiency improvement among SMEs is also gaining the attention of bilateral and multilateral organizations. USAID, GIZ, EU and Netherlands Embassy have been launched and have carried out various RE and EE initiatives for SMEs in Pakistan in collaboration with ENERCON, SMEDA and NPO.

The Japanese government through JICA has conducted several feasibility studies for GHG reduction projects focusing on energy efficient technologies and processes in the Pakistan textile and steel sector. The German Technical Agency (GIZ) has been working in Pakistan on energy efficiency technology promotion, development and dissemination in SME sectors under Renewable Energy and Energy Efficiency (REEE) project in collaboration with SMEDA. As part of the project, energy audits were conducted in various clusters including textile, steel, paper and pulp, etc. Moreover, GEF has funded a number of projects focusing on energy efficient technologies in the SME sector through UNDP, as well as the recent GEF/UNIDO project titled "Sustainable Energy Initiative for Industries in Pakistan".

The currently on-going international cooperation programs in place are described below:

#### **National Energy Conservation Programme**

In 1985, with funding and technical assistance from USAID, Pakistan initiated a major national EE&EC programme. Under the project, a detailed National Energy Conservation Plan was drawn up and ENERCON was established to serve as the Government's focal implementing agency.

#### **Energy Efficiency Initiative by Asian Development Bank**

The Asian Development Bank (ADB) has included Pakistan in its regional Energy Efficiency Initiative (EEI) launched in 2006. The Bank has a framework analysis to help define a future demand-side EE&EC assistance strategy to the country to be financed through a major loan programme under US\$1 billion a year EEI funding. In this respect, national action and investment

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<sup>9</sup> Pakistan Innovation Strategy: Key to competitiveness in the 21<sup>st</sup> Century by Ministry of Finance, Government of Pakistan sponsored by US AID.

<sup>10</sup> Improvement in local products and practices achieved through adoption of knowledge and technology available worldwide.

<sup>11</sup> Establishment of competitive activities with Adaption made to existing technologies.

plans along with project pipelines are slated to be finalized by the ADB for which country level consultations have already begun at the Planning Commission.

### **Programme on Renewable Energy and EE**

In 2006, the German development cooperation, GIZ, began a €3.2 million technical assistance programme in REEE and identified ENERCON and NPO as the focal counterpart agencies for the EE part of the project. The main thrust of this programme is to develop technical and management capacity within these institutions as well as amongst other public and private sector stakeholders to enable them to play their roles more effectively. GIZ is also helping ENERCON in accordance with the Government's Energy Conservation Policy 2006 to develop a national EE&EC action plan. Moreover, GIZ and SMEDA have set down the objectives for an EE programme for the textile industry.

### **Prime Minister Quality Award (PMQA) in Pakistan**

The Prime Minister Quality Award (PMQA) in Pakistan has been successfully established by the National Productivity Organization (NPO) in 2012. The organization is responsible for the management and administration of the PMQA, a prestigious award, developed on the basis of the world recognized business excellence principles found in the US Malcolm Baldrige National Quality Award and other similar awards. Today, more than 70 countries in the world and 17 countries in Asia have adopted the criteria for performance excellence i.e. Quality Award.

The goal of the PMQA is to promote awareness of productivity and its impact on competitiveness, understanding of the requirements for excellence in quality, as well as the sharing of information on successful strategies and on benefits derived. Their focus is on helping organizations in their journey towards quality and performance excellence. Hence, the PMQA is the highest honour given to an organization for business excellence in the country.

### **South Asian Regional Initiative by USAID**

USAID has also been implementing the South Asian Regional Initiative (SARI) project in several South Asian nations since 2000. Under the current phase of the SARI Energy Cooperation and Development (SARI/Energy) programme since 2007, Pakistan has been included as a recipient of technical assistance. The programme focuses on regional approaches to meet South Asia's energy security needs including energy trade, EE, rural energy supply, regulatory issues and energy statistics.

### **UNIDO GEF-4 RE project**

UNIDO implements the GEF-4 funded project on the development of gasification in SMEs in Pakistan entitled "Promoting Sustainable Energy Production and Use from Biomass." Lessons learned will be instructive to the present project. In particular, the project will explore the possibility of linking and building on the GEF activities related to policy, regulatory framework and capacity building.

### **UNIDO GEF-5 Sustainable Energy Initiative for Industries Project**

The project objective is to create a market environment to promote the use of RE/EE technologies and measures in the selected industrial sectors of Pakistan. The project components include; to develop the policy and regulatory framework on use of EE/RE in Industry, to create an investment platform for promoting investments in RE/EE and scaling up the market, and to establish an accreditation center for energy experts on EMS & RE applications in industry. The project has been approved by the GEF under replenishment 5 with a grant of US\$ 3,620,000.

Moreover, the project will build on lessons learned from similar initiatives such as: (i) the Cleantech Open in the United States of America, a reliable and proven UNIDO partner after having executed a joint project in South Africa in 2011 as part of the "Greening COP 17" project; and (ii) Eco-Business Partnership Programme in Austria.

The project will also link up with UNIDO's Green Industry initiative to promote sustainable industrial growth. UNIDO believes that the consensus around the concept of a Green Economy can only be reached if developing countries are provided with concrete opportunities to participate in the global markets for environmental goods and services and if opportunities for sustainable development are created for them in the international system for a green economy. To that end, UNIDO's global initiative on Green Industry outlines policy frameworks, instruments and concrete examples of good practice measures and programmes that would support green industries and the greening of the existing industries in developing countries and economies in transition.

The Cleantech approach and methodologies adopted under the project will build on the Green Industry initiative, and will go a step further by focusing on innovative SMEs through an eco-system approach that will involve identifying start ups, and nurturing, mentoring and incentivizing technological innovations to promote clean energy technologies and systems in selected SME clusters.

### **A.1. 3) The proposed alternative scenario, with a brief description of expected outcomes and components of the project**

#### **GEF Project Alternative Scenario**

The proposed alternative scenario would be the implementation of the GEF UNIDO Cleantech Programme for SMEs in Pakistan. The project is part of the UNIDO/GEF global initiative that seeks to promote innovative environment friendly clean energy technologies in small businesses and SMEs – see brochure in Annex D. The project is in line with the National Policies in Pakistan and GEF focal area priorities. Clean energy technologies developed and promoted as a result of the innovation competition and the accelerator programme will lead to reductions in overall national GHG emissions, and will contribute to Pakistan's sustainable green growth thereby addressing a global issue of climate change and national issues of energy security, employment creation and competitiveness of SMEs etc.

The project, in addition to creating an enabling policy environment and institutional capacity, will also assist in the establishment of a supportive innovation ecosystem through the organization of three annual competitions with associated accelerator programmes. It is expected that each competition will have around 100+ entrants. From these entrants, around 40-50 semi-finalists will be selected and will receive support through the accelerator programme as described hereunder. About 10-15 finalists will then be selected to receive further support as part of the accelerator programme. From these finalists, winners and runners-up will be selected. The selection of winners, runners-up, and finalists will be made by various judge panels based on their evaluation of the business plans or pitches submitted by the finalists and semi-finalists receiving support from trainers or mentors. The numbers of entrants, semi-finalists, finalists, winners and runners-up will vary from year to year, depending on the number of technology categories to be covered, maturity of the organization team, price categories, etc.

The promotion of clean energy technology innovations<sup>12</sup> and entrepreneurship in Pakistan through Clean Energy Innovation and Entrepreneurship Acceleration Programme is envisaged through the following three components discussed in detail below:

#### **Component 1 –National Cleantech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits**

This component is based on the experience gained under the successful Cleantech business competition and accelerator pilot program carried out in South Africa in 2011 as part of the Greening of COP17 project that was funded by the GEF. This competition/accelerator program was implemented by the Government of South Africa and UNIDO in conjunction with the National

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<sup>12</sup> The proposed project will initially limit its focus to clean energy technologies, however the intention is to build upon this success and in the future expand into other sectors.



Cleaner Production Center (SA-NCPC), the Council for Scientific and Industrial Research (CSIR) and the Cleantech Open from USA. In the case of Pakistan, the project component #1 would be implemented in close collaboration with Center on Climate Change and Development (CCCCD) and other stakeholders.

### **1.1. SME associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating platform at the national level established**

In Pakistan, it is proposed to set up a National Cleantech Platform (NCTP) at the Center for Climate Change and Development (CCCCD) supported by the government institutions i.e. PCST, NPO, SMEDA, PCRET, PIM, FPCCI<sup>13</sup> and private sector. NCTP/CCCCD will organize the annual competition at the national/provincial level to identify innovators within SME clusters, facilitate mentoring to link up with the global value chain and set up a more complete accelerator, modeled on the national Cleantech Open in the United States and similar programmes in other parts of the world. The National Associations of SMEs, Cleantech Open, UNIDO and other key institutions will partner to design this program in Pakistan, keeping in view local conditions and needs. To begin with, in 2013-14, given the complexities and diversity of the Pakistan economy, the Cleantech competition and accelerator will focus on the Punjab province, expanding in 2015-16 to include three other provinces.

### **1.2. Annual Cleantech business competitions held across selected SME clusters covering four clean energy sectors (and expanded from one region/province in 2014 to three regions/provinces in 2015-16)**

In the initial phase, given the diversity of SME sectors and the geo-economic scenario of the country, the proposed Cleantech programme, competition and accelerator will focus on the Punjab province in 2013-14 before being expanded to three other provinces in 2015-16. To begin with, technology categories will consist of the four clean energy technology sectors:

- Energy Efficiency
- Renewable Energy
- Waste to Energy
- Water Efficiency

Although there may be value in adding an additional category to recognize a specific industry subsector or need in a region, care will be taken when adding new categories to maximize impact under the project. There is much benefit in standardizing categories, as it would enable effective judging, benchmarking and the sharing of mentors. A specific need to stimulate innovations in a specific area might be best served not by a new category but by a new prize that would extend across all categories and applicants, or within a given category. The opportunity for additional prizes<sup>14</sup> will be defined after further discussions with local partners and national stakeholders, but currently four prizes have been defined beyond the main competition awards:

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<sup>13</sup> Pakistan Council for Science and Technology (PCST), National Productivity Organization (NPO), Small and Medium Enterprise Development Authority (SMEDA), Pakistan Council for Renewable Energy Technologies (PCRET), Pakistan Institute of Management (PIM), Federation of Pakistan Chambers of Commerce and Industry (FPCCI)

<sup>14</sup> Additional prizes might include: Best use of Information Communications Technology; Best Support for Climate Change Adaptation; SE4All Energy Access Prize.

Prize	Description
Category	Overall winner in one of the four competition categories
Sustainability	Finalist with the most effective integration of sustainability into their business model and operations
Technology	Semifinalist team with the clean technology that offers the greatest potential to recycle, reuse and reduce
University	Most promising entry in the competition developed from a university based team (students, researchers or faculty) linked with enterprises

## **Component 2 – Capacity enhancement initiative for clean technology innovations**

The project component “institutional capacity enhancement for clean technology innovations” would be implemented in collaboration with NPO, PCST, PIM, PCRET, SMEDA, FPCCI and PPDB. The Project Management Unit (PMU) and NCTP/CCCD would coordinate the activities under the capacity enhancement initiative for clean technologies.

### **2.1. Capacity building of national industrial associations to host the Cleantech programme**

To ensure the long-term growth of the Cleantech competition and accelerator in Pakistan and to support Cleantech startups and foster a vibrant and sustainable Cleantech ecosystem through partnerships and collaboration, partners and stakeholders including staff of National Associations of SMEs will be trained on best practices for management of the platform. Capacity building initiatives, among others, would include training of trainers on entrepreneurship start-ups, knowledge management and exchange of information on best practices and a coordination mechanism including a specific focus on women entrepreneurs and participants. This will include participation at the Global Cleantech competitions and meetings, which brings together competition hosts and partners from around the world to share best practices and experiences.

### **2.2. Mentor Program launched – 100+ mentors identified and trained regionally and online**

The Cleantech mentor programme will aim at maximizing every participant’s chances of winning the business competition, of raising investment capital and of achieving sustainable commercial success. The mentoring programme consists of both mentoring methodology and training. Each semi-finalist team will be matched with one “generalist mentor” and multiple “specialist mentors” based on mutual areas of interest and proper matching of team needs and mentor strengths.

**Generalist Mentors** - A generalist mentor is the general coach, guide and advisor for the team, typically with extensive Cleantech or startup experience. Often, generalist mentors are serial entrepreneurs and active investors who often become trusted advisors to and investors in the company once the competition has concluded. Mentors are unable to join or invest in a mentee company during the competition cycle.

**Specialist Mentors** – A specialist mentor is an expert in a key functional discipline such as finance, marketing, engineering or law. They act as on-call subject matter experts and may be from both large corporations and startups.

In 2014, 50+ mentors will be identified and trained using international best practices, methodologies and tools. Special efforts will be made to involve women entrepreneurs and mentors in the programme. In 2015, in conjunction with the expansion of the competition pilot to three additional regions/provinces, an additional 50+ mentors will be identified and trained. The focus will mostly be

on mentors within the three regions/provinces participating in the pilot competition but activities will also include mentors with high potential in other parts of the Pakistan and overseas (through the Pakistan Diaspora). Training sessions will be online and in-person. Mentor development activities will begin in 2013 in conjunction with competition outreach activities. The intention is that 100+ mentors will be trained, certified and engaged before the competition launches for the third year in 2016.

### **2.3. Extensive advocacy and outreach activities including training programmes, seminars corporate and PPP Forums held regionally and online**

Advocacy and outreach activities will begin in 2013 to raise the profile of the competition and accelerator, and the potential for clean technologies to benefit SMEs and small businesses as a whole. Activities will include training program, briefing sessions, press releases, social media activity and advertising. The mix of these activities will vary in line with local conditions. For example, the 2011 South Africa Cleantech Competition used radio advertising to target a more diverse range of entrepreneurs and innovators. Outreach activities will be supported by the local entrepreneurs, and partnerships including service providers (e.g. patent attorneys, accountants etc.), university departments and societies. Importantly, outreach provides not only an opportunity to find potential competition and accelerator participants but also a means to change awareness of clean technologies, climate change and the role of entrepreneurs.

With regard to the training program, intensive training seminars and other training events, it is vital that more seed stage investors are brought into the ecosystem to support the growing number of companies launched through the Cleantech process and supported through the accelerator. This will be achieved by bringing entirely new investors into SME sectors, and encouraging existing technology investors to invest at much earlier and potentially riskier stages. Both groups will be supported through the dissemination of best practices from investors from around the world including case studies, new tools and organizations (e.g. formation of new investor groups). These networks would primarily comprise of angel investors, defined as individuals that provide capital to start-up businesses, that pool research and investment capital in order to achieve a broader scope. The Training Programme will begin once the semifinalists are announced and run through to the final judging process. The goal is to educate and enable the semifinalists to become successful businesses. Attendance in each portion by at least one team member is highly encouraged. All semifinalist teams participate in the following with their assigned mentors: Cleantech training seminar; Special Topic Seminar; Business Clinics; and Practice Judging.

The Cleantech training seminar will be an intensive, three-day program for competition semifinalists that will be held in Islamabad during 2014 and 2015. The training is intended to address all aspects of the business model and investor pitch. The end goal is an effective business strategy and a succinct, clear pitch, so that each semifinalist company emerges from the competition and accelerator with the best shot at success. The programme would allow for instructional learning from a lecture format tied closely with a hands-on approach, group exercises and activities.

To assist companies in making connections to potential investors and partners, half-day PPP forums will be held at partner corporations and government agencies to highlight opportunities for investment, loans, grants, technology adoption and partnerships. The intention is to assist as many semifinalist companies as possible to raise funding (grant and equity), find customers, and build partners within 12 months of completing the competition. There will be a specific focus on undertaking activities that would involve women entrepreneurs more actively in seminars and investor group meetings.

Regarding online training sessions, registration would be free and all semi-finalists will be encouraged to participate. However, there would be various stages/phases to qualify for the final stage. Out of these registered participants, around 15+ participants would be shortlisted for advanced training sessions and the Cleantech competition.

### **Component 3 – Policy and regulatory framework for scaling up Cleantech competition, innovations and acceleration activities across Pakistan**

The activities under the project component “Policy and institutional framework for scaling up Cleantech competition, innovations and acceleration activities across Pakistan” would be carried out in collaboration with PCST, NPO, PCRET, PPDB and SMEDA. The PMU and NCTP at CCCD would coordinate the component activities.

#### **3.1. Policy and regulatory environment affecting Cleantech innovation in SMEs reviewed and proposals for improvements presented to decision makers**

The project will assist in reviewing the policies and regulations relating to the promotion of clean energy technologies, innovation and entrepreneurship to identify which ones need to be developed and/or improved. The related policies and regulations can be those promoting the clean energy technologies of the selected categories in SMEs, and those governing the protection of intellectual property rights, agreements on sponsorships, roles, responsibilities, and rights of different stakeholders: competition organizer and entrants, sponsors, mentors, judges, etc. Special efforts will be made to formulate policies that would aim at involving women entrepreneurs and mentors in the Cleantech programme. Similarly, the innovation culture will give rise to entrepreneurship with appropriate financial arrangements. It is expected that results under this project are likely to provide experience and inputs for the establishment of the National Innovation Fund that will help in scaling up innovations in the field of green and clean energy technologies in selected SME clusters.

#### **3.2. Regional stakeholder meetings held and partnerships developed with leading institutions, agencies and universities across the country**

As part of the growth of the Cleantech process and accelerator across Pakistan, meetings will be held with key stakeholders and partners including chambers of commerce and industry and SME associations in many regions. The focus of the meetings will be on communicating successes with the pilot competition in Pakistan in 2014-16 and establishing roles and commitments going forward.

When moving into three other regions/provinces, especially those less associated with technology, it is important to understand the status of existing Cleantech entrepreneurs, potential competition entrants and the regional opportunities and challenges. In some cases, research may suggest that some regions should be combined into a single competition region to achieve sufficient economies of scale.

The leading universities and institutions in Pakistan such as UET Lahore, Peshawar, Taxilla, Faisalabad, UAF, Karachi, PCRET, QAU & NUST Islamabad, PCSIR, and IPO will be an excellent source of new clean technologies, emerging entrepreneurs and additional team members. The partnership may consist of supporting entrepreneurship education in these universities (with a focus on clean technologies), developing case studies and co-hosting events. The aim is to have the universities encouraging and facilitating their students and graduates to enter the Cleantech accelerator programme.

### **Marketing the Cleantech Approach**

As a cross-cutting issue, the success of this programme hinges on effective marketing of the whole Cleantech approach and mobilising interest by members of the Cleantech ecosystem. Raising awareness and mobilising interest are central for the success of the Cleantech approach on two accounts. First, there should be adequate buy-in by various stakeholders who deal with SMEs to the national Cleantech programme to make the Cleantech approach viable. Second, once involved, there is a need to ensure their continued involvement and support for the Cleantech programme to ensure the mainstreaming of the Cleantech approach and its continuation after the project. Accordingly, this project will engage in activities designed to raise awareness of the Cleantech approach amongst SMEs, policy makers, universities, and financiers that include dissemination of brochures and other

print material outlining the approach and the benefits of getting involved. The project will also take advantage of meetings of these stakeholders at the provincial and national level to make presentations on the Cleantech approach. The project will also make use of the project website to regularly communicate progress and achievements of the UNIDO/GEF project.

#### **A.1. 4) Incremental cost reasoning and expected contributions from the baseline , the GEFTF, LDCF/SCCF and co-financing**

GEF resources are being requested to provide technical assistance for the promotion of clean energy technology innovations and entrepreneurship in Pakistan through the GEF UNIDO Cleantech Programme for SMEs. The GEF intervention is sought to foster innovative technologies that can help in the scaling up of clean energy technologies for fueling green growth in Pakistan. The project aims to provide a focused approach in promoting innovation in clean technologies with a special focus on Energy Efficiency, Renewable Energy, Waste to Energy and Water Efficiency. The proposed GEF project will place an emphasis on promoting innovation in the energy and climate change dimension.

The promotion and adoption of innovations in clean technologies in Pakistan will have lasting positive effects for the global environment as it will allow tackling of environmental problems at the source by simultaneously avoiding or reducing pollutant emissions and the optimum use of natural resources and energy. The focus of the project, which is on the adoption of commercially viable clean technology innovations by SMEs, will further contribute to generate substantive and long-term benefits to the global environment as they represent the key drivers of economic activity and thus energy consumption and CO<sub>2</sub> emissions. As a result, the promotion of clean technology innovations will allow striking a balance between growing economic activity and its global environmental impact.

In the absence of such an intervention it is likely that the increased growth would strain the system and lead to an increased reliance on conventional sources of energy. Without GEF support for this project, energy intensive SMEs will not be able to increase their focus on clean technology innovation or mobilize support at the national and international level in creating business ideas around clean energy technologies and linking to a value chain approach.

UNIDO will contribute US\$50,000 in cash (from DO funds managed by PTC) and US\$50,000 in-kind to the project to cover the travel costs of its staff, international consultants and staff-time. The use of staff time from other than ECC UNIDO Branches will be considered as in-kind contribution from UNIDO to the GEF project; especially under Component 2 involvement of other UNIDO branches where specific expertise is anticipated, most notably from the Montreal Protocol Branch and the Environmental Management Branch. The mentioned amount of US\$50,000 is expected to be easily reached – and even exceeded – based on staff time from the mentioned Branches.

#### **A.1. 5) Global environmental benefits (GEFTF, NPIF) and adaptation benefits (LDCF/SCCF)**

In assessment of Pakistan's low carbon growth path (0.8% of global emissions) and given the specific focus of the project on promoting innovations in clean energy technologies, a ten year horizon has been selected for estimating the **indirect** savings of GHGs.

The reduction potential has been calculated based on the Economic Intelligence Unit estimates, accounting for approximately 180.8 Mt CO<sub>2</sub> eq by 2020. Given the cross-sectoral impact of the innovative clean energy technologies, the project can contribute to the savings estimated under the top-down approach. Thus, assuming the same data for 2023 as for 2020, it is estimated that with 0.25% and 0.5% as the lower and upper bound the emissions in the range of 452,000 t CO<sub>2</sub> eq to approximately 904,000 t CO<sub>2</sub> eq will be reduced over a 10 year period. The proposed GEF contribution of US\$ 1,369,863 would result into a unit abatement cost (UAC) of US\$ 3.03 per ton of CO<sub>2</sub> and US\$ 1.5 per ton of CO<sub>2</sub> respectively.

### **A.1. 6) Innovativeness, sustainability and potential for scaling up.**

Keeping in view the high priority accorded to innovation, technology transfer and capacity building of SMEs as critical components of overall industrial strategy to address climate change and overall resource efficiency by the Government of Pakistan, the project will primarily aim at promoting an innovation ecosystem approach driven by incentives, to assist in the design of policy and institutional framework at the national level for promoting innovations in clean technologies in small businesses and SMEs in the country. The project will adopt an inter-disciplinary approach involving SME, national ministries, academia, industrial associations, provincial governments, partner agencies such as NPO and SMEDA and autonomous research centers in the country and abroad. The project will closely coordinate with other similar international efforts, as it is critical to share and document best practices and knowledge that can help in enhancing productivity in SMEs and at the same time, mitigating climate change. It is proposed that the selected institution will be part of the network with the National Clean Tech Platform (NCTP), and will act as the connecting node with similar climate technology centers in developing countries. Similarly, the innovation culture will give rise to entrepreneurship with appropriate financial arrangements. It is expected that results under this project are likely to provide experience and inputs for the establishment of a National Innovation Fund that will help in scaling up innovations in the field of green and clean energy technologies in selected SME clusters.

### **A.2. Stakeholders. Identify key stakeholders (including civil society organizations, indigenous people, gender groups, and others as relevant) and describe how they will be engaged in project and/or its preparation:**

The identified key stakeholders involved in the project include PCST, NPO, SMEDA, CCCD, PIM, and PPDB. The project will be implemented in close cooperation with CCCD and private sector through chambers of commerce and industry (CCIs). The roles of the key executing partners are as follows:

<b>Stakeholder and mandate</b>	<b>Envisaged role in the project</b>
PCST	Pakistan Council for Science and Technology (PCST) will act as lead national executing agency to provide technical inputs for the project activities.
CCCD	Center on Climate Change and Development (CCCD) will be the CSO member of the PSC and co-lead implementation counterpart of the project. The NCTP would be established at CCCD premises as agreed by the government and private partners. CCCD would support the efforts to involve women entrepreneurs and investors in the programme.
NPO	NPO, the Ministry of Industries will be a member of the PSC. As such it will participate in the policy component and assist industries in becoming energy efficient.
SMEDA	Small and Medium Enterprise Development Authority will be a member of the PSC and participate in the policy component and promotion of Cleantech completion, mentor programme, and capacity building activities.

PCRET	PCRET will be a member of the PSC and participate in the policy component. PCRET would promote the clean and renewable energy technologies identified under the project.
PIM	Pakistan Institute of Management (PIM), under the Ministry of Industries, will be an executing partner and member of the PSC. PIM will participate in the policy and capacity building component of the project.
FPCCI	A representative of the chamber of commerce and industry (to be selected during the implementation phase) will be a member of the PSC.
Gender Dimensions	Relevant women entrepreneurs, associations and gender focal points will be invited to participate in all activities of the project. The project will deliberately mobilize interest from women entrepreneurs by targeting the involvement of their associations in the project process. This will be done by taking into consideration the cultural context that exists in Pakistan. That way, the project would adequately address the gender imbalances in SMEs and provide a solid basis for gender mainstreaming in clean technology innovations.
HEC, Universities and Academic institutions i.e. University of Engineering and Technology (UET), NUST, QAU, UAF etc.	Knowledge accumulation and dissemination management.

The project will have a Project Steering Committee (PSC), which will be chaired by the PCST and co-chaired by NPO. Their role is to provide strategic guidance on project implementation. A Project Management Unit (PMU) under NPO will be established at UNIDO Field Office and will be responsible for the daily management of the project. NCTP/CCCD will be facilitated by PMU in executing the co-lead role in implementation of the project. Moreover, NCTP will be supported by the Government of Pakistan and project stakeholders.

**A.3. Describe the socioeconomic benefits to be delivered by the Project at the national and local levels, including consideration of gender dimensions, and how these will support the achievement of global environment benefits (GEF Trust Fund/NPIF) or adaptation benefits (LDCF/SCCF).:**

The project will result in more Cleantech start-up small and medium scale enterprises being identified and supported, for catalyzing innovations in clean energy technologies. The creation of a national platform for promoting innovation will result in enhancing national human capital and thereby, leading to job creation and poverty reduction. There will also be new job opportunities, as the viable clean technologies shall commence local production and scaling up of innovation. Indigenous production of the inventions will also lead to a reduction in the cost of equipment for SMEs and will thus further benefit small industries. The increased use of clean technology innovations will result in a reduction of GHG emissions.

The innovative technology Cleantech programme for SMEs will highlight the need for supporting clean technology innovations at the national level. In particular, this programme will bridge the gap between innovators and investors, thereby potentially creating new business ideas and concerns. This

project will try to forge synergies between innovators and the international private sector that can then be invested in the subsequent commercialization of the technologies.

Moreover, special effort will be made to involve gender groups as consultants, participants, entrepreneurs, mentors, etc. in all stages of project implementation. Gender analysis will be carried out as part of the social assessment before the start of the project and gender specific targets will be monitored and evaluated throughout the project. Hence, it is planned that a minimum target share of trained women should reach approximately 30% of the total number of mentors/experts trained. Additionally, female mentors/experts will be encouraged to participate in trainings and other project activities. Furthermore, women entrepreneurs are expected to contribute to various project components and activities to support gender mainstreaming. In particular, this sort of participation/experience enables women entrepreneurs to participate in intensive training seminars, and provide technical assistance in organizing a successful competition.

**A.4 Indicate risks, including climate change, potential social and environmental risks that might prevent the project objectives from being achieved, and if possible, propose measures that address these risks:**

The main risks, their rating and mitigation strategy for the project are listed below:

<b>Risk</b>	<b>Rating</b>	<b>Mitigation</b>
Lack of interest by the public and industrial associations in organizing the Cleantech programme, resulting in limited participation, or entries with low quality, especially for the first years	Medium	Proper communication programmes would be prepared and implemented with adequate resources allocated to ensure effective and widespread communication of the Cleantech programme.  Regional workshops would be carried out.  Effective support would be provided to innovative SMEs. User-friendly entry form would be prepared.
Lack of interest by mentors	Low	Mentors would be identified through a stringent selection criteria and an assessment of their ownership to the competition shall be determined at an early stage.
Lack of absorptive capacity within national counterparts	Low	The Cleantech programme is in line with national policies and the project would be executed in close coordination with the PCST, NPO and other counterparts.
Lack of effective coordination between various project partners	Low	A proper coordination would be sought through the Project Steering Committee and ad-hoc working groups will be established if necessary.



Incentive and financial support system are insufficient	Low	The capacity of financial and governmental institutions will be strengthened on energy saving opportunities and their potentials. Grant and non-grant instruments will be developed and applied to ensure the availability of financing resources such as revolving credit lines with private and public sector banks.
Climate Change Risks	None	There is no climate change risk foreseen for the achievement of the project's objectives.

**A.5. Explain how cost-effectiveness is reflected in the project design:**

The development and implementation of this project will be closely coordinated with other related projects and initiatives in order to create synergies and avoid overlapping. In addition to the Project Steering Committees, working groups and other coordination mechanisms will be established when necessary to ensure effective coordination. The National Project Manager is also the future competition programme manager, and he/she will also act as the local consultant on clean energy technologies promotion and innovation.

UNIDO's Green Industry Platform (National Clean Tech Institution) will provide support in bringing key stakeholders together under the project, which will aim at coordinating efforts to support and encourage green growth amongst SMEs.

The project will closely link up with other GEF projects of UNDP and UNIDO in Pakistan for promoting business models for increasing penetration and scaling up of sustainable energy and promoting industrial energy efficiency in SMEs through energy management standard, system optimization and technology incubation.

**A.6. Outline the coordination with other relevant GEF financed initiatives [not mentioned in A.1]:**

UNIDO, with technical input from the Cleantech Open and funding from the GEF, has already supported South Africa to successfully organize the 2011 SA Cleantech competition on the margins of COP 17 at Durban. UNIDO will build on the experience gained under the South Africa Cleantech programme and use best practices to implement the proposed project in Pakistan. In addition, project implementation will also be closely coordinated with Cleantech projects in other countries under the global GEF UNIDO Cleantech programme and other concerned programmes and funds as mentioned in A.1.

This project proposal will also build on the efforts of the GEF/UNDP project "Productive Uses of Renewable Energy in Chitral District, Pakistan (PURE-Chitral) and Promotion of Energy Efficient Cooking, Heating and Housing Technologies (PEECH)" as well as on the regional project titled "Barrier Removal to the Cost-Effective Development and Implementation of Energy Standards and Labeling Project" (BRESL).

Within UNIDO, synergies with relevant departments, such as the Business, Investment and Technology Service Branch, Trade Capacity-Building Branch, Agri-Business Development Branch, Montreal Protocol Branch, Industrial Policy and Private Sector Development Branch and Environment Management Branch will be established.

UNIDO has been working for more than 20 years supporting SME development in developing

countries including Pakistan and has a strong regional office in Islamabad.

#### **A.7 Describe the institutional arrangement for project implementation:**

##### **INSTITUTIONAL ARRANGEMENT**

UNIDO is the only GEF Implementing Agency involved in this project and thus no specific arrangement with other GEF Agencies is required or envisaged.

##### **PROJECT IMPLEMENTATION ARRANGEMENT:**

As the GEF Implementing Agency, UNIDO holds the ultimate responsibility for the timely implementation of the project, the delivery of the planned outputs and monitoring of the achievement of the expected outcomes. The project manager, in close coordination with the National Programme Coordinator, will initiate the procurement and recruitment actions and manage the working of the project. Execution of the project on the ground will be the responsibility of the PMU. The PMU, under the supervision of the UNIDO Project Manager and in close consultation with CCCD, PCST, NPO and other national partners, will be responsible for the daily management of the project execution.

The Project Steering Committee (PSC) will be established under the Chairmanship of PCST and co-chaired by NPO to provide strategic guidance on project implementation; its members will be drawn from SMEDA, CCCD, PCRET, PIM, PPDB and UNIDO. The PMU will act as the Secretariat of the PSC and will consist of the National Programme Coordinator (NPC) and a Project Administrative Assistant (PAA). Operating as an entity, the PMU will be responsible for the day-to-day management, monitoring and evaluation of project activities as in the agreed project work plan. The PMU will coordinate all project activities being carried out by project national experts, NCTP and partners. The Unit would facilitate NCTP/CCCD to execute the co-lead role in the implementation of the project, cleantech competition, mentor and accelerator programme, including policy, regulatory and capacity building initiative. Moreover, NCTP/CCCD would be supported by the government and other stakeholders of the project, accordingly. Advisory working groups will be established when necessary. The PMU will be funded by the GEF budget and co-financing funding from the project counterparts. During the implementation period of the project, UNIDO will provide the PMU with the necessary management and monitoring support.

Fig 1: Organigram of the management of the project implementation:

## **B. Description of the consistency of the project with:**

### **B.1. National strategies and plans or reports and assessments under relevant conventions, if applicable, i.e. NAPAs, NAPs, NBSAPs, national communications, TNAs, NCSA, NIPs, PRSPs, NPFE, etc.**

Pakistan recognizes issues of energy security and climate change mitigation as priority areas for policy action, as described in the National Climate Change Policy 2012, developed by the Ministry of Climate Change, which is substantiated by Pakistan's Initial National Communication on Climate Change<sup>15</sup> to the United Nations Framework Convention on Climate Change (UNFCCC) of 2003. The National Climate Change Policy provides a framework for addressing the issues that face or will face Pakistan in the future due to climate change.

The Devolution Plan 2011, under the 18th Amendment of the Constitution of Pakistan, led to the establishment of provincial ministries/departments on energy and environment for focused work at the provincial level on environment and renewable energy projects. The Ministry of Climate Change, however, has been established at the federal level and received its approval of the National Climate Change Policy in 2012 from the cabinet and Prime Minister of Pakistan. Prior to this, the major policy initiatives included the enactment of the National Conservation Strategy (NCS) plan of Action and the finalization of a National Environmental Action Plan (NEAP) in February 2001. NEAP outlines four priority areas for the development and implementation of environmental conservation programs: clean air, clean water, solid waste management and ecosystem.

The National Climate Change Policy 2012 offers recommendations including mitigation, adaptation, technology and capacity building and is built on the following objectives:

1. To pursue sustained economic growth by appropriately addressing the challenges of climate change;
2. To integrate climate change policy with other interrelated national policies;
3. To focus on pro-poor gender sensitive adaptation while also promoting mitigation to the extent possible in a cost effective manner;
4. To ensure Water Security, Food Security and Energy Security of the country in the face of challenges posed by climate change;
5. To minimize the risks arising from expected increase in frequency and intensity of extreme weather events: floods, droughts, tropical storms, etc;
6. To strengthen inter-ministerial decision making and coordination mechanisms on climate change;
7. To facilitate effective use of the opportunities, particularly financial, available both nationally and internationally;
8. To foster the development of appropriate economic incentives to encourage public and private sector investment in adaptation measures;
9. To enhance the awareness, skill and institutional capacity of relevant stakeholders;
10. To promote conservation of natural resources and long term sustainability.

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<sup>15</sup> Pakistan's Initial National Communication on Climate Change to the United Nations Framework Convention on Climate Change, Ministry of Environment, Government of Pakistan, November 2003.

Pakistan's Policy for Development of Renewable Energy for Power Generation<sup>16</sup> supports RE projects in the private sector that can serve as successful business and technology-assimilation demonstrators and scaling up of capacity deployment. The Policy states: "Pakistan needs to initiate a sustained, long-term transition towards greater use of renewable energy (RE) – an indigenous, clean, and abundant resource whose considerable potential the country has yet to tap meaningfully. The Government of Pakistan (GoP) intends to pursue this objective of harnessing power from renewable resources with the full participation and collaboration of the private sector."

The draft Pakistan Energy Efficiency and Conservation Act<sup>17</sup> focused on the establishment of a high-powered body, namely the Pakistan Energy Conservation Committee (PECC) as well as encouraging the facilitation of the import and local manufacture of technologies to promote energy conservation. It aims at capturing the country's 25-30% energy conservation potential by providing conservation efforts with legal protection.

In May 2011, the National Economic Council approved the Framework on Economic Growth (the development blue print prepared by the Planning Commission) which includes the following measures on climate change:

- Protecting growth from climate change induced disasters through the integration of risk reduction and management concerns within the planning process;
- Climate proofing economic growth from the impacts of climate change;
- Promotion of green growth through investment in low carbon technologies, backed by the necessary finances.

Regarding the SME Development Policy, Pakistan has designed a coherent policy for SME promotion through the Small and Medium Enterprises Development Authority (SMEDA) that has adopted a sectoral development approach with a focus on several priority sectors with growth potential. The current SME Policy in Pakistan aims at creating a truly enabling environment for sectoral growth, and to be innovative and supportive for the enterprises.

The Framework on Economic Growth in Pakistan put emphasis on innovation to bring about sustained economic growth. It recommends that the country develop an industry-university Research and Development (R&D) alliance targeted at high pay-off technical areas. It also suggests economic growth through innovation by the following three steps: 1) implementation of innovation policy and the creation of the National Innovation Agency (NIA). This will help "Diffusion and Absorption" to transform "Innovation" into a national buzz through media hype of local success stories to create heroes and harness the "Vision"<sup>18</sup> aspect of entrepreneurs and innovators in youth; 2) It supports a "Broader Investment Climate" to sponsor a nationwide battle of the minds, creative ideas, products, and competitions with the process of instantly funding and mentoring best feasible ideas on-the-spot<sup>19</sup>; 3) It encourages the "Beta-implementation model"<sup>20</sup> (pilot projects) rather than jumping into the countrywide innovation/entrepreneurship reforms exercise. Such a step could be launched in a

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<sup>16</sup> AEDB (2006) Pakistan's "Policy for Development of Renewable Energy for Power Generation". Islamabad: <http://www.aedb.org>; <http://www.pc.gov.pk/Policies/PakistanREDevelopmentPolicy-Dec092006.pdf>

<sup>17</sup> Pakistan Energy Efficiency and Conservation Act, 2011 ([http://www.na.gov.pk/uploads/documents/1302581567\\_924.pdf](http://www.na.gov.pk/uploads/documents/1302581567_924.pdf))

<sup>18</sup> Start-up should be made part of next-generation culture (indoctrinating youth to create their own opportunities in order to let them breathe outside the traditional job-seeking paradigm).

<sup>19</sup> P@SHA's Launchpad and TiE business idea competition for young garage inventors/innovators, "Engro Achievement award" for talented Pakistani professionals, Best Mobile Innovation in Pakistan, a 'Made in Pakistan' mobile contest staged by COMSATS.

<sup>20</sup> Singer S. and Senor D, Start-up Nation: The story of Israel's economic miracle, Council on Foreign Relations, 2009.

promising locality (a sort of beta-testing ground)<sup>21</sup> analyzed in varying conditions and fine-tuned for broader adaptability.

The National Science Technology & Innovation Policy 2012 is also in line with the Framework on Economic Growth and represents Pakistan's current position on innovation. The policy envisages a paradigm shift, in which innovation is recognized as an integral part of the S&T system. It emphasized that the innovation system of the country needs to be consolidated and expanded and places the highest priority on the quality of human resources and the necessary measures to educate and train manpower. The Vision of the policy is to achieve the security, prosperity and social cohesion of Pakistan through equitable and sustainable socioeconomic progress using science, technology and innovation as central pillars of development in all sectors of economic activity.<sup>22</sup> It describes an effective mechanism of policy oversight, highlighting innovation as a driver of economic activity, a paradigm shift from supply to demand side and an effort to align ST&I policy with national policies in other economic sectors.

Regarding environmental issues, the policy notes that the application of science and technology is essential for addressing the prevalent problems of environmental degradation. At present, Pakistan looks toward the technologically advanced nations for the solution to environmental problems. However, the appropriate application of simple technologies, either developed indigenously or adapted, can solve the majority of these problems. The policy recommends that the Ministry of Climate Change and the Ministry of Science and Technology should team up to study and solve the various environmental problems.

Similarly, the Policy for Development of Renewable Energy for Power Generation (2006), formulated by the Alternate Energy Development Board of Pakistan, envisages an increase in the deployment of renewable energy technologies (RETs) in Pakistan so that RE (solar, wind, biomass, tidal, geothermal etc.) provides a minimum of 9,700 MW by 2030 and helps ensure universal access to electricity in all regions of the country. According to the policy document, this objective would be achieved through a number of measures, including the facilitation of the establishment of a domestic RETs manufacturing base; facilities and manpower available in PCRET can be utilized to achieve the stated target. Considering the variety of stakeholders and the broad spectrum of technologies involved in energy production, the S&T policy objective would be achieved through the creation of a 'Renewable Energy Fund' for research into the development of new RE technologies, such as hydrogen fuel cells, Fresnel mirrors and low-cost/high-efficiency photovoltaic panels. R&D organizations need to undertake concerted efforts for research into inter-related areas of water resource management, development and management of groundwater, assessment and mitigation of desertification, impact of climate change on water availability, saline agriculture and disposal, and re-use of saline water. There is also an urgent need to develop a modus operandi for transferring the results of R&D to end users.

The proposed project is in line with the national priorities as stated in the above mentioned documents to ensure that climate change is mainstreamed to steer Pakistan towards climate resilient development.

## **B.2. GEF focal area and/or fund(s) strategies, eligibility criteria and priorities**

The project is aligned with GEF's focal area strategy under Climate Change Mitigation with Objective 1: "Promote the demonstration, deployment, and transfer of innovative low-carbon technologies" and is in line with GEF-5 Modality 3: "SME Competition Pilot: Encouraging Entrepreneurs and Innovators," as it will provide support for entrepreneurs and innovators seeking to establish a commercial venture, by specifically encouraging SMEs to expand in "green" and "clean" technologies to secure national competitiveness.

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<sup>21</sup> China selected Shenzhen as testing ground for gauging free-market economy reforms, before exporting its tweaked version in rest of the country.

<sup>22</sup> National Science, Technology and Innovation Policy 2012, Ministry of Science and Technology, Government of Pakistan, October 2012.

The Project aims to strengthen the policy and institutional framework, and build national capacity to promote innovations in clean energy technologies in SME in Pakistan. It will strive to support innovative startups and promote entrepreneurship in selected SMEs identified through the national/regional competitions. The project will also mobilize investment and develop national capacity of the SME sector in Pakistan to promote clean low-carbon technologies linking to global value chain resulting in a reduction of GHG emissions and carbon footprints of the selected SMEs.

### **B.3. The GEF Agency's program (reflected in documents such as UNDAF, CAS, etc.) and Agencies comparative advantage for implementing this project:**

Recognizing the importance of energy for economic development, as well as the negative effects of inefficient energy use, the GEF has made it a strategic objective to support projects that not only promote the transfer of energy efficient and renewable energy technologies, but also enable work with regulatory institutions on reforming policies and regulations in this vital sector. The project is in line with the GEF's work on climate change that has maintained a strong focus on the transfer of environmentally sound technologies (ESTs), closely allied with the UNFCCC's technology transfer framework. Moreover, the project is in line with, UNDAF, MDGs particularly MDG-7 Environment, and One UN Framework in Pakistan.

UNIDO's mandate is inter-alia, to promote technology transfer, technology development and deployment in developing countries. One of the current three thematic priorities of UNIDO programme is sustainable energy and environment. UNIDO's Energy Strategy aims at helping developing countries and countries in transition to achieve the following objectives:

- Increase the competitiveness of their industries by reducing the dependence on fossil fuels;
- Reduce their impact on climate change by decreasing the carbon emissions of their industries through energy efficiency and by promoting renewable energy technologies;
- Increase the viability of their enterprises, particularly in rural areas, by augmenting the use of locally available renewable energy sources.

This Cleantech project will also be closely coordinated with the other relevant projects of UNIDO in Pakistan, in particular with those relating to the Montreal Protocol Branch and the Environmental Management Branch. For example, with the HCFC Phase-out management plan with a budget of US\$6.5 million from the Montreal Protocol Branch, where companies who are under this programme will be invited to participate in the Cleantech programme.

UNIDO's in-house expertise will offer technical oversight and the UNIDO office in Islamabad will be involved in the day-to-day operations alongside representatives from project counterparts, and other key stakeholders. UNIDO's Centres such as National Cleaner Production Centre (NCPC) and Investment and Technology Promotion Centre (ITPO) and their networks will be closely involved in key activities of the project, where the issue of resource efficiency are broadly promoted.

Furthermore, UNIDO will draw on its extensive experience in working with SME clusters and private sector development in implementing this project. UNIDO's SME development programme in Pakistan, initiated in 2001, focused on five clusters that led to the creation and development of twenty additional clusters. UNIDO maintains an excellent network with major key stakeholders in the SME sector in Pakistan and works extensively on issues related to skills development, strengthening institutional capacity and job creation.

### **C. Describe the budgeted M&E plan:**

Project monitoring and evaluation (M&E) will be conducted in accordance with established UNIDO and GEF procedures. The overall objective of the monitoring and evaluation process is to ensure successful and quality implementation of the project by: i) tracking and reviewing project activities execution and actual accomplishments; ii) providing visibility into progress as the project proceeds so

that the implementation team can take early corrective action if performance deviates significantly from original plans; and iii) adjusting and updating project strategy and implementation plan to reflect possible changes on the ground, results achieved and corrective actions taken.

Please note: “according to the Monitoring and Evaluation policy of the GEF and UNIDO, follow-up studies like Country Portfolio Evaluations and Thematic Evaluations can be initiated and conducted. All project partners and contractors are obliged to (i) make available studies, reports and other documentation related to the project and (ii) facilitate interviews with staff involved in the project activities.”

The Logical Framework Matrix in Annex A provides performance and impact indicators for project implementation along with their corresponding means of verification. These will form the basis on which the project's M&E Plan will be built. Implementation of the M&E Plan will be undertaken by the Project Management Unit (PMU) that will be guided by NSC including representatives of PCST, NPO, SMEDA, CCCD, PCRET, PIM, FPCCI and UNIDO.

The M&E procedure will consist of project inception, progress reporting, PIRs, a final project report and tracking tools following GEF requirements. A detailed monitoring plan for tracking and reporting on project time-bound milestones and accomplishments will be prepared by UNIDO in collaboration with the PMU and project partners at the beginning of project implementation and then periodically updated. The terminal evaluation report will be submitted to the ODG/EVA, and thus will also fall under their responsibility.

By making reference to the impact and performance indicators defined in the Project Results Framework, the monitoring plan will track, report on and review project activities and accomplishments in relation to:

- a. Number of SMEs to pursue innovations in clean technologies; Successful Cleantech (CT) programmes organized after project completion;
- b. Additional investment into clean technology innovations due to increased interest in the CT programme;
- c. Number of SMEs as members of the national platform (sex-disaggregated data will be collected);
- d. Tons of GHG emissions directly and indirectly avoided.

The NPC will be responsible for continuous monitoring of project activities execution, performance and will track progress towards milestones. The UNIDO project manager will be responsible for tracking overall project milestones and progress towards the attainment of the set project outputs and will also be responsible for reporting to the GEF. A mid-term review for the first year of project implementation will be conducted by an external consultant approximately 16 months after the start of the project. The lessons learned from the mid-term review will help to adjust and update the project strategy and implementation plan to reflect possible changes on the ground, results achieved and corrective actions taken for the purpose of the smoother implementation of the second part of the competition. A final external evaluation will be carried out 4 months after operational completion of the project.

US\$50,000 from the GEF and co-financing equivalent to US\$50,000 have been foreseen for the M&E activities.

Following is the table summarizing the key M&E activities of the GEF budget:

<b>M&amp;E Activity Categories</b>	<b>Feeds Into</b>	<b>Time Frame</b>	<b>GEF Budget (USD)</b>	<b>UNIDO (USD)</b>	<b>Co-financing (in-kind, USD)</b>	<b>Responsible Parties</b>
Measurement GEF Tracking Tool specific indicators	Mid-term Review and Terminal Evaluation Reports	At project mid-term and completion	20,000	30,000	20,000	<ul style="list-style-type: none"> <li>• Project execution partner/PMU submit inputs for consolidation and approval by project steering committee (PSC);</li> <li>• PSC submits final inputs/reports to UNIDO PM</li> </ul>
Periodic progress reports and monitoring of project impact indicators (as per LogFrame)	Project management;  Semi-annual progress report;  Annual GEF PIR	Semi-annually				
Midterm review/evaluation	Project management; PSC	At project mid-term	10,000	5,000	10,000	UNIDO PM and PMU
Independent terminal evaluation	Terminal Evaluation Review (TER) conducted by UNIDO ODG/EVA	Project completion (at least one month prior to the end of the project and no later than six months after project completion)	20,000	15,000	20,000	Independent evaluator for submission to UNIDO PM

#### **D. LEGAL CONTEXT**

The following legal context will apply to the project: “The Islamic Republic of Pakistan agrees to apply to the present project, mutatis mutandis, the provisions of the Revised Standard Technical Assistance Agreement concluded between the United Nations and the Specialized Agencies and the Government on 2 July 1956.”

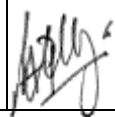


**PART III: APPROVAL/ENDORSEMENT BY GEF OPERATIONAL FOCAL POINT(S) AND GEF AGENCY(IES)**

- A. RECORD OF ENDORSEMENT OF GEF OPERATIONAL FOCAL POINT (S) ON BEHALF OF THE GOVERNMENT(S):** (Please attach the [Operational Focal Point endorsement letter\(s\)](#) with this template. For SGP, use this [OFP endorsement letter](#)).

NAME	POSITION	MINISTRY	DATE (MM/dd/yyyy)
Mr. Muhammad Khalid Siddiq	GEF Operational Focal Point	MINISTRY OF CLIMATE CHANGE	08/12/2013

- B. GEF AGENCY(IES) CERTIFICATION**

<b>This request has been prepared in accordance with GEF/LDCF/SCCF/NPIF policies and procedures and meets the GEF/LDCF/SCCF/NPIF criteria for project identification and preparation.</b>					
Agency Coordinator, Agency name	Signature	DATE (MM/dd/yyyy)	Project Contact Person	Telephone	Email Address
Mr. Philippe Scholtès, Officer-in-Charge, Programme Development and Technical Cooperation Division (PTC), UNIDO GEF Focal Point			Alois P. Mhlanga, Energy and Climate Change Branch, UNIDO 	+43-1-26026-5169	a.mhlanga@unido.org

**ANNEX A: PROJECT RESULTS FRAMEWORK** (either copy and paste here the framework from the Agency document, or provide reference to the page in the project document where the framework could be found).

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
<b>Objective</b>					
Promotion of clean technology innovations and clean technology entrepreneurship for SMEs in Pakistan	<p>Number of SMEs to pursue innovations in clean technologies; Successful Cleantech (CT) programmes organized after project completion;</p> <p>Additional investment into clean technology innovations due to increased interest in the CT programme;</p> <p>Number of SMEs as members of the national platform (sex-disaggregated data will be collected);</p>	<p>No clean technology innovations support system;</p> <p>Minimal investment in clean technology innovations;</p> <p>Negative attendance from the SME sector;</p> <p>No indirect CO<sub>2</sub>eq emission reductions related to clean</p>	<p>NCTP established to support SMEs, thus identifying promising clean technologies start-ups in the country;</p> <p>An investment strategy prepared; SMEs are trained and connected with funding partners and investors;</p> <p>US\$5 million invested in clean technology innovations;</p> <p>At least 300 SMEs as members of the national platform;</p> <p>Indirect emission reductions in the range of 452,000t</p>	<p>Project progress reports; mid-term review and final project evaluation report; the GEF Tracking Tools.</p> <p>Database and records maintained during and after project completion.</p>	<p>SMEs remain important in Pakistan's economy;</p> <p>SMEs are committed to the Cleantech approach;</p> <p>Government of Pakistan takes interest in Cleantech approach.</p>

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
	Tons of GHG emissions directly and indirectly avoided.	technology innovations.	CO2 eq to approximately 904,000 t CO2 eq over the period 2013-2023.		
<b>Outcome 1</b>					
A coordination mechanism/platform established at the national level to promote clean technology innovations and entrepreneurship; clean energy technology innovators identified, coached and supported during and beyond the Cleantech competition	<p>Number of innovative businesses created/accredited;</p> <p>Number of prizes for innovators with great impact on women entrepreneurial development and job creation.</p>	<p>No record of experience in innovative CT in Pakistan;</p> <p>As of yet, no Cleantech projects have taken place in Pakistan, and thus no prizes have been issued.</p>	<p>Establishment of the platform to coordinate at least 10 newly accredited innovative businesses per year;</p> <p>4 prizes per competition (headed by female and male) with the option to increase based on individual circumstances.</p>	<p>Project progress reports; mid-term review and final project evaluation report;</p> <p>Feedback from participating and non-participating enterprises and other stakeholders through survey and interview.</p>	<p>Continuous support and participation by government, R&amp;D institutions and SMEs;</p> <p>Sufficient commitment and participation by the experts, mentors.</p>
<b>Outputs</b>					
1.1 SMEs associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating	<p>Number of National Cleantech Platform (NCTP) established;</p> <p>Number of entries, number of semi-finalists and finalists etc.</p>	<p>No NCTP in place;</p> <p>As the CT competitions are yet to be established, the baseline of entrants</p>	<p>1 NCTP established;</p> <p>Approximately 100 entrants per competition (target of 10% women</p>	<p>Monitoring and Project progress report; mid-term review and final project evaluation report.</p>	<p>Continuous support from government and national agencies;</p> <p>Commitment from project partners and committed</p>

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
platform at the national level established 1.2 Annual Cleantech business competitions held across selected SME clusters covering four clean energy sectors		and finalists is zero.	participants).		participation of entrepreneurs.
<b>Outcome 2</b>					
National institutional capacity build for mentoring and training programmes as part of the competition and accelerator programme	Number of human and financial resources of PCST, NPO and other counterparts with built capacity;  Wide platform of all stakeholders operationalized.	No institutional capacity to conduct training and competitions on CT.	The conducted trainings and competitions show positive result;  Trained PCST and NPO staff are able to assist in the CT mentoring and training programmes.	Project progress reports; mid-term review and final project evaluation report;  Feedback from entrepreneurs being mentored.	Continuous support and participation by industry and other partners;  Sufficient commitment and participation by the experts, mentors.
<b>Outputs</b>					
2.1 Capacity building of national industrial association to host the Cleantech	Number of PCST and NPO staff trained to be able to organize the competition and the accelerator programme;	PCST and NPO staff have not received any training on the organization of the CT programme;	10 PCST and NPO staff received training on competition organization (with at least 10% being	Project progress reports; mid-term review and final project evaluation report.	Continuous support from government;  Continuous support and participation by relevant

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
programme			women);		stakeholders.
2.2 Mentor Program launched and 100+ mentors identified and trained regionally and online	Training workshops and mentoring sessions organized;	As the CT accelerator programme is yet to be established, the baseline of accompany workshop is zero;	At least 10 training workshops and mentoring sessions organized over 3 years (target of 10% women participants);		
2.3 Extensive advocacy and outreach activities including training programme, seminars, corporate and PPP Forums held regionally and online	Number of regional workshops or training courses organized;	There are currently no CT regional workshops present in Pakistan;	2 regional workshops or training courses organized (target of 10% women participants);		
	Number of shortlisted SMEs connected with funding and partnership opportunities.	Presently, there is lack of awareness on such initiatives present.	At least 20 of shortlisted SMEs connected with funding and partnership opportunities.		
<b>Outcome 3</b>					
Policy and institutional framework strengthened to promote cleantech innovations in SMEs and support the local innovation	Extent to which these policies and regulations are amended or implemented.	A score between 0 and 4 will be given to assess these policies; baseline is currently zero.	A score between 0 and 4 will be given to assess these policies; target is 4.	Project progress reports; mid-term review and final project evaluation report.	Continuous support and participation by industry and other partners.

Result	Indicators	Baseline	Target	Means of Verification	Assumption and Risks
ecosystems in the country					
<b>Outputs</b>					
3.1 Policy and regulatory environment created	New policies and regulations developed to create a conducive policy environment for CT implementation;	The current policy framework needs to be adapted to the CT programme;	1-2 new policies and regulations developed;	Project progress reports; mid-term review and final project evaluation report.	Continuous support from government;  Continuous support and participation by relevant stakeholders.
3.2 Regional stakeholder meetings held and partnerships developed with leading institutions, agencies and universities across the country	Regional stakeholder meetings held and partnerships developed.	No partnerships and regional programmes to promote coordination among institutions.	At least 4 regional stakeholder meetings held and partnerships developed.		

## ANNEX B: TIMELINE OF THE OUTPUTS

Outputs	2013	2014				2015				2016		
<b>Component 1:</b> National Clean Tech Platform (NCTP) to promote clean technology innovations and competitiveness in SMEs in Pakistan to deliver global environmental benefits	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
1.1. SME associations and national agencies involved in promoting clean technology innovations mobilized and a coordinating platform at the national level established												
1.2. Annual Cleantech business competitions held across selected SME clusters covering four Cleantech sectors												
<b>Component 2:</b> Capacity enhancement initiative for clean technology innovations	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
2.1. Capacity building of national industrial association to host the Cleantech programme												
2.2. Mentor Program launched – 100+ mentors identified and trained regionally and online												
2.3. Extensive advocacy and outreach activities including training programme, seminars, corporate and PPP Forums held regionally and online												
<b>Component 3:</b> Policy and regulatory framework strengthened for scaling up cleantech competition, innovations and acceleration activities across Pakistan	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
3.1. Enabling policy and regulatory environment created												
3.2. Regional stakeholder meetings held and partnerships developed with leading institutions, agencies and universities across the country												
<b>Component 4:</b> Monitoring and Evaluation Management	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3	Q4	Q1	Q2	Q3
4.1. Mid-term and final project review/evaluation conducted												
4.2. Documentation of best practices for dissemination												

# ANNEX C – ENDORSEMENT LETTER

Tel: 051-9245548  
Fax: 051-9245627



(F.No.9 (10)/2010/GEF-5 Endorsements)  
**Government of Pakistan**  
**Ministry of Climate Change**  
LG & RD Complex, Sector G-5/2, Islamabad  
\*\*\*\*\*

**Joint Secretary /**  
**GEF Focal Point-Pakistan**

Islamabad, the 6<sup>th</sup> March, 2013

To: **Mr. Georgios ANESTIS**  
**Senior GEF Coordinator**  
**UNIDO Headquarters**  
**Vienna , Austria.**

Subject: **ENDORSEMNT FOR"GEF UNIDO CLEANTECH PROGRAMME FOR SME's IN PAKISTAN".**

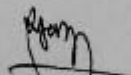
In my capacity as GEF Operational Focal Point for Pakistan, I confirm that the above project proposal is a) in accordance with my Government's national priorities and our commitment to the relevant global environmental conventions b) was discussed with relevant stakeholders including the global environmental convention focal points. The project was approved by GEF National Steering Committee, Ministry of Climate Change.

2. I am pleased to endorse the preparation of the above project proposal with the support of UNIDO. If approved, the proposal shall be prepared and implemented by Pakistan Council for Science and Technology (PCST), in cooperation with National Productivity Organization (NPO), Pakistan Council for Renewable Energy Technologies (PCRTE) and Centre for Climate Change and Development (CCCD).

3. The total financing from GEF being requested for this project is USD 1.5 million from Climate Change STAR allocation under GEF-5 inclusive of the project preparation grant (PPG) and agency fee for project cycle management services associated with the total GEF grant. The financing requested for Pakistan is detailed in the table below:

Source of Funds	GEF Agency	Focal Area	Amount in USD			
			Project Preparation	Project	Agency Fee	Total
GEF STAR	UNIDO	Climate Change	-	1,369,863	130,137	1,500,000

4. I consent to the utilization of Pakistan's allocation in GEF-5 as defined in the System for Transparent Allocation of Resources.

  
(Muhammad Ijaz)

## Copy to:

1. GEF Secretariat, Washington DC, USA
2. UNIDO Country Office, Islamabad.





<sup>23</sup> The digital version of the Global Brochure is on the GEF website:  
[https://www.thegef.org/gef/sites/thegef.org/files/publication/GEF-UNIDO\\_GlobalCleantech.pdf](https://www.thegef.org/gef/sites/thegef.org/files/publication/GEF-UNIDO_GlobalCleantech.pdf)