

## **Project Summary**

**Name of Project:** Installation of Energy Efficient Products and Technologies for CO<sub>2</sub> Emission Reduction in Gilgit and Ghizer Districts of Northern Pakistan

This project is the twenty fourth CDM project submitted to this Ministry and aims Installation of Energy Efficient Products and Technologies for CO<sub>2</sub> Emission Reduction in Gilgit and Ghizer Districts of Northern. The basic purpose of the project activity is to make home-improvement products that impact household health, economics and housing conditions more accessible and affordable, while simultaneously making the eco-system more sustainable by reducing human pressure on the environment and reducing the level of CO<sub>2</sub> and allied hazardous emissions. This would be achieved by replacing the presently used inefficient products for heating and cooking with more energy efficient (EE) products and practices, thereby also reducing the consumption of wood in these products and contributes towards sustainable development. The project will earn additional annual revenue from sales of 0.030 million per year Certified Emission Reductions (CERs), through CDM mechanism. Total investment of the project is 1.71 Million US\$.

### **Objectives:**

1. The main objective of this project activity is the installation of energy efficient products and technologies for CO<sub>2</sub> emission reduction in Chitral for improvement of energy efficiency of housing of the area and thereby reducing the use of non-renewable biomass for heating and cooking purposes.
2. To help the international community in achieving the objectives of combating climate change under UNFCCC by reducing significant amount

of greenhouse gas (CO<sub>2</sub>) emission and to contribute to the regional and national sustainable development.

**Date of Submission:**

March 2010

**Submitted by:** Greentech Solutions (Pakistan) Ltd. Karachi, Sindh, Pakistan

**Project Proponents:**

1. Industrial Promotion Services, Karachi, Sindh
2. Building and Construction Improvement Program – Agha Khan Planning and Building Services, Pakistan
3. Carbon Resources Management, S.A Geneva, Switzerland

**Detail of Total Project Cost:**

| <b>Cost</b>   | <b>Price<br/>(Million US \$)</b> |
|---|----------------------------------|
| PDD Documentation and Registration                      | 0.07                             |
| Validation and Verification (Annual)                    | 0.10                             |
| Personnel, Operations & Maintenance                     | 0.55                             |
| Communication and Awareness                             | 0.20                             |
| Entrepreneurs Technical and Financial Capacity Building | 0.15                             |
| Product Subsidy to households                           | 0.32                             |
| Monitoring Subsidy to households                        | 0.05                             |
| CO <sub>2</sub> Emissions Monitoring                    | 0.15                             |
| Project Monitoring , Evaluation and Reporting           | 0.12                             |
| <b>Total Project Investment (Million US \$)</b>         | <b>1.71</b>                      |
| <b>Total Project Investment (Million PKR)</b>           | <b>143.5</b>                     |

**Estimated Emission Reduction:**

| <u>Source</u>   | <u>Tons of CO<sub>2</sub>eq/ yr</u> |
|---|-------------------------------------|
| <b>Total Annual Reduction:</b>                                | 30,100                              |
| <b>Emission Reduction in 10 years:</b>                        | 30,1000                             |
| <b>Operational Lifetime:</b>                                  | 10 Years                            |
| <b>Project Starting Date:</b>                                 | 2010                                |
| <b>Crediting/Validity Period:</b>                             |                                     |
| • For Kyoto First Commitment Period:                          | 2008-12                             |
| • Estimated validity period<br>(Including Post Kyoto period): | 2019                                |
| <b>Economic Viability of the Project:</b>                     |                                     |
| Internal Rate of Return (IRR):                                | 17%                                 |
| Without CDM benefits:   | - IRR                               |
| With CDM benefits:  | 17 %                                |

**Benefits from the Project:**

| <b>Activity</b>   | <b>Revenue (US\$ Million/Year)</b> |
|---|------------------------------------|
| Sale of Carbon Credits (@ US \$/tones of CO <sub>2</sub> eq): | 2.41 ( Gross)                      |
| <b>Total estimated annual revenue:</b>                        | 0.27                               |

**Other Qualitative Benefits:**

- The project will result in significant reduction in the emission of greenhouse gases.
- The project will introduce modern technology in the country
- The project activity will improve technical knowledge of local population
- At least 50 % saving on fuel wood purchase for heating and cooking

- 25 % reduction in health bills
- 50 % reduction in house repair expenditures
- 50 % reduction in smoke related diseases; and
- Reducing women and children workload and time saving in fuel wood collection (8-10 person days per year).
- Increase of at least 150 new income generating opportunities
- The project activity will set up an example of national sustainable development to be followed by other at local level