

## PROTOTYPE - FACT SHEET

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### TITLE:

**Latest and Modern Organized Fan Testing Services for Pakistan Electric Fan Industry (PEFI)**

#### Mission statement

The project will support energy efficiency and promote investment climate for fan industrial production.

#### Briefly describe your prototype idea

The proposed lab will provide highly specialized nature, inclusive of almost all fan testing equipment facility. The lab will provide energy efficiency in fan manufacturing. The lab will be able to test almost all types of electric fans being manufactured in Pakistan. It will train the staff of private fan manufactures to assist in quality and low energy fan production and will become a center of dissemination of knowledge and research. The lab will also provide the testing, labeling and issuance quality certificate in accordance with provincial energy act.

The project will enable the fan industry to increase exports and thus will increase the foreign exchange revenue. Global demand of domestic fans is in excess of US\$ 4 billion per year and Pakistan's share is US\$40 million/year that is only a fraction of 1%.

The project will span over three years with an estimated cost of US \$ 1,298,200 cumulative budget required for the establishment of Fan Testing Lab.

The breakup of cost is given below:

Components	Cost US \$
Civil works	111300
Machinery and equipment	883000
Office and furniture	21000
Office automation equipment	10900
Project staff salaries	15600
Transport & Travel	52000
Accreditation	64000
Total Cost	1298200

#### Target group

The fan industry comprises of roughly 450 medium, small and micro enterprises producing Pedestal (32%), Ceiling (63%) and bracket fans. This sector is currently producing 10 million fans with average growth of 17% per year.

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Total manufacturing Units	450
No. of Large manufacturers	4
No. of SMEs	446
Average consumption of ceiling fan produced by Large Manufacturers	90 Watt
Average Consumption of ceiling fan produced by SMEs	130 Watt
Net saving for six months if PS-I 2010 is complied with	2630 Watt

#### Potential partner(s) for implementation

University of Gujrat as the Pakistan Electric Fan Industry is mainly located in Gujrat (70-75%) and Gujranwala (around 30-25%).

**Key challenges and opportunities**

- Additional funds may be demanded due to increase in the market rates
- Awareness may have to be created amongst manufacturers to get their fans tested / stamped
- Awareness of end users is needed for the larger / longer benefits of energy efficient fans and it is saving impact in financial terms
- About 5-6 number of employment opportunity will arise from the establishment of fan testing lab
- Small manufacturer will enter in market competition
- Due to labeling of electric fans the export of Pakistani fans will increase which in turns increase the employment at local industry
- Economic considerations
- The Lab will charge fee at the following rates

IEC 60335-1, IEC 60335-2-80 Testing fee	\$ 600 per sample
Energy Efficiency Testing	\$ 50 per sample
PS-1 Standard Testing Fee	\$ 100 per sample
Performance Testing of low power induction motors	\$ 150 per sample
Energy Efficiency testing of low induction motors	\$100 per sample
Total Amount of forecasted revenue	\$ 115000 per annum
Forecasted Average Variable cost per annum	\$ 90000 per annum

This shows that the project will become self-sustainable

**Increase in Exports:**

The average export revenue from fan is about \$ 40 million, which can increase to about 10 times only by the price effect.

Future Roadmap	
May 2016	Prequalification and hiring of EPC contractor
June 2016	Start of civil works
December 2016	Purchase of machinery and equipment
June 2017	Completion of civil works and recruitment of staff
December 2017	Completion of setting up of lab
January 2018	Testing of lab facility & Accreditation and outreach activities to create awareness

### Next steps

The lab can be used as a research and training center for fan manufacturers in future.

The scope of the project can be increased in future by establishing a common facility center for fan industry by providing stamping press, hydraulic press slitting lines, engraving and boring facilities.

Advisory services will be provided for fan manufacturers and transfer technology to local industry. This will further boost the productive efficiency of the fan industry. Quality improvement of other parts may also be incorporated later on for which foreign funding can be sought.