

*International Workshop on*  
**Renewable Energy Technologies in Pakistan**

(December 16-18, 2014)



**DAAD**

Deutscher Akademischer Austausch Dienst  
German Academic Exchange Service



Organized by

**Faculty of Agricultural Engineering & Technology**  
**University of Agriculture, Faisalabad, Pakistan**

[www.uaf.edu.pk](http://www.uaf.edu.pk)

**&**

**University of Kassel, Germany**

[www.uni-kassel.de](http://www.uni-kassel.de)

Sponsored by

**German Academic Exchange Service (DAAD)**

## 1. Preamble

In connection to international conference entitled “Renewable energy technologies in Pakistan” held on October 1-3, 2013, now we are going to organize an “International Workshop on Renewable Energy Technologies in Pakistan” held in University of Agriculture, Faisalabad on December 16-18, 2014. In this workshop different issues and problems faced by farming community will be discussed and best possible solutions to these problems will be disseminated. As we know that, energy needs are indelibly linked to Pakistan’s economic and sustainable growth capabilities. Pakistan has been in increasing demand across various areas of energy sources. Given the need for energy, the Government of Pakistan is doing its utmost to explore and promote renewable energies and energy efficiency. Among renewable energy resources, solar energy is of special significance as it is abundantly available. The average solar energy available in Pakistan is  $5.5 \text{ kWh m}^{-2} \text{ day}^{-1}$  with annual mean sunshine duration between 8 and 10 hours per day all over the country, except for the northern parts. In advanced countries like Germany, solar energy is successfully utilized for power generation in the form of grid-tied PV systems. The most important industrial processes using solar energy at mean temperature level are: sterilizing, extraction, pasteurizing, drying, solar cooling and air conditioning, hydrolyzing, distillation and evaporation, washing and cleaning, and polymerization. The temperature range of these processes lies between  $60\text{-}280^\circ\text{C}$ . Most of the agro-based industries can be operated in this medium temperature range. Moving from traditional food processing facilities to modern renewable energy technologies and demand-based post-harvest facilities requires comprehensive information of the resources (solar thermal and solar PV), their potentials and requirements. Detailed information on supply and demand enables optimal use of these resources to improve livelihoods through maximizing profit. Innovative German solar thermal technologies like Scheffler fixed focus concentrator, solar tunnel dryer (STD) can easily be developed in Pakistan and used for the processing of fruits and vegetables as well as for value addition of different agricultural products for rural community. Another source of renewable energy available from materials derived from biological sources like wood, bio waste, straw, manure, sugarcane, and many other byproducts. By 2010, there was 35 GW of globally installed bio-energy capacity for electricity generation. In its most narrow sense it is a synonym to bio-fuel, which is fuel derived from biological sources.

Potential for almost all types of renewable energies exist in Pakistan. These types include solar (PV and thermal), wind, biogas, micro-hydel/canal fall, biodiesel production, biomass/waste to energy production, geothermal, tidal/ocean energies etc. On average solar global insolation  $5\text{-}7 \text{ kWh m}^{-2} \text{ day}^{-1}$  exists in the country over more than 95% of its area. Wind speed  $5\text{-}7 \text{ m s}^{-1}$  persists in coastal regions of Sindh and Baluchistan provinces and in a number of North West frontier valleys. According to a survey, Pakistan possesses more than 20,000 MW of economically viable wind power potential.

More than 1200 MW micro/mini hydropower potential is estimated to be available in the country while including power generation at northern mountainous region and southern plane region including energy generation through canal fall also. Total biogas generation potential of  $14.25 \text{ million m}^3 \text{ day}^{-1}$  is available in the country.

## 2. Workshop Aims and Objectives

The objective of the workshop is to disseminate the knowledge about different renewable energy technologies through teaching and innovative ideas of presenters in the field of “Renewable Energy” which includes; equipping them with technical knowledge and skills required for the design and development, operation and maintenance. Furthermore, focusing on indigenous renewable energy technologies to integrate academic learning with practice orientated industrial experience and internship for career planning.

### 3. Registration Form (Available on a separate sheet)

### 4. Important Deadlines

Deadline for submission of abstracts	Dec 08, 2014
Deadline for online registration	Dec 08, 2014
Workshop dates	December 16-18, 2014

### 5. Registration Fee

Local participants	PKR 1000/-
UAF alumni	PKR 500/-
International delegates	100 € or equivalent
Accompanying person	50 € or equivalent

### 6. Call for Abstracts (Workshop themes)

The interested scientists/researchers from all over the world are encouraged to submit their abstracts as per deadlines mentioned above. Please send your one page abstract on one of the following workshop themes;

- Innovative technologies in solar thermal heating and cooling
- Off-grid and on-grid solar PV systems for household and industrial applications (including solar pumping systems)
- Integration of energy field and agriculture
- Challenges/Impediments in the implementation of biogas technology in Pakistan
- Sustainable Power generation from agricultural wastes/biomass and bio-diesel
- Energy production potential in wind/hydel/geo-thermal and fuel cells

### Eminent International Speakers Announced

1. Dr. Uwe Richter, Expert in Solar Instrumentation and Networks, Germany
2. Mr. Michael Hesse, Germany
3. Ms. Katherine Troeger, Germany

## 7. Abstracts Submission

All abstracts clearly indicating the aims and conclusions of the work, not exceeding one page (A4) with contact details should be submitted to Dr. Anjum Munir, Assistant Professor ([anjum.munir@uaf.edu.pk](mailto:anjum.munir@uaf.edu.pk)), Faculty of Agricultural Engineering & Technology, University of Agriculture, Faisalabad (PAKISTAN) on or before December 08, 2014. Abstracts will be selected by the organizers after peer review. A book of accepted abstracts will be produced and handed over to the workshop participants.

## 8. Sponsorship

All participants will have to arrange for their travel and registration fee etc. The registered delegates will be served with local hospitality including registration dossier and post workshop tour.

## 9. Visa Formalities

International participants will arrange their visas through Pakistani Embassies or Consulates in their respective countries. The workshop secretariat will be happy to facilitate their participation by providing them official invitation and acceptance letter for this workshop or any other required assistance.

## 10. How to Reach Faisalabad?

Faisalabad is connected with Karachi through air flights. Delegates arriving at Lahore and Islamabad Airports can reach Faisalabad within 2-3 hours and 4-5 hours respectively by AC coaches or DAEWOO buses via Motorway. Pleasant weather with 10-15°C at night and 15-20°C during day temperatures are expected during month of December.

## 11. Accommodation

The University rest house and foreign faculty hostel will be available for accommodation of international participants only. However, national participants can book local hotels available in the Faisalabad city. Local pick and drop service will be available for international participants. International participants are encouraged to intimate Dr. Anjum Munir, Assistant Professor ([anjum.munir@uaf.edu.pk](mailto:anjum.munir@uaf.edu.pk)) well in time about their arrival schedule, flight information and accommodation, etc.

## 12. For Further Information

**Dr. Anjum Munir (On behalf of organizing committee)**

Faculty of Agricultural Engineering & Technology

University of Agriculture, Faisalabad, PAKISTAN

Tel: + 92 (041) 9200161-70 Ext. 3002

Cell No: +92-300-9667687

E-mail: [anjum.munir@uaf.edu.pk](mailto:anjum.munir@uaf.edu.pk)

**Prof. Dr. Allah Bakhsh**

Dean

Faculty of Agri. Engineering & Technology

University of Agriculture, Faisalabad, 38040, PAKISTAN

Tel: + 92 (041)-9200161-70 Ext. 3001

E-mail: [bakhsh@uaf.edu.pk](mailto:bakhsh@uaf.edu.pk)

**Prof. Dr. Asif Ali**

Director

Office of Research, Innovations and Commercialization

University of Agriculture, Faisalabad, 38040, PAKISTAN

Tel: + 92 (041) 920016-701 Ext. 3600

E-mail: [asifpbg@uaf.edu.pk](mailto:asifpbg@uaf.edu.pk)



## University of Agriculture, Faisalabad, Pakistan

*International Workshop on*  
**Renewable Energy Technologies in Pakistan**  
**December 16-18, 2014**

### Registration Form

Dr/Mr/Mrs/Miss: \_\_\_\_\_

Position/Title: \_\_\_\_\_ Qualification: \_\_\_\_\_

Affiliation/Address: \_\_\_\_\_

Ph/Fax: \_\_\_\_\_ Cell: \_\_\_\_\_

E-mail: \_\_\_\_\_ Pre-registered: \_\_\_\_\_ Y / N \_\_\_\_\_

**Registration Fee:**

Rs. \_\_\_\_\_ mode of payment \_\_\_\_\_ cash/check/credit card/bank transfer \_\_\_\_\_

*I would like to make an (i) oral presentation, (ii) poster session, or (iii) display our products.*

Title of the Abstract/Paper: \_\_\_\_\_

Signature: \_\_\_\_\_ Date: \_\_\_\_\_

*Workshop Secretariat:*

<p><b>Chief Organizer</b></p> <p><b>Dr. Anjum Munir,</b>            Coordinator Energy Systems Engineering            Faculty of Agricultural Engineering &amp; Technology University of            Agriculture, Faisalabad, PAKISTAN            Tel: + 92 (041) 9200161-70 Ext 3002            E-mail: <a href="mailto:anjum.munir@uaf.edu.pk">anjum.munir@uaf.edu.pk</a></p>	<p><b>Dean</b></p> <p><b>Prof. Dr. Allah Bakhsh</b>            Faculty of Agri. Engineering &amp; Technology            University of Agriculture, Faisalabad, 38040, PAKISTAN            Tel: + 92 (041)-9200161-70 Ext. 3001            E-mail: <a href="mailto:bakhsh@uaf.edu.pk">bakhsh@uaf.edu.pk</a></p>
--	--

**Patron: Prof. Dr. Iqrar Ahmad Khan (Sitara-e-Imtiaz), Vice Chancellor, UAF**

*NB: Only selected abstracts will be presented orally, while others can be included in poster sessions, however, all accepted abstracts will be published as mentioned in the Abstract Book.*