



TVET CENTER

ENERGY TRAINING AND RESEARCH CENTER (ETRC)

Integrity- Quality - Equal Opportunity



**CENTER IS LICENSED BY PAKISTAN ENGINEERING COUNCIL
FOR PROFESSIONAL DEVELOPMENT OF ENGINEERS**

**ENERGY TRAINING
CONTINUOUS SKILL DEVELOPMENT PROGRAMS
RESEARCH ON ENERGY POLICY, REGULATIONS AND QUALITY**

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WELCOME

**Chief Executive Officer
Engr. Faiz M Bhutta**

Greetings from Energy Training and Research Center.

Continuous mis-management in Energy sector has created hurdles in the progress of the Country. The only solution left is to make energy transition quick toward Green and Clean Energy.

Continuous rising demand of energy because of rising urbanization and population, the role of green and clean energy share in energy mix has become imperative to bring affordable and reliable energy for the consumers of this country.

The aggressive targets by Government to add green and clean energy share in energy mix has created a large gap between the demand and supply of skilled and qualified workforce in energy and power sector which requires energy training centers and institutions to bridge this gaps.

Energy Training and Research Center (ETRC) has been created by the merger of already established Energy Training Center and PRENAC (Renewable Academy) by adding one more area of research to have complete energy portfolio of services.

ETRC has qualified faculty and state of art Lab and workshop for testing and training of Energy Systems. I am master trainer from GIZ Pakistan, Resource person on CPD on Renewable Energy Courses by Pakistan Engineering Council. I am TOT on Solar Energy from RENAC (Renewable Academy Berlin Germany), TOT on Micro and Mini Hydro (MHP) from HNAC/UNIDO Changsha China, TOT on Energy Management by International Energy Training Center/UNIDO Pakistan, TOT on Solar Pumping from Lorentz Germany and got many training in Pakistan and Abroad. I am trainer, speaker and consultant.

ETRC is Licensed Professional Engineering Body by Pakistan Engineering Council for CPD Courses and also approved training center by AEE USA.

We welcome all engineers, managers, Supervisors and support staff to attend training Courses for improvement of Energy related skills to being superior performance in their work.

Wishing you success in your career.

Engr. Faiz Bhutta
Chief Executive Officer
Energy Training and Research Center (ETRC)
Lahore, Pakistan

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PERMANENT FACULTY

Engr. Faiz Muhammad Bhutta - Principal Trainer

Faiz Mohammad Bhutta is a PEC registered Professional Engineer in Electrical plus MBA & MS. He has done post Graduate Diploma in Telecommunication from COMSAT. He has 35 years of experience of working in the areas of Industrial Automation, ICT, Solar Energy Technologies, Water and Solar Pumping Technologies, Solar Lighting, Mini and Micro Hydro power plants and Energy Management. He has trained so far more than 2500 persons on Solar, MHP and Energy Management.

He served at managerial posts at various National and International organizations like ZELIN, INTECH, SOPHA, GRUNDFOS, COMSATS and IZHAR Group etc and now running his own firm Techfa Consulting.

He has got first training from Germany on CNC Machines in 1981 and started his career as CNC Engineer. He got training from RENAC Berlin on Design and Installation of Solar Energy Systems and he got GIZ training in Pakistan for design and installation of Solar PV and Solar Thermal Systems. He got 20 days TOT training from HNAC China on Mini and Micro Hyrdo Power Plants. He is master trainer on Solar Energy from GIZ Pakistan and resource person of Pakistan Engineering Council on Renewable Energy. He is trainer in solar, MHP Energy and Business Management. He is TOT on Energy Management from UNIDO/international Energy Center.

He has designed and installed various Energy related Systems and also implemented Energy Efficiency Improvement plans in Industries and Buildings.

He is member of organizations namely International Solar Society Germany (ISES), Member AEE Global, Life member PEC , Life Member of HVACR Society, Life Member of IEP, Life member of IEEEEP and member of MAP.

Engr. Shahid Hussain Jafri - Trainer

Engr. Shahid Hussain Jafri has held the posts of Chief Engineer, Director of Quality Assurance and Advisor in a public sector organization. He obtained BSc in Electrical Engineering from Engineering College Peshawar and MS in Electrical Engineering from UET Lahore.

He has an overall experience of 40-years in various fields. He worked as Incharge of maintenance of electrical, instrumentation and control systems of a power plant. He worked in design and engineering of plant information/supervisory computer systems. He provided consultancy for Quality Management Systems (QMS) - ISO 9001:2008 certification of healthcare units (hospitals), food and agriculture centers, various design and manufacturing facilities and labs.

He is certified Six Sigma Black Belt, certified Lead Auditor of Information Security Management System (ISMS) - ISO 27001:2005, Environmental Management System (EMS) - ISO 14001:2004, Quality Management Systems (QMS) - ISO 9001:2008, Quality Professional 'CQP' in Quality Management and Lead Implementer Laboratory Management System ISO 17025:2005.

He has received professional trainings in foreign countries. He is member of American Society for Quality (ASQ), Life Member of Pakistan Engineering Council (PEC).

Engr. Obaid ur Rehman - Lab and Research Engineer

He has done BSc Engineering in Electrical from UET Lahore and has one year experience of design, installation and commissioning of Solar systems. He will conduct hands-on workshops and practicals.

There are visiting trainers associated with ETRC for training.

TRAINING COURSES (Online and Inperson)

PV-101 – Five days Solar PV Course (Solar PV Design, integration and Performance measurement)

This course is a mix of theory and practical making you a full solar engineer and technician with full insight into solar basics, solar system design, solar system integration, solar system testing, solar system maintenance and solar system performance testing. This course is suitable for technicians, Supervisors, inspectors and engineers who would like to be to enter or would like to improve their existing skills in PV system design, integration and performance testing.

ST-102 – Three days Solar Water Heating Course (Solar Water Heating sizing, Installation and Performance measurement)

This course is a mix of theory and practical making you a familiar with the solar water heating system with full insight into solar thermal basics, solar water heating system types and components, Solar system sizing, Installation, commissioning and performance measurement This course is suitable for solar Water Heating technicians, Supervisors, inspectors and engineers who would like to be to enter or would like to improve their existing skills in Solar Water Heating system design, integration and performance testing.

SB- 103 – Three Days Course on Renewable Business and Sales

This course is suitable for all those who would like to start sales and business career in Renewable company or would like to set up their own Renewable company or want to be Contractor or reseller in Renewable Energy business. Concepts discussed in detail include: Renewable Energy fundamentals, Types of Renewable Energy Systems, Market segmentation, Targeting and positioning, Customer Types and qualification, Solar Sales Process, Market players and competition, Business plans, Sales quotations and proposals, Sales presentations and Renewable Energy Economics.

SWP- 104 – Three days (Planning and construction of Small Wind Power System)

This course will provide full insight into Wind Energy Basics, Types of Wind Power Systems, Wind Power system parts and components, Types of Towers, Planning and Designing and Installation of small wind power systems and quality standards. This course is suitable for technicians, Supervisors, inspectors and engineers who would like to be to enter or would like to improve their existing skills in small wind Power systems.

SHP- 105 – Five days (Planning, construction and management of small Hydro Power Systems)

This course will provide full insight into Hydro Energy Basics, Types of Hydro System, Hydro system parts and components, Construction, operation and Maintenance of small Hydro Power.

EE-106 – Five days (Energy Efficiency and Conversations in Buildings and Industries)

This course will provide insight into energy efficiency improvement and conservation in buildings and Industries. By the end of course, participants will gain essential knowledge and skills to save energy, reduce operational costs and carbon emissions, comply with legislation and meet their organizational environmental goals.

Ee107 – Six month and one year certificate courses on Solar Energy system Design, Installation, Integration, Sales and Business and performance

1. The program is flexible in terms of hours and presence
2. For six month certification, one has to complete 288 Hours
- 3, For one year certification one has to complete 576 hours
4. It is hands-on course with lab work and work at sites for solar system installations

EE107 – Three days (Advanced Course on Solar PV system designing by Licensed PV sizing and Simulation Software)

EE108 – One day (Energy Management System fundamentals and ISO 50001)

Other Courses as per demand.

MHP-108 - Two days and five days course on MHP (Micro and Mini Hydro Power Systems)

Customized Courses are offered as per demand.

RESEARCH AREAS



ENERGY POLICY



ENERGY MONITORING



ENERGY STANDARDS



ENERGY REGULATIONS



ENERGY INNOVATIONS



ENERGY PERFORMANCE



RESEARCH REPORTS



ENERGY SYSTEM TESTING



ENERGY MARKETS



ENERGY

TRAINING

RESEARCH

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