



TECHNOVATE

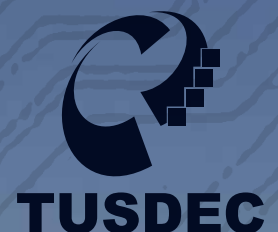
Technology Upgradation and Skill Development Company - TUSDEC
Quarterly Newsletter - **Issue 3**

Green Technologies for Pakistan
TUSDEC Engineering Support Centres
(Peshawar, Lasbela, Hyderabad)

Glimmers of Her Destiny
(TUSDEC Focusing on Women Empowerment)

NIDA-Ace of Facilitation

Rendezvous with Sohail P Ahmed
(Group Vice Chairman - House of Habib)



Renewable Energy for Pakistan!

EDITORIAL

For the past eight years our country is struck with a rampant energy crisis attributed to years of negligence and mismanagement of resources. The situation has played havoc to the industry making millions of lives deplorable to an extreme. According to an official report, Textiles Industry has suffered losses of PkR 200 billion since last four years due to the unkempt energy supply. An official statement made by the authorities at Karachi Chamber of Commerce and Industry (KCCI) revealed 25% shrinkage in the overall businesses during 2012 which is mainly accounted to the electricity shortfall.¹ Globally, abundance of energy resources and their sustainable acquisition are among the basic factors to plan and actualize on development goals. Forecasts are made to escalate the supply of energy based on the growing population count and the planned industrial expansion. Unfortunately for Pakistan the articulation for improved standards of living and augmented industrialization are not reflected in its policies and measures to ensure copious energy supply. Hence unremitting shortages took the proportions of massive crisis where the urban, rural and industrial users are smashed with flagrant load shedding. Citing a recent blow, Textile Industry of Pakistan lost export orders worth \$1 billion in December 2012 and January 2013 as one third of its production capacity was deceased due to electricity and gas unavailability.¹ The orders were mostly diverted to manufacturers in Bangladesh and Sri Lanka where the energy sector is subsidized for industrial optimization. The situation weaves huge impediments to foreign investment in the country. Increased prices of fossil fuels, long-laid underinvestment, partly implemented reforms, lack of dams and the last hook of huge circular debt which is usually paid off as small bait to resume the supply on interim basis are the issues posing frightful energy crisis in the country. Construction of dams can resolve the mayhem besides that may prevent the economy of Pakistan from the hazardous damages to crops and lands by flash flooding every year but the prevalent economic ordeal has even hampered the country to sponsor any of the dam construction projects domestically. Still there exists a vent that indicates cloud nine for the nation sharp-set with the shortage of electricity. Pakistan relishes fair geographical feasibility, where alternatives like solar and wind power can offer most operable solutions to the problem. According to a report, Pakistan has ready potential for 100,000 MW for solar generated electricity.² The belligerent progression towards solar energy is viable because the country has an extensive sunny belt with larger population segments settled in rural terrains

where it is too expensive to connect their villages to the grid stations. Remarking the incongruence, if ever 0.25% of Baluchistan was covered with solar panels with an efficiency of 20%, enough electricity would be generated to cover the country's demand.² The shift towards alternate energy sources will also incarnate various junctures to invite foreign direct investments to install wind turbines and solar cells. The heavy costs attached with the commissioning of solar and wind power equipment was also restraining the major venturing in this sector where now the Government of Pakistan has taken a salubrious step of exempting the equipment from the import duties. TUSDEC is also stepping ahead to foster the renewable energy sector in Pakistan with the supply of technically trained manpower. Shortage of relevant technical manpower are posing the barriers to the use of renewable energy sources on cut and dry basis, there prevails a dire indigence of producing trained technical personnel in the various areas of alternate energy equipment fitting

and handling. On the basis of an intensified need assessment survey, TUSDEC in collaboration with GIZ Pakistan has launched an extensive technical training program in various areas of solar technologies. NIDA Centre Peshawar is also rendering short courses addressing technical domains of alternate energy in Pakistan. As Pakistan has been ranked above India and Bangladesh in World Bank's Ease of Doing Business Index, capitalizing on solar and wind power technologies as alternate energy means can lay off an ideal landscape to entice the FDI inducing an effective and prospering economic system and as a catalyst to overall development.

1. *Energy Crisis Crippling Economy, January 1, 2013, The News*

2. *Energy Shortages in Pakistan: Opportunity in Crisis*

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Word from the CEO...



Acquisition of modern technology and skillful workforce is certainly crucial to pave progress for Pakistan. With an abundance of natural resources and expansive age pyramid, our country outlays an ideal context for industrialization if capacitated with the transfer of sophisticated technology and skilled workforce. Where globalization has led to stringent market competition, it has also marked destiny to ascend for many developing countries. Of all the factors that might contribute to a country's socioeconomic growth, technological upgradation and knowledge management are required to be harnessed most effectively. Fostering the same ideology, TUSDEC continues the efforts to render the local industry with hi-grade technological inductions and skillful manpower.

It is indeed gratifying that after fueling the progress of TDM (Tools, Dies and Moulds), Ceramics and Cement sectors, the company is now setting up 3 common facility centres outfitted with modern CNC machines to support the light engineering sector in Lasbela, Hyderabad and Peshawar. The centres will provide modern engineering solutions and relevant trained manpower to the local industries while hugely enumerating the employment prospects in the area. Remarkably addressing the area of advanced product design and engineering, our five NIDA (National Institute of Design and Analysis) centres have trained more than 10,000 engineers in advanced disciplines of CAD/CAM design and analysis. Now the company is contemplating to replicate the project in Hyderabad, Sargodha, Larkana, Qasoor and Bahawalpur. Cognizant to the terrible energy crisis in the country, TUSDEC has laid down its focus on upholding the renewable energy sector. Specialized technical trainings are being organized at NIDA centres to facilitate the sector with locally available and technically adept manpower. Capitalizing on its extensive experience in trainings and development, TUSDEC is collaborating with international donors to back the green technologies sector in Pakistan.

As I have mentioned earlier, Pakistan is blessed in terms of human capital which is required to be trained and developed to become the reclaimable resource of the economy. Weighing up the fact, the company is implementing two-mega scale projects of TVET (Technical Vocational Education and Training) sector reforming in collaboration with ACTED (Agency for Technical Cooperation and Development) and Delegation of European Commission to Pakistan. The projects aimed at improving the access of quality technical and vocational education for the men and women belonging to marginalized communities in KP, FATA, AJK and Sindh in order to haul them towards mainstream economy. Mindful to the significance of socioeconomic gender mainstreaming, TUSDEC is organizing vocational trainings, where women belonging to lower income backgrounds are being equipped with various employable skills. The actions aimed at their capacity building through providing sustainable livelihood opportunities for them. Our collaboration with First Women Bank Limited to implement USAID Gender Equity Program is another articulation of our efforts towards socioeconomic women empowerment through skill development.

I would also commend another perceptive initiative of TUSDEC that is the Experts Services that flock up the senior industry experts at one platform as prospective consultants, culminating the need of pricy foreign consultancy while employing the tacit knowledge of the many proficient people from our industry.

Here I would like to take the opportunity to express my pride over the mounting achievements of my company. We at TUSDEC are determined to enable the strategic industrial clusters of the country with technological sophistication and adept manpower in order to connect Pakistan to the global value chain.

Basit Maqsood Abbasi
CEO, TUSDEC

Skill Development for Solar Power Industry in Pakistan

Short Vocational Training Courses



Pakistan is an ideal landscape for a prospective reliance on Solar Technologies to generate electricity, as most geographical territories enjoy an extensive exposure to the sunlight. Committed to its mission of economic expansion through technology upgradation and skill development, TUSDEC

(Technology Upgradation and Skill Development Company) with its wide-ranging experience in technical training is going to launch free foundation level courses in Solar Technologies (Photovoltaics-PV and Solar Heating Systems SH). The program is co-funded by the European Union, the Kingdom of Netherlands and the Federal Republic of Germany and implemented through Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) GmbH in collaboration with National Vocational and Technical Training Commission (NAVTTTC). TUSDEC through this action also seeks to aid the emerging sector of Green Technologies in Pakistan with field specific skilled manpower availability. To ensure optimal impact of the program, TUSDEC will be admitting the training nominations from the industry. The enterprises can send their newly recruited technical staff for basic technical trainings in Photovoltaics and Solar Heating Systems. During the course the trainees will be paid a monthly stipend of PKR 2000. The trainings will enable the trained candidates to look for better employment opportunities in various enterprises of renewable energy or they can start up their own work as Solar Technicians.

Eligibility Criteria

- Vocational certificates in electrical, mechanical, and plumbing
- Diploma (DAE) in electrical and mechanical
- Special relaxation for experienced electricians and technicians

Courses Offered

- Photovoltaics
Photovoltaics (PV) is a method of generating electrical power by converting solar radiation into direct current (DC) electricity using semiconductors.
- Solar Heating Systems
Solar water heating systems are the alternatives to conventional water heating systems such as electric geysers and fuel-fed boilers.

Program Schedule

Total 5 batches of 25 students in each batch will be trained in three courses of PV and two courses of SHS. Each course will be comprised of three months. The courses will commence on the following schedule;

Course

Batch 1 (1st Course of PV)
Batch 2 (1st Course of SHS)
Batch 3 (2nd Course of PV)
Batch 4 (2nd Course of SHS)
Batch 5 (3rd Course of PV)

Time

April, 2013
June, 2013
September 2013
October 2013
June 2013

Contact Info

Technology Upgradation and Skill Development Company
(Ministry of Production)
State Cement Corporation Building, Kot Lakhpat,
Lahore 5470, Pakistan
Tel: (+92)-42-111-000-143, 35145793, 35145795
Fax: (+92)-42-35121658, 35145792
Email: skill@tusdec.org.pk Website: www.tusdec.org.pk

Registration forms are available at TUSDEC website and office.

News & Updates



TUSDEC COLLABORATES WITH ACTED TO TRAIN THE VULNERABLE COMMUNITIES

TUSDEC has partnered with ACTED (Agency for Technical Cooperation and Development) to implement a project of TVET (Technical Vocational Education & Training) support in the areas of Upper Dir, Jacobabad, Muzaffarabad, Lower Dir, Kashmore, Swat and Shikarpur. The three years program is sponsored by European Union – A Delegation of European Commission to Pakistan. The action is aimed at socioeconomic elevation of the vulnerable communities residing in the target geographical proximity. Through the provision of expedient access to quality technical and vocational education in various employable trades, the action will stipulate the improved livelihood opportunities for target beneficiaries. TUSDEC is acting as a program facilitator by providing TOT (Training of the Trainers), Curricula Development, and Selection Services of TVET Institutes. The project is taking a demand-driven and comprehensive approach in its execution vouching the market relevance of the trainings as well as the program sustainability over the years.

TUSDEC STEERS SKILL DEVELOPMENT IN KP AND FATA

Implementing another large-scale project of Strengthening TVET (Technical Vocational Education & Training) Sector in the far flung areas of KP (Khyber Pakhtunkhwa) and FATA, TUSDEC has entered into direct collaboration with European Union – A Delegation of European Commission to Pakistan. The four years project is funded by European Union with a total action cost of 3.8 million EUR. Head quartered at Peshawar, the action is seeking to train at least 12000 men and women from the marginalized communities of the tribal belt. The project also impels curricula standardization of the TVET institutes in KP and FATA keeping in view the training requirements of the private sector employers and industrialists. The action encompasses regional trade bodies, TVET Institutes, Technical Education Boards, local Chambers of Commerce, NAVTTC and FATA Development Authority as its key stakeholders. TUSDEC will be imparting industry-driven trainings to the program beneficiaries to enable them become a part of main stream economy. After the completion of each batch of trainings, TUSDEC will support the trainees in their placement prospects both in local as well as overseas job markets. It has also been contemplated that a rigorous tracer study will be conducted after one year of the graduation of each batch, so that the program impact could be closely gauged.



TUSDEC JOINED HANDS WITH SARGODHA CHAMBERS OF COMMERCE AND INDUSTRY

TUSDEC entered into a Memorandum of Understanding with Sargodha Chambers of Commerce and Industry. Under the doctrine of memorandum both parties will be collaborating in the areas of research and development, capacity building for existent and upcoming industries and skill development in order to accumulate the national talent reservoir. TUSDEC and SCCI have also agreed to collectively constitute a platform of cooperation and assistance in order to fortify the small medium entrepreneurship. Both parties have conceded to bestow their prime contribution to determine the technological and vocational skill gaps prevailing in the local industrial landscape while perceptively working together to decimate them. MOU was formally penned on a meticulous gathering at TUSDEC Head Office Lahore. TUSDEC former CEO Mr. Anwar Ali Pervez and President SCCI Mr Mazhar Ahmed Malik were present on the occasion to ink the agreement.



MoU Signing Ceremony at TUSDEC Head Office in Lahore

MINISTRY OFFICIALS WERE BRIEFED ON PUBLIC SECTOR DEVELOPMENT PROGRAMMES

Senior officials from the Ministry of Production, Government of Pakistan visited TUSDEC Head Office in Lahore on December 17, 2012 to review and appraise the Public Sector Development Programmes being implemented by the company. Prestigious guests were inclusive of Senior Joint Secretary Abdul Jabbar Ali, Deputy Secretary Naseer Ahmed and Assistant Chief Planning Sadia Kanwal. Project Management Unit Director at TUSDEC Ms. Sadia Masood apprised the guests about the progress on three Engineering Support Centres being established at Peshawar, Lasbela and Hyderabad. She emphasized on the need of governmental support and timely resource allocation for a punctual completion of the projects. She apprised the guests that after successful completion, these projects will render immense benefits for SMEs in light engineering sectors prevalent in KP, Sindh and Baluchistan while augmenting the livelihood opportunities for area workforce. The team was briefed about the remarkable contribution of five centres of NIDA (National Institute of Design and Analysis). The ministerial conjugation appreciated NIDA on training more than 10,000 engineers and students in various advanced disciplines of CAD/CAM Design and Analysis within first five years of its operations. TUSDEC senior officials put forward company's recent initiatives aimed at strengthening the TVET Sector of Pakistan in collaboration with national and international donors. The successful completion of CDTC (Ceramics Development and Training Complex) was also brought up with a comprehensive explication on its ongoing operations.



Ministerial Conjugation alongside TUSDEC Officials Visiting NIDA Lahore Centre

TUSDEC EXPERTS SERVICES - HARNESSING COUNTRY'S TACIT KNOWLEDGE

TUSDEC has launched an online experts' database to connect the industry's decision makers with seasoned consultants. The primitive objective backing the initiative is to capitalize on the brainpower of our own country. The portal has quenched the need of abundant solutions locally available for the diametric industrial problems in the areas of Product Design and Fabrication, Production Optimization, Technology Innovation, Inter alia using R&D, Process Engineering, Machinery Maintenance, Material Management, Industrial Design and Total Quality Management. TES (TUSDEC Experts Services) has been launched in July 2012 and since then a large assortment of industrial experts and consultants have been registered at the panel that can extend prehensile and cost-effective solutions. The notion mounting this action is to reduce our industry's reliance on foreign consultancy redeeming greater margins of growth and profits. In collaboration with LCCI (Lahore Chamber of Commerce and Industry) TUSDEC has also setup a help desk to facilitate the experts registration process.

PROBING FOR THE GREY AREAS IN THE FAN MANUFACTURING SECTOR

In January 2013, TUSDEC has conducted a baseline assessment in Gujrat to probe the fan industrial cluster of Pakistan. The research has been conducted in collaboration with Pakistan Electric Fan Manufacturers Association (PEFMA) and Fan Development Institute (FDI). Through the research, TUSDEC has identified various grey zones that are insistenty impeding the fan industry specifically in meeting the international quality standards in export orders. The research has divulged that the industry is experiencing a grave dearth of institutional support in quality certifications, testing facilities and providence of modern production equipment causing huge inefficiencies and wastage. It has been revealed that the firms in isolation are making efforts to reverse engineer the designs and market their products internationally. Inferior quality raw materials like 'drum steel' is being used for production where any standardization of safety measures has never been introduced. Manufacturing processes like body turning and body drilling are still being performed on conventional machinery, where a shift towards CNC machines can mount up the overall productivity of the cluster by four times, while inducing a 40-50% cut in the annual wastage. The research also brought out the trend of seasonal employment and lack of institutional support shackling the industry with unavailability of skilled manpower. On the basis of an acute sector analysis, TUSDEC has contrived a comprehensive plan of intervention to overpass the technological break up, enhance workforce productivity and inculcate product design innovation to increase the competitiveness of the Fan industry in Pakistan. The strategy will also focus on standardization of quality assurance and product safety measures. Another dimension to the plan entails upgradation of TUSDEC's existing testing laboratory to a Testing and Certifying Agency for the fan industry. The company aims to effectuate the plan through capacity building of Fan Development Institute Gujrat by setting up modern CNC machines, initiation of training courses and improvement of laboratory facilities. TUSDEC will also put forward a blueprint elaborating the tactics for cluster based international branding of Fan Industry which will help grab the export revenues from the contesting markets.

TUSDEC JOINS HANDS WITH CNP-WCCI

Capitalizing on its vision of empowering women through their socioeconomic ascension, TUSDEC has joined hands with Central and North Punjab Women Chamber of Commerce and Industry. The collaboration has been substantiated in shape of a formal MoU signed on January 11, 2013 guiding both parties to cooperate on the issues of sustainable capacity building of modest women through arranging vocational training courses for them. The MoU signing ceremony held at TUSDEC Head Office in Lahore where Mr. Basit Maqsood Abbasi, CEO TUSDEC apprised the guest congregation about the various interventions made by TUSDEC to enable the provision of quality Technical and Vocational Education for marginalized women. Ms. Qaisra Shiekh President CNP-WCCI highlighted the need of imparting industry driven trainings to these women in order to ensure formal earning prospects for them. Both organizations deem to work in collaboration to arrange various paid employment opportunities for the skilled women or to encourage their potentials of small and medium entrepreneurship. Senior officials and executive members from both sides were present at the event.



MoU Signing Ceremony at TUSDEC Head Office, Lahore

TOP GRADE CEMENT TESTING AND TRAINING SERVICES

CR&DI (Cement Research and Development Institute) has conducted an extensive training program for the employees of Vemco Imtiaz Constructions, a company based in Afghanistan. A batch of trainees has been sent by the company at CR&DI where the trainees were instructed about the techniques of cement testing on ASTM C-150 standard. After the successful training of one week the trainees were certified by CR&DI for their attained skills of cement testing. CR&DI is going to train another batch of trainees from Afghanistan in April 2013. The institute has provided meticulous cement testing services to notable construction projects of Bhasha Dam, Motor Way M4 Project, Neelam Jehlum Hydro Power Project, Guddu Power Plant, Metro Bus Lahore Project, Bahria Town Project, Benazir Bhutto International Airport Islamabad and Mangla Dam Raising Project.



Glimmers of Her Destiny!

Yes!
She Can Do!

TUSDEC Organized Vocational Training Courses for Marginalized Women in Collaboration with First Women Bank Ltd. (FWBL) under USAID Gender Equity Program!

Enabling Livelihood Opportunities for Vulnerable Women!

Pakistan as a society is marked with extreme socioeconomic marginalization of women specifically in the rural terrains and lower income groups of the country. Women folks in Pakistan make more than 51% of the total population yet the dichotomy prevails when they are found to be sustaining at the lowest ladder in the ciphers of education and labor force participation. From the four walls of home to their public lives, females in Pakistan are subjugated in the reflection of so-called culturally instituted patriarchal conventions out-loud propagating male dominance and coercive suppression of women socioeconomic and political freedom. In the current globalizing world, gender equality and empowerment of women are the imperatives of achieving sustainable economic development. For a country like Pakistan where there pertains massive imbalance of income distribution with the masses still enduring in the rural settings, it is important to capacitate women with necessary vocational skills so that they could make a decent living for their families.

Ironically the females in impoverished settings, bear equivalent burden of the family's struggle to make a living, yet they are least acknowledged for their economic partake. Lack of the opportunities for formal education and training for them incisively hampers their chances of decent employment, social security and freedom from crisis. Most women start-up an avocation informally in their domestic premises like knitting, sewing and embroidery where lack of industrial exposure and with restricted access to the markets call them a victim of exploitation at the hands of intermediaries.

In a recent action TUSDEC (Technology Upgradation and Skill Development Company) has collaborated with FWBL (First Women Bank Limited) to launch vocational training programs for women under USAID Gender Equity Program. The courses of domestic tailoring, fashion design and product packaging have been implemented at TUSDEC NIDA centres, where 103 women have been trained. To ensure their convenience and motivation at the trainings, TUSDEC provided them with transportation facility. A program impact study revealed magnificent transition of trained women becoming entrepreneurs augmenting their family income streams.

NIDA Centre in Karachi is holding various other technical training courses in both conventional and advanced trades focused at empowering women belonging to marginalized socioeconomic fractions. Pertaining to the shift towards digital product design and development, the women are being trained on advanced software applications in the fields of jewelry and textile design. Further intensifying the livelihood prospects for them; NIDA Karachi has successfully administered the courses of digital lawn design and printing. The curricula and content for all the trainings orbit around the market requirements and industry's demand for skilled women manpower.

Face of Facilitation

NIDA (National Institute of Design and Analysis) is successfully consummating the need of proficient manpower in the fields of digital product design and engineering. The institute has equipped more than 10,000 trained engineers and mid-career professionals with advanced CAD/CAM design skills. Its five centres in Lahore, Karachi, Quetta, Peshawar and Sialkot are progressing towards notable alliances and collaborations with leading Technical and Vocational Training Institutes and Regulatory bodies to further fortify its stream of trainings and industry solutions. Reckoning its remarkable contribution to the engineering sector, TUSDEC has deliberated to further expand the institute's parameter by setting up five more CAD/CAM training centres in Hyderabad, Sargodha, Qasoor, Larkana and Bahawalpur. The centres will facilitate the adjoined industries in improving their design engineering and fabrication fragments by delivering intensive hands-on training on commercial CAD/CAM packages and across-the-board product design solutions on competitive prices.



NIDA Peshawar Organized Trainings of Solar Panel Installation

NIDA Peshawar centre has concluded the technical training course of Solar Panels Installation for 16 trainees. The candidates were registered community members of Sarhad Rural Support Program. To impart the short training course NIDA Peshawar facilitated with the provision of 2400 Watt hi-tech training setup as well as arranged for seasoned trainers. Trainees were brought to rehearse the techniques imparted in the classroom sessions, thereby were enabled to effectively deploy the acquired skills for their livelihood prospects. At the course completion, the successful candidates were certified by NIDA Peshawar and were also facilitated in finding employment opportunities for them.

NIDA Karachi Collaborates with TTB (Trade Testing Body)

NIDA Karachi Centre has recently been registered with Trade Testing Board (TTB) Karachi coming under Sindh Technical Vocational Education and Training Authority (STEVTA). The centre is authorized to conduct CAD/CAM enabled technical courses of Multimedia Graphics, Architecture Design, Basic Auto CAD and Basic Computer Skills with a certification from TTB Karachi. NIDA Karachi has also been accredited to conduct specialized vocational courses for females in employable trades of Fashion and Textile Design, Apparel Making and Domestic Tailoring. NIDA being a recognized institution in technical and vocational trainings has collaborated with TTB to optimize its efforts to bring about quality TVET education in Sindh. The courses jointly launched by TTB and NIDA Karachi will enable the candidates to seek better job prospects considering the aggregated market credence of both organizations in advanced technical education.

NIDA Peshawar Collates with Directorate General of Technical Education and Manpower Training

NIDA Peshawar Centre has signed MoU with Khyber Pakhtunkhwa Directorate General of Technical Education and Manpower Training under KP Chief Minister's Free Technical and Vocational Training Program. The KP Government has arranged six months training in mobile repairing for a pool of 25 candidates at NIDA Peshawar. The training is being imparted free of cost where students are being apprised with an operable curricula with additional emphasize on practical trainings. Students are also being provided with a monthly stipend of PkR 2000. At successful completion, the course will enable the candidates to seek improved livelihood prospects in the local as well as overseas markets.

Establishment of Design Facilitation and Training Center in Khyber Pakhtunkhwa

NIDA Peshawar Centre has signed MoU with DOST (Directorate of Science & Technology) under its developmental scheme "Establishment of Design Facilitation and Training Center in Khyber Pakhtunkhwa (DF&TC)" for the capacity building of technicians/para-technicians through free of cost formal technical training courses. NIDA Peshawar will launch a series of training courses for matriculate, undergraduate and graduate students. After the trainings students will be certified by NIDA Peshawar and will be aided in finding paid employment avenues. The courses will be sponsored by KP Directorate of Science & Technology.

NIDA Lahore Earned a Nomination as Professional Engineering Body

NIDA Lahore has recently been nominated as Professional Engineering Body by Pakistan Engineering Council (PEC) to carry out the CPD (Continuing Professional Development) activities. The centre has been authorized to conduct the short courses, workshops and seminars which would be organized for the Registered Engineers (RE) and Professional Engineers (PE). NIDA will arrange these courses at its state-of-the-art lab facilities. Courses of 5S Tools for Workplace Management, FEA using ANSYS, Clean Development Mechanism (CDM), Process Piping Stress Analysis, Computer Integrated Manufacturing (CIM), Project Planning and Scheduling & Progress Monitoring have been launched in the preceding month.

NIDA Lahore Joins Hands with Kinverg

NIDA Lahore has signed MoU with Kinverg to collaborate in the areas of technical and managerial skills dissemination. Kinverg is an apex organization offering its extensive management consultancy services in Pakistan and overseas. Under the collaboration the specialized trainings of Six Sigma Yellow and Green Belt, Quality Management, Information Security and several other managerial trainings will be organized.

NIDA Lahore is serving the industry with its competitive and reasonably priced 3D Scanning and Reverse Engineering services. A non-contact 3D scanner from Italy has been deployed to handle the jobs with enhanced precision. The scanner can digitize with an accuracy of $\pm 0.005\text{mm}$ and scanable area is within an envelope of One Sq. Meter (1m x 1m or 3ft x 3ft).

Training the Youth!

SkillTech International Karachi

Pakistan is smashed with daunting figures of poverty where according to a recent study; every third Pakistani is caught up in the poor bracket which makes a cut of 58.7million out of the total country's population striving to merely make a living. Lack of education, poor governance, inflation, non transparent resource allocation and lack of sustainable safety nets are few of the familiar reasons ascribed to the escalating poverty counts. The dearth is not only to enumerate the figures of basic literacy instead the youth is required to be cultivated in various employable trades. In Pakistan there is a very minuscule count of TVET (Technical Vocational Education and Training) Institutes and where there exist any the trainings are not imparted to meet the local and global industrial demands for trained manpower. Resultantly the country's human resource do not get absorbed in national as well as overseas job markets sprouting the margins of unemployment and socioeconomic deprivation.

TUSDEC has laid down many interventions focusing on restoring the TVET Sector in many underprivileged geographical factions of the country. In the same verve the company has established SkillTech International Karachi in 2009. The centre aimed at equipping the youth in Sindh with technical skills to overlay the prospects of employment for them in both local and international job markets. SkillTech International steers trainings contesting the international standards and curricula. The centre has collaborations with City & Guilds UK and NED University of Engineering and Technology Karachi for the accreditation of its various short courses in specified engineering fields. Since its inception, SkillTech International has trained more than thousand students in the areas of Electronic and Electrical Engineering, Automation and Control Engineering, Chemical Engineering, Basic Information Technology, Communication and Management Skills.

In addition to its regular short engineering courses, SkillTech International Karachi has arranged customized trainings for notable organizations; SUPARCO, Pakistan Air Force, Pakistan Navy, Thal Engineering, Dawn News and Pakistan Refinery. The centre has joined hands with BBSYDP (Benazir Bhutto Shaheed Youth Development Program) and has trained 59 students in five courses of Industrial Automation Technician, System Administration and Construction Engineering.

SkillTech Karachi is encompassed over a state-of-the-art training facility absolutely outfitted with its huge training labs, digital instruction facilities and a large panel of seasoned trainers. Based on its extensive experience in training and development, the centre is going to launch its own DAE Program. This initiative will benefit the youth belonging to relatively modest income groups to attain advanced skills on nominal rates.



Computer lab at SkillTech Karachi



Class Room at SkillTech Karachi



Certificate Distribution at SkillTech Karachi

Skill Development in KP and FATA



JOIN US IN PROVIDING BETTER MEANS OF LIVELIHOOD!

TUSDEC is implementing a project of skill development in the far flung areas of FATA and Khyber Pakhtunkhwa to provide better livelihood opportunities to the marginalized communities. The four years programme is funded by European Union.

TUSDEC invites the participation of small and medium entrepreneurs, local industrialists, TVET authorities and TVET Institutes operating in KP and FATA to be a part of the programme. The participants will be engaged for their feedback and assistance in digging out the precise vocational and technical trades in which the local manpower can be trained to enhance its employment prospects.

The Programme Aims At

- Training 12000 men and women from KP & FATA
- Demand identification of the local industry to impart vocational training courses
- Providing livelihood opportunities for the trained manpower
- Improving the access, equity and quality of TVET education in the area

For further details contact us at:

TUSDEC Facilitation Unit, Sate Life Building, First Floor, 34, The Mall, Peshawar.
Tel: 091-9212330-2



Rendezvous with

Sohail P Ahmed

(Group Vice Chairman - House of Habib)



In its tradition of recollecting on the protocols extended by its forerunners, TUSDEC has interviewed another emblem who has contributed his astute directions to fuel up the company's stride towards progress in its preliminary years. Mr. Sohail P. Ahmed, Group Vice Chairman House of Habib was an eminent member of TUSDEC Board of Directors, which he reminisces as a remarkable experience.

Being part of the distinct guiding light of the company, he conferred with his vast technological knowledge, analytical incisive and utterly dynamic managerial understandings to initiate and substantiate various grand-scale projects of TUSDEC.

An engineer from NED, he attained his postgraduate

qualification from Holland, later he went to INSEAD France and opted for its Advanced Management Program. Mr. Sohail P Ahmed started off his career from his factory in East Pakistan later he joined Pakistan Tractors Corporation which subsequently merged with Pakistan Automobile Corporation (PACO). At PACO, he became the CEO of Naya Daur Motors and Mack Trucks at the age of 38, turning around the two drowning ventures. He joined Atlas Engineering Ltd, previously known as Allwin Engineering in 1985 and after working there for 8 years, he joined House of Habib, setting up a new venture, Thal Engineering. Putting all his knack and experience, he began the journey to establish Thal Engineering as a company to last forever. Mounting on the ladder of excellence, he led various pivotal ventures under House of Habib. Inculcating each project with his discerning knowledge, experience and his elevated set of business ethics and values he infiltrates perfection in every speculation at hand. Mr. Sohail P Ahmed is currently designated as Vice Chairman (Automotive Side) at House of Habib. Having been on the senate of many notable educational institutions and universities, he keeps a diligent sagacity about the educational sphere of Pakistan. His persuasion about various domains of work and accomplishment serves the pinnacle of values and moral stipulations vividly defining the rationale of his remarkably professional milieu. Our editorial crew managed to have an enlightening interview session with Mr. Sohail P Ahmed at his office in Karachi which we have composed to appear as an eminence to our communiqué.

TUSDEC: You have been closely attached to the automotive industry of Pakistan. How would you comment on the potentials of that industry? What measures should be taken on development level to support this sector?

Sohail P Ahmed: I have been associated with automotive industry since 1973 and have moved through various ventures. We have to look at the massive contributions of this industry in other countries like India, Thailand, Malaysia, China, USA and the potentials will be evident. First of all, automotive industry has been rated as one of the biggest employers in the world. Secondly, it is very technologically oriented. A lot of technological inventions that have been originally made in automotive industry were later utilized in defense and aviation sectors. That is why Peter Drucker has called automotive industry as the mother of industries and as well, industry of industries. This industry has multiple forward and backward linkages with other allied

business sectors such as service, maintenance and repair, insurance, parts manufacturing design engineering, testing, tooling etc and the list is long. So when automotive industry flourishes, it has a magnified impact on the overall economy. This industry contributes 4 to 5 % of the GDP in countries like Malaysia and Indonesia. In India 10 % of the entire working population is stated to be employed in this industry in Germany every 7th employed person is associated with it. In Pakistan automotive industry contributed 2.8% to the GDP during the previous year. In countries like Malaysia and Thailand, there are about 200 plus cars per thousand people whereas in Pakistan we have only 12 cars per thousand people, so as we increase the number of cars per thousand people, the industry starts showing its real effect on the economy. These are a few reasons, this industry should be supported and allowed to grow and thrive.

TUSDEC: Based on your association with vocational training institutes, how would you comment on the scenario of the vocational education for women? Which trades do you think should be in focus for their technical and vocational trainings to enable sustainable livelihood opportunities for them?

Sohail P Ahmed: There is a training institute for women in Korangi, Karachi of which I am the Chairman and there are various other institutes, that I am associated with. I do not think there should be any restriction of fields on women. Pakistani women are flying aircrafts, climbing mountains, work in armed forces etc. Ideally it should entirely depend on her, however there are few societal factors in our country that inhibit women from making independent choices about their careers. So at the vocational training level, I do find that women are more interested in the courses of beautician, designing, clothes making and cooking. These days IT or software development is a side where more and more ladies are taking admissions. As we launched a course in computer maintenance, it was interesting to see that many women were interested to take the course. Software application is also emerging out as a prospective area which women can opt as their vocation, there are no societal boundaries attached to this field. Exports of software can also prove to be a big opportunity for women.

TUSDEC: You have been representing notable public and private sector organizations. How do you think both sectors can synchronize their efforts to achieve various development objectives leading towards improved industrialization and poverty reduction?

Sohail P Ahmed: Business should be done by business i.e. the private sector. The state sector should create an enabling environment for the private sector through business friendly and consistent long term policies, removing the bottlenecks and hindrances so that the private sector could steam ahead. This will lead to harnessing of energies from both sides that would ultimately lead to economic growth and development on longer term basis.

TUSDEC: You are on the prestigious senate of few notable engineering colleges and universities. What should be the role of academia in technological research and development to uplift the industry?

Sohail P Ahmed: First I would like our

Sohail P Ahmed: This is a very subjective question and so would be the answer. In my opinion yes TUSDEC was working towards its vision and was achieving its goals. Almas Hyder was the first Chairman of the company and was a very dynamic person, he was always willing to look at new ideas, new thoughts so there was an overall encouraging environment at TUSDEC. It started off well, it worked well and it tried to bring in some, innovative people as well. The organization had a good team and had great support from the Government in its initial years which made TUSDEC accomplish its goals through setting up various institutes for technology upgradation.

TUSDEC: How would you comment on TUSDEC actualization in shape of the three Common Facility Centres

TUSDEC: You have been on the Board of TUSDEC (Technology Upgradation and Skill Development Company). How was your overall experience with the organization?

Sohail P Ahmed: I really enjoyed my stay on TUSDEC's board, because TUSDEC came up with a very fresh and futuristic mandate. It was and I hope it still is a very 'doing' organization. We would take decisions and then closely monitor the pace of implementation so one felt part of the happening scene. We were planning and probing the areas which were not our own so it was challenging to think differently. It was great to think beyond today, beyond our own working time.

institutions to make our students think. We lag in this approach at our schools, colleges and universities. We prefer to spoon feed the students, we want them to learn what the book is saying never allowing them to think 'out of the box'. We do not want to allow our children to do any lateral thinking and that is the biggest problem with our education system. Besides we do not have real research in our universities; students should take up real projects from the industry, should do real time research and that should be marked as their graduation milestone. Unfortunately the interaction of our academia is not sufficient with the industry. There has to be a number of foras on which the interaction should happen on practical terms. The teachers at the universities must also be sent to the workplaces to have a feeling what the industry is all about. I think students should also be interned 6 months to one year in the industry and that should become an essential part of their curricula. There are many more ways of enhancing the interaction between industry and universities, as visiting speakers concept, consulting by faculty, surveys etc.

TUSDEC: What was the vision on which TUSDEC was institutionalized and when you left the organization was it operating on its original line of action?

(KTDMC, GTDMC and CDTC)? Which other industrial clusters in your opinion are in need of common facilitation in terms of latest technology transfer and relevant skill development?

Sohail P Ahmed: KTDMC has been a big success up till now, self supporting its operations totally as there is no support from the Government. GTDMC was just being put up when I was with TUSDEC, there were few problems but the institution has some very fine equipment and machinery. Now I hope the problems



have been resolved as GTDMC has the potential to play a bigger role than KTDMC, being established in Punjab where there is much more industrialization than any other province of the country. All these common facilitation centres are catering to the tooling indus-

TUSDEC: TUSDEC has established 5 CAD/CAM training centres which have trained above 10,000 students up till now and the company is planning to replicate the project in Qasoor, Larkana, Hyderabad, Bahawalpur and Sargodha. How significant do you think is the advanced CAD/CAM training for the product design and engineering sector of Pakistan and which other geographical areas should be intervened with the same initiatives?

Sohail P Ahmed: CAD/CAM is certainly very essential to be learnt and acquired as knowledge. Pakistan had a great opportunity to excel in the software application side, here we could take a leap working on the horizons of information technology as it was a new field but unfortunately we have lagged behind in technology. CAD/CAM is required, necessary for process control & effectiveness in conjunction with concepts like CAE. In manufacturing we cannot work without CAD/CAM and expect to compete. There are latest software applications that we also need to be adept at. We do need such training institutes in Baluchistan as there would be many young boys and girls willing to have such trainings but the only requisite is that wherever we set up such training centres, there must be a small infrastructure of industry around it otherwise the trained people will migrate to the urban areas and cities will continue to get populated which is again not a very desirable situation.

try because there is a big gap in tooling availability in Pakistan and that's why TUSDEC went on to this route to setup these institutions for tool development. The gap between supply and demand is still very large, we still import a lot of tooling from abroad every year. It is important that tooling is of right design, they are delivered on time and are available at the right price.

Besides, we need some good testing facilities in our country so that we could test what we have prepared. In developing countries, factory owners install basic testing equipment; while costly testing is

done in central testing laboratories as the requirement is not so frequent. The factory owners thus do not prefer to invest into it themselves. CDTC should play a big role in the area of testing and if it already does then we can replicate this project on other places.

We should also concentrate on the area of machine maintenance, we bring in the equipment but we lack in the ability to maintain it. We need training in the machine maintenance side, so that the machines do not sit idle for want of repair or maintenance. As the machines are getting more and more electronic controls, we need some training in electronics of machines. This can also help us in designing some equipment with electronic controls.

TUSDEC: Pakistan is endowed with abundant feasibility for solar and wind energy production. Why do you think are we not venturing in a major way into these renewable energy sources? Where do you see the scope of green technologies in Pakistan?

Sohail P Ahmed: The reason we are not adapting green technologies in Pakistan is lack of an enabling environment. The upfront cost of these kinds of technologies is very high and to defray this Government must make few arrangements; first the rate of lending should be reduced secondly, there should be an incentive on using these kind of energy sources. If we look at the countries like US or Germany, there are two sectors fostering this area; state and the private sector. While state sector sets up large units, when it sells the power it does not charge the cost of that investment through increased rate, but amortizes it over a long period say 20-25 years and supplies power at rates from other conventional sources. But when private sector goes into it, it has to supply to the national grid and can only make money, if funded through long term soft loans. Even individual consumers can install solar power for their houses, if very long term soft loans are available; it will get a pull automatically. It is very much doable, governments are doing it in other countries, even in India they are massively deploying the wind energy resources.

We must not focus only on mind skills; we should also focus on hand skills. Both mind and hand skills should be combined together and that is only possible if we have our academia in close interaction with the industry.

TUSDEC: As our industry is growing more and more adaptive towards high-tech CNC machines, how would you elaborate on the need of locally available trained manpower on PLC (Programmable Logical Control) systems?

Sohail P Ahmed: Yes we need trained

manpower for CNC machines. PLC was once upon a time a big thing but this has been replaced with numerically controlled machines. We do need, as I said earlier, people trained on machine maintenance considering it a prerequisite for installing such high-tech equipment. We can enter into a joint venture with a foreign organization making high-tech machines and controllers on the terms that we would buy machines from them and can setup a training institute, where their experts will train our local manpower. Organizations like TUSDEC can entertain this idea as it is also about technology upgradation.

TUSDEC: How would you comment on the growing trend of corporate social responsibility in Pakistan? What do you think should be the role of different private sector organizations in improving the quality, access and equity of TVET sector in Pakistan to enable sustainable livelihood opportunities for marginalized communities?

Sohail P Ahmed: Giving is not new in Pakistan, as Muslims we have always been doing it in the form of Zakat and it is a part of the way we live but now we have got a word for it. And it is a good phenomenon as it implies that giving should be channelized in a funneled manner so that it can yield positive results in education, health, hygiene or any other sector. Vocational trainings are another need where you can utilize CSR. There are already thousands of vocational training institutes in Pakistan but still there is a huge dearth of skilled people in Pakistan which is because of the low quality of training that is being imparted in these institutions. We need vocational training institutes which can impart portable quality skills and expertise. First we must strive to stabilize the economy to make the industry grow, because only a flourishing industry will absorb the people who are being trained. If there is no linkup, then we will waste our trained manpower.

TUSDEC: TUSDEC has established SDCs (Skill Development Centres) in Battagram and Khaki and then launched mobile training courses in Southern Punjab and Sindh.

Where do you think the project of Skill Development Centres should be replicated?

Sohail P Ahmed: As I said earlier, these institutes must be established where there is an infrastructure of industry as the trained manpower is needed to get

absorbed there, otherwise they all will start migrating to the big cities and that means the development will again be stagnant in the smaller towns. If people are trained in smaller towns, they should be provided with the job prospects there and that is also a part of government's duty.

TUSDEC: How would you comment on the commercialization of higher education in Pakistan and how the scenario is affecting the country's knowledge bank?

Sohail P Ahmed: Most of our universities and colleges have no international ratings, except a few; this speaks for itself. If we look at Indian Institutes of Technology (IITs), their graduates get

ing shop, but if you train a person to be a machinist, he would only be able to work in a machine shop. Improved levels of skill development certainly enable a person to earn a livelihood and if he is willing to take a risk he will become an entrepreneur.

TUSDEC: What improvements do you suggest should be made in the TVET (Technical Vocational Education and Training) sector of Pakistan to overcome the prevalent socioeconomic encumbrance?

Sohail P Ahmed: Some of our vocational training institutes have really gone down and they need improvement in various areas particularly in administration,

ments but what he achieved, his attitude, humbleness and mannerism. Jinnah for his honesty, for his ability to analyze, his steadfastness and determination. They are my heroes.

TUSDEC: You have been a leader to various organizations and institutions. What is the biggest leadership challenge today in your opinion and how do you manage to combat that?

Sohail P Ahmed: I think the biggest challenge for any organization is to attract good people and to retain them. Good people like to be recognized, rewarded and involved, they want to have fair play at their organization, so to me right now this is the biggest challenge for the organizations. Through good people they can upgrade technology, uplift their image and through good people they can become more competitive.

TUSDEC: We would like you to comment on the significance of Human Capital to achieve organizational success in today's competitive environment?

Sohail P Ahmed: When I started Thal Engineering, I took a plain piece of paper and started to plan for a company that would last a century. Whichever aspect I worked on, I found the root cause to be quality of people. How to attract and retain right people and good people was then the question. I came to the conclusion that it is the work environment i.e. the culture that does it all. So how to build the right culture? Here I concluded that a culture built on shared values and ethics is the answer.

For competition nothing works better than good people. Wherever are you competing it is not because of the machines but your team. Machines depreciate, people appreciate with the passage of time. So we should focus on looking after the people, by rewarding them, appreciating their good work, training them, upgrading them, only then we can make an organization competitive; be it small or large by retaining its spirited human resource. It always requires a good able person to run a good machine well; the machine will not work itself.

easily absorbed in the international job market. Why are our universities not being recognized globally? It depends on few key factors; quality of our teachers, quality of our teaching methods, our induction process and our methods of examination which translate into one factor and that is the overall quality of our education. Since the inception of HEC, a lot of focus has been laid on higher education. Now we have teachers who are PhDs, but if a person has a doctorate degree that does not mean that he/she will also be able to teach well. His learning must have been enhanced but the ability to teach is not necessarily improved and there is a great difference between the two. As I said earlier, it is important that our teachers develop the thinking ability in the students and that is the reason we must have real research in our universities. I remember, when I was in NED we had a couple of teachers who were PhDs, one of them used to make us think ourselves and the other used to refer to the book all the time. We never went to the latter.

TUSDEC: How significant is the focus on technological upgradation and skill development to ensure national competitiveness through production innovation, optimization and entrepreneurship?

Sohail P Ahmed: Entrepreneurship does not have a direct link with vocational training and education. Entrepreneurship is an attitude. Vocational skills can help a person to set up shop or work for someone else. It depends on the type of skills as well, if a person is trained as a motor mechanic he may start his own business or if a person receives training in plumbing, he can open up his own plumb-

management & governance. These institutes must create a learning environment and while imparting skills, they also need to influence the minds of the students, who must learn to acquire work ethics and values. Best institutes are those where students are residents, only then you get a chance to change the minds of the kids. Students learn some values and discipline at army institutes because they are made to practice the discipline and values day and night. It is not enough to talk about values & ethics, we need to make our kids practice the work code and ethics that will automatically lead to an improvement in work culture. A culture is developed by practicing values which become a way of living. Japan is a great example in this respect. Their only resource was people and how remarkably they have developed this resource.

TUSDEC: How would you comment on establishing an industrial management and technology upgradation fund in Pakistan to support the commercialization, industrialization and exports promotion of small scale entrepreneurs?

Sohail P Ahmed: It is a good idea to have a technology fund to help upgrade technology, through technology acquisition. There would be ground rules for which technology, extent of support & monitoring of approval plan auditing and results.

TUSDEC: Who has been your inspiration to excel in your professional life?

Sohail P Ahmed: Jack Welch, the former CEO of General Electric, he stands out and Mr. Agha Hasan Abedi who led BCCI, for his achievements not for the way he has made those achieve-

TUSDEC: Your Message to the readers.

Sohail P Ahmed: We are obliged to develop good work culture at our institutes and workplaces. We need to inculcate ethics and values into our society as the basic need of work and living. Once this takes root and the leaders walk their talk everyone will make honest utilization of their time and deliver. Shared values will lead to team work.



Reining the Power from Water!

Hydropower is the most important of the “renewables” for electrical power production worldwide, providing 19% of the planet’s electricity. It is recognized as reliable, sustainable, dependable and most cost-efficient in generating electricity and clean resource of renewable energy.

A turbine converts the energy from falling water into rotating shaft power. The selection of the best turbine for any particular hydro site depends upon the site’s characteristics (head and flow available), desired running speed of the generator or other devices loading the turbine, whether the turbine will be expected to produce power under reduced flow conditions and power-speed and efficiency-speed characteristics of turbine.

Moreover, hydropower is divided into four main categories; Micro hydro (less than 100 KW), Large hydro (more than 100 MW), Small hydro (up to 10 MW) and Mini hydro (around 1 MW). The economic life-time of a hydropower station is between 40 to 80 years and annual operational and maintenance cost is one to four percent of capital cost.

Pakistan’s total hydropower resources have been estimated at 59,796 MW (Gross) out of which 41,045 MW is so far considered exploitable potential. At present installed capacity for hydropower generation is only 6,792MW or just over 11 percent of gross. It is promising however that an ambitious plan has been launched to harness hydropower potential optimally, through investments by public sector as well as private sector¹. Mentioning the projects, Wapda’s Allai Khwar (121MW) and Duber Khwar (130MW) power stations have been completed and are being connected to national grid. Jinnah project (96MW) is in its stages of completion, expected to achieve commercial operations shortly. Construction of Golen Gol (106MW) is also in progress. Gomul Zam dam (about 18MW) is also near to its completion, while construction of Kurram Tangi dam (83MW) has been initiated and prequalification of contractors for Keyal Khwar (128MW) is in process. Other projects like Neelum-Jhelum hydropower project of 969MW and Diamer Bhasha dam project (4,500MW) is awaiting sponsorships from the international donor agencies. Tarbela fourth extension project of 1,410MW being financed by the World Bank is to kick-start by end of this year. Meanwhile, feasibility studies of Bunji (7,100MW) and Basho (28MW) have been finalized. Akhori



dam (600MW), Dasse project (4,320MW), Munda dam (660MW) and other many hydro projects are underway under the current policy².

In terms of small hydro, Productive Use of Renewable Energy (PURE) Project is being implemented to install 103 hydro power plants in Khyber Pakhtunkhwa (KP) and Gilgit Baltistan (GB), with the total cost of USD 19.5 million. Another project for 250 plants is under preparation for the same areas. Eight hydro projects have been initiated under the Renewable Energy Development Sector Investment Program (REDSIP) with the support of the Asian Development Bank (ADB). These projects are being implemented in KP and Punjab with an estimated cost of USD 290 million. Another 2 small hydro power projects have been initiated under REDSIP. The Government of Punjab has issued LOIs to private investors for establishment of 10 small hydro projects with a cumulative capacity of 142MW at different locations in Punjab. AEDB has initiated a program with the assistance of Deutsche Gesellschaft für Internationale Zusammenarbeit (GIZ) support to assist the provinces to solicit private investments in small hydro sector; under this program pre- feasibility study for 25 hydro sites in AJK, Sindh, Punjab and KP with the cumulative capacity of 284.14 MW has been completed. Public sector Hydro power projects are initiated in (a) KP (worth USD150.99 Million, of 17.0MW, 36.6MW and 2.6 MW), (b) Punjab (worth USD 138.74 Million, of 5.38 MW, 4.04 MW, 2.82 MW, 4.16 MW and 7.64 MW) and (c) Gilgit Baltistan (worth USD 71.12 Million, of 26 MW and 4 MW)³. Conclusively, we can say that a lot is being done by the competent authorities to rein this valuable energy source despite the confronted challenges.

1. <http://dawn.com/2013/02/18/developing-hydropower-potential-risks-and-constraints/>

2. *et.al.*

3. *Pakistan Economic Survey, 2011-12*

NOTES OF TESTIMONY

Effort is futile till it brings about the goals it is driven upon. TUSDEC manages to trace back each of its development initiative to measure the actual impact that the program has brought about against the goals it was originally set out to achieve. In the same spirit the women who have been imparted with vocational skills under USAID Gender Equity Program in collaboration with First Women Bank Limited (FWBL) were studied for the improvement in their livelihood opportunities as a result to their skill enhancement. Most of the women endowed with the skills of tailoring, fashion and textile design and product packaging were found blissfully busy running their own small scale businesses or being employed at reasonable wages. TUSDEC also imparted construction skills courses in the rural terrains of Southern Punjab and Interior Sindh. Folks belonging to the flood displaced families were trained as masons, plumbers, electric and gas welders. Internships were also arranged for the candidates so that they could further polish their acquired skills set. After the trainings most of them found reasonable employment prospects or experienced a fair wage hike. Most of them as sole bread winners of their families are now earning better to cover their household expenses.

Razia Ismail is an inhabitant of Lahore city. She was spending a marginal life with meager income in exchange to her informal venture of hand made flowers. She always had the knack for sewing and flower making but due to meek financial provisions, she could never receive any vocational training. As soon as she heard of the vocational trainings being organized by TUSDEC in collaboration with FWBL under USAID Gender Equity Program, she forwarded her application for the course of domestic tailoring and got selected. So the journey towards prosperity through perfection began for her at the premises of NIDA Lahore where proficient trainers buffed up her existent talent. She learnt fabric cutting, colors scheming and stitching and found her skill levels above. After training she continued her work of flower making with added precision and also started stitching clothes for the women of her community. Now she is making decent money out of her work with an increased number of orders raising her household income and sparing her with a chunk to save every month.

"I was already working but was lagging finishing in my work. During my training at TUSDEC I learnt varied techniques of fabric cutting and sewing. Now I am getting huge tailoring orders and making more money. I am extremely happy as it has eased out my family's burdens".

Riaz Azeem Bakhsh a lad of 20 years is the second eldest son of his family comprising of two elderly parents, 5 brothers and two sisters. The family was already lurking in impoverishment when the flash flooding of 2011 tossed up the rural area of Rakh Ehsanpur in Southern Punjab. Before the disastrous floods, Riaz was working as a welder in the local market, but due to no formal training, his work was lagging perfection causing him to drop many customers. Riaz got to know about the vocational training course of welding which was being organized by TUSDEC at a Model Village in Daira Din Panah Muzaffargarh in collaboration with Engro Foundation. He applied for the free of cost trainings and got enrolled. During the course Riaz honed his construction skills and focused at earning proficiency in the field of welding. Construction skills helped him renovate his house where with added proficiency in welding he got a job in Mahmood Textiles Muzaffargarh. Later he got a better opportunity at Sareena Engineering Muzaffargarh rendering him with reasonable wages. With the complete tool kit he received at successful culmination of his course he is also handling small scale freelance welding jobs and making an adequate living for his family.

"I was working as a welder with no specialized training or certification in hand which was hampering my employment prospects in any organization and I was failing to grab projects from the local market. I am glad to have this training as it actually helped me out in lifting up my income level. Now me and my brother can make enough money to buy the bread and butter for our family. The construction skills I acquired from this course have greatly mitigated the perils of rehabilitation for us".

Irum Fizza is a young girl from a very humble family backdrop. She was aware of her talent with colors and fabrics but she wanted to sharpen her skills to a professional level so that she could adopt fashion designing as an avocation. She was reluctant due to the high charges of the trainings being imparted at different vocational training centres. She waited no longer when she heard of USAID GEP trainings being organized at TUSDEC and got herself register with FWBL. After an extensive training course, Irum's talent received a boom and finessed to a noticeable level. She also started her own small scale business and exhibited her work. She has started taking orders from women with boutiques in Canada and USA. The training has enabled an economically secure and independent future for Irum now in her early twenties.

"I wanted to learn a vocation so that I would not be financially dependent on anyone. I always had an interest in playing with color themes and designing of clothes and I materialized it into my profession through trainings imparted at TUSDEC Lahore under USAID GEP. I received great mentoring and encouragement there from the trainers and my fellows; hence I started up my own business".



Mohammad Akmal, 26 years old was ambushing in bleakness after the floods ruined their village in Muzaffargarh. The boy was the only supporter of the family with his gravely sick parents and two siblings. The entire family was left with desolation as there was no permanent shelter and no means to earn. His disappointment met the fortune finally when he eared about the free of charge vocational trainings in a model village of Muzaffargarh, organized by TUSDEC. At the model village in Daira Din Panah, he received construction skills training, built his own home and learnt a vocation to practice further as an occupation. Akmal is now residing at the model village in his self-constructed shelter home and is making a good living out of his job at a local firm as a welder.

"I was so distressed as I was the sole wage earner of my family as my father was so old and ailing and when floods hit our village I lost my job which was already not paying me enough to bear my family's expenses and the medication of my parents. I learnt welding skills and then was provided with a tool kit. Initially I started off with an informal job at a local welder's shop later I got employment in a firm. Now I am able to make enough money to run my family's expense roll. I am planning to get advanced welding trainings so that I can have better job opportunities".





honoring the Cooperation!

Down the line of its exceeding initiatives in technological upgradation and skill development, TUSDEC has speculated over potential synergies of work to capitalize on the common objectives and efforts to achieve them while minimizing the chances of redundancy and improvidence. Over the years of its operations the company has attained diligence of various socioeconomic fronts where there exist vivid margins of development and improvement. Among so many other social disparities, there prevails the socioeconomic gender discrimination, where women particularly those belonging to lower income groups are discouraged to attain formal education. Sustaining social discourtesy levels higher than women, there exists the transgender community that calls for massive assistance and endowment to command socioeconomic dignity, freedom from social threats and desertion. Heedful to the situation, TUSDEC has set out to pursue with the line up of socioeconomic elation of modest women and transgender in Pakistan by enabling opportunities of formal technical and vocational trainings for them ultimately providing them with livelihood prospects. To ensure comprehension in the objectives and outputs to the action, TUSDEC squared off to collaborate with few public and private sector organizations credited for their extraordinary contribution towards gender mainstreaming.

Collaboration with Darul Aman Lahore and Sialkot

TUSDEC aims to train the socially dispossessed and deserted women residing at the Darul Aman Lahore and Sialkot in various basic and advanced employable trades like tailoring, home crafts making and fashion designing so that once they leave the vicinity they can start earning independent living for themselves out of a formal job or through self-employment. TUSDEC deems to setup a training lab within the premise of Darul Aman to arrange for the sustainability of the action.

Joining Hands with Baidarie Sialkot

The company determined to facilitate the access of formal vocational trainings for the women residing in rural suburbs of Sialkot. To stir up the action, an MoU has been signed with Baidarie Sialkot, a local NGO based at the village of Sambrial near Sialkot. Baidarie will aid the process of mobilizing the target beneficiaries for the vocational training courses to be imparted by TUSDEC. The trainings will be offered in various trades reflecting the actual demand of the industry prevalent in and around the city. The trained women will also be linked up to the formal employers and micro-finance institutions.



Collation with Gender Interactive Alliance

Intending to steer third gender mainstreaming, TUSDEC has collaborated with Gender Interactive Alliance Pakistan. MoU has been signed guiding both organizations to collaborate on the areas of formal vocational education for the marginalized community of transgender thereby enabling them to earn a decent living for them. Both organizations will work in cooperation to lift up the socioeconomic status of this socially derelict community.

Aiming to Foster the Acid Burn Victims

Pakistan is marked among the countries with highest counts of women victimized with the heinous act of acid burning. TUSDEC has inked an agreement with Depilex Smile Again Foundation for sustainable capacity building of the victims through vocational skill development. TUSDEC will provide free of cost trainings to the women passing through their phase of recovery under the shed of Depilex Smile Again Foundation. After trainings the candidates will also be aided in finding formal line of work as well as will be helped out in setting up small and medium enterprises.

Depilex  Smileagain Foundation



Fostering Women Entrepreneurship

To promote women in small scale venturing, TUSDEC has entered into an alliance with Akhuwat, a recognized micro-finance institution. A formal MoU has been penned down directing both organizations to cultivate the chances of decent avocation for vulnerable women through skill development and endowment of small loans enabling them to start their own small scale businesses.

With the formal vocational education and employment, these deprived segments of the population can be harnessed to contribute towards a socioeconomic paradigm shift, as it is never the unskilled but adroit manpower that can be surmised as the country's resource.

Initial stream of funds amounting to PkR 5 million have been released by the Government on January 2013 which further triggered the execution process. For an owed implementation of the three Engineering Support Centres, a pool of seasoned local and foreign consultants is being affianced for top-grade construction of the centres, high-tech equipment installation and initial training of the manpower.

Collecting the command from its own mission of latest technology transfer and relevant skill development, TUSDEC is in the process of establishing three Engineering Support Centres under Government of Pakistan's CFCs (Common Facility Centres) Program which was launched under a loan of USD12 million from Asian Development Bank. The CFC program aims at supporting the SMEs in various industrial clusters of Pakistan. Under the same intervention, TUSDEC has successfully established CDTC (Ceramics Development and Training Complex) which is successfully functioning since July 2012.

TUSDEC Project Management Unit (PMU) is now facilitating the implementation of three Light Engineering Support Centres in Peshawar, Lasbela and Hyderabad. Detailed project implementation plan of PMU has been approved by Planning Commission of Pakistan. The objective impelling the establishment of three engineering support centres is to provide common pool of targeted technologies, manpower training, testing inspection, process optimization and related services to the light engineering industrial clusters in Sindh, KP and Baluchistan. The aim is to consummate need-based manpower development with demand-based technical assistance for the Small and Medium Enterprises in the area while enabling a wage hike and resultant socio-economic amelioration.

THE WAY

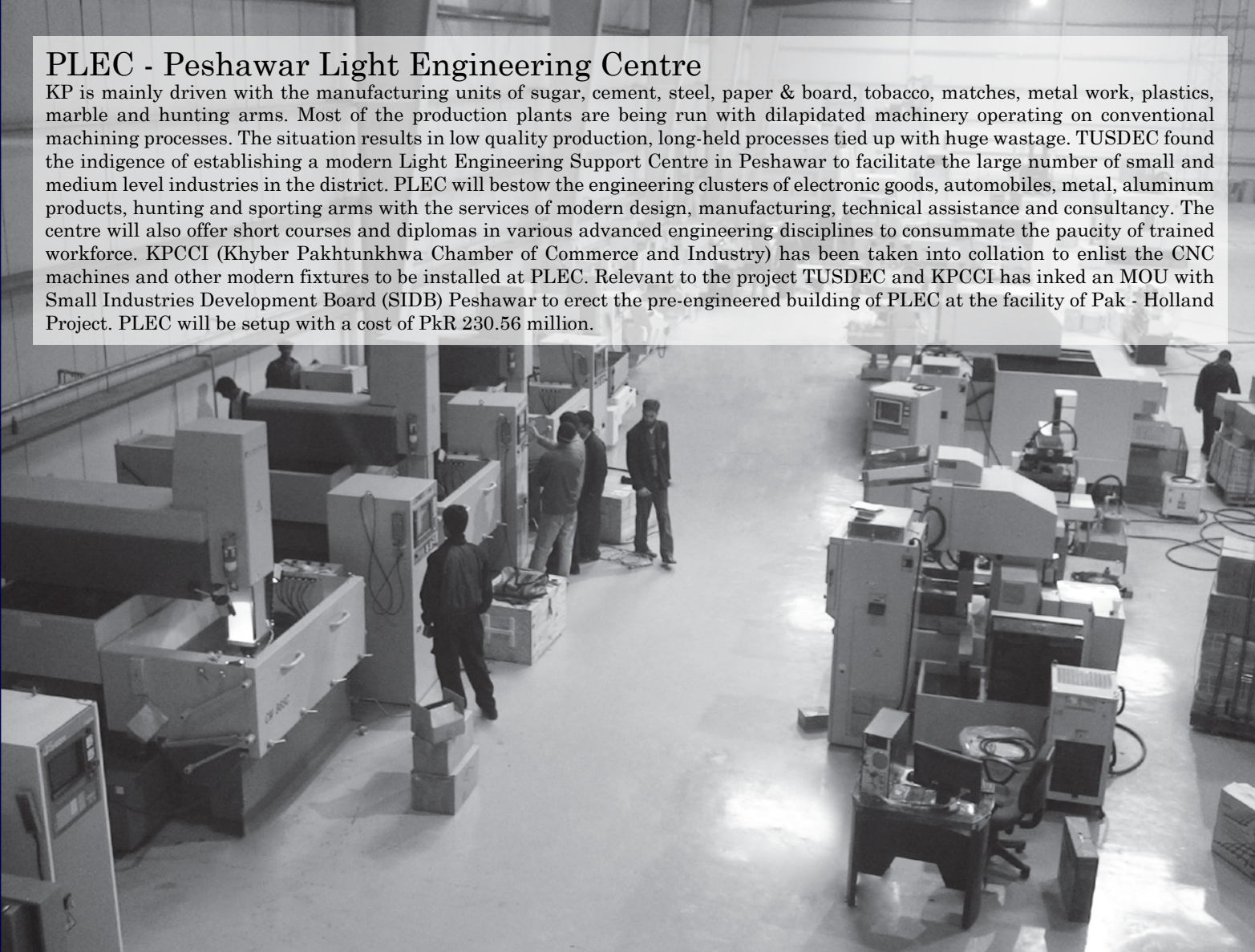
LEUC - Light Engineering Upgradation Centre Baluchistan

Baluchistan marks the largest provincial proximity of Pakistan with abundance of natural resources, protracted coastal line, mineral and hydrocarbon deposits. Out of the eight industrial estates of Baluchistan, five are present in Lasbela. TUSDEC aimed to foster the SMEs in Baluchistan hence conducted a need assessment survey in the area revealing the dearth of technical support and skilled personnel in the automobiles, steel products, electrical goods and metal parts industry prevalent in Lasbela. The centre is being setup at Hub Industrial and Trading Estate (HITE) Lasbela as it is condensed with major manufacturers and engineering units. The centre will have two functional classifications. Its Technical Support Centre will be comprised of Fabrication Workshop, Electrical Workshop, HVAC Workshop and Carpentries Manufacturing Workshop whereas there will be a Quality, Designing, R&D and Technical Training Centre for equipment manufacturing, repair, maintenance, testing, training and quality evaluation services. The centre will provide certified diplomas in basic and advanced technical trades to the local hands which will enumerate the job prospects for them while elevating the precision standards of production. The project will be implemented with a total action cost of PkR 217.90 million. For an efficacious implementation TUSDEC has collaborated with LCCI (Lasbela Chamber of Commerce and Industry) to determine the machine and equipment installation needs. Through a fortified agreement, LIEDA (Lasbela Industrial Estate Development Authority) has endowed free of cost land to stall the capacious pre-engineered structure of LEUC.

FORWARD

PLEC - Peshawar Light Engineering Centre

KP is mainly driven with the manufacturing units of sugar, cement, steel, paper & board, tobacco, matches, metal work, plastics, marble and hunting arms. Most of the production plants are being run with dilapidated machinery operating on conventional machining processes. The situation results in low quality production, long-held processes tied up with huge wastage. TUSDEC found the indigence of establishing a modern Light Engineering Support Centre in Peshawar to facilitate the large number of small and medium level industries in the district. PLEC will bestow the engineering clusters of electronic goods, automobiles, metal, aluminum products, hunting and sporting arms with the services of modern design, manufacturing, technical assistance and consultancy. The centre will also offer short courses and diplomas in various advanced engineering disciplines to consummate the paucity of trained workforce. KPCCI (Khyber Pakhtunkhwa Chamber of Commerce and Industry) has been taken into collation to enlist the CNC machines and other modern fixtures to be installed at PLEC. Relevant to the project TUSDEC and KPCCI has inked an MOU with Small Industries Development Board (SIDB) Peshawar to erect the pre-engineered building of PLEC at the facility of Pak - Holland Project. PLEC will be setup with a cost of PkR 230.56 million.



HESC - Hyderabad Engineering Support Centre

A comprehensive need assessment study was performed to canvass the local industries prevalent in and around Hyderabad. The survey revealed huge dearth of technical assistance and manpower training in the metal manufacturing, automotive and other light engineering sectors. Following the insights, the implementation of Hyderabad Engineering Support Centre has been contrived. The project will be established with a total cost of PkR 223.49 million. To achieve superfine results and impacts, HCCI (Hyderabad Chamber of Commerce and Industry) has been aligned in collaboration to identify the equipment and skill scarcities. Collaboration with STEVTA (Sindh Technical and Vocational Training Authority) has also been made for land acquisition. The centre will facilitate the agricultural equipment, automobile, plastics and metal production units with precision design and development, technical assistance, CAD/CAM and CAE solutions, precision grinding and inspection on modern CNC machines. The centre will also offer short courses and diplomas for pertinent skill development and will extend advisory services for product and process quality enhancement through its panel of experts. HESC is going to propel great socioeconomic improvement in the area with abounding job prospects and common facilitation of modern machinery.

THE FOLIO



TUSDEC Imparting Technical Skills in Southern Punjab & Sindh



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Technology Upgradation & Skill Development Company Ministry of Production
State Cement Corporation Building, Kot Lakhpat, Lahore 54770, Pakistan
Tel: (+92)-42-111-000-143 Fax: (+92)-42-35121658 E-mail: info@tusdec.org.pk www.tusdec.org.pk

Editorial Crew: **Ansa Rabia**, Manager BD&M Department
Farzeen Khan, Associate BD&M Department
Illustrated By: **Rizwan Mir & Atif Ilyas**



Technology Upgradation & Skill Development Company Ministry of Production
State Cement Corporation Building, Kot Lakhpat, Lahore 54770, Pakistan
Tel: (+92)-42-111-000-143 Fax: (+92)-42-35121658 E-mail: info@tusdec.org.pk www.tusdec.org.pk