

MONTHLY

ISSN 2309-6578

ENERGY UPDATE



Inauguration of Thar Coal Power Project

13th
Anniversary
Edition



PTI drops another petrol bomb

Environmental pollution rising alarmingly in major cities

Pakistan Steel's woes to continue

Renewable energy policy in the offing

EXCLUSIVE INTERVIEWS



Michael Keroullé
GE's Regional Executive MENAT Region



Ikram Sehgal
Chairman K-Electric



Najeeb Ahmad
CEO ABB Pakistan



Fahd K Chinoy
Deputy CEO, Pakistan Cables Ltd.



Waqas H. Moosa
CEO, Hadron Solar (Pvt.) Limited



Waqar A. Khan
CEO Star Hydro Power



Najeeb Ahmed
Director, Albario Engineering



Sindh Transmission & Dispatch Company (Pvt.) Limited

**Thrives to Provide High Voltage
Transmission Infrastructure
for Wind/Solar/ Hybrid Power
Evacuation from RE Park**

Thatta (Jhimpir),

**Keti Bandar, Gharo, Sindh
in Collaboration with NTDC
to Boost**

The National Grid of Pakistan

**Sindh Transmission & Dispatch Company (Pvt.) Limited
Transmitting Energy From Generation To Generations**

3rd Floor, State Life Building No. 03, Dr. Ziauddin Ahmed Road, Karachi. (Pakistan)

☎ 021-111-777-832 ✉ info@stdc.com.pk 🌐 www.stdc.com.pk

📘 www.facebook.com/stdcl 📷 www.instagram.com/stdc.pl 📺 www.youtube.com/Sindh Transmission & Dispatch Company

DESCON POWER SOLUTIONS: SETTING A BENCHMARK IN OPERATIONS & MAINTENANCE SERVICES



Coal Power



Thermal Power



Hydro Power



Solar Power

Descon Power Solutions has always been at the forefront of innovative Services. Our expertise makes us 'Best in Class' for provision of 'Operations and Maintenance' (O&M) Services to Thermal, Wind, Solar, Hydel, Reciprocating Engines, Bagasse Based, Open & Combined Cycle Power Plants. Tailored packages are designed to cater to customer's specific requirements. Descon Power Solutions ensures that the transition to O&M phase is seamlessly managed. Let's commit and strive to build a better, safe, more efficient, and environmentally friendly future.



GAS THIEVES, BEWARE...

Government of Pakistan's strong resolve to root out gas theft has breathed new life into **Operation Grift**, SSGC's anti-gas theft campaign. SSGC, by enforcing Gas (Theft and Recovery) Act 2016, has scored major prosecution successes. FIRs were lodged, culprits were tried in Gas Utility Courts and miscreants sent behind bars and fined heavily.

1,370
RAIDS

127 FIRs
LODGED

Over **1** Billion
Rs. CLAIMED

Gas Theft crimes involve:

Violation of Gas Sales Agreement (GSA)

Unauthorized enhancement of gas loads other than contracted for in GSA

Installation of suction booster in industrial units

Unauthorized use of more gas against that registered by the meter

Such crimes will lead to a maximum of 10-year prison term

14 years imprisonment with Rs. 10 million fine



Tampering with Gas Pipelines

14 years imprisonment with fine up to Rs. 10 million



Damaging Gas Pipelines

10 years imprisonment or fine up to Rs. 5 million



Bypassing the Industrial/ Commercial Meter

10 years imprisonment or fine up to Rs. 5 million



Exceeding Authorised Load

10 years rigorous imprisonment with Rs. 3 million fine



Unauthorized Gas Distribution

7 years imprisonment or/and Rs. 5 million fine



Maliciously Wasting Gas or injuring work

6 months imprisonment or fine up to Rs. 1 Lac



Bypassing the Domestic Meter



Running of Unauthorized Generator on Domestic Meters



Unauthorized Use of Compressor



Unauthorized Domestic Connection

10 years imprisonment or fine up to Rs. 5 million



Tampering with the Industrial/ Commercial Meter or Regulator



Sui Southern Gas Company Limited

To report gas theft
CALL: 1199

Send brief and pics on **0323-8213346**
WHATSAPP 0322-8217576
Email: gas.theft.info@ssgc.com.pk

SUPPORTED BY:



ORGANIZED BY

**ENERGY
UPDATE**

Objectives:

The 4th International Wind Energy Summit 2019 will feature Keynote Addresses, Interactive Panel Discussions and Technological Showcase giving unmatched networking opportunities to the delegates; benefiting from the annual summit's proceedings. Following are key-area of discussions but not limited to:

- Government Renewal Policies
- Public Private Partnership
- Multi-level Foreign & Local Projects Investments
- Grid and Off-Grid Solutions for Villages & Remote Areas
- Meeting the 2030 Roadmap to achieve energy targets
- Transfer of Technology and HRD

For Registration and Sponsorship, contact:

M. Naeem Qureshi
Cell: 0300.206.8048

Engr. Nadeem Ashraf
Cell: 0304.309.8328

For Registration:

Email your nomination(s) to:
energyupdate@gmail.com

No. 309, Al-Sehat Centre, Hotel Regent Plaza, Shahrah-e-Faisal, Karachi, Pakistan.

Tel: (9221) 3565.3676, 3521.3853, 3563.1465

4th International Wind Energy Summit 2019

Sustainable Policy & Reliability
Challenges & Opportunities!!

th
27 August
2019
Marriott Hotel
KARACHI

Energy Update – Your Energy Partner
www.energyupdate.com.pk



ALBARIO ENGINEERING (PVT) LTD.
www.aepl.com.pk



YOUR ENERGY PARTNER

- ◆ EPC & Electro-Mechanical
- ◆ Infrastructure & Civil Contracting
- ◆ Operations & Maintenance
- ◆ Plant Outage / Turn Around Services
- ◆ Inspection & Testing Services
- ◆ Rehabilitation & Up-gradation
- ◆ Power & Industrial Supplies
- ◆ Tank & Steel Structure Fabrication
- ◆ Oil & Gas Services
- ◆ Renewable Energy

CONTENTS

EXCLUSIVE INTERVIEWS



36

Michael Keroullé
GE's Regional
Executive
MENAT Region



16

Ikram Sehgal
Chairman
K-Electric



22

Najeeb Ahmad
CEO
ABB Pakistan



26

Fahd K Chinoy
Deputy CEO,
Pakistan Cables Ltd.



39

Waqas H. Moosa
CEO, Hadron Solar
(Pvt.) Limited



45

Waqar A. Khan
CEO
Star Hydro Power



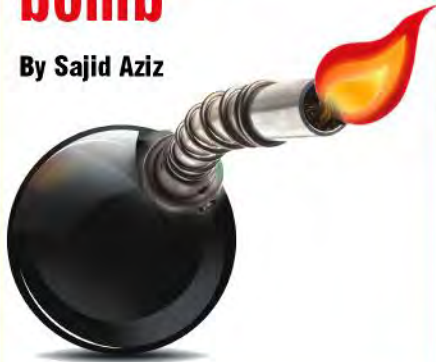
51

Najeeb Ahmed
Director, Albario
Engineering

PTI drops another petrol bomb

10

By Sajid Aziz



13

Pakistan Steel's woes to continue

Razzak Dawood's maneuverings to result
into multiplying losses



Renewable energy policy in the offing

19

By Akhtar Ali



25

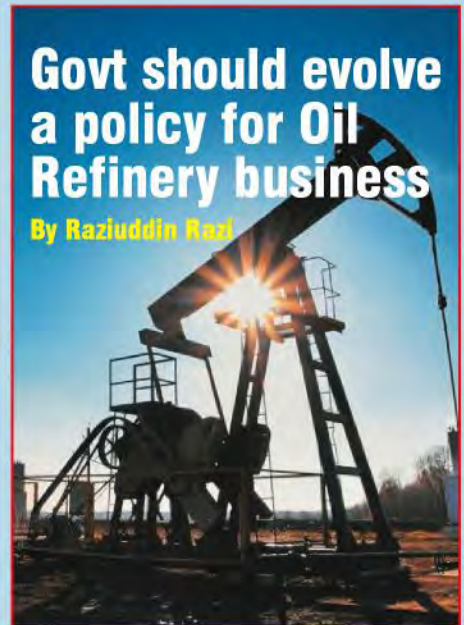
Environmental pollution rising alarmingly in major cities

By Nawaz Khuhro



Govt should evolve a policy for Oil Refinery business

By Raziuddin Razi



Disclaimer: No reliance should be placed on the [information provided in the magazine] by any one for making any financial, investment and business decision. The information is general in nature and has not been prepared for any specific decision making process. *Energy Update* has not independently verified all of the [information provided in the magazine] and has relied on sources that have been deemed reliable in the past. Accordingly, *Energy Update* or any its staff or sources of information do not bear any liability or responsibility of any consequences for decisions or actions based on the provided information.



SMART MEP (Pvt) Ltd.

INTRODUCTION

SMART MEP (Pvt) Ltd. is a leading Building Management System (BMS) & Surveillance Security Systems Company located in Lahore, Pakistan with a commitment to providing excellence in design and engineering solutions using innovative and sustainable products and services. We deliver expert FA, PA, BMS (Integrated SCADA, DDC Controllers), Security and Surveillance (CCTV, NVR, Intrusion, Access control, Video wall, Analysis algorithm for Facial and object recognition, storage and compression system), HVAC (Chillers, AHU, Fan coil unit) & Smart Parking system solutions that meet the engineering requirements of our clients with reliability.

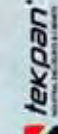
OUR BRANDS



BOSCH



PLANET TREND
TECHNOLOGY
Honeywell



OUR PRODUCTS



Basement Floor, Solutions Tower, 95-A, DHA Phase-8, Commercial Broadway, Lahore Pakistan.

URL: www.smartmeponline.com Email: sales@smartmeponline.com

UAN : +92 - 42 - 38100682 Fax: +92 - 42 - 38100683

From the editor's desk...

Energy mess.....goes on and on

Nine months down the road, government has yet to show any willingness in handling the energy mess. Inefficiencies in energy related sector are at the core of the twin deficit problem, yet the incumbents have nothing concrete to demonstrate despite the fact the circular debt is touching the dangerous level of Rs1.6 trillion.

The energy related ministries and finance ministry combined have failed so far in handling the circular debt, and other energy related governance and management issues. At the time PTI assumed power, the energy circular debt was Rs1.1 trillion and now it soaring over Rs1.6 trillion. In just less than 200 days, the toll has increased by an average Rs1.5-2 billion per day.

Did the government come unprepared? If eight months are not enough, how many are? The talks of issuing Sukuk initiated 4 months ago and to-date no TFC or Sukuk has been issued. This could have happened in weeks. Rs200 billion Sukuk is likely to be issued this week or the next. But government's indecisiveness and slow decision making is not the right recipe for reforming energy sector. The problem is that no one is taking onus, and collectively, they do not seem to have comprehended the gravity of the issue.

The decisions were wrong from the onset - be it handling of furnace oil imports, managing RLNG demand, clearing circular debt, sacking gas companies board or appointing MDs, The challenges are big, but the government does not seem to have team to tackle the same.

The focus is on fixing power sector thefts which is a small problem in bigger scheme of things. The energy management team is penny wise but pound foolish. The first step in resolving any mess is to work on the big hurdles, before delving into the petty matters. What is the fun in stopping a few billion rupees leakages when the buildup of circular debt is Rs1.5-2 billion per day?

There is an energy task force, and cabinet committee of energy, but no one is seemingly in control.

The next step is to have right people at right place and coordination amongst relevant departments and ministries. How can you expect the NTDC in existing capacity to perform when the next year forecast on energy mix is out of proportion? The NTDC estimated FY19 FO consumption at 2.7 billion units while in 7 months; the consumption is already 7.4 billion units.

This and other problems demonstrate lack of understanding and capacity constraints. For example, the idea of gas prices revision was right, but it should have been on averages instead of abrupt jump in bill on cut off slabs - such decisions require energy is the epicenter of the fiscal problem. And to get out of the rut of boom-bust cycle, the most pressing need is to strengthen and straighten the energy sector.



ENERGY UPDATE

Managing Editor
M. Naeem Qureshi
energyupdate@gmail.com

Editor
Sajid Aziz
saziz75@gmail.com

Associate Editor
Ismat Sabir

Editorial
Mustafa Tahir
mustafa_mt92@hotmail.com

Marketing
Engr. Nadeem Ashraf
nadeem.event@gmail.com

Khalid Iqbal
khalid.nfeh@gmail.com

Bureau Chief Islamabad
Shams ul Azhar

Art Director
Rizwan Rathore
rathore.rizwan@gmail.com

Advisors
Dr. Nasim A. Khan
Zafar Sobani
Anwar Shahid Khan

Circulation & Subscription
Zahid Ali
Shakeel Qureshi

Photographers
Ahmed Tareen
Abdul Haleem

Overseas Correspondents
Arif Afzal - USA
Andrew Mckillop - France
Kazim Wasti - Canada

Legal Advisors
M. Nadeem Sheikh Advocate

Monthly Energy Update

309, Al-Sehat Centre,
Hotel Regent Plaza, Shahrah-e-Faisal, Karachi
Pakistan.
Tel: 021-3565 3676, 3521 3853 3567 4570
Email: energyupdate@gmail.com
Web: www.energyupdate.com.pk

Published by M. Naeem Qureshi for Energy Update
& Printed at Print Vision, Karachi Cell: 0333-2244586

PTI drops another petrol bomb

Imran's regime let's looters and plunderers to prevail

By Sajid Aziz

As the government has dropped another petrol bomb on the poor consumers in the shape of POL prices amidst a major opposition by the cabinet members fearing a big uproar in the masses who are tolerating the PTI government's unabated price increases since the day it has come into power last year.

The Oil and Gas Regulatory Authority (Ogra) has recommended the federal government to increase prices of all petroleum products up to 15 percent for the month of May. In the wake of increasing prices of crude oil globally, the oil and gas regulator has calculated an increase of Rs 14.37 per litre for motor spirit (MS), Rs 4.39 per litre for high speed diesel (HSD), Rs 7.45 per litre for kerosene oil and Rs 6.40 per litre in the price of light diesel oil (LDO).

A

adjustments in petroleum levy on other products to prevent a surge in prices ahead of the holy month of Ramazan. The Ogra has proposed the government to charge PL on MS @ Rs 10 per litre and Rs 8 on HSD. It also proposed PL at Rs 6 per litre on kerosene oil and Rs 3 per litre on LDO.

If the government approved the recommended prices of petroleum products, the rate of MS would reach from Rs 98.89 per litre to Rs 113.26 per liter (15 percent increase), the price of HSD would go up from Rs 117.43 per litre to Rs 121.82 per liter (3.7 percent increase), the light diesel oil would go up from Rs 80.54 to Rs 86.94 per liter (7.8 percent increase) and with the addition of Rs 7.45 per litre in the previous rate of kerosene oil, its price would be Rs 96.76 per litre. The Ogra has calculated ex-refinery sale prices of petroleum products at standard 17 percent general sales tax (GST) and petroleum levy on MS and HSD.

But this is not the end of it, Imran Khan has given a free-hand to the friends of Pakistan's enemies to ruin our economy for peanuts. The loan agreement with IMF has opened up floodgates of loot and plundering by the government organizations to raise POL, Gas, electricity prices as well as given free hand to the private sector to extort public. So this is just the beginning of the price spiral of everything after the IMF agreed to loan a meager amount of \$6.4 billion to be given in three years' time. God forbid, it seems a chaos like situation in Pakistan at that time when inflation.

Pakistan's government has hiked fuel prices by 6.5 percent to PKR 98.89 rupees, or USD 0.70 per liter, on April 1st, amid persistent fiscal and current account deficits and spiraling inflation. Gasoline Prices in Pakistan averaged 0.74 USD/Liter from 1995 until 2019, reaching an all-time high of 1.14 USD/Liter in December of 2012 and a record low of 0.46 USD/Liter in December of 1998. ■

summary has been moved to the Ministry of Finance for monthly review of existing prices of petroleum products for the month of May. Sources said that the government is likely to bring down general sales tax on diesel from 17 percent and make

EMC Pakistan (Pvt.) Limited is a consulting company working since year 1997. The services offered encompass the environment, health and safety aspects to public and private sector organizations. EMC Pakistan is registered with the Pakistan Engineering Council (PEC).



EMC Office Locations



- ❖ Environmental Studies (IEE, EIA and ESIA)
- ❖ Environment, Health and Safety Audits
- ❖ Implementation of management systems
- ❖ Resettlement Action Plan & Land Acquisitions
- ❖ Design, Fabrication, Installation and Operation of WWTPs
- ❖ Project management, evaluation and monitoring
- ❖ Technical, financial, and economic feasibility studies

- ❖ Supply and demand analyses of energy resources
- ❖ Energy Efficiency, Energy Conservation and load management
- ❖ Public/stakeholders consultation hearing
- ❖ Processing of CDM projects
- ❖ CAD applications including GIS mapping
- ❖ Land & Topographical Survey
- ❖ Sub Soil Investigation



Contact Detail:

Head Office # 502, 503, 504 & 505 Anum Estate, Opp. Duty Free Shop, Main Shahrah-e-Faisal, Karachi.

Karachi Tel: 9221 – 34311466, 34321717

Islamabad Tel: 051-8744155

Fax: 9221 – 34311467

E-mail: mail@emc.com.pk, nadeem@emc.com.pk



THERE'S PEL IN EVERY HOME



Main Offices and Factory (Unit I)

- +92-042-359-20151-59
- +92-42-359-20191, 359-20195
- mktgdpvt@pel.com.pk
mktgpd@pel.com.pk
- 14-KM Ferozpur Road, Lahore-54760

Factory (Unit II)

- +92-42-35935207-21
- +92-42-35935228
- 34-KM, Ferozpur Road,
Lahore-55110

Regional Office (South)

- +92-21-322-00951-4
- +92-21-323-10330
- infopd-khi@pel.com.pk
- Baig Tower, Near Baloch Colony Bridge,
Main Shahrah-e-Faisal, Karachi

Regional Office (North)

- +92-51-281-3021-22, 24
- +92-51-281-3023
- mktgdpvt@pel.com.pk
- 301, 3rd Floor, Green Trust Tower,
Blue Area, Islamabad



By Sajid Aziz

Pakistan Steel's woes to continue

Razzak Dawood's maneuverings to result into multiplying losses

An unelected Advisor to PM is hand in gloves with the beneficiaries of concessionary SROs "Import Tariff" without any fear of accountability. It appeared that PTI Government compromised with the plunderers who deliberately destroyed the PSM from 2005-06 to 2018-19 and not ready to investigate the "Factors Leading to Losses + Payable Debts" to identify the persons at fault and financial recovery is a contradiction with PTI manifesto. Advisor is allegedly saving the corrupt elements, not initiated measure for transparent accountability process for fixation of Rs 460 billion (losses + debts were mounted from July 2008-09 to August 2018) comparing with Rs 10 billion profit as on June 2008.

MOI&P failed to reconstitute PSM BOD and not appointed management as it was proposed by PSM board of directors and requested by "PSMC Stakeholders Group" in letters addressed to Prime Minister of Pakistan, Finance Minister, MOI&P, PSM and Senate Committee on MOI&P.

"Investigation and removal of Abdul Razak Dawood, the non-representative, unelected Advisor to MOI&P has been sought to fulfill the promise of accountability" rather than accusing the previous regime. The high handedness of erstwhile advisor to the PM has resulted into the resignation of Chairman of Board of Directors, Eng. M A Jabbar, the only professional member of BOD and a man of principle who had given the true picture of Pakistan Steel's state of affairs in his presentation

to the Parliamentary Committee on PSM.

Pakistan Steel Mills (PSM) revival plan is in the doldrums as the existing Board of Directors (BoD) has refused to endorse it saying that they have not been taken on board prior to submission to the Economic Coordination Committee (ECC) of the Cabinet. This was the crux of a meeting of Board members with the Prime Minister's Advisor on Commerce, Textile, Industries and Production and Investment, Abdul Razak Dawood. When Abdul Razak Dawood started his briefing on PSM revival plan, one of the Board members pointed out that the entire plan was published in the newspapers. The Advisor then sought a copy of the report and after seeing the news item the Advisor clarified that he was unaware of it.

He, however, explained what the Experts Group has suggested in its study and what the Economic Coordination Committee (ECC) of the Cabinet has recommended for future line of action and subsequently, the Federal Cabinet. The sources said the Board members are not ready to respond to National Accountability Bureau (NAB) queries or of any other investigative agency. The Board members stated that they wanted to tender their resignations when the name of ex-Chairman PSM Board Engineer Memon Abdul Jabbar was withdrawn as Director, but resisted as they felt their action may create an embarrassing situation for the government. On March 28, 2019 another Board member Raziuddin tendered his resignation.

The government is mulling revival of PSM under a Public Private Partnership (PPP) mode which implies some other parties (national or international) will be involved which may attract a new investigation. One of the Board members observed that earlier PSM was delisted from the list of those entities which are being privatised and now it is again being added to the active list of entities which are being privatised.

On April 16, 2019, Abdul Razak Dawood briefed the cabinet about the efforts for making PSM operational with the objective to make it a profitable entity. An insider told that Dawood, also shared his sentiments with the Board members, saying that he is afraid of the day he will hand over or offer PSM to a private party. But despite the fact he is well aware of the consequences of any intrigue into the PSM affairs, he is still active on making unilateral decisions for the benefit of his chosen ones including Hubco and Aisha Steel. ■

Salute to the creativity of this artist



Everyone seems to be in such a hurry to scream 'racism' these days. In London, a customer asked, "Do you have 'Sarso Da Tel?'" The shopkeeper says "are you a 'Sardar'?" The guy, clearly offended, says, "Yes I am...But let me ask you something. If I had asked for Olive Oil, would you ask me if I was Italian? Or if I had asked for Bratwurst, would you ask me if I was German? Or if I asked for a kosher hot dog would you ask me if I was Jewish? If I had asked for halal meat..wud u ask me if I was Muslim? Or if I had asked for a Taco, would you ask if I was Mexican? The shopkeeper says, "No, I probably wouldn't." The guy says, "Well then, because I asked for Sarso Da Tel, why did you ask if I am a Sardar?" The shopkeeper replied, "Because, this is a wine shop"



The President

Prime Minister,

Cabinet Ministers and the hundreds of other assorted Ministers

Sir, I write on behalf of the Professionals & Businessmen of Pakistan. We are not defrauding taxes. We are trying to save Taxes to get the bare basics for our families.

1. We buy Generators/Inverter/UPS/solar systems because the Govt. has failed to provide a reliable power supply.

2. We install our own clean water systems because the Govt. has failed to provide safe drinking Water.

3. We hire security guards and use CCTV because the Govt. has failed to ensure our safety (The politicians and their hangers on travel with armed escorts with our money)

4. We send our children to Private Schools because the Govt has failed to provide good schools (The school fees of the politicians' and officials' children are sponsored by obliging businessmen)

5. We go to private hospitals because the Govt. has failed to provide decent medical care. (The President's fund pays the full bill for Govt Ministers and their cronies to go to London for (treatment)

6. We buy and maintain cars because the Govt. has failed to provide decent public transportation.

Finally...

What does the Tax Payer get in return on retirement, when he needs it most to survive ?

Nothing! Not even social security. His own EPF and ETF too is embezzled by the Govt.

Throughout his lifetime, his earnings are used by the Government to give subsidies to the masses for buying votes.

What else does the govt do with our tax money?

-Set up courts which give judgements as asked by the Govt.

-Operate police stations which work mainly for politicians

-Operate hospitals which fail to treat the needy

-Build roads and infrastructure to steal our money (40-100%).

And the list is endless...

If the Pak Government too provided the above as done by the governments of civilized countries, why would anyone avoid or evade paying taxes ?

We all know that the entire tax revenue is misappropriated by officials and Politicians (ref: billions of dollars are lying in foreign banks) .

A Business works at a margin of between 2% to 10% , whereas the government takes 30% of his income to cover its wasteful expenditure. Is it at all fair?

Sirs, That's why Pakistani do not want to pay Taxes.

We save our tax money for our necessities , for our old age ,

for our safety and security.

This phenomenon indicates the failure of the Government in discharging its own functions fairly and efficiently.

The Government alone is responsible for this.

RASTGAR
AIR COMPRESSORS

**READY
STOCK**

Available

AIR COMPRESSORS

DRYERS

FILTERS

WATER SEPARATORS



*Terms And Conditions Apply

RASTGAR & CO
The Compressed Air People

CompAir
AUTHORISED DISTRIBUTOR

KARACHI
Erum Nazir
Cell: +92 333 3662150
Tel: +92 21 35123114
Email: ko@rastgar-co.com

ISLAMABAD
Mohammad Pervez
Cell: +92 333 5136906
Tel: +92 51 2228723
Email: io@rastgar-co.com

LAHORE
Syed Farhan Ali Bukhari
Cell: +92 333 4411293
Tel: +92 42 35783991
Email: lo@rastgar-co.com

Compressed Air Cost Control

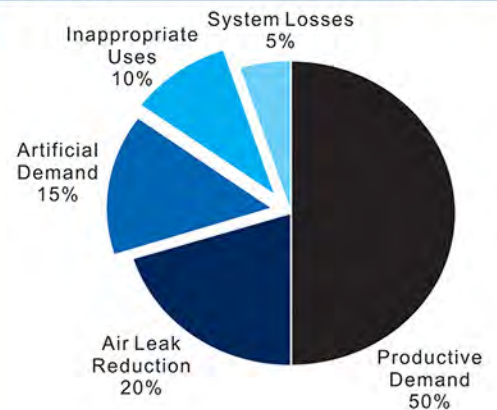


AirAudit Helps

- Waste Less Air / Energy
- Reduce Compressed Air System Load
- Identify Leaking Machines
- Restore Production Plant to Peak Efficiency
- Reduce Cost of Compressed Air Use Per Unit by Up to 30%

Waste

Actual Demand



www.airaudit.com.pk

Tel: +92 51 2228763 | Cell: +92 332 0506134
Email: info@airaudit.com.pk | Web: www.airaudit.com.pk

KARACHI | LAHORE | ISLAMABAD

More feeders are being exempted from loadshedding this summer

**K-Electric is a viable entity having bright future:
Ikram Sehgal, Chairman KE**

The K-Electric is a viable entity. It is an entity that is producing electricity. It is an entity, which has problems but that are not of its own making. In fact, the K-Electric inherited problems. But these problems have been overcome to a good degree. But the future of this entity is good and bright. Every day as we speak now, more and more feeders in Karachi are being exempted from power load shedding. Load Shedding does exist in the city but we are trying to overcome it." Ikram Sehgal, Chairman of Board of Directors of K-Electric, stated this during an interview session with the Energy Update during which he talked about the process of bringing reforms and improvement in the working of the privatized power utility of Karachi and also efforts being made to enhance its overall efficiency for the consumers. In his interview with Energy Update, Mr. Sehgal continues to say.....

Energy Update: What is your own viewpoint about K-Electric and the role you are going to play there?

Ikram Sehgal: The K-Electric is a service company whose very bases were damaged in the past. It is indeed a big achievement to turnaround this company and to bring back corporate culture in it. I am lucky by any measure that I was elected to become chairman of this company. A number of problems does exist in this organization too if you go from the top to the bottom-level of this utility company. There does exist unions of employees and politicization within working of this organization. You will be surely amazed if you are told



By Naeem Qureshi

about the problems being faced by us in running this organization. No doubt a system and a structure definitely do exist in this organization. I remained part of the boards of several organizations. I have learnt a lot of things. I will never make a false statement. If anything wrong does exist here due to your own mistake then don't expect from me to cover it up. I'll do this because this country and this city have given me credibility after so many years. If I go somewhere and speak up there then people do believe that I'm making a correct statement.

My advice to the people in the K-Electric is that do your work in the organization as your work is to provide uninterrupted electricity to people of Karachi. That is your work. My job is

to make sure to provide the image cover that has been denied to this organization since long.

EU: What investment made in K-Electric by its privatized management?

Mr. Sehgal: The major chunk of investment in K-Electric is in the area of power generation. Then came transmission lines and lastly it was the turn of distribution system of K-Electric. The investment in the distribution system of K-Electric came in the form of grid stations. Basically it is the case that you have failed to do the things you were supposed to do in K-Electric but you have done so many other things, which nobody was expecting from you to do them.

The residents of the area of the city where I have been living were used to run electricity generator daily for eight hours on an average. Now no load shedding exists in our area. The phenomenon of power load shedding should not occur in the system of K-Electric. The total number of consumers of K-Electric is three million. There are about 700,000 industrial and commercial consumers of electricity in the city. The number of residential consumers in the city is about 2.3 million. Some 300,000 kunda connections still exist in our system. The Kunda takes the electricity away from the grid as it has the potential to disturb electricity cycle of the entire city. The kunda connections after falling cause electrocution in water during rains.

Most of the investment in privatized K-Electric took place after Abraaj Group took over its management. New power generation units are coming online as they would add up to 700 Megawatts electricity to the system of K-Electric. We have laid 17 kilometres-long transmission lines from Bin Qasim power station. We are trying that our existing power generation units are converted to Re-gasified Liquefied Natural Gas (RLNG).

EU: What is the position of liabilities and receivables of the K-Electric presently?

Mr. Sehgal: We owe money to the Sui Southern Gas Company whereas the Karachi Water & Sewerage Board owes us money. The actual money we owe to SSGC is Rs14 billion but they have been demanding Rs80 billion

interest on our dues. If we are made to pay the interest on our dues then let us also allow collecting interest as well (from the KWSB). If you think it is your right to collect the interest from us then allow us also to exercise this right for ourselves. And Please keep in mind that whatever gas we have consumed in last five years, we have duly paid its bill to the SSGC.

It is imperative that order of the court should be followed to resolve the dispute of dues related to us as the

My advice to the people in the K-Electric is that do your work in the organization as your work is to provide uninterrupted electricity to people of Karachi. That is your work. My job is to make sure to provide the image cover that has been denied to this organization since long.



court order demands constitution of a committee, which should be formed at the earliest to resolve this issue.

EU: What is your opinion about the penalties lately imposed by the NEPRA on K-Electric?

Mr. Sehgal: One has to see the state of distribution system of K-Electric as it could not withstand overloading of its system in the situation of heatwave. The important thing in this regard is that the new investor who will take over K-Electric is going to invest 9.5 billion US Dollars to upgrade the infrastructure of K-Electric. This

investment will be made to improve and upgrade transmission and distribution systems of the K-Electric. At a number of locations, the distribution system of K-Electric would be made underground from the safety point of view. It is not just the problem of K-Electric as every concerned stakeholder should also get involved in it. Nobody talks about receivables of K-Electric.

EU: What about profit earned by Abraaj Group after it took over the K-Electric?

Mr. Sehgal: The Abraaj will get its due profit after the proposed resale of the K-Electric. Till this moment not a single penny out of the profit of K-Electric has been repatriated from Pakistan. Not a single rupee of K-Electric's profit has been so far sent out of Pakistan. Whatever profit is earned from the K-Electric has been invested in it as it has been recycled within the company.

EU: When will the consumers of K-Electric start getting cheaper electricity as compared to the bill they have been paying these days?

Mr. Sehgal: The consumers of K-Electric will start getting cheap electricity when all its power stations will come online while power generation from our existing units will be done on R-LNG instead of expensive furnace oil. For this LNG should be supplied to the K-Electric on the rates it is currently being supplied to the industries.

EU: You have been associated with the business of private security agencies since long as what is your suggestion to regulate this sector?

Mr. Sehgal: It is high time that an independent regulatory agency should be established to regulate the working of private security agencies as the provincial Home Departments could do nothing in this sector. The proposed regulatory authority will make sure that personnel of private security agencies were hired after their proper background check and verification of their particulars. This regulatory authority will also make sure that proper training and weapons are given to the guards of these agencies. ■

HI-TEK
ASME CERTIFIED

- ENGINEERS
- CONTRACTORS
- MANUFACTURERS



ABOUT US

From its humble start in 1999, HITEK Manufacturing has played its role in engineering goods manufacturing from simple holding tanks to ASME coded pressure vessels and complete solution provider in project management of a multi-dimensional project. The company is ISO 9001, 14001, 18001 and ASME certified and is well placed to manufacture and repair coded vessels.

HITEK is an industry leader in the production of LPG cylinders and LPG Browsers and manufactures Cylinders in all sizes for most of the LPG marketing Companies. The four acres of manufacturing works is completely equipped to Fabricate, test and paint cylinders to customer specs.

Hi-Tek Manufacturing Pvt. Ltd.

Hi-TEK House, H # 1, Service Lane,
Quaid-e-Azam Interchange,
Ring Road, Lahore - Pakistan
Tel +92-42-36556686, 36550234,
Fax: +92-42-36557104

Direct +92-42-36559090

Mr. Muhammad Tayyab

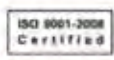
Cell : +92-321-8585 813

Mr. Sajjad Haider

Cell : +92-321-437 4040

E-mail: marketing@hitek.com.pk

www.hitek.com.pk



Renewable energy policy in the offing

■ By Akhtar Ali

The government has decided to allow partial revival of renewable energy projects blocked in March last year by the PML-N government subject to a revised tariff mechanism and greater decisive role to National Transmission and Dispatch Company (NTDC) to provide interconnection facility.

It has noted that between November 2018 to January 2019 collection of power bills amounted to Rs244 billion compared to Rs204 billion, showing an increase of almost Rs39.7 bn. The major increase of Rs16 bn came from increase in tariff while Rs13.3 bn higher revenues were earned due to improved recovery from consumers. About Rs6.1bn saving was achieved in three months through loss reduction and Rs4.5bn through higher fuel price adjustment.

It was decided that all projects which have been granted letters of support (LoS) by the Alternate Energy Development Board (AEDB) shall be permitted to proceed towards the achievement of their requisite milestones as per the Renewable Energy Policy 2006. However in those cases where more than a year

has elapsed since tariff determination by the National Electric Power Regulatory Authority (Nepra), the rates would have to be reviewed by the regulator as per policy.

It was also decided that any resource risk linked with RE projects being considered as pipeline projects under the 2006 policy would be consistent with the Nepra's decisions taken in various tariff determinations dealing with such projects and resource risk for wind, solar and hydro would be henceforth borne by the seller.

All projects that have been issued LoI, granted determination of tariff by Nepra and issued a generation license would be allowed to proceed ahead towards the achievement of their requisite milestones as per the 2006 policy. However, if the tariff determination has been done since more than one year or if the tariff validity period, has elapsed, Nepra would be requested for review of the same to make it consistent with the current market environment, lower cost and consumer interest.

In case of wind projects that fall in

the above categories and are situated in the wind corridor of Jhimpir, Sindh, the NTDC and Sindh government would work on the latter's proposal for the construction of evacuation facilities from the said corridor by the provincial government and would be reflected in a firm agreement.

The Cabinet Committee on Energy (CCoE) has approved Power Division's proposal that all future renewable energy (RE) investments should be treated in line with the RE Policy 2019 that envisages a framework consistent with the current international market and greater consumer benefits.

Moreover control of theft, the CCoE was appraised that during the period from October 13, 2018 to February 22, 2019, as many as 20,712 FIRs were registered and 1,909 arrests were made. Detection bills charged amounted to Rs1,278.305 million while the amount of detection recovered was Rs537.120 million.

The Asian Development Bank's (ADB) one billion dollar worth of stalled project to curb cash bleeding in the power sector is all set to commence on after four years



of quiet period, officials said. The ADB's funded multi-tranche financing facility is to become operational for placing advanced metering infrastructure (AMI) in two power distribution companies.

Pakistan has been facing the crisis of current account deficit for long time mainly due to import of huge quantity of petroleum products to fulfill the country's energy requirements, he said. With the establishment of an oil refinery with the help of Saudi Arabia, Pakistan would be able to overcome the crisis as it would save foreign exchange. Minister Omer Ayub Khan said the government was formulating a policy on renewable energy to enhance its reliance on renewable energy mix from currently 4 percent to 30 percent by 2030 which would create investment space of over \$55-60 billion.

He said currently the government was the only buyer and seller of energy. Pakistan was opening its energy market for foreign investment to minimize its reliance on costly energy mix. We have planned to increase the ratio of renewable energy in the existing energy mix from 4 percent to 30 percent 2030.

The minister said the Saudi company was one of the world's leading firms in renewable energy and it would help Pakistan in installing state of the art solar energy technology. Pakistan's energy generation would go up to over 55,000 MW in 10 years which would need huge investment, especially in the renewable energy sector.

Power generation sector requires around \$38 to 40 billion, transmission sector \$7 to 8 billion and the distribution sector \$8 billion over the next 10 years. He said CSP was an advance technology in solar energy production and the government would negotiate with the Saudi company in that regard. The government was preparing a policy to shift in its

energy mix with addition of renewable energy and the sector had greater investment opportunities.

The up-gradation of renewable energy technology would help to provide cheaper energy and reduce reliance on expensive energy mix comprising of oil and gas and was consuming huge foreign exchange reserves of the country. The alternative renewable energy would also help provide cheap energy to the industrial sector, which in return would produce competitive products ultimately increasing the country's exports.

ACWA Power is a major developer, investor and operator of power generation with a specialty in renewable projects and has 51 assets spread across 11 countries. According to the company's website its total portfolio is valued at over \$30 billion and can generate more than 29GW of power as well as produce over 4.8 million m3 per day of desalinated water.

Its shareholding pattern is equally impressive and includes eight Saudi conglomerates, Sanabil Direct Investment Company (owned by the Public Investment Fund of Saudi Arabia), the Saudi Public Pensions Agency as well as the International Finance Corporation. So the company has sizeable financial muscle and is well equipped on the technical side too. ACWA plans to invest \$4 billion in the power sector with a focus on renewables so the opportunity is ripe for Pakistan to expand its renewable energy solar and wind.

Capitalizing on this potential opportunity will require a lot of concerted effort from policymaking quarters and the power division. There has been blatant resistance to the induction of more renewable energy by the bureaucracy. The previous government also left the 1000MW Quaid-e-Azam solar power park in sad shape.

The National Transmission and Dispatch Company (NTDC) have been alleged of deliberately delaying power evacuation arrangements to wind power plants which caused considerable delay in the commissioning. The Alternative Energy Development Board (AEDB) has been extremely lethargic in coming up with a competitive bidding framework for renewable energy projects, a fact lamented by the power regulator regularly in its past State of Industry reports.

Removing these hurdles and creating a streamlined process for investment in renewables is crucial to closing any real deals that actually translate into tangible

benefits not only for the investor but for the country as well.

A Danish company, Vestas Wind Systems which is also the world's largest wind is investing more than \$2 billion to initially set up 250 MW of wind farms which is part of the 1000 MW Quaid-e-Azam Wind Park in Punjab. If Vestas and ACWA can execute their projects in a cost competitive manner against traditional fossil fuel based energy, the flood-gates can be opened to attract foreign direct investment (FDI) to promote cleaner energy in Pakistan. Given the gung-ho an investment in coal power plants, a balance is necessary to keep emission levels in check. ■



Breaking News

UN publishes 1st quarter Demography Report 2019

There are 7.8Billion people on planet. (earth).

The report shows

Women = 5.6Billion

Men = 2.2Billion

So, they advised women to be careful in showing attitudes to any man because out of the 2.2 Billion men:

One billion are married already.

130 million are in prison.

70 million are mentally ill.

That means that we have just about 1 billion men available for marriage and out of the 1billion:

50% are jobless

3% are gay

5% are Catholic Priests

10% are your relatives

35% are above 66years

So, ladies both the married and singles, you have to rethink before treating any man like trash.

For details visit

UN demography report

ENERGY UPDATE

**SPECIAL OFFER ON
1 YEAR SUBSCRIPTION
(12 ISSUES)**

Save up to Rs. 400/-

**92-21-35653676, 35213853
energyupdate@gmail.com**

Connect **Your** Life
To Your **Home** &
Your **Security**



A D SECURITY

— SYSTEMS —



Intruder Alarm
Systems



CCTV
Systems



Checkatrade.com
Where reputation matters

Are You Looking To Keep You Or Your Premises Safe?

- We install, maintain and repair all intruder alarms CCTV, intercom and access control
- View, control and manage your security systems anywhere in the world with smartphone apps
- Feel at ease with monitoring services and police response tailored to suit you and your business
- We can takeover any existing security system and offer maintenance checks to guarantee the best performance for you & your premises
- We understand that being security conscious is ever increasing protecting your property and family is a number one priority
- Our fully insured and accredited team offer quality, safety and cost efficiency throughout and whole process

High tariff energy slows down wheel of economy

■ By Amer Malik

The high-tariff energy raises cost of production leading to non-competitiveness of export products, which slows down the wheel of Pakistan's economy, says Najeeb Ahmad, the Managing Director and CEO of ABB Pakistan, a local chapter of international power-generation company based in Zurich, Switzerland. In an exclusive interview with Energy Update, Najeeb Ahmad said that....

Pakistan won't be able to strengthen economy without increasing exports and lowering imports, which cannot be possible without low cost energy. The labor cost in Pakistan is double as compared to the labor available in neighboring countries so cost of energy plays a key role in total cost of production which needs serious attention from all concerned.

Currently, he said, the power supply in Pakistan stands at 18,000 to 19,000 MW with an installed generation capacity of 33,000 MW and still we are facing challenges of load shedding during peak time. By 2040, the demand growth is foreseen to 80,000 Mega Watt (MW) and will require huge infrastructure in transmission and distribution system including extension and upgrade. Revamping of aged power plants using efficient technologies such as high efficiency turbines and implementation of digitization etc. shall also be considered with clear focus on low cost energy mix with maximum contribution from hydro and renewable.

Considering it a high time to look for ways and means to increase power generation in Pakistan, Najeeb Ahmad urged the government to announce Pakistan's renewable energy policy as early as possible. He said, "Pakistan's renewable energy policy is still under consideration, which envisages 30 percent contribution in total energy production till 2030. As of today, he said, renewable energy has a paltry share of 5 percent in the total power production in the country from wind and solar power. In such a situation, the tariff does not remain in control and hurts economy.

"This is where ABB can play a vital role," he said, and added that ABB is constructing CASA 1000, HVDC project of transmitting 1,300 MW clean hydro energy from Tajikistan to Pakistan. It has also completed the first Static VAR Compensator (SVC) project in Pakistan installed at 220kV

Kot Lakhpat grid station Lahore to improve power system stability and reliability near large industrial loads.

He informed that ABB has recently completed a wind energy project of 50 MW for Zephyr in wind corridor of Gharo area in Sindh in addition to 100MW Fauji Foundation wind projects in 2015. He said that Jhimpir and Gharo areas in Sindh have a capacity of wind power generation of up to 40,000 MW. How-



ever as of today, he said, it is only generating approximately 1300 MW of electricity.

He said that the net-metering is a revolutionary concept, saying that it allows the owners to utilize the energy as per their requirement and sell surplus electricity to the distribution company. He said that it is a one-time investment with slightly higher cost, but it gives quick return on investment in 3-4 years payback period. He said that ABB has already supplied approximate 10 MW solar-powered invertors at various institutions, industries and infrastructure projects in Pakistan

He said that hybrid setup can help generate solar energy in day time and wind energy in the night. However, to generate power at optimum capacity, he said, a huge infrastructure with transmission lines needs to be set up to supply it to the consumers. Currently, he informed that approximate 60 percent is thermal generation electricity, 30 percent hydro power and up to 5 percent of solar and wind generation, 4% from nuclear and 1% from bagasse.

He said that transmission losses are in the range of 2 percent, while distribution system's losses run between 8 percent to 40 percent for different distribution companies in Pakistan due to lack of regular maintenance and long aged equipment. Therefore, he said, the government shall have proper implementation plan to improve the efficiency of T&D network and minimize the waste.



He lamented that there's a huge gap between planning and implementation. We see lack of coordination between various government departments and institutions, which causes undue delay in completion of projects. Therefore, he urged the government to remove institutional hiccups to improve efficiency for complete end to end process.

He said that there is a huge growth in urbanization, and according to estimates, the urbanization will grow at 50 percent by 2025. Nine cities already have more than 1 million population in Pakistan and 75 between 100K to 1M, which contributes approximate 78% of country GDP. In developing countries like Pakistan 1% increase in urbanization lead to approximate 1.1% increase in economic growth rate.

He further added that due to continuous growth and development, specially urbanization of small cities and villages, the future of safe, smart and sustainable electrification is very bright in Pakistan. Concept of Smart / Micro GRIDS is prevailing in almost every vertical of industry where implementation of Renewable, Electrical vehicles and SMART Building is booming due to their unmatched advantages including cost savings and lower environmental impact. At the same time the electrical grid is also evolving from traditional topology to modern decentralized configuration where consumers and producers are no more differentiated and here ABB rich portfolio across the whole value chain of utilities, process and infrastructure can ensure seamless & safe operations of modern electrical system.

Mr. Najeeb highlighted that we strongly believe that corporate social responsibility reflects company values and behaviors to its stakeholder and as a corporate citizen we have taken various initiatives in supporting education, health and community services across the country. ABB Pakistan is in its continuous process of capacity enhancement with clear focus on our corporate value pairs i.e. safety and integrity, customer focus and quality, innovation and speed, ownership and performance and collaboration and trust. ■

Pak-Arab Refinery Ltd.

PAK-ARAB REFINERY LTD. (PARCO), a Joint Venture between the Government of Pakistan (60%) and the Emirate of Abu Dhabi (40%), was incorporated as a public limited company in 1974.



As an integrated energy company, PARCO is a leading player in Pakistan's petroleum industry with major operations in oil refining, transportation, storage, and marketing.

PARCO has the most modern and largest operating refinery in Pakistan having a capacity of 100,000 BPD (representing about 25% of the country's refining capacity), strategic storage of over one million tons, over 2000 kms of cross country pipeline network (including its JV subsidiary Pak-Arab Pipeline Company Limited (PAPCO), and a rapidly expanding retail network of TOTAL PARCO (TPPL) - a joint venture with TOTAL of France. With the acquisition of Chevron's fuel operations, TPPL is now the second largest Oil Marketing Company in Pakistan. PARCO is also marketing nationwide LPG under the brand name of Pearl Gas. High quality asphalt is being marketed as Biturox.

PARCO's performance is reflected not only in its technical and financial results, but can also be judged by its other achievements and awards e.g. it has maintained its AAA and A1+ long and short term credit rating by Pakistan Credit Rating Agency (PACRA) for the twentieth year running. The company set another first in Pakistan when it obtained three simultaneous international certifications: ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System) and ISO 45001:2018 (Health and Safety Management System). PARCO has also received Environment Excellence Awards for the last several years and is rated among the top 10 organizations in Pakistan for outstanding achievement in Environment Management.

From producing environment friendly products to efficient, world class engineering facilities and infrastructure, building a competent team, and major social initiatives, PARCO is doing its utmost in Providing Energy with Responsibility. ■

A Memon coffin maker in Nigeria was on his way to deliver one of his coffins, one night, when his car broke down. Not wanting to be late, he put the coffin on his head and began walking to his destination, nearby.

A policeman saw him & decided he cld make some easy money off d Memon. So he asked the Memon "Hey, what are you carrying and where are you going???"

The Memon not wanting to bribe replied... (You will love his reply)

"I did not like where I was BURIED so I am RELOCATING" . . .

The policeman FAINTED....!

Moral of the story.....don't mess with a Memon.





Solar Quality Passport

- A guideline for safe, high-quality solar installations
- Chronological compilation of installation data for customer support
- State of the art system enabling customer feedback for solar projects
- Creates transparency and builds trust in customers

For more information visit:

www.solarqualitypassport.pk



Environmental pollution rising alarmingly in major cities

By Nawaz Khuhro

Population rise besides ill planning and allocation of meager funds by relevant authorities, is causing massive environmental pollution in major cities including Karachi, Lahore and Peshawar. These cities are most air-polluted where air quality is harmful for public health. Unfit transport system and industrial emissions cause air pollution that is affecting people, mostly those living in congested areas. Major factors responsible for high population growth in Pakistan are high fertility, low contraceptive prevalence rate, high unmet need of family planning, declining mortality, custom of early marriages, son preference, poverty, illiteracy especially of women and lack of women empowerment and religious constraints.

A strong and reliable transport and communication sector is extremely important for the advancement of the economic system. The substandard water is also being provided to the people as population has risen to an alarming level. Garbage and overflowing gutter water is also seen at many places in these cities.

The worst situation is in Karachi where garbage is scattered in every place. The city government blames Sindh government for not providing sufficient funds for cleanliness while Sindh

government refutes this blame. However, it has been observed that both governments are not doing good job in this regard due to political disputes.

The funds allocated for the cities are insufficient to cater to the need of cleanliness, clean water and well-spaced housing projects, while major share of these funds is also embezzled. The reason behind it is political hurdles, embezzlement and commission mafia. The project contracts are being awarded on commission basis and political influence while major share of funds is embezzled by using substandard material in water supplies, roads and other projects. These malpractices have been seen in almost all the government, whether who rules the country. Neither PPP and PML-N nor PTI regime could control the corruption.

A Transparency International's report says Infrastructure, telecommunications, energy and textiles are all potential sectors of interest for foreign firms and investors looking to do business in Pakistan. However, corruption remains a major obstacle to companies operating in the country, along with macro-economic uncertainty and lingering security risks.

While companies are likely to

encounter corruption across all sectors, certain industries and firm profiles are more at risk than others. Collusive contracting and kickbacks remain widespread in the energy and infrastructure sectors, while industries driven by fast-moving consumer durables, such as telecommunications, seem to be becoming more resistant to such practices.

Larger firms are generally less vulnerable to coercive corruption, and the positive effects of foreign bribery laws, such as the UK Bribery Act, can be gradually felt percolating through multinationals' value chains as local firms become increasingly sensitive to the compliance requirements of foreign companies.

The total population of the 10 major cities in Pakistan has increased from 23.41 million in 1998 to 40.92 million in 2017. Approximately 35 percent of Sindh's total population lives in Karachi and Hyderabad alone. Karachi occupies the top position in the list of most populous cities of Pakistan with population of 14.91 million which shows an increase of 59.8 percent in 19 years. Likewise, the population of Hyderabad city increased from 1.16 million to 1.73 million showing 49.1 per cent growth. ■

Open import of products from China may threaten local industry - Fahd K Chinoy

Exclusive interview of Deputy Chief Executive Officer, Pakistan Cables Limited



The relatively easy and open access granted to Chinese manufacturer by the Government of Pakistan is a major threat that can have an impact on the survival of our industry. Imports of wire and cable have increased from \$56 million to \$124 million in the span of the last two years, says Dy CEO of Pakistan Cables, Fahd K. Chinoy in an interview with Energy Update.

■ By Engr. Nadeem Ashraf ■

market is Aluminium Conductor Composite Core (ACCC®), which is a new technology for conductors that is highly efficient, reduces line-losses, and increases transmission capacity. This introduction is set to have a major impact on the efficiency of Pakistan's stressed and ageing transmission and distribution network.

EU: Would you like to brief about the role and importance of your company in Pakistan's current economic and business scene?

FKC: Pakistan Cables is the pioneer of wires and cables in Pakistan and a brand that has enjoyed patronage across generations of users. Its strong brand equity among its valued customers makes it an industry benchmark. We have been the first to introduce a large number of cable and wire products in the country and are proud to be a major part of the country's industrial growth story. The Company is part of the Chinoy Group of Companies which combined generated an estimated turnover of \$747 million during 2017-2018. According to an estimate, the local wires and cable industry employs over 3,000 households and generates a combined revenue of Rs40 billion. Despite the political and economic challenges, Pakistan Cables has consistently contributed to the national exchequer and generated direct and indirect employment opportunities. We have invested in foreign technical collaborations through JVs with BICC, General Cable and now CTC Global (for ACCC) paving way for R&D and boosting local capacities in the

Energy Update: Brief our readers about your company as since how long it has been functioning and what services and product it has been selling?

Fahd K Chinoy: Pakistan Cables, the country's oldest and most reputable cable manufacturer was established over six decades ago in 1953 as a joint venture with British Insulated Calendar Cable (BICC). In 2010 General Cable Corporation, a Fortune 500 company and global leader in cable manufacturing invested in Pakistan Cables by taking up a 25% equity stake in the company. General Cable was affiliated with Pakistan Cables up to 2017. Pakistan Cables primary product lines are Wire and Cable, Copper Rod, PVC compound and Aluminium Sections and its annual revenue is in excess of Rs. 9.5 billion. The company has been listed on the Pakistan Stock Exchange since 1956.

The most recent product that we have introduced to the

Power outages happen on a daily basis in Pakistan and that is a big hindrance. There's no such issue in China, which makes them more efficient. Similarly, with the recent phenomena of large Chinese contractors entering Pakistan and working on several mega projects, we are starting to see a major influx of all types of Chinese cables in the Pakistan market.



industry. We have invested in technology, best practices and have a strong reputation in the market for product quality and operating through a highly ethical approach. Our products and factory have received several certifications, including the coveted KEMA type test certificate as early as 1984 (we now have successfully passed 8 KEMA type tests). We are the larger importer and processor of copper in Pakistan and on the forefront of innovation.

Pakistan Cables has played a critical role in the progress and development of the country's electrical infrastructure and has been a major player in the industrialization of the country. Hundreds of millions of meters of our product has been installed in practically every corner of the country and has formed the backbone for industrial progress and construction growth.

EU: Given the CPEC developments at the forefront, do you see a major threat for local manufacturers?

FKC: The relatively easy and open access granted to Chinese manufacturer by the Government of Pakistan is a major threat that can have an impact on the survival of our industry. Imports of wire and cable have increased from \$56 million to \$124 million in the span of the last two years.

Pakistan Cables and our close competitors set up plants years ago to cater to medium voltage cable requirements of K-Electric. K-Electric initially used to buy from us but then they moved to Chinese product and this coincided with Abraaj coming in.

In Pakistan, we import almost all our raw materials and these attract import duty, whereas the Chinese have the benefit of locally available raw materials. This coupled with an export subsidy that is estimated to be between 13% - 15%, makes it very difficult to compete with certain Chinese products.

Power outages happen on a daily basis in Pakistan and that is a big hindrance. There's no such issue in China, which makes them more efficient. Similarly, with the recent phenomena of large Chinese contractors entering Pakistan and working on several mega projects, we are starting to see a major influx of all types of Chinese cables in the Pakistan market.



The concessions given by Pakistan's government to Chinese, due to CPEC, are completely against Pakistani industry. There is 17 percent sales tax on the products that we supply, whereas if CPEC projects purchase imported cable and wire they are exempt from paying sales tax and customs duties. Import is not just focused only on China, imports can be done from other countries as well and the CPEC project importing would never choose local products, because of the huge advantage they would get from importing. So, the whole world has the advantage to supply to any special project in Pakistan as compared to the Pakistan industry. We demand that the local industry be given the facility to sell to CPEC projects on a zero rated basis, otherwise there is a strong chance that the local industry will get wiped out.

Q4: You mentioned power outages, what role can cable industry could perform in plugging pilferage, line/technical losses in power supply system of Pakistan?

FKC: The need for major reforms in power generation and transmission sector of Pakistan is a burning issue; according to a World Bank report, Pakistan's power sector suffers from inefficiencies that cost the economy \$18bn or approximately 6.5 per cent of GDP. Increased energy consumption results in overloading of transmission and distribution lines and creating need for additional capacity. Constructing new lines is an expensive and time-consuming option. The capital investment and time required for setting up new T&D infrastructure, and stringent

regulatory process for acquiring new Right-of-Way (RoW) further hinders progress. There are now newer technologies in place installed in other parts of the world for years that proving solutions to enhancing T&D capacity, while reducing line losses.

Aluminium Composite Core Conductors or ACCC® is one such innovation that Pakistan Cables launched in 2017 for the first time in Pakistan in collaboration with CTC Global Inc., US. This made 2017 a breakthrough year for us. We successfully completed the installation of Pakistan's first ever Aluminium Conductor Composite Core ACCC® in the National Transmission & Despatch Company's (NTDC) system that resulted in doubling the capacity of the 220 kV Double Circuit Transmission Line from Gaffi Substation to Nishatabad Substation. Similarly, we just carried out a project a re-conductoring for MEPCO that has more than doubled the capacity of the line by installing A CCC®. These re-conductoring projects were completed without any modifications to the existing towers and structures and at a much lower cost than what would have been required to build another transmission line. It is a proven innovative technology worldwide with over 67,000 KMs installed in over 50 countries. The Asian Development Bank (ADB) is carrying out an aggressive lending program to Pakistan and has been recommending the use of this technology. However, just like any product innovation is faced with an uphill task of 'changing mindsets', we are still at the advocacy stage for ACCC® too. We continue to promote this technology at every level and believe that ACCC® can revolutionize Pakistan's energy landscape.

EU: Detail of modernization, upgrading, best practices, safety procedures adopted by your company?

FKC: Well, they all go hand in hand. As the only Pakistani wires and cable manufacturer with a history of foreign affiliations, we have always led the way in fostering technical knowledge and best practices adopted in other markets. Upholding standards and setting benchmarks is an uphill task in Pakistan, especially when you are competing in a market proliferated with wires and cables manufactured with sub-optimal raw materials and poor implementation of law.

We believe that we are not here to sell a product alone. We are in the business of providing hassle free wiring so-

lutions that end users rely on and most importantly trust. That's why nearly all of our raw material is imported from world-class partners from around the world.

Another key aspect is that adhering to national and international standards require that we remain consistent in terms of our product manufacturing hence a robust QA system is in place under which all our products are rigorously tested, are in the business of not selling. The numerous certifications are a testament of continued upgrading and maintaining of our plants and the manufacturing facility to ensure that the product delivered is truly world class. We have a dedicated Copper Rod Plant and



a PVC Plant, which are the key raw materials in wiring and this allows us to maintain quality standards across the manufacturing line.

Through our varied advertising campaigns over the years, such as 'Safety Par No Compromise', we educate consumers not to opt for cables that come with a cheaper price tag but are actually manufactured using sub-standard raw materials. Such wires, when exposed to varied conditions are prone to catching fire (short circuit) endangering human lives, property, etc. The fact that short circuits are the most common cause of fire in homes and buildings today is proof that such manufacturers are thriving and largely go unchecked.

We value health and safety of our people and communities we serve. That is why we remain committed to promoting occupational health and safety initiatives to minimize work related risks. We have a comprehensive Health, Safety Environment Management System and HSE policy which is supported through a robust training programme and self-audits, internal audits and periodic management reviews. Pakistan Cables was the first in the industry to achieve HSE

certification and currently we hold OH-SAS and ISO certification.

EU: What is your view about Pakistani engineering sector?

FKC: Our country's engineering base has huge potential and the cable industry has a role to play in it. With industry friendly policies, backed by suitable economic environment, the wires and cable industry can result in substantial import substitution and become a major export industry for Pakistan. Our economists need to learn from Turkey where supportive government policies have resulted in making Turkey the 5th largest cable exporter in the world.

We are currently engaging the gov-

ernment on several levels to make clear to them the potential of the wire and cable industry to Pakistan.

EU: Please brief us about the CSR activities of Pakistan Cables?

FKC: We see CSR as a business approach that allows us to contribute towards sustainable development by uplifting economic, social and environmental benefits for the community. We have a rich history of supporting philanthropic causes focused on women empowerment, health, education and social development. More recently, we have focused more on causes that empower communities such as supporting Solar lamp drive distribution in remote areas of Balochistan with HELP-Balochistan, transforming cable reels into pieces of art for public installations in Karachi through KBT's Reel On Hai, etc. We also support educational scholarships and gold medals at GIKI and UET (Lahore and Faisalabad campuses). In addition, within the company's day to day operations too, we are quite committed to ensure that good practices are maintained in Health, Safety and Environment within its own operations. ■



ORGANIZED BY
National Forum for
Environment & Health
www.nfeh.org.pk

CALL FOR
NOMINATIONS

16th Annual Environment Excellence Awards 2019



AEEA 2019 Secretariat:

Engr. Nadeem Ashraf,
Cell: +92 304 309 8328

Ruqiya Naeem
Cell: +92 333 344 1295,
Email: ruqiyanaeem@gmail.com

#309, Al-sehat Centre, Hotel Regent Plaza, Shahrah-e-Faisal, Karachi.
Tel: (92-21) 3567 4570, Email: nfehpk@gmail.com

All environment friendly organizations are
invited to submit their nominations

Deadline for Nominations: April 20, 2019

For Award Criteria, visit www.nfeh.org.pk



nfeh.org

Partners

**ENERGY
UPDATE**

CSR Update



Publicity Channel

K-Electric's long awaited TP-1000 nears completion

The electricity crisis has become a permanent phenomenon in Pakistan. However, K-Electric's \$450 million Transmission Enhancement Project (TP-1000), which aims at ensuring a smoother and more reliable power network, is likely to be completed this year, which may ease problem to some extent. The project, which was initiated in 2016, will add over 1,000 MVAs into Karachi's transmission system which will

By Ismat Sabir

Gulshan-e-Iqbal, Bin Qasim, Labor Square and Gadap areas of the metropolis. It is a part of the utility's commitment and vision to serve its customers by investing in infrastructure. To accommodate the growing power demand of the city, K-Electric has planned investments across the value chain.

resulting in an improvement of 3 percent and 7 percent in distribution and transmission capacity respectively. The power utility is also working to diversify its fuel mix towards clean energy and in this regard, two 25 year EPAs with IPPs have already been signed which will add 100 MW of renewable energy to K-Electric's



help improve the power supply system of the power utility. Moonis Alvi, CEO K-Electric, companies are working as vendors on the project including Siemens. Out of seven planned grids under this project, three grids have already been commissioned, including a 220 KV grid while the construction of others is in full swing. The project will be completed this year. Moonis said TP-1000 will go a long way towards strengthening the ability to transmit the additional power that we have requested from the national grid. Talking about the scope of the project, he informed that TP-1000 includes 7 new grid stations along with new power transformers and circuits and up gradation of existing transmission infrastructure. The three grids commissioned have been installed Surjani, Shadman, and Old Golimar areas, whereas work underway for remaining grids at

Through continuous up gradation and construction of new network, the power supply would improve further for our valuable customers," he said. The power company has already invested US\$ 2.1 billion in the city's power infrastructure since 2009. As a result of these investments, K-Electric has substantially improved services for Karachi's consumers and businesses. Amongst other initiatives, the company added 1,057 MW of generation and reduced line losses from 36 percent to almost 20pc in 2009, including all industrial customers. K-Electric additionally created 30 Customer Care Centers to improve and enhance customer engagement. Adding new generation capabilities and strengthening its transmission and distribution network are currently K-Electric's highest priorities. In 2018 alone K-Electric has also added 76 feeders and 1,721 PMTs/substations,

system by 2019. Additionally, K-Electric is also evaluating another 250 MWs of renewable projects to further increase the share of renewable energy based on solar, wind, biogas in its system.

After ten years the expansions are taking place but actual demand is too low. A research forecasted 4 percent; the total energy demand is expected to double to 122 MTOE in ten years. At \$50/bbl crude oil price, the annual energy import bill would exceed \$27 billion by FY2018. The actual primary energy consumption stood at 86.3 MTOE in FY18, while total energy import bill including POL, LNG and coal stood at \$15.7 billion and the Brent averaged at \$63.7/bbl in

FY18. Now the energy consumption is less than the capacity and infrastructure that is being added, there are pressures to revise up tariffs due to growing capacity payment. The only sane way to lower

the per unit capacity payment is by increasing the number of units being consumed which is improving day by day and less energy is required as efficient plants are coming online, such as RLNG plants versus old FO/gas based plants. The productivity in the manufacturing processing is also improving to lower the energy need at any given level of production. For instance, cement plants' fuel efficiencies are improved; better automobiles are coming with higher fuel efficiencies; inverter air conditioning and LED lights have lowered the bill for the same level of consumption in domestic that can only happen if the demand grows proportionately. Since demand is a function of price, the lowering down of subsidies, has been putting an upward pressure on pricing, and the demand goes down at higher prices. Plus, the technology commercial use and the list go on. The demand forecasts and implementation of new energy plants are not incorporating all these variables. First the machinery imports, and later the fuel imports are straining the current account deficit while energy related subsidies are creating fiscal imbalances. In order to counter those, the energy prices have to be revised up, and in result the demand will compress further. These fiscal and economic costs erode competitiveness, which is not good for exports or general economic expansion.

The economics of renewable has improved significantly in the last decade,

and the energy future is in renewable be it solar, wind or biomass. With solar becoming more accessible, commercial and domestic energy consumption would rely less on the grid. The other factor for low reliance on grid is growth in captive generation in the past decade. The expansion in the energy sector plants did not incorporate the growing reliance on the captive sources in days of high load shedding. Now with expected increase in grid energy prices, the industry is more inclined to use their own energy producing sources.

There are multibillion dollar projects in the country's long term plans such as the TAPI and IP gas pipelines, RLNG import terminals, coal projects, and the list goes on. It's time to introspect and revise plans accordingly while encouraging research to gauge demand at various prices level and have a dynamic model to assess the impact on other economic variables.

Hubco, the country's biggest independent power producer, has planned to raise an estimated seven billion rupees through right issue in a bid to increase its stake in a 1,320 megawatts coal fired power project being set up under the Chinese corridor framework., analysts said. Hub Power Company Limited (Hubco) decided to offer its 140 million ordinary shares of Rs10 each, constituting 12.1 percent. The funds from the rights issue will contribute towards the increase investment stake in CPHGC from 26 per-

cent to 47.5 percent, via HPHL (Hub Power Holdings Limited), Hubco said in a filing with the stock exchange. The share transfer books of the company will be closed from April 23, 2019 to April 30, 2019 (both days inclusive) to determine the entitlement of right shares. The imported coal fired power project is a priority project under the China Pakistan Economic Corridor for which an agreement was signed in 2016. The project is expected to be in commercial operation by the mid of this year. Hubco said the right issue is being made at a price, which is far less than the current share price in the market. There is no major investment risk

associated with the right issue,* it added. "Normal risks with the business will remain; however, the company is well placed in the market with proven track record which will help mitigate such risk factors. Hubco is expected to raise seven billion rupee from the right issue, assuming the right issue gets completely subscribed. Hubco needs \$163 million to meet equity contributions in HPHL, Thal Nova Power and Thar Energy Limited, Zeeshan Afzal, an economist at Insight Securities said. Afzal further said earnings per share (EPS), based on pre-right shares, is expected to decline 18 percent during the current fiscal year of 2018/19 to Rs6.05. But, EPS is expected to increase by 50 percent to Rs9.07 in FY2020, according to Hubco's financial projections. ■

Pakistan-Turkey hold SEF on Strategic Economic Framework

Senior Pakistani and Turkish officials met in Ankara to finalize Pakistan-Turkey Strategic Economic Framework (SEF) aimed at boosting trade and commercial ties between the two brotherly countries. Turkish President Recep Tayyip Erdogan and Pakistan Prime Minister Imran Khan agreed earlier this year in Ankara to develop a long-term strategic economic framework for promoting economic relationship to reflect the extremely close strategic and historic ties between the two countries. Mr. Noor Ahmed, Secretary, Economic Affairs Division headed Pakistan delegation which included senior officials of various ministries and departments. Ambassador of Pakistan to Turkey Muhammad Syrus Sajjad Qazi and Pakistan Consul General in Istanbul Bilal Khan Pasha also attended. Gonca Yilmaz Batur, Deputy Minister for Trade, headed the Turkish delegation. During the talks that were held in a cordial environment, considerable progress was made on discussing the draft SEF as well as a comprehensive plan of action.

Broader areas of collaboration in the proposed SEF includes: trade and textile, investment and industrial cooperation, banking and finance, transport and communication, low-cost housing, defence production, aviation, auto industry, agriculture, water resource management, health and pharmaceuticals, transport and communication, education and vocational training, energy, science and technology, organized industrial zones and small and medium enterprises as well as culture and tourism. The SEF under discussion details major activities to be undertaken and the plan of action that will be followed.

It is expected that the finalized SEF would be adopted during the next meeting of the Pakistan Turkey High Level Strategic Cooperation Council to be held in in Pakistan soon that will be co-chaired by President Recep Tayyip Erdogan and Prime Minister Imran Khan. ■



The solution to domestic power tariff Un-affordability lies with us!

By Dr Qazi Ahmed Kamal

Recently one of my colleagues shared with me an electricity bill of a South Asian country end-user. The bill was for \$280 for the first quarter of this year in which full access to air conditioning, ironing and all the rest of the privileges of a normal city life was included, this made me very surprised. This equaled in our terms to around rupees thirteen thousand per month. An unbelievable bill by our standards. Ok this was maybe an exception to the rule or something and this is not the average payment of an average citizen I thought so I dug deeper. What I found out was even more startling.

The structure of the bill was very different to our bill formats. This bill just had four entries. Basic fees, Kilowatt price, fuel tax (like our FAC) and Vat (in place of our sales tax). Then I looked at my bill. What a contrast! Strange heads of charging were there such as Electricity Duty, Bill Collection Charges and TV

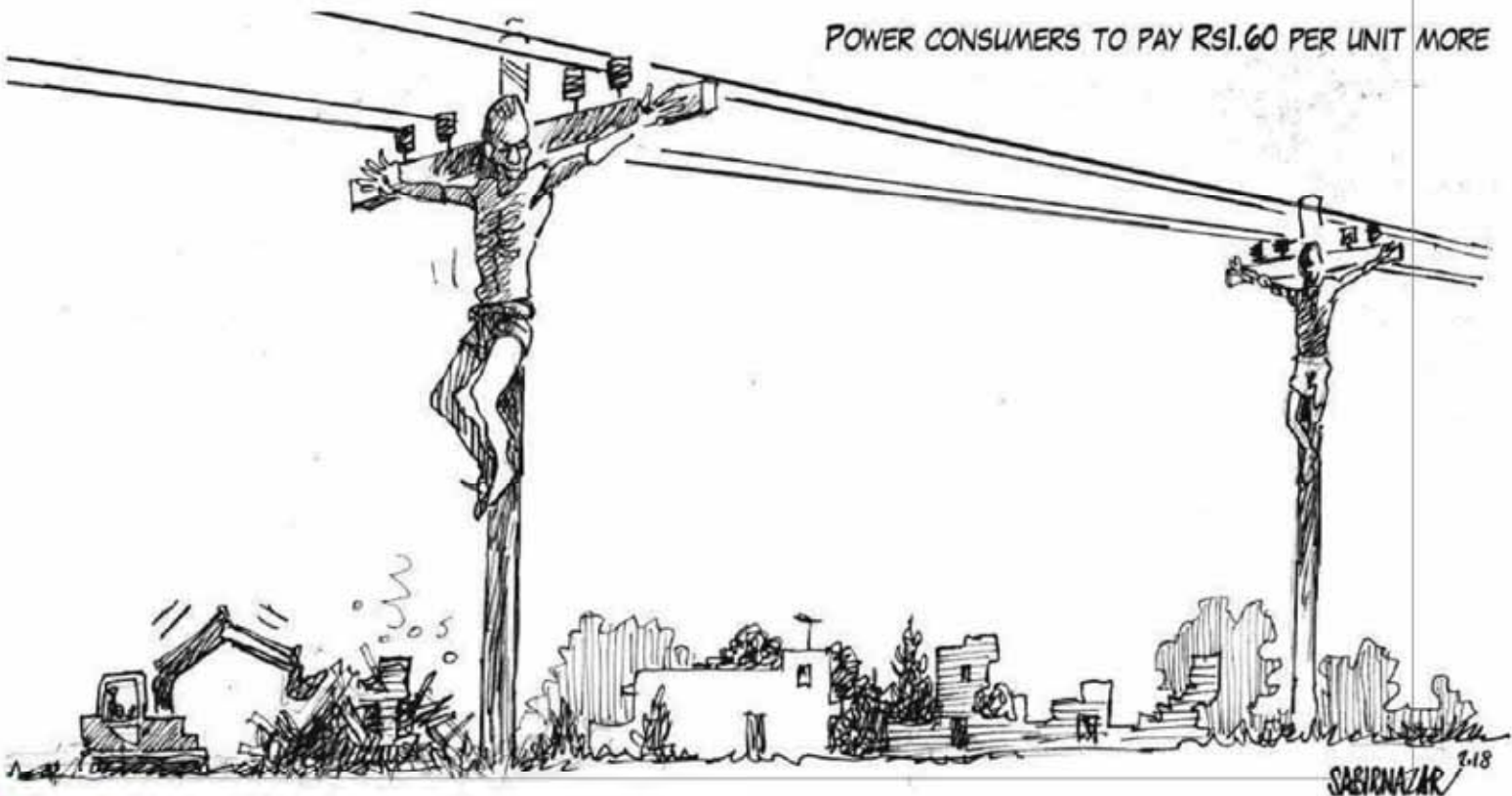
Licence Fees. I m not going into the comparative costs at this point. My question is simply to make me understand that by what strength of imagination is the TV Licence fees included in the tariff and what is the bill collection charge got to do with the end-user and if the Electricity Duty is really necessary?. Not only this but where is the sum taken from us in these headings going? Who is the intended beneficiary? Does anyone anywhere on the planet need a license to watch TV in this day of internet charge and what not? The icing on the cake is that its charged per TV set. So you need to multiply the number of sets by this fees per month! This is totally ridiculous. The end-user is made to pay for the things that have absolutely nothing to do with the power he uses. So the assumption here is that even the people that lead the prayers are watching TV inside the mosques? If the bill collection charges are being paid then what is the

bank paying its cashiers for? Isn't that their job to collect money and if any charges are to be paid should it not be paid by the power company to the bank? Is the bank not grateful enough already to get this extra cash in its coffer that it is charging the power company for collecting it? None of the issues make any sense at all or have any logic or rhyme or reason.

The most interesting point was that there was no power bill cost at all for the sector using up to 50 units per month and that there were 4.5 million such users across the country. This made sense. What they can't afford, the state provides for free and the whole of the country contributes. The minimum cost of production is recovered plus the amount that is needed for free power. Pure genius!

Another point was that residential users were divided into two basic categories. One had the tariff up to 150

POWER CONSUMERS TO PAY RS1.60 PER UNIT MORE



units and the other above 150 units. This way the users of the higher units did not get the benefits of the slabs of the less than 150 units. This was very fair unlike our system of slabs that has two categories of slab benefit but the benefit rises for the users of higher units per slab. Again full marks.

The peak and off peak systems were also very different than our systems. Their peak times were 9 am to 10 pm straight through Monday to Friday. The off peaks were of course midnight to 9 am Monday to Friday and midnight to noon on weekends and national holidays. The rates had a minimum two fold increase in peak time. So no residential user will start his AC before 10 pm. This made a lot of sense and conservation of power usage would be his top priority. The nation as a whole would be more inclined to use the available power more diligently.

So I concluded the country has a cheap source of power so they are doing all this but to my utter amazement the country in question has generation mostly as thermal base! This stunned me completely! We are running away from thermal and they make mainly thermal power. Its 61% gas, 11% coal, 12% nuclear and 16% renewable. Biggest dam makes 749 MW only. I missed a heartbeat! I was still not satisfied that I am surely missing something. Has to be some sort of hidden calculation that I am unaware of. How can they afford all this? What percentage of losses are built in the system? Just like we have like 18% into the NEPRA tariff even now from a 37% loss many years ago they must be inculcating some charges that are not seen by me yet. So I started my search. Had I not taken this search I would not have hung my head in shame. There was no theft competent in the tariff rate.

I threw up my hands in disbelief. You have to be joking. It was composed of Fuel cost, IPP cost, Import costs, policy cost(subsidy amount) and Vat. That's it. Nothing more. I said ok they want to hide it? I shall prove them wrong. I went to the base tariff rate. Something that NEPRA decides from the request of the cost of production by the units. This was my last chance of redemption. Sadly I could find nothing! No inclusions for theft. Although there were components for generation, transmission and distribution expansions plus O and M expenses and Interest amounts but no component of theft. A set claw back to the distribution was offered in built if the recovery went to a certain limit which further lowered the rates for the end user and distributor equally and so the policy makers had made them a team rather than adversaries.



My last attempt was ok I give them credit but their system could be smaller and better controlled with less people than us. I had to comfort myself somehow that we are not the sad lot that I am seeing with respect to all the parameters so far. So I started checking up more facts. Lo and behold, the curtain fell. 35000 MW generation, 32000 Km circuit of transmission, 17000 GWh distribution and retail, 20 million customers (finally something to argue upon in my favour) and 99.8% population with power! 42% of generation is state owned and 100% of transmission is state owned. 100 % of distribution is state owned. Much like our system 35% of generation is from IPPs . Only 7% is imports.

The cost analysis is very interesting.

(The tariff rate for the 450 units for us and theirs is the same) Our tariff rate is inclusive of 20% theft factor. What does that mean? It means that we have ourselves created this tariff structure unaffordable . Through our own shallow thinking we have made our lives miserable. This single factor if absent from our tariff will reduce our tariff by 20%. Just imagine the savings we can make . The comfort we can enjoy. Of course the additional irrelevant heads must be deleted immediately. In order to make it affordable we have to reduce theft . There is no other way. Unless there is a marked reduction in our attitudes and our mind set we shall continue to see this power debacle facing us . As a nation we have failed on an individual basis , as a muslim even to perform our obligation in this regard.

Govt. has to reduce the sales tax to 7% for the residential users in order to curb theft. The govt may earn a bit less but as a whole the reduction is theft will be motivated by making it affordable for the masses

The concept of free power rather than reduced power rates should be explored like mentioned in the article. This can only happen when there is theft reduction as a national mind set change. If a nation can manage mainly on fossil fuel and gas and renewable why cant we ? This means its not as bad as its being proposed but its badly managed by us. At 7 tcf of gas deposits they generate 61% of total power generation from it and we at 30 tcf blow away 150 mmcf/d yearly AS UFG and make around 30% of power generation from it. I am sure the regulators in that country must be doing a fantastic job of actually regulating matters and not just calculating matters and should take up the good practices . I also think that regulators don't tow the govt. line in anything there and would be really independent

At the end we need to seriously look inside ourselves and question ourselves if we are strong enough to bring the desired change in our mind sets instead of the govt. for the mess we are in by our own doings and how can we get out of it. Contrary to popular belief the solution to the tariff unaffordability lies with us only. ■

ENERGY UPDATE

SPECIAL OFFER ON 1 YEAR SUBSCRIPTION (12 ISSUES)

Save upto **Rs. 400/-**

92-21-35653676, 35213853
energyupdate@gmail.com

This is why investing in the power sector is a bad idea

■ By Raja Shahzed

The power sector for the last decade has been marred by an inefficient energy mix, lack of a competitive bilateral market and an inefficient transmission and distribution system. Additionally, electricity is being purchased by Central Power Purchasing Agency Guarantee Limited (CP-PAG) from Independent Power Producers (IPP) at higher tariffs. Failure to timely exploit hydro resources has forced the country to tilt towards expensive power generation through use of expensive fuels like high speed diesel, imported coal and LNG.

A higher interest rate with minimum barriers to flow of capital would be beneficial in the form of inflow of foreign capital. For an import-based economy like Pakistan, this would have a strengthening impact on the local currency and reduce input costs. However, given Pakistan's growth rate and economic volatility, the marginal propensity of investors to invest is very low. Just increasing interest rate to induce investors to invest in Pakistan, along with a strengthened fiscal and monetary policy, may not achieve desired results.

The tariff in power sector has been envisaged under a two part tariff scheme i.e. Energy Purchase Price (EPP) and Capacity Purchase Price (CPP). EPP, including fuel expense and variable operational and maintenance cost, is primarily paid to the company for producing and delivering electricity to the national grid. On the other hand, CPP is a fixed cost (debt servicing, insurance, fixed operational and maintenance costs, and working capital financing cost) reimbursed to the company for establishing and maintaining the power plant facility.

A certain percentage of return on equity invested is also incorporated within it. In order words, all the actual variable and fixed costs incurred by IPPs in producing and delivering electricity are reimbursed and a certain percentage of return over equity invested is guaranteed.

Almost 85 percent of the project cost is the cost of imported machinery, equipment and services of technical experts. National Electric Power Regulatory Authority (Nepra) determines the project cost in dollars and converts it into local currency at reference exchange rate,



which is the rate at date of tariff determination. All exchange losses thereafter become part of project cost. Therefore, any excess cost incurred by investor on account of variation in exchange rate during the construction of power project becomes part of total project cost.

With increasing project cost, the amount of financing required for the project automatically surges up. Not only does the investor have to borrow more, the equity investment in the project also increases due to regulatory restrictions that require total project cost to be financed in the ratio of 20-30pc equity and 70-80pc debt.

The cost of borrowing incurred by the IPPs is reimbursed over the life of the project financing. In case of local lending, it is indexed to Karachi Inter Bank Offer Rate (Kibor) and in case of foreign lending it is indexed to London Inter Bank Offer Rate (Libor) and any variation in the exchange rate.

Investors are offered guaranteed dollar based returns over equity investment. Paid to investors in local currency, this investment ranges from 15-20pc. In order to keep the dollar based return intact, any adverse variation in the exchange rate is reimbursed to IPPs thereby also contributing to an increase in tariff.

Additionally all local components of the tariff are indexed to local inflation and all foreign components of tariff are

indexed to US inflation and exchange rate. Therefore any increase in interest rate and exchange rate has a direct impact on tariff.

The circular debt is mounting due to the higher power generation costs because of an expensive fuel mix, increasing interest rates, weakening of rupee, and lack of timely payments by power purchasers. The aggravating circular debt issue has compelled IPPs to finance operations by utilising the maximum limit of working capital facilities available to them, thereby rendering them unable to access finance from other resources.

This situation, coupled with higher working capital finance cost due to higher borrowing and increased interest rates, is jeopardizing IPPs that may default under their relevant concession agreements. Further, if a power purchaser is unable to make payments to IPPs within the due date, then for each day after the due date the power purchaser is required to pay an outstanding balance at a specific delay payment rate. The benchmark of which is Kibor plus agreed spread. Hence, any increase in interest rate would further burden the already cash starved power purchaser in meeting its payment obligations.

The ever increasing circular debt due to high tariffs and an inefficient power distribution system is creating resentment among investors. To attract further investment in power sector, particularly in power transmission sub-sector, additional incentives/securities are required. These measures would ultimately increase tariffs as well as the government's contingent liability.

Electricity is one of the major factors of production for any business, particularly for Small and Medium Enterprises (SMEs) which are assumed to be the backbone of the economy. Any increase in cost or interrupted supply of electricity has a detrimental impact on their growth. The alternative to grid power is through the use of generators whose operational costs are very high. All businesses are impacted due to higher electricity costs and interrupted supply. In the larger context, this hinders GDP growth and ultimately renders the country's products uncompetitive in international markets. ■

courtesy: Daily Dawn



Your partner for **LPG** systems

Target Engineering Enterprise with its vendors from U.S.A & Europe provide simple, adaptable and diversified solutions to counter the ongoing energy crisis.

- > Synthetic Natural Gas/LPG-Airmix Systems or Vaporized LPG systems for Factories, Industrial units & Gas utility companies:
- > Reticulated LPG or SNG network (Piped LP-Gas or Piped SNG) for housing projects, gated communities, restaurants, commercial buildings and malls.
- > LPG/AutoGas dispensing equipment & LPG conversion kits for Automobile sector.
- > LPG cylinders & LPG transport trucks/bowsers for LPG distribution and marketing companies.
- > LPG filling scales, LPG transfer pumps and LPG compressors for LPG bottling plants and LPG marketing companies.

Other systems and services include:

- > Gas leak detection systems
- > Gas meters
- > Gas analysis equipment
- > Firefighting systems
- > Building management systems etc.

For more details on our range of services & project consultation, please visit our website:

www.targetee.com



Exclusive interview of GE's regional executive for steam power, MENAT region, Michael Keroullé

Pakistan's journey towards energy independence is a critical cornerstone of the country's secure energy future. GE has been a long-term partner supporting the development of Pakistan's energy sector and economy and is currently playing a vital role in reaching a crucial milestone on that journey as the first power plant using local lignite comes online. With the official inauguration on April 10, Engro Powergen Thar Private Limited power plant has successfully delivered first fire and first full load, which means for the first time in Pakistan's history, indigenous lignite coal was used for utility scale power generation. Energy Update was delighted to meet with GE's regional executive for steam power, MENAT region, Michael Keroullé, for an exclusive interview and talk about the importance of coal as a part of Pakistan's energy mix, the benefits of a local supply chain, and how technology can help to make Pakistan's energy future more sustainable.



By Naeem Qureshi

Energy Update: What is your viewpoint regarding recently inaugurated Thar coal power project?

Michael Keroullé: We are thrilled, to say the least. Tapping Thar lignite will offer Pakistan a cost-effective means to address a major part of the energy deficit in the country, and we are proud to bring GE's leading technologies to support this strategic initiative. The recently inaugurated coal power project is a milestone for the country as it seeks to diversify energy sources to meet the growing demand for power. The power plant is expected to be commissioned this year and will add 660MW of power to the national grid. As the country's first project firing Pakistani Thar lignite, the plant will help reduce the pressure on foreign exchange reserves, support Pakistan's energy independence and promote increment of indigenous sources of power generation to over 50 percent.

EU: What is your own observation about Pakistan's power sector?

Mr. Keroullé: Pakistan has set a robust strategy to ensure

long-term energy security for the country. This involves a clear diversification approach that adds different energy sources to lower dependence on fuel imports and enable sustainable growth. We are continuously seeing wind, hydro and gas power being added to the mix, and certainly coal, of which the recently reached milestone of using local lignite resources is a truly remarkable step towards a energy future. Pakistan has solved some significant challenges on this journey and has now proven that local lignite is a feasible and economically viable source of energy for the country, and this is an achievement to be very proud of.

The economic factor is of prime importance for a country like Pakistan; the cost of power needs to be affordable for people as well as competitive for industries to foster industrial development and attract foreign investment. Using local lignite resources provides several benefits. Building a local supply chain creates jobs, lowers cost, and it reduces dependence on imports, thus saving the country's foreign exchange reserves. GE is very honored to support Pakistan on its journey to a

future with reliable, affordable and efficient energy.

EU: What is your viewpoint about environmental concerns regarding coal-based power generation in the country?

Mr. Keroullé: Technology has made immense progress, and today solutions exist that can bring emissions of coal-fired power plants on a level comparable with those of a modern gas-fired power plant. So the environmental impact can be addressed by making smart and prudent technology choices. GE's technology has proven its reliability in burning low calorific and high-moisture fuels like Thar lignite coal, while keeping a low environmental footprint for power plants around the world, including in Europe, the USA and Turkey. GE's ultrasupercritical (USC) technology is today's standard bearer for coal power plants across the globe. Operating at temperatures and pressures above the critical point of its predecessors, the combustion process within an ultrasupercritical boiler bypasses the need for a conventional drum system, converting water directly into steam that drives the turbines to generate electricity. Together with the state-of-the-art controls for combustion and stronger materials needed to support the heightened temperature and pressure, USC coal plants are capable of generating power at a higher efficiency rate with significantly reduced emissions and related operational costs. GE complies entirely with the most stringent regulations for local pollutants like SOx, NOx and dust. Furthermore, GE has demonstrated the viability of large (>800MW) coal power plants with air-cooled condensers in places like South Africa, minimizing the use of water where water is a scarce resource.

EU: What challenges have you been facing while doing business in Pakistan?

Mr. Keroullé: We have a very good value proposition here, which is the right balance between cost and efficiency/performance. This allowed us to get a substantial market share of coal projects in Pakistan, and we are supplying boilers and steam turbine generators for all of the lignite projects which are under execution in the country. This trust in GE's technology and expertise is one of the best measures of competitiveness we have in Pakistan.

EU: Tell us about contribution of GE in the renewable energy sector of Pakistan.

Mr. Keroullé: Along with other sources of fuel, GE continues to broaden the renewable energy footprint in Pakistan, as the country's indigenous sources help to provide alternative and sustainable sources of energy. When you look at Pakistan's overall energy mix, GE is supporting the country across the entire energy value chain from generation to consumption, and across the energy mix, be it coal, gas, wind, and hydro. Today GE-built technologies can generate the equivalent power needed to supply up to 30 percent of the



country's electricity.

We are proud of the partnerships we have developed with the independent power producers in this country. GE is also actively involved in the maintenance of these different types power plants, ensuring reliable and smooth operations on the long term. After building and commissioning these plants, we remain fully committed to maintain them in order to keep them operating efficiently and economically as long as possible. We have long-term service agreements on the gas side, and similarly we are also entering into long-term service agreements with coal-based power plants.

EU: What is GE's future planning in Pakistan?

Mr. Keroullé: We have just finalized setting up two new power units in Thar, which are in the commissioning stage. Once the concept of local lignite shows all the positive outcomes for the country on a broader scale, we are confident that there will be more investment in new lignite projects. Now that Pakistan has successfully made that step, it's economic impact is manifold and offers a great value proposition for Pakistan. We should keep in mind that lignite is not an easy fuel. What we have brought here for the Thar 2 plants includes decades of experience and expertise in consuming the most difficult fuels in the world for power generation. We are bringing this expertise to Pakistan as we are convinced this is a very important step for the country. We also believe that the long-term success of Thar coal power projects will grow with their expansion; as the scale of local lignite power generation increases, it will become economical for the power consumers. GE is here to continue supporting Pakistan on that journey.

EU: Tell us about contribution of GE in the field of corporate social responsibility?

Mr. Keroullé: At GE, CSR stems from sustainability. We have an active GE Volunteers chapter in Pakistan, which provides an avenue for employees and their families to be involved in community outreach efforts. These voluntary activities are being conducted on a frequent and sustainable basis.

Energy has also installed an emergency medical center in Jhimpir, a village in Thatta district. This facility aims to bring fundamental medical emergency services to the community in a timely manner. In addition, the commitment of \$100,000 will create awareness around EHS, and serve the wider community, in terms of emergency and temporary care.

As part of our CSR initiatives and leveraging our global technology expertise, GE is working to promote capacity-building of Pakistan's energy sector workforce. In addition to scholarship awards, GE is also looking to introduce advanced training programs that will be offered to top engineering institutes of Pakistan, with an emphasis on hydropower, covering both engineering theory and practice, including GE's digital portfolio as well as state-of-the-art Operations and Maintenance technology. ■

**Can
Thar Lignite
Coal Unlock
More Energy
Independence
for Pakistan?**

YES.

For the first time ever, Pakistan has used its indigenous Thar lignite coal to generate electricity. This marks the beginning of a new era of reliable and affordable domestic power for generations to come.

GE is honored to support Pakistan on this important step, by supplying Engro Powergen Thar Private Limited power plant with our innovative CFB boilers.

The first successful firing of the challenging Thar coal using GE boiler technology is a clear demonstration of our decades of European design experience, expertise and commitment to high quality manufacturing processes.

This is the Power of Yes.

#ThePowerofYes

ge.com/power/steam



GE wishes to thank its valued partners

engro powergen thar



Renewable energy should be a focus area for Pakistan - Waqas H. Moosa

An exclusive interview of CEO, Hadron Solar (Pvt.) Limited

Solar energy should be a focus area for Pakistan as it can have tremendous contribution towards bringing down price of electricity and improving the environmental situation. Pakistan relies heavily on imported fuel sources for energy requirements and using Renewable Energy, in particular solar energy, will allow the country to avoid fossil-fuel imports, says Waqas H Moosa in an exclusive interview with Energy Update.



By Naeem Qureshi

Energy Update: Kindly explain the specific role Hadron Solar will perform in the energy sector of Pakistan with specific reference to the Renewable Energy?

Waqas H. Moosa (WHM): Hadron Solar is working in 3 areas within the energy sector of Pakistan: Agricultural sector - primarily focused on solar water pumping solutions (tube wells), we help farmers to minimize electricity requirement for water pumping needs. For farmers, water is a critical resource and they frequently have multiple power sources for their tube wells, e.g. diesel motors, WAPDA and tractor-based motor. Our solar-based solution allows the farmer to reduce his electricity consumption as well as diesel consumption for powering the tube wells.

2) Residential sector - home-based residential systems can have two purposes - (i) to provide a steady source

of backup power during periods of load-shedding, especially with extensive load-shedding situations where typical UPS battery banks are no longer able to support the client requirements, and (ii) to provide a source of saving by generation of electricity from the sun's light - allowing customers to save on their electricity bills.

3) Commercial sector - we work with our clients to help them save on their electricity costs through on-grid solar solutions that cover some or all of their energy requirements by using energy from the sun.

EU: What is your viewpoint regarding the importance of Renewable Energy for the energy sector of Pakistan?

WHM: - It should be a focus area for Pakistan as it can have tremendous contribution towards bringing down price of electricity and improving the

environmental situation. Pakistan relies heavily on imported fuel sources for energy requirements and using Renewable Energy, in particular solar energy, will allow the country to avoid fossil-fuel imports. In addition, Pakistan suffers heavily from air pollution, with some Pakistani cities in the list of top polluted cities in the world. Switching some of the energy production from fossil-fuel based energy to solar energy will help to reduce the levels of pollution as well.

EU: What steps the Pakistani government should urgently take to ease out the Renewable Energy?

WHM: : Renewable Energy and in

particular Solar Energy usage in Pakistan is mushrooming throughout the country. There are shops selling solar panels even in the most remote areas of the country. Left on its own, the industry will grow in an unregulated manner, which may or may not evolve to be in the best interest of the country - similar to what we saw with the CNG industry for cars. Some steps the government can take: Ensure minimum standards of quality are set and met. This includes providing guidelines on what type of panels and inverters can be imported and then ensuring the guidelines are enforced. This will allow us to avoid poor quality solar panels and inverters being imported into the market.

2) Help to create awareness on quality standards through creating a qualification program for quality installers and sellers; this can be done through AEDB (Alternate Energy Development Board) and / or PEC (Pakistan Engineering Council) - in similar line as they have created list of approved vendors who can apply for Net Metering licenses on behalf of their customers.

3) Create a master plan/vision for solar and renewable energy for the next 5-10-20 years whereby specific policy guidelines and targets are laid out for the industry to plan accordingly and equip itself with the right tools to ensure that the vision that is attained.

EU: What is your own analysis about energy sector of Pakistan as what steps should be taken for the best growth of this sector for the maximum benefit of all the stakeholders including the end-users of the energy resources/supplies in the country?

WHM: We believe that getting the energy planning right is a critical requirement to ensure sustainable growth for Pakistan and securing the future of the

country. Solar energy is definitely going to play a major role in this sector in the future. And it is very important to create a holistic approach looking at the end-users, the suppliers and the owners of the electricity infrastructure to ensure that maximum benefit is provided to everyone.

As the costs of solar go down and the costs of conventional electricity go up, we will see a higher and higher share of solar energy in the electricity mix. And a lot of this solar energy will be produced on-site, i.e. on the rooftops of houses, warehouses, commercial buildings, etc. We are entering an era of Distributed Generation, where instead of the traditional model of a single generator (electricity provider), we now have multiple sources of electricity in any given location. Some of these will be traditional in nature, e.g. the thermal power plants that produce electricity from Furnace Oil or LNG. Some of these will be new-era IPPs (Independent Power Producers), who supply electricity from renewable means, such as wind or solar. But a lot of them will be home owners and small businesses who have solar installed on their rooftops and would like to export any additional electricity to the grid during the day, through Net Metering.

The electricity model of the future will be very different from the model we have been seeing for the past few decades. An interesting analogy could be taken from the world of telecommunication. Whereas in the past, there was just one provider and everyone depended upon the local telephone company for their communication choices, today there is a myriad of choices available in terms of the network operator, the type of communication service (wired, wireless, satellite, etc.) and the type of rate plans to use. We are already seeing such models in the energy sector in various parts of the world. Solar energy, and wind energy, are playing a bigger role in terms of their share of the overall energy mix. But it is important to plan this right. We do not need to invent everything from scratch. We need to study what has worked for others and what are the latest trends. And then based on this, we can develop the outline for a model that we believe will be best for the Pakistani market as it evolves in the new era of distributed generation and energy markets.

EU: Please suggest a plan for our government to make energy import/production/consumption in

the country most sustainable, environment friendly, long lasting and most economical for Pakistani consumers.

WHM: We are working with the LUMS Energy Institute to prepare recommendations for Approaching Distributed PV (photo voltaic / solar) for the government and utilities. The findings are currently being shared by various experts within the Pakistan power sectors and should be ready to be published by end of this month. The main idea of our research is to create a picture of the potential for distributed generation, specifically distributed solar generation, identify expected issues that are expected to arise as the level of grid penetration of solar generation grows and outline potential policy recommendations to overcome these issues based on a study of other markets and industry trends.

To provide some perspective, solar (as well as wind) are now firmly established as the cheapest source of electricity globally. With gradual increase in solar adoption for power requirements by domestic and commercial customers across Pakistan, a big challenge faced by utilities and the power distribution network will be managing excess power in the system in peak daylight hours - when the sun is shining at its brightest and maximum solar potential is available - and a drop in available power as the sun sets, coinciding with a time of evening peak demand. This phenomenon has been observed in a number of countries / regions once solar penetration in the grid crosses a certain level, usually varying between 15-30% - it is called a 'Duck Curve' because of the shape of the demand curve from the perspective of the electricity providers.

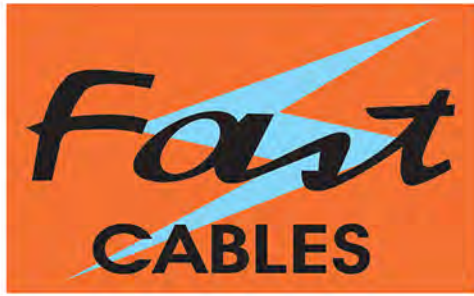
Multiple strategies have been adapted to 'flatten' the duck curve, and with the advent of grid level storage solutions, there are many opportunities to take advantage of the cheaper cost of solar electricity while minimizing any issues faced. Rooftop solar is here to stay, and even without any policy, it will proliferate due to the economics. If it grows on its own, it will eventually create issues that have been observed elsewhere, and even in Pakistan in other industries, for example in our CNG sector. Our work with the LUMS Energy Institute is a step towards outlining the path that the utilities, regulators, and other players can take towards harnessing the potential of clean, abundant solar energy to provide long-lasting, robust and economical solutions for the Pakistani customers. ■

ENERGY UPDATE

**SPECIAL OFFER ON
1 YEAR SUBSCRIPTION
(12 ISSUES)**

**Save upto
Rs. 400/-**

**82-21-35653676, 35213853
energyupdate@gmail.com**



Leading through Innovation

Contributing Towards Nation's Self Reliance

33kV

Highest Voltage Grade
Cable Manufactured
for the First Time in Pakistan



Inauguration of Thar Coal Power project

No representation from Federal Govt surprises dignitaries

The inauguration of Thar coal mine and its power project in Islamkot recently was really an occasion to celebrate. It is time for celebration by all those stakeholders of the project, which untiringly worked for last several years to turn this distant dream into a reality.

Chairman of Pakistan Peoples Party Bilawal Zardari on 10th April, 2019 inaugurated open-pit coal mine in Thar Block-II in Islamkot area and adjacent 2x330 MWs power generation plant that is consuming Thar coal being extracted from this coalfield that is the first one of entire Thar area. This is the first major power plant of the country, which will consume indigenously extracted coal through the process of open-pit mining.

The project's site at a faraway location from the Islamkot town was virtually turned into an oasis as such fabulous arrangements were made under a large fully air-conditioned canopy to host the inaugural ceremony.

Among many special guests who flew on special planes from Karachi newly built airport in Thar, the one of the

special guests chartered Airport to Thar, the one of the



Bilawal B. Zardari, Murad Ali Shah, Khurshed Jamali, Imtiaz Sheikh inaugurating Thar Coal Power Plant

special invitees of the ceremony in Islamkot.

Though one aspect of the ceremony was quite disappointing for many guests of the ceremony i.e. there was no proper representation of federal government on the occasion though Federal Power Minister, Omar Ayub Khan was expected

to attend the ceremony.

The audience of the inaugural ceremony were informed on the occasion that Sindh Government had invested \$120 million in the project to extract coal beneath Thar's land and to develop the necessary infrastructure for Thar coal energy project as road



Billawal Bhutto Zardari Chairman PPP, Murad Ali Shah CM Sindh, Imtiaz Sheikh Minister Energy Sindh, Khursheed Jamali Chairman SECMC, Chinese CG Wang Yu & others addressing at inauguration of Thar Coal Power Plant.

networks are of prime importance among such civic facilities. The Thar coal energy project whenever achieves its optimal capacity would help the country save two billion dollars in foreign exchange every year. The Thar coal project was completed five months ahead of its schedule. The coal was extracted in Thar block-II on 10 June, 2018 while first generation unit of Thar coal power project was synchronized with the national grid on 18th March, 2019. As many as 52 Thari women were trained to serve as dump truck drivers to work in Thar coal mining project.

Sindh Energy Minister Imtiaz Ahmed Sheikh said on the occasion that Thar had been divided into 12 blocks keeping in view its vast coal reserves as this was the first block from where coal had been extracted.

He said that five more power generation projects would be installed in Thar as afterwards coal-based power generation from the desert area of Sindh would increase to 4,500 MWs.

The provincial Energy minister informed the audience that work had been started to extract coal from Block-I of Thar.

He said that electricity being generated from Thar coal was like a gift from people of Sindh for rest of the country. Electricity generated on Thar coal would serve as energy security of the entire country, he said.

Mr. Sheikh said that later on Thar coal power projects would serve as the

base-load for electricity production in the country. He thanked China for its active support to materialize the project.

Chinese Consul General in Karachi Wang Yu said that he simply could not believe that the project had been completed in such a short time.

He said that Thar coal power project was part of the China Pakistan Economic Corridor (CPEC) as it would serve as a model to be followed as how rest of the CPEC projects could be completed in Pakistan.

Chairman of Sindh Engro Coal Mining Company Khurshid Jamali said that last

eight years of the Thar coal mining project had been most arduous and laborious.

He said that capacity of coalfield of Thar Block-II would be increased to 20 million tonnes per annum as electricity produced on it would become cheapest in the country with the tariff of six cents per kilowatt hour.

He appealed to the federal government that from now onwards it should place a complete ban in the country on new power projects on imported fuel as electricity generated on indigenous resources of hydro power,



Billawal Bhutto, Murad Ali Shah, Nisar Khurho, Khusheed Jamali, Syed Qaim Ali Shah & others at Thar Coal

Exclusive Report

renewable energy, and Thar coal would be enough to meet power needs of the country.

Samad Dowood, Vice-Chairman of Engro Corporation, said that Engro would continue to support all the initiatives to uplift the lives of Thari people once more investors would join the venture to tap Thar coal energy.

Sindh Chief Minister Syed Murad Ali Shah said on the occasion that precious reserves of Thar coal belonged to people of Thar as Thar would bring change in the entire Pakistan.

The Sindh CM said that completion of Thar coal energy project was an occasion easily comparable with the earlier feat to make Pakistan a nuclear power. "Earlier Zulfikar Ali Bhutto commenced the work to make Pakistan a nuclear power while it is the Pakistan Peoples Party's government in Sindh, which started and completed the Thar

coal project," he said.

Chairman of Pakistan Peoples Party Bilawal Bhutto Zardari said on the occasion that completion of Thar coal power project was the manifestation of the good governance, delivery, and performance of the Sindh government of PPP. "This is also Naya Pakistan. This is how mega projects are completed," he said on the occasion.

He noted that PPP (Public Private Partnership) unit of Sindh government had been declared sixth in entire Asia in a recent survey of PPP regimes of all Asian countries conducted by the well-reputed world renowned magazine The Economist published from the UK.

He said that earlier Sindh government had done several major development projects under the PPP regime including construction of the longest bridge on the Indus River and Karachi-Thatta dual carriageway. ■

No oil, gas reserves found at Kekra-1: Petroleum Division

Offshore drilling at the Kekra-1 site near Karachi has found no reserves of oil and gas, according to an official of the Petroleum Division.

Hours after Prime Minister Imran Khan reiterated that there is a chance of discovering "massive reserves at the site by next week", the Petroleum Division said that the drill did not yield the desired results.



"ExxonMobil, ENI, PPL and OGDC were conducting the drill at Kekra-1. More than 5,500-metre-deep drilling was conducted but oil and gas reserves were not found. The drilling work has now been abandoned," an official told DawnNewsTV.

"The cost of the drill was estimated at Rs15 billion," he added.

Special Assistant to the Prime Minister (SAPM) on petroleum division, Nadeem Babar, also confirmed to Geo News that the search did not find any reserves.

The development came after Prime Minister Imran on multiple occasions fuelled the hopes of Pakistan "hitting an oil and gas jackpot" — the latest of which came earlier today during his speech at a fundraising event in Peshawar for the Shaukat Khanum Memorial Cancer Hospital and Research Centre.

"A well is being dug near Karachi, and it seems that we would know within one week ... and it is possible that we could find such a massive gas reserve that Pakistan would never have to purchase gas from outside," the premier said. ■

CSR Projects of SECMC & Thar Foundation



Govt should readily come up with new policy on hydro power sector to attract new investors:

Waqar Ahmd Khan, CEO Star Hydro Power

We are not in a position to take a decision whether or not to do investment for new projects we are intending to do as right now evaluation of these projects is being done. This is because the government's plan is not clear at the moment. Till the moment, this plan is not clear; the new prospective investors could not take a decision especially in the hydro power sector. The biggest issue in the hydro sector is that both its development and construction phase is relatively much longer as it attracts very serious investor only". This was stated by Waqar Ahmad Khan, chief executive officer of Star Hydro Power (a subsidiary of Korea Water Resources Corporation), which has completed the 147 Megawatts run-of-the-river Patrind Hydropower project in Azad, Jammu & Kashmir. Following are the important excerpts of his interview:



Energy Update: What is the current situation of power sector in your viewpoint?

Waqar Ahmed Khan: At present new policy is being made at the level of federal government. Apart from this, talks have been under way for integrated expansion plan in the power sector. Right now, all the things in the power sector are almost in a standstill position. The power sector projects, which are in the development phase, as whether they have to sign power purchase agreements with the government or they have to do the financial close, situation of all of them is quite complicated now.

The investors in power sector, who already had secured Letter of Intent, are now making the progress on their projects but without any encouraging signal from the government about

By Naeem Qureshi

the way forward. The situation of uncertainty in the power sector will exist till the time no clear signal is received from the government. The present situation is quite worrisome for the investors in the power sector.

EU: Has the present government done any consultation for the new policy?

Mr. Khan: The government definitely conducted consultation with concerned stakeholders for adopting a new policy for the renewable energy sector as a proper workshop was conducted for the purpose where all the relevant quarters were invited to have their input. For the other regular policy of the power sector, we have never been invited by the government to hold consultation on this issue.

EU: What are your future plans?

Mr. Khan: We are intending to do new projects whose evaluation is currently being done. We are indeed in a position where we could not take a decision whether or not to do further investment. This is because the present government till this moment is without a clear plan. Till the time the government lacks clarity in the power sector the prospective investors could not take a decision especially in the hydro power sector. The biggest issue of the Hydro power sector is that its development phase is quite long, which takes two to three years owing to involvement of land acquisition and similar issue. Then its construction phase is also quite long so hydro power sector attracts very serious investors having very strong financial and technical status. It is important that the plan of government



should be very clear about the hydro power sector this is because the prospective investor has to do very long-term planning in this sector. The construction phase for wind and solar projects is relatively quite short as the prospective investor in the renewable energy sector does have considerable maneuverability as that is not the case for the investor in the hydro sector. The investor in the hydro power sector needs clarity in policy on long-term basis. The government's policy should clearly state as to what extent and at what places it intends to utilize the hydro power. Such a kind of clarity is lacking these days. The prospective investors would not take a decision regarding investment owing to this lack of clarity.

One more important thing is that for the sake of expansion of hydro power sector of Pakistan, we should duly evaluate upcoming projects in the sector in order to verify their feasibility in terms of technical, financial, political viability.

EU: Is hydro power an exclusive domain of the federal government?

Mr. Khan: Both the power production and laying of the transmission lines have been the responsibility of the federal government so the input of federal authorities concerned has been naturally more in this domain. The water resources, however, comes under the provincial domain as per the Constitution. The provinces in the country especially Khyber Pakhtunkhwa, have been trying to develop this resource. The KPK does have both resource and potential for hydro power sector. The provincial governments will definitely and ultimately get involved in this domain. But real progress on this issue will only happen when the federal government comes up with a clear policy on the issues as to when the transmission line will be laid for such

projects and ultimately who will going to purchase this electricity. The planning alone on the part of the provincial governments will do no wonder in this regard until and unless the provinces enter into B2B-like arrangements for selling electricity it produces or else they find purchaser of the electricity on their own. The input of federal government will remain critical in this sector in near or medium term future.

EU: Tell us what the provincial government of KPK could particularly do in this regard?

Mr. Khan: A provincial government like that of the KPK does have more influence in the federal government as compared to a private organization. So in this regard the KPK government has to take the initiative for sitting along with the federal government so that a policy on hydro power could be announced in the country at the earliest. Secondly a clear-cut time frame should be announced to resolve issues related to interconnection of hydro power projects with the national grid. The KPK government has to take the lead in persuading the federal government to get these issues resolved at the earliest. Such an initiative would allow prospective investors in KPK to work on hydro power projects with fullest commitment.

EU: What is the performance of your newly commissioned Patind Hydro Power project?

Mr. Khan: The operational performance of our project has been exemplary so far. The availability of the project in the last year remained 99.75 per cent. The power purchase agreement says that the project should remain available for up to 93 per cent though we have surpassed this target. Last year was the year of drought, which meant less availability of water to the project as we produced

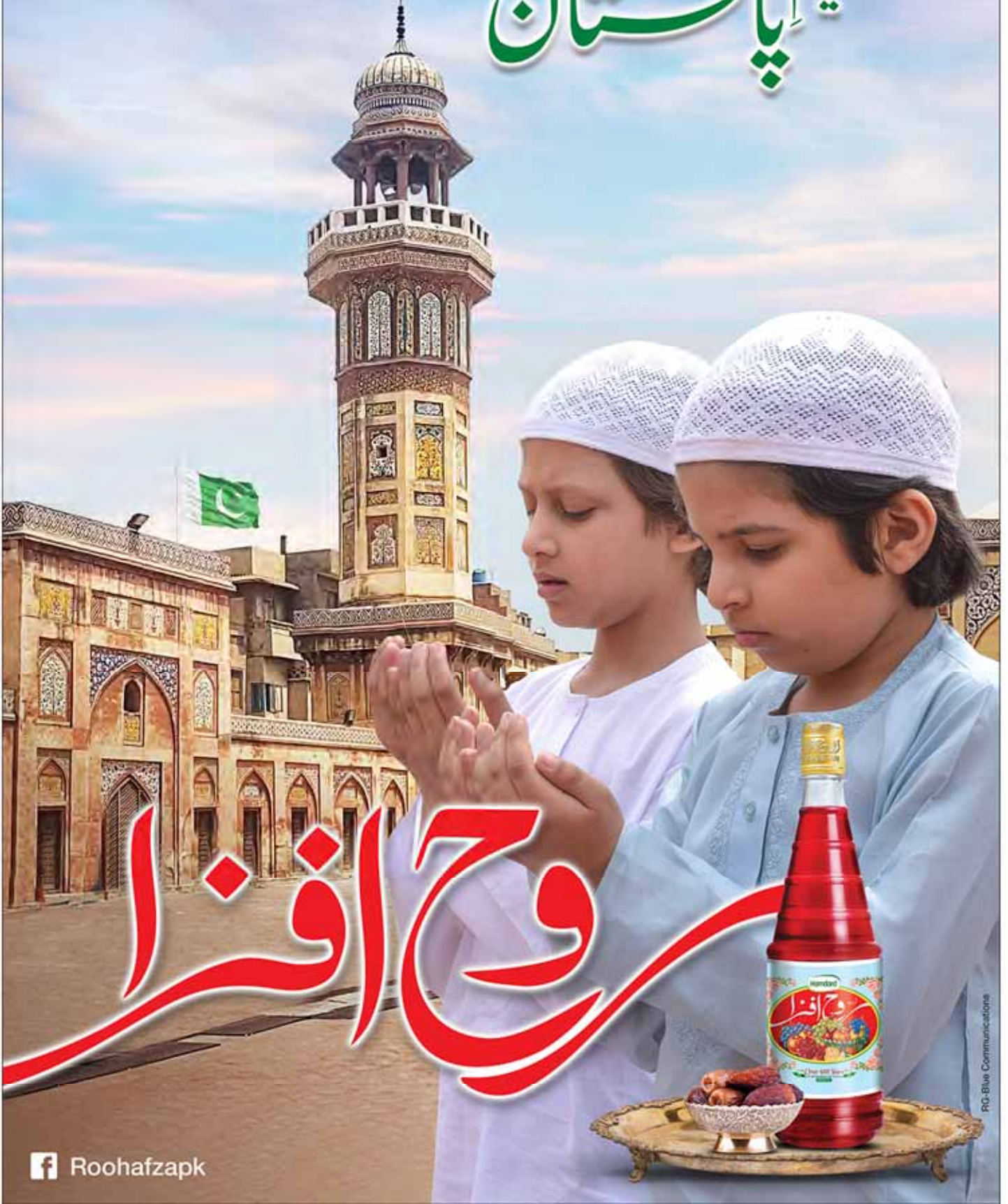
less electricity accordingly. The water available to the project was less than our expectation so electricity production was also below average. The project has been producing and delivering electricity without any hiccup. Still our main point of concern for the project is the availability of its main transmission line that will be used to connect it to the national grid in Mansehra. This transmission line is yet to be laid though one-and-half years have passed since commissioning of the project. One should also take into account previous five years in this regard, which had been spent to construct the project. This was the responsibility of the NTDC. Right now we have been supplying electricity through a small transmission line connecting the hydro power project with the Muzaffarabad grid. This small transmission line has to be balanced very delicately in order to avoid tripping. At the moment the project has been producing electricity ranging between 115 Megawatts to 118 Megawatts. Next month our power production will be increased to 147 MWs to 148 MWs. Our problems will be increased in the coming summer months due to unavailability of the main transmission line.

EU: What are the CSR-related aspects of your power project?

Mr. Khan: We have been engaged in skill development of local population. We have been also running internship and scholarship programme for local students. Women have also become included in our skill development programme. We are also doing tree plantation in the area. We are also going to start research projects in collaboration with the local universities. Apart from this, before commencement of the construction phase of the project, we offered very generous compensation to local population for acquiring land for the project. ■

Hamdard

ماہ رمضان
قیام پاکستان



روح افزا

Govt should evolve a policy for Oil Refinery business in Pakistan

By Raziuddin Razi

Pakistan is a growing economy and a nation of 225 million strong consumer orientated people. The consumers have high demand for energy, primarily petrol, jet fuel, kerosene and diesel. Therefore, it makes economic sense and financial viability to establish small indigenously designed and fabricated refineries in Pakistan, along with small Oil Marketing Companies (OMC). The petroleum products produced by these refineries can be sold without a hitch because Pakistan is a petroleum deficit country. 5000 to 40,000 BPD sizing has been selected because of affordable equity by the local business persons and comparatively low capital cost per barrels per day compared to large refineries. 5000 to 40,000 BPD refineries can all be indigenously manufactured in Pakistan thus eliminating high seas transportation costs.

Petroleum Products Marketability:

The aforementioned Demand and Refining Capacity analysis shows that Pakistan at present has a serious Oil Refining Deficit of more than 300,000 BPD and by 2030 the deficit would be a staggering 600,000 BPD, even after including the Saudi 300,000, FWO 40,000 and KRL/SPEC 20,000 BPD refineries which are at initial stages. Therefore, petroleum products from a number of 5000 - 45000 BPD will be absorbed/sold without an issue.

Economics: Demand of 1.2 Million Barrels per day is conservative, in case of 7% GDP growth rate the demand figure

could be higher. Each day Pakistan imports petroleum products means loss of precious foreign exchange. I would not dwell on refining capacity in the neighborhood to make my case but would emphasize that refineries would create thousands of jobs for the professionals, skilled and unskilled, enhance fragile energy security, create intellectual base, engage much lying idle fabrication facilities and much more. Each barrel of petroleum products Pakistan means loss of \$ 4 to 10 per barrel. In 2018, Pakistan imported on a daily basis 312,776 barrels on an average that means \$2 Million lost daily or simply \$ 700 Million lost annual,

excluding jobs and GDP losses.

Refining and Marketing Policy:

Present, the Policy was prepared without much of public debate. Collective wisdom always pays-off therefore, it is suggested that the Government and OGRA holds some debate and discussion to evolve a fruitful policy.

Pakistan needs Large and Small Refineries:

Large refineries also need to be encouraged. However, large refineries like the KSA 300,000 bpd and Chinese 250,000 bpd are all FDI that require considerable time for financial close, manufacturing and installation, perhaps 6 to 8 years. Needless to say, a small refinery 5,000 to 40,000 would not require more than 2 to 3 years. Time saved in small refineries is of high benefit to the economy. Since these small refineries can be built by local investors and entrepreneurs therefore, the profits and related debt service will also be local and remain within Pakistan. It would be a highly beneficial for Pakistan to have KSA and



Pakistan Demand and Refining capacity is as follows:

	Demand	Refining Capacity Nameplate	Refining Capacity Actual/Derated	Refining Deficit
2018	28 MTPA[1]	19.37 MPTA	12.78 MTPA	15 MPTA
2030	60 MTPA	37.00 MPTA	30.00 MTPA	30 MPTA
2018	575,342 BPD[2]	398,014 BPD	262,566 BPD	312,776 BPD
2030	1,232,877 BPD	763,014 BPD	627,566 BPD	605,311 BPD

Chinese refineries asap and simultaneously local investors and entrepreneurs build 5000-40000 BPD refineries.

Level Playing Field: Due to unknown reasons the previous government announced 20 years of Income Tax exemption for refineries above 100,000 BPD, only. This had put the Pakistan investors and entrepreneurs at a disadvantage. No Pakistani has the financial muscles to install a new 100,000 BPD refinery therefore, the law was discriminatory. Hopefully, the present government would remove this anomaly and extend similar exemptions to all refineries regardless of size. This will give impetus to local engineering and manufacturing by way of refining industry. During recent past some 6 small refineries were being worked upon of which one 40,000 and another 20,000 have started construction despite of having put on a disadvantage due to unfair Tax regime. Other two packed up and left, while two are on wait and see mode.

OMCs to come in all sizes:

Through collective wisdom will come ingenuity. Small OMCs need also be encouraged, of say 5000 BPD sales volume without any compromise on safety and quality. This will counter the Dabba Pumps in the rural areas and also discouraged smuggled spurious petrol and diesel. The Government requires some Rs 3 Billion investment for someone to get into firs petrol pump. This needs to be re-visited. Recently, the government put a ban on issuing new OMC licenses; this is counter competition measure and issuing of licenses needs to be restarted. Pakistan is a growing country therefore, needs more investors and entrepreneurs; as well as jobs.

Petroleum Products Specifications:

Euro IV is a great cliché. Do we really need to live with Euro IV luxury? Did EU live with Euro IV during its nascent years? We have very small vehicle population in rural areas, so why Euro IV? There is an urgent need to debate the specs so that country does not waste precious money unnecessarily. We need to ponder whether we need speed from 0 to 100 km/hr in 4 seconds or do we need Brake Horse Power. Pakistan has not yet achieved the affluence scale to opt for sporty speed life style. RON, Benzene, Aromatics and CST are candidates to be adjusted to our life style.

Indigenous Refineries: Of course, Pakistan is not ready to indigenously design and/or fabricate refineries over 45,000 BPD but 5000 to 40000 can designed, fabricated and financed easily in Pakistan by ENAR, HMCs, Shipyard, DESCOR, Etimaad, Habib Rafiq, Suffolk, FRR etc. Also, financing can be arranged in PKR by consortium of local banks. This would make debt service in PKR. This model will make aforementioned design and fabrication shops buzzing with business and employment of our younger generation. Expected EIRR is around 20-30% by coupling a 5000 Barrels per day refinery with OMC, while the Capex would be around \$50 Million and Equity \$ 12.5 Million (Rs 1.8 Billion). Prudential regulations allow Debt/Equity of 75/25 and further 10% bridge financing making even easier on the investors. Selling off 20% shares near or after COD as allowed by SECP would further improve EIRR. Financing cost is a real killer of business in Pakistan. We hope the SBP would realign Policy Rate so that financing becomes reasonable and competitive with neighboring countries.

Energy Update may call a brain storming session too evolve a policy and strategy for the Oil Refinery business in Pakistan and export of small refineries to developing and less developed countries. ■

An army officer wrote a love letter to his girlfriend!!



Dear Naazneen,

Subj: Offer of Love!

I am very happy to Inform you that I have fallen In love with you since the 14th of Feb 2019, with reference to the meeting held between us at 15:00hrs at Pizza Hut F7 Islamabad.

I would like to present myself as a prospective lover.

Our love affair would be on probation for a period of three months and depending upon compatibility, it would be made permanent.

Upon completion of the probation period, there will be a continuous on-the-job training and performance appraisal schemes leading up to promotion from lover to spouse.

The expenses Incurred for coffee and entertainment would be initially shared equally between us.

Later, based on our progress, I might take up a larger share of the expenses.

However, I am broadminded enough to take care of your expense account.

Request you to kindly respond within 7 days of receiving this letter, Failing which, this offer would be deemed cancelled without further notice and I shall be considering someone else.

I would be happy, if you could forward this letter to your sister, if you do not wish to take up this offer.

Kindly acknowledge receipt. Wish you all the best. Thanking you In anticipation,

Yours sincerely



The pic says a lot about the father's effort, but the kid only see's the mother's love ~
Usidame
Alfred
Ifidon

ABB

Frequency Inverters
PLCs & Motors



multitek

Energy Analyzer, Current, Voltage, Frequency, Transducers & Relays



Schneider Electric

Frequency Inverters and Soft Starters

Danfoss

INDUSTRIAL CONTROLS & INSTRUMENTATION



PEPPERL+FUCHS

FACTORY AUTOMATION Inductive, Capacitive & Magnetic Sensors, Photo Electric Sensors, Ultrasonic Sensors, Rotary Encoders, Counters & Speed Monitors, ID Systems & AS-Interface.

PROCESS AUTOMATION Signal Conditioner/ Barriers, Intrinsically Safe Modules, Remote Process Interface, Intrinsically Safe Field Bus, Level Control Sensors, Process Measuring & Control Systems.

Solenoid Valves
Pressure Switches
Thermostates
Contactors & Relays
Pressure Transmitters



Honeywell

Flame Programmers
U V Sensors
Pressure Switches
Gas Actuators
Valve bodies
Modutrol Motors
Digital Controllers
Circular Recorders
Paperless Recorders
Temperature/Pressure/
D.P. Transmitters
Micro Switches
Limit Switches



TARIQ AUTOMATION

A Sister Company of Tariq Electric House

Ground Floor, Saify Development Chamber, Moti Masjid Near Denso Hall, M.A. Jinnah Road, Karachi-74200, Pakistan.
Tel: (+92-21) 3262-8409, 3263-9178 Fax: (+92-21) 3262-4460 Email: info@teh-ta.com, teh@super.net.pk

Govt should support local firms for a strong participation in CPEC

A formal chat with Najeeb Ahmed, Director Albario Engineering

By Engr. Nadeem Ashraf

The government needs to support the local engineering and construction companies to play a larger role in CPEC and infrastructure development, says Najeeb Ahmed, Director Albario Engineering in a formal chat with Energy Update.

EU: Please inform about the basic functions performed and services provided by Albario Engineering?

Najeeb Ahmed (NA): Albario Engineering (Pvt) Ltd, is a one-window solution provider in the fields of energy, industrial solutions and infrastructure. The Group excels in diversified business activities, ranging from Electro-Mechanical Contracting to Civil Construction, Operations & Maintenance, Turn-around and Rehabilitation Services, Fabrication, Technical Trainings, Real Estate Infrastructure Development and Manufacturing of Transformers.

EU: What is your edge in the industry?

NA: With decades of experience under its belt, Albario has the capability of implementing novel energy solutions to produce reliable, efficient and competitive results for its partners and customers.

We have a highly capable team to provide timely maintenance / shutdown services for oil & gas and energy sector, handling gas turbines, steam turbines, other rotating equipment, balance of plant and electrical equipment.

Similarly, our Inspection & Testing Services Division ensures that customer assets are tested, monitored and maintained with the highest level of integrity.

Our infrastructure and construction wing is busy in supporting cement, petro-

chemical, refineries and other industrial complexes to rehabilitate and upgrade their facilities and building real estate housing and infrastructure projects to fulfill the housing needs in the country.

EU: What are the new sectors and areas of the industry and businesses where Albario has been providing services?

NA: Recently, our focus has been on the renewable sector, where we are a leading operations and maintenance company working 24/7 on multiple wind projects in Jhimpir, Sindh covering the balance of plant and wind turbine services. Similarly, we are AEDB approved net-metering contractor, executing multiple solar projects. GRIT, our company manufactures distribution transformers of various ratings.

EU: In what manner the Albario could provide support to Pakistan to build a strong relationship with foreign countries in terms of export?

NA: Albario has been actively executing projects and performing specialized power plant maintenance services in various countries including UAE, Iraq, Saudi Arabia, Qatar, Oman, Nigeria and Morocco. Our dedicated and hardworking expat crew works internationally to bring in much needed foreign exchange for the country.

EU: What important role the Albario could perform in expansion, upgrading of Pakistani energy and engineering sectors?

NA: The Company is a humble contributor in supporting its foreign OEM



and construction partners and lead Chinese EPC. Companies in building over 9,000 MW combined-cycle, thermal and renewable projects across Pakistan and in the region including some CPEC projects. AEPL is supporting its foreign operations maintenance partners in managing over 5,000 MW power projects on a long-term basis, covering both fossil and renewable technologies.

EU: What is your viewpoint about the current state of Pakistani energy and engineering sector?

NA: We have seen large additions in our generation capacity recently and now we need to improve, rehabilitate and expand our transmission and distribution network. The government needs to support the local engineering and construction companies to play a larger role in CPEC and infrastructure development. Export oriented industries must be built in economic zones to boost high valued engineering exports as well.

AEPL is in the process to create a better future for all and committed to produce and deliver reliable power to the people of Pakistan ■

Combating Climate Change Is A Must-Win Battle: Governor Sindh

Fighting climate change is the most important war that we need to fight right now. This was stated by Imran Ismail, Governor Sindh while speaking as the chief guest at the Climate Change, Summer & Monsoon Safety Awareness Seminar organized in Karachi, in collaboration with NDMA, PMD, JPMC and K-Electric.

The governor also said that the focus needs to be on precaution and prevention as peak summer approached. He lauded the initiative by K-Electric to partner with key stake-holders for summer preparedness and appreciated the fact that the awareness drive is on an even bigger scale this time. Ismail also said that Green Pakistan initiative is a part of the government's efforts to limit the impact of climate change in the country and in Karachi. He appealed to civil society to come forward and become a partner in this initiative by adopting a

Lieutenant General Omar Hayat, Chairman NDMA said that Pakistan is one of the most disaster-prone countries in the world. "From 1947 to 2010 we lost USD 19 billion to floods. From 2010 to 2019, we have lost USD 19.5 billion to floods alone."

"We have faced all kinds of disasters, both natural and man-made and will mostly likely face them again. Our preparedness is better but nowhere close to where we need to be and our urban centers are particularly at risk because of unplanned growth," he said. "There can never be too much awareness about disasters, and we must make Karachi resilient, to make Pakistan resilient."

The Pakistan Meteorological Department has always been at the forefront on any initiative related to climate change and Abdur Rasheed, Chief Meteorologist, Karachi highlighted the imminent threat to Pakistan with regards to global warm-



perature, air pollution and water shortage are the three key issues we will face because of climate change," Rasheed also said.

Ikram Sehgal, Chairman, K-Electric welcomed the collaboration towards increased and improved summer and monsoon preparedness. He said KE would extend full support to the Provincial Disaster Management Authority (PDMA), Rangers and various NGOs who will be setting up heat protection camps across the city. He further said that KE would also act as facilitator in first-aid capacity building workshops in Karachi for around 1,000 volunteers in collaboration with The Youth Parliament.

Earlier, Fakhar Ahmed, Chief Marketing and Communication Officer of KE spoke about the power utility's summer preparedness through the strengthening of its network and system and by beefing up the on-ground work force through capacity building and technological advancement. He expressed the hope that the presence of key stakeholders under one roof would result in better inter-agency coordination and help in providing effective support to combat the impact of climate change.

Iftikhar Shalwani, Commissioner Karachi; Dr. Seemi Jamali, Executive Director, JPMC; Amir Zafar, Chief HSEQ, KE and Azmat Hayat, Additional DG, PMD also spoke on the occasion and briefed the participants about the threats from climate change and preventive and protective measures to take in the peak summer months. The speakers also highlighted the collective role of civic and government bodies as well as the citizens of Karachi to not just highlight and report cases of power theft but to also conserve electricity consumption during peak hours. ■



tree.

The Climate Change, Summer & Monsoon Safety Awareness Seminar brought together participants from the National Disaster Management Authority (NDMA), Provincial Disaster Management Authority (PDMA), Pakistan Meteorological Department (PMD), Jinnah Postgraduate Medical Center (JPMC), K-Electric (KE) as well as members of civil society who engaged in a series of panel discussions to highlight the issues facing the country and its economic hub, Karachi and also tried to come up with possible solutions.

The guest of honor at the seminar

ing. He said that Pakistan is ranked 135th in generation of greenhouse gases but 8th in the rank of countries that are at risk from climate change. "This basically means that the people of Pakistan in general, and the citizens of Karachi in particular will have to be more prepared than ever to minimize the impact of environmental degradation on the quality of life and economic growth."

"Among the most severe threats we face is water shortage. According to the UNDP we can save only 9% of our flood-water and the impact of this will continue to become worse until 2025. Rise in tem-

Sarsabz o Pursakoon Karachi Tree Plantation Campaign

PM's aide lauds forestry campaign kicked off in Sindh to plant two billion trees in five years

Advisor to Prime Minister on Climate Change Malik Amin Aslam has said that around two billion trees will be planted in Sindh in next five years under a recent greenery drive launched by Sindh Forests Department in collaboration with the like-minded non-governmental organizations including the National Forum for Environment and Health (NFEH). The Advisor to PM stated this on Wednesday while speaking at the launching ceremony of a tree plantation campaign here at PIA Township.



He lauded the recent initiative of Sindh Forests Department to promote urban forestry in the province in line with the tree plantation campaign of the present government.

Mr Aslam said on the occasion that up till now 150 million tree saplings had been planted in the entire country under the drive of the present government to do afforestation under the banner of Green and Clean Pakistan initiative.

He said that plantation drive would be done in the country with the help of the major national institutions and public sector organizations like the Pakistan In-

ternational Airlines.

Also speaking on the occasion, CEO and President of PIA Air Marshal Arshad Malik said that tree plantation campaign had been kicked off in the areas around PIA Township, surrounding roads, streets, and playgrounds in Karachi.

Famous cricketing legends Wasim Akram and Sarfaz Ahmed also attended the ceremony. While speaking on the occasion, they appealed to the children and other people to wholeheartedly take part in the tree plantation campaign under aegis of the present government.

Also speaking on the occasion, NFEH President Muhammad Naeem Qureshi said that his NGO had been supporting tree plantation campaign at a number of locations in the city keeping in view ad-

vent of the spring season.

He said that playgrounds and vacant fields of the PIA would be utilized to plant 5,000 tree saplings during the current campaign to promote greenery. He said that awareness among masses would also be promoted to make them educate about importance of tree plantation in urban areas.

The distinguished guests on the occasion planted tree saplings at the park of the PIA Township along with children and also visited school of the area.

Others who attended the ceremony included Director Sports of PIA Shoaib Mohammad, its GM Sports Shoaib Dehri, NFEH Secretary General Ruqiyah Naeem, Engineer Nadeem Ashraf, and Mustafa Tahir. ■



MoU signed for production of transport products under CPEC

A memorandum of understanding has been signed, which will allow manufacturing of Chinese transport vehicles and related technology in Pakistan to reap the benefits of China Pakistan Economic Corridor (CPEC) project.

The Rawal Industrial Equipment and Malik Group of Companies entered into the agreement in this regard at a ceremony held here at a hotel. Chairman and CEO of Malik Group of Companies Malik Khuda Baksh and CEO of Rawal Industrial Equipment Farrukh Kamal signed the MoU on the occasion.

Speaking on the occasion, Mr. Kamal said that his company had been formed some four years back in view of the increasing trade relations between China and Pakistan in the backdrop of the CPEC.

He said that assembly plant for the indigenous manufacturing of the transport vehicles and related technology was being established at Dawoodkhel in District Mianwali, which is situated on the route of the CPEC. The assembly plant will start its production by the end of current year. He said that his unit would initially create up to 5,000 job opportunities.

He said that one of the prime productions of his assembly plant would be luxury buses whose demand in the country would increase with tourism prospects increasing in Pakistan. Trucks, tankers, excavators, prime movers, earth moving machinery, and related technology will also be assembled at the



plant.

Speaking on the occasion, Malik Khuda Baksh said that the main reason his company had entered into the agreement was the massive demand for buses for public transportation in urban parts of Sindh including specialized vehicles required for the proposed Bus Rapid Transit System in Karachi.

"This is really need of the hour," he said while adding that he had been in contact with Sindh Transport Department to introduce such buses of Chinese-origin for public transportation service in cities like Karachi. Ayesha Malik Director of Malik Group, Chinese Investors were also attended the ceremony. ■

2500 trees to be planted in PIA Township under drive to promote greenery in Karachi



A target of planting 2500 tree and plant saplings here in PIA township area and in its surroundings was set as 1200 saplings have already been planted under a campaign to promote greenery in Karachi.

The information to this effect was passed on to the participants of a programme held here at the PIA Model School to mark the Earth Day-2019. The audience was informed that the PIA and National Forum for Environment and Health (NFEH) had joined hands to do this campaign to promote greenery.

Speaking on the occasion, Company Secretary of PIA Muhammad Shuaib said that 1200 tree saplings had already been planted in PIA Township and in its surrounding areas that included Lemon, Berry, Gul Mohar, and Jambul trees. He said that efforts were under way to plant 2500 more tree saplings in the area.

He expressed gratitude to the NFEH for organizing the event to mark the Earth Day at the PIA Township. "It is our desire that every student of this school takes part in the plantation campaign as later on he should also take care of the sapling planted by him or her as such an activity would help the students know more about the importance of plantation drives," he said.

Also speaking on the occasion, NFEH Vice-President Khalid Iqbal said that his non-governmental organization had been doing tree plantation in Karachi for last four years.

He said that under a campaign to promote urban forestry in which NFEH was also taking part, 10,000 plant saplings had been planted in Shaheed Benazir Bhutto Park in Boating Basin area. He said that NFEH had joined hands with the PIA to make Karachi a green, calm, and serene city. "It is the duty of every resident of this city to make Karachi a green and livable city," he said.

He said that promotion of greenery could only prevent extreme weather conditions during peak summers that could cause heat wave like situation. He said that residents of the city should know about drawbacks and disadvantages of the alarming phenomenon of environmental degradation.

The area residents of PIA Township were also briefed on the occasion about importance of tree plantation campaigns and problems being caused due to the phenomenon of the environmental degradation. The school students and PIA Scouts on the occasion took part in the tree plantation campaign in different parts of the PIA Township.

The students, teachers of the PIA Model school, PIA Scouts, Mustafa Tahir and Mohammad Ali of NFEH also took part in the event. ■

GOING SOLAR? GO WITH REC

- Secure investment with a global, bankable manufacturer
- Energy production that will pay for itself
- Ideal for all types of installations worldwide
- Reliability of a strong and experienced European brand



**ROBUST AND
DURABLE DESIGN**



**100%
P.D. FREE**



**MORE POWER
PER M²**



IRENEC 2019, Istanbul

Team Energy update participated in Conference

The Energy Update was proudly associated with the "9th International 100% Renewable Energy Conference" (IRENEC 2019) held in Istanbul, Turkey from April 24 to April 26, 2019.

A delegation of Energy Update, which is one of the media partners of the three-day international moot, attended the conference. Managing Editor of Energy Update Muhammad Naeem Qureshi led the delegation. Engr Nadeem Ashraf and Ruqiya Naeem were also attended the conference

Naeem Qureshi on the occasion shed light on the massive potential of Sindh province in Pakistan-also the home province of the EU-to generate renewable electricity using wind and solar power available there in abundance throughout the year.

He said that Pakistan's only wind corridor, which was producing over 1,100 MWs of clean electricity, was situated between Jhimpir and Gharo areas in the Sindh province. He said that Gharo-Jhimpir wind corridor having massive potential of renewable energy generation was situated next to Karachi, which was considered as the economic and industrial hub of Pakistan.



He said that clean electricity generated from Gharo-Jhimpir wind corridor could go a long way in expansion and growth of business and industries activities in Karachi as for the purpose the concepts of smart grids and provincial/local transmission and dispatch systems had to be materialized. Mr. Qureshi on the occasion explained the challenges being faced by the Pakistani government in increasing the share of clean electricity in the national energy mix for saving the precious foreign exchange reserves and also to safeguard the physical environment.

On the occasion, Tanay Sidki Uyar, who is the Conference Chair of IRENEC 2019 and President of Renewable Energy Association of Turkey, said: "In our journey of promoting 100% Renewable Energy, we have arrived the 9th stop where we shall again share our research results and other achievements". "Every day we are discovering and practicing the good quality of renewable energies. The genie is out of the bottle," said Mr Uyar.

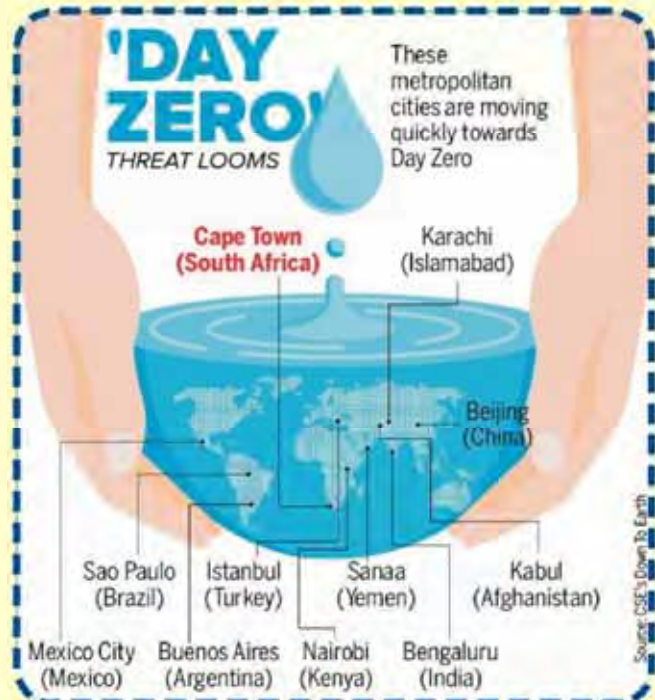
"As the main energy source of living space on earth, sun



and its derivatives were available before, are available today and will be available in the future. Global support provided for the renewable energy made the market penetration of renewables possible," said the president of the Turkish Renewable Energy Association.

"During IRENEC 2019 we learnt from the global experiences on difficulties, barriers, opportunities and solutions for transition to 100 % renewable energy societies and make our contribution to Global Transition to 100% Renewable Energy," he added.

One of the keynote speakers of the conference, Dr. Osman Benchikh, Ex-Head of Energy Programme of UNESCO, said that sustainable development underlines the need to manage energy resources judiciously; on the other hand, no development can occur without access to basic energy services. ■





Downlights



Commercial Lights



Track Lights



Industrial Lights

UPTO
80%
ENERGY
SAVING
LIKE NEVER
BEFORE

BENEFITS



Instant start

Coarts LED light glows instantly with its natural and cooling effect better than similar products.



Superior light Quality

The LED light gives you the right brightness without compromising quality.



Saves up to 80% energy

Saves up to 80% more energy than other conventional lights.



15x longer lifetime

LED lights last up to 15 times longer than other filament lights and twice the fluorescent energy savers.



Free of Hazardous substances

Coarts LED lights are safe and do not use hazardous substances.



IR and UV Free

The infrared-free LED lights do not radiate heat and ultra violet rays making fabric and items underneath the light decoloration proof.

WHY CHOOSE COARTS?

Coarts Lighting Solutions understands your lighting needs and helps you achieve the desired lighting outcome/ambience. It gives you fine brightness, efficient wattages and quality without any compromises because to us it is not just about lighting up a space it's about reshaping lives for the future.

PPL bags top award for corporate philanthropy

Pakistan Petroleum Limited (PPL) was declared largest corporate giver on account of volume of donations for 2017 by Pakistan Centre for Philanthropy (PCP) based on their regular annual survey of corporate philanthropy trends in the country. This is the 14th consecutive year in which PPL has received the award in this category.

DMD (Coord.) Khalid Raza and GMCS Furqan Uddin Sheikh of PPL jointly received the award from eminent businessman and Pro Chancellor, Lahore University of Management Sciences, Syed Babar Ali during Pakistan Philanthropy Forum 2019 organized by PCP at Institute of Business Administration, Karachi Campus, on March 20. The event was attended by a large gathering of business leaders, development organizations and media.

As a responsible national company, PPL has remained committed to serving the nation and spurring development over the last six decades through its diverse and long-term Corporate Social Responsibility (CSR) programme. With a minimum spend of 1.5 percent of pre-tax profit, the company's actual CSR spending exceeds that threshold. During 2017-2018, for instance, the company spent Rs. 1.171 billion on CSR initiatives, which works out to about 1.85 percent of pre-tax profit.

PPL's CSR programme focuses on need-based interventions



in education, healthcare, livelihood generation and infrastructure development for underserved communities residing around the company's operational areas as well as in urban centres. To maximize long-term impact of its development initiatives, the company ensures conception and implementation through a participatory process, involving local stakeholders, followed by close monitoring and inspection to extract lessons learned for further improvement. ■

Hamdard Pakistan and PIA signs MoU

Hamdard Pakistan and Pakistan International Airlines have signed a memorandum of understanding (MoU) under which Rooh Afza carbonated drink - "RoohAfza Go" will be served to onboard passengers during Iftar time in PIA's flights and it will also be available in markets in Karachi. Syed Faizullah Jawad, Director Marketing and Trade on behalf of Hamdard and Muhammad Amir Memon, General Manager, Brand Management, representing PIA signed the MoU.

Speaking on the occasion, Amir Memon said: "PIA is the national airline and RoohAfza is the national syrup of Pakistan therefore, this partnership is natural. "RoohAfzaGo will be served at Iftar time to the in-flight passengers of PIA at the height of 30 to 35 thousand feet during the month of Ramazan",

he added. He showed great joy on the inclusion of RoohAfza in the PIA menu and reiterated that this relationship would continue for a long run. He further stated "It will be our pleasure to take feedback on "RoohAfza Go" from passengers."

Mr. Usama Qureshi, Managing Director and CEO, Hamdard said "Keeping in view of the blissful holy month of Ramazan, we entered into this deal to facilitate the passengers of PIA for Iftar. "We will continue to explore more horizons for strengthening mutual co-operation. He further said "Pakistan came into being on the 27th Ramazan and Shaheed Hakim Mohammed Said always has celebrated the 27th Ramazan as Pakistan's Independence day. Hamdard has upheld this tradition even after his shahadat. ■





INC ENGINEERING

Introduction

INC Engineering (INC), true to its name, it offers dynamic experience with extensive synergy and deals in Consultancy, Engineering and supply of equipment, OEM parts in the field of Foods & Beverages, Process, Chemicals, Fertilizers, renewable energy, power generation and industrial process plants. The standard of electrical and instrumentation construction varies from industry to industry and INC have developed highly qualified teams, trained by our principals, guarantees the selection of the most suitable equipment and reliable after sales services to cater for the needs of our clients or achieve their objectives



SIEMENS



NOVUS

We Measure, We Control, We Record

Honeywell



ROSEMOUNT

ABB

EMERSON

BELDEN
SENDING ALL THE RIGHT SIGNALS



Allen-Bradley

Contact Detail

Basit Tower, 4th Floor, FL-24,
Gulshan-e-Jamal, Opp:
COD, Main Rashid Minhas Road,
Karachi Pakistan
Tel: +92-21-38651033,
Fax: +92-21-38651036,
Email: sales@inc-eng.com,
www.inc-eng.com

Our Key Brands



WOODWARD



**SCHALLER
AUTOMATION**

MONTHLY ENERGY UPDATE

www.energyupdate.com.pk



SPECIAL Anniversary Offer

Save upto Rs. 400/- on 1 Year subscription (12 Issues)

Rs. 3800/-
(Including Courier Charges)

For subscription, advertisement contact:

Tel: (92-21) 3565 3676, 3567 4570,
Email: energyupdate@gmail.com

www.energyupdate.com.pk

EnergyUpdate (Official)



KP has potential of generating thousands of megawatts electricity - Himayat Ullah Khan



Khyber Pakhtunkhwa Advisor to Chief Minister for Energy and Power, Himayat Ullah Khan has said that Khyber Pakhtunkhwa has huge reservoir of energy where these natural resources can generate thirty thousand megawatts of electricity while the government is also in

need of private sector cooperation in order to get the country out of energy crisis.

Khyber Pakhtunkhwa Advisor to Chief Minister for Energy and Power, Himayat Ullah Khan has said that Khyber Pakhtunkhwa has huge reservoir of energy where these natural resources can generate thirty thousand megawatts of electricity while the government is also in need of private sector cooperation in order to get the country out of energy crisis. He was addressing to a national conference on Innovative partnership to Accelerate Sustainable Energy in Khyber Pakhtunkhwa. The conference was jointly organized by Khyber Pakhtunkhwa Energy department and US Pakistan center for advanced studies in energy, University of Engineering and Technology, Peshawar.

The Ambassador of South Korea, Vice

Chancellor University of Engineering and Technology, Peshawar Dr. Iftikhar Husain, Additional Chief Secretary Mr. Shahzad Bangash, Secretary Energy Mr. Sarfaraz Durrani, Center for Advanced Studies in energy Dr. Najeeb, Chief Executive Officer PEDO Mr. Bahader Shah were attended the conference.

The purpose of the conference is to bring together government officials, energy sector professionals, academicians and representative from donor agencies and private firms to discuss investment opportunities in the province's energy resources.

Advisor to Chief Minister said that in current provincial government several power projects are being done rapidly, which will generate a total of 220 MW of electricity, for the purpose of producing oil and gas reserves in the southern districts of the province, private investment is required to start work on multiple blocks.

Mr. Himayat Ullah Khan said that the current government is working on numerous energy projects which will overcome the current energy crisis while these power generation will generate four thousands MW power, which will be a major source of employment as well as the stability of the province's economy in the coming days.

He said that further steps are being taken to develop the energy sector in light of the instructions of Chief Minister Khyber Pakhtunkhwa. ■

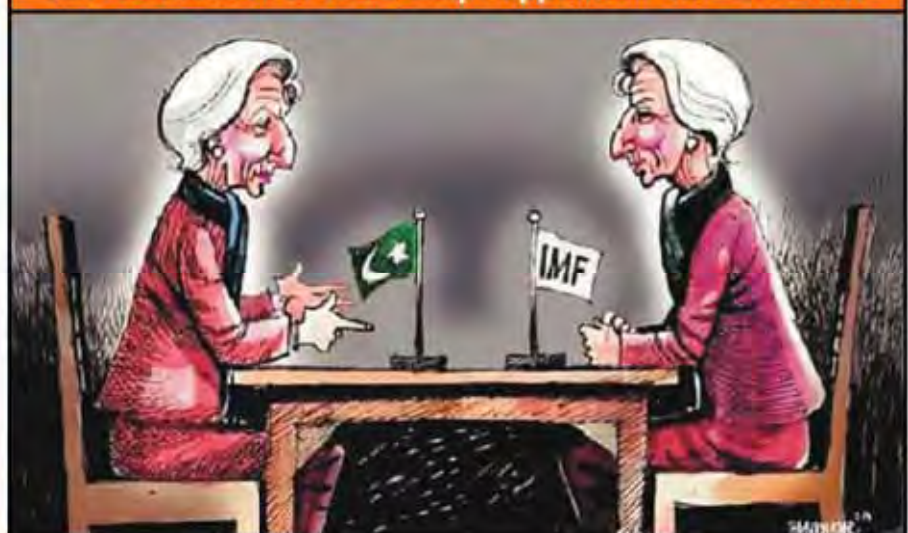
OGDCL discovers gas in Mangrio

Oil & Gas Development Company Limited (OGDCL) has discovered Gas and condensate oil from its Exploratory cum appraisal Well Mangrio # 01 in Nim Block, located in District Tando Muhammad Khan, Sindh. OGDCL has 95% share in the Block and is the operator with 5% share holding of Government Holding Private Limited (GHPL).



The Structure of Mangrio Well # 01 was delineated drilled and tested using OGDCL's in house expertise. The well was drilled down to the depth of 2676 Meters. The well has rested 10.44 MMSCFD gas, 120 BPD condensate through choke size 32/64" at Wellhead Flowing Pressure 2085 Psi from Lower Gru B-Sand. The discovery of Mangrio Well # 01 is the result of aggressive exploration strategy adopted by the Company. It has opened a new avenue and would add to the hydrocarbon reserves base of the OGDCL and of the country. ■

IMF Economist Dr Reza Baqir appointed SBP Governor





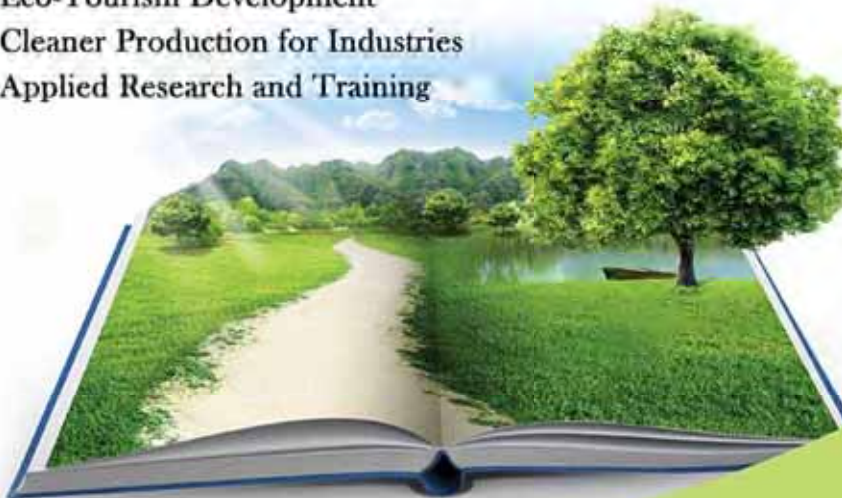
GLOBAL ENVIRONMENTAL MANAGEMENT SERVICES (PVT) LTD.

The Largest Network of Environmental Services Across Pakistan and UAE

Global Environmental Management Services Pvt. Limited (GEMS) is one of the leading Environmental Services Company in Pakistan. Our mission is to maximize resource value by minimizing & even eliminating adverse environmental impacts so that in addition to economy, environment can also thrive. GEMS Owns & Operates the largest network of Environmental & Social Services across Pakistan. We have a dedicated team of professionals & a network of ISO-17025 accredited & EPA Certified Environmental Testing Laboratories & Industrial Waste Management Facilities. We have a vast experience of dealing with various private & public sector organizations across Pakistan and UAE.

Our Core Services

- Environmental Studies (ESIA, SEA, IEE, EMP, Audits etc.)
- Natural Resource Management
- Independent Environmental Monitoring Consultants
- Environmental Testing Laboratories
- Topographical Surveys & Soil Investigations
- Industrial Waste Management Services
- Resettlement Action Plans
- Baseline Studies and Habitat Mapping
- Community Consultation and Engagement
- Eco-Tourism Development
- Cleaner Production for Industries
- Applied Research and Training



2nd Floor, Aiwan-e-Sanat, ST-4/2, Sector 23, Korangi Industrial Area, Karachi

Ph: (92-21) 35113804-5; Fax: (92-21) 35113806;

Web: www.gems-intl.com, Email: info@gems-intl.com

Govt to power official buildings with solar power

In order to generate ample electricity at affordable rates, the government is considering converting official buildings on solar power. Minister of State for Climate Change Zartaj Gul in her written reply said a proposal is being submitted by Prime Minister's Solarisation Programme, in which power division has informed that solarisation and internal conservation of electricity of public sector buildings can bring multiple advantages clean and affordable energy at sustainable level, savings in electricity bills.

She said development of local market and skilled manpower transfer of technology would open up avenues for new investment. Solarisation of public buildings can meet certain share from electricity load, and has the potential to bring huge savings and new investment in the country. Gul said initially the programme may be launched from public buildings, and the federal ministries have been advised to finalise proposals for solarisation of their respective government



buildings within a period of three months.

In the next phase government hospitals, schools and canals can be converted on solar power, in a phased manner. Federal Government Ministries, Depart-

ments, Autonomous Bodies, Corporations etc. may be directed to develop their proposals to implement the conversion process in the next three years. Minister said as per proposal funds may be awarded from the regular budget every year, from the savings or un-utilized surrenders. Alternate Energy Development Board (Power Division) would provide technical assistance for solarisation, net metering and similar innovative technical solutions to support the programme. Gul said so far the Ministry of Climate Change has converted one of its attached departments, namely Zoological Survey of Pakistan (ZSP) on solar energy with the grant assistance from UNDP. It produces 8KW electricity. Answering another question Minister for Federal Education and Professional Training Shafqat Mahmood said the Federal Directorate of Education, Islamabad has not established any new Government Schools in the new residential sectors and colonies of ICT during last five years from 2013 to 2018. ■

IUCN, Engro initiate, Mangroves Plantation Drive

The International Union for Conservation of Nature (IUCN), and Engro Elengy Terminal Private Limited (EETPL) joined hands to celebrate the launch of their latest collaboration, a mangrove maintenance and plantation initiative focused in the Port Qasim area.

The project's inception ceremony was held at Korangi Fish Harbour, amidst residing along the coast, and attended by a number of government officials, experts, CSOs and students from nearby schools; representatives from the Sindh Forest Department and the Port Qasim Authority also attended the ceremony.

In his opening remarks, Mr. Adil Mushtaq from Engro Elengy, spoke about EETPL's continued commitment to improving the environment it operated in, as well as underscored the need to conserve mangroves terming it an ecosystem the communities depend on. "Given that we are operating in the area, it is our duty that we ensure the livelihoods of the communities and ensure that the ecosystem they thrive on continues to be maintained," added, he added.

Ammar Shah from Engro Elengy, who initiated the engagement with IUCN in 2015, said that "while the company's previous mangrove plantation initiative with IUCN was a success, there is a need to do more - Engro recognises the importance of maintaining these plantations in the long term," noted Mr. Shah.

Dr. Babar Hussain, a coastal natural resource expert from IUCN, spoke about the current initiative that entails maintenance and plantation over 500 hectares in the PQA, and said that "this three-year engagement will see IUCN and EETPL working on mangrove plantations and maintenance at a number of sites within the Port Qasim Authority (PQA). The project also has a component on raising environmental awareness among coastal communities in the area." ■



In a British bar, a short discussion on arranged marriage took place as follows:



English man: How could you marry a woman before knowing her?

Indian man: How could you marry a woman AFTER knowing her?

End of the discussion!

A guy went to Bangkok and after few days wrote a loving message to his wife ... at the end he said I wish you were her!

He wanted to say, I wish you were here

He is still recuperating from bone repairs he can walk but much slower

Take care of your spellings & Don't let the auto- dictionary ruin your life:

A family vacation with in-laws to beaches of Goa, resulted in divorce.

Husband posted a beautiful picture of his wife and Mother-in-Law on Facebook with the caption: Bitches of Goa

IEEEP FAIR
2019

10TH
ANNIVERSARY
EDITION

PAKISTAN'S PREMIER B2B
**ELECTRICAL & ELECTRONICS
INDUSTRIAL EXHIBITION**
October 1st - 3rd, 2019 | Karachi Expo Centre

CREATING SYNERGIES



www.ieeepfair.com

ORGANIZER



IEEEP
KARACHI CENTRE

IEEEP FAIR SECRETARIAT

C-175, Block-9, Gulshan-e-Iqbal, near Aziz Bhatti Park, Karachi
Tel: (92-21) 3482 1159, 3482 1160 Website: www.badarexpo.com
Email: info@ieeepfair.com, faisal.ali@badarexpo.com

EVENT MANAGER



BADAR EXPO
SOLUTIONS

Prof. Dr. Abdul Bari Khan Conferred Leadership Awards

The Asian Association of Management Organization (AAMO) has awarded Prof. Dr. Abdul Bari Khan with the Asian Leadership Award. This was based on the Management Association of Pakistan (MAP) awarding 'Lifetime Achievement Award' to Prof. Dr. Abdul Bari Khan, CEO, Indus Hospital Network, for his exemplary social work and lifelong humanitarian services, earlier in April at the 34th Corporate Excellence Award ceremony.

Presided by the Malaysian Prime Minister Tun Dr. Mahathir Bin Mohamad, the award ceremony by AAMO was held in Kuala Lumpur in Malaysia. Salah Uddin, Executive Director, MAP, represented the Management Association of Pakistan on that occasion.

Truly a non-profit organization, the Management Association of Pakistan (MAP) believes in promoting and recognizing altruistic leadership and philanthropic services offered by leading welfare and charitable organisations and philanthropists throughout the country. ■



Pakistan confers civil awards on Turkey's leading personalities

Ambassador of Pakistan to Turkey Mr. Muhammad Syrus Sajjad Qazi presented Pakistan's high civil awards to two leading Turkish personalities at a dignified ceremony held in Ankara. The President of Pakistan had conferred the prestigious 'Hilal-i-Pakistan' upon Mr. Ismail Kahraman, leading politician and former Speaker of the Turkish Grand National Assembly. The President also conferred 'Hilal-e-Imtiaz' upon Prof. Dr. Recep Akdağ, former Deputy Prime Minister and former Health Minister. The awards were conferred upon the Turkish dignitaries for their services for promoting and strengthening Pakistan-Turkey relations.



Addressing guests at the ceremony, Ambassador Syrus Qazi lauded the invaluable services and contributions of Mr. Ismail Kahraman and Dr. Recep Akdağ towards further cementing Pakistan-Turkey relations. Noting that Pakistan-Turkey relationship has been nurtured by enormous efforts of our earlier generations, Ambassador Syrus Qazi said the responsibility lies with us to further strengthen it and pass this sacred trust to our younger generations. Mr. Ismail Kahraman and Dr. Recep Akdağ in their remarks thanked the Government of Pakistan for the conferment of these prestigious awards on them. They reiterated the resolve to continue their efforts for the promotion of Pakistan-Turkey brotherly ties.

Citations of both the dignitaries were read out. Mr. Ismail Kahraman has been one of the distinguished figures of the Turkish politics. His unwavering friendship and love for Pakistan and its people have been the hallmark of his illustrious political career. As a young student during 1965 India-Pakistan war, he organized a mass public rally in Istanbul in support of Pakistan's principled position on the Jammu & Kashmir. As a true friend and well-wisher of Pakistan, Mr. Kahraman has rendered innumerable services for strengthening Pakistan-Turkey relations throughout his political career, including by providing unequivocal support to Pakistan at all international forums.

Dr. Recep Akdağ has an illustrious professional and political career. He has proved to be a sincere friend of Pakistan. As Minister for Health, he has rendered innumerable services for the uplift of the public health system in Pakistan. His personal vision and involvement, as part of extensive bilateral cooperation aimed towards provision of modern health facilities and capacity building at Pakistani public hospitals, played an important role in improving provision of vital health services in Pakistan. ■

IRENA gets new Director General

Francesco La Camera took office as the Director-General of the International Renewable Energy Agency (IRENA).



Director-General La

Camera is to lead the Agency during a period of rapid change in the global energy landscape driven by an unprecedented growth in renewable energy and the ever-growing urgency to limit climate change. While progress has been especially significant in the power sector, further efforts are needed to scale-up renewable energy solutions in end-use sectors such as transportation, heating and cooling.

"The global energy transformation is entering a new phase," said Mr. La Camera. "We must do everything we can to accelerate the pace and scope of change if we are to meet climate objectives, while ensuring that the new energy paradigm is fair and inclusive. This is also a unique opportunity to spur economic growth in a sustainable manner and close the energy access gap by creating a world where energy is abundant and available to all. As Director-General of IRENA, I will work tirelessly with all IRENA Members, stakeholders and partners to support the transition to a sustainable energy future." ■

www.pogeePakistan.com



#POGEE



POGEE

**17th International Exhibition for the Energy Industry
20-22 June 2019 | Karachi Expo Centre**

ORGANIZED BY



Pegasus

Reduce Energy Costs, Increase Profits

How a Small Company is Making a Big Difference to Profits of Large Companies

Pakistan's small, knowledge based companies are leading in agility and innovation. They tend to see opportunities, in services, which are missed by large companies.

AirAudit is Making Impressive Contributions to Reducing Energy Consumption of Pakistani Manufacturing & Exports

AirAudit (Pvt.) Ltd is one such enterprise. With presence in Karachi, Lahore, Faisalabad and Islamabad, this young Pakistani company has discerned the huge losses being incurred by large scale manufacturing companies in their compressed air systems. AirAudit sets out to bring such waste of energy and operational losses to its customers, and over the last 4 years of its existence, it has been able to highlight huge potentials of energy conservation, in the compressed system of its clients.

Rising energy costs are the prime challenge of Pakistani Industry. Most of the industrial sectors in Pakistan are energy intensive and are vulnerable to high rates of energy, losses across various

On the exports front, compliance is getting stringent day by day. Carbon emissions and energy conservation programs will soon become mandatory reporting. Exporting companies can start looking good to their customers, if they conduct energy saving activity.

production processes, resulting in higher energy bills, loss of competitiveness, which has severely export performance of Pakistan's manufacturing sector.

The biggest opportunity for the Large Scale Industrial Manufacturing industry is to create shared value - People, Planet, Profits. They are better able to meet their CSR, Compliance and Sustainability Goals through energy efficiency.

AirAudit has helped major industrial groups in achieving Carbon Credits, CSR visibility and reducing cost of Compressed Air production. Advice on compressed air transmission according to ISO8573-1 standards and minimizing leaks and inappropriate uses helped reduce costs.

A Textile Unit in Karachi saved 216MW of electricity and reduced 155 tons of Carbon emission annually. Similarly AirAudit helped a Tobacco company in saving 275MW of energy costs and helped them reduced 200 Tons of Carbon emission. An International carbonated brand achieved great saving by reducing 231 Tons of Carbon Emission and saved 320MW of electricity. A packaged food company also reduced electric consumption of 325MW annually and reduced carbon emission of 140 Tons. There are many more examples in Pakistan, where customers gained competitiveness in Export Market and CSR visibility through compressed Air Audit.

AirAudit has helped reduce purchase cost, as well as cost involving installation, maintenance and recurring energy cost.

Energy cost can often be the most important expense to evaluate. Going Green and save 1 KW for every 100 cfm of air utilized can add up to big savings that drops right to your bottom line profitability.

From the above, the reader can see that Equipment Purchase Price and Service Cost represent only a small portion of the overall cost of owning and operating a compressed air system. Over a 10 year period, the energy required to operate the compressor is more than 75% of the annual cost of compressed air. A compressed air audit is must given these circumstances.

Equipment Purchase and Service Cost represent only a small portion of the overall cost of owning and operating a compressed air system

Energy conservation programs and initiatives are of great value in the face of this never ending energy crisis, which is challenging economies for a long time.

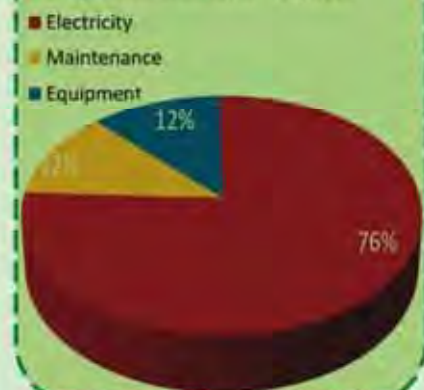
Reduced compressed air utilization has a direct effect on the energy utilization and subsequently on the cost of the units produced.

AirAudit helps customers to:

- 1- Identify leaks and weaknesses in the compressed air system of any manufacturing company.
- 2- Gives plan to repair leaks and remove in-efficiencies.
- 3- Connects customers to a leaks specialist company.
- 4- Advises on Heat Recovery from Compressors.
- 5- Carries out a post repair audit.
- 6- Keeps energy costs in check by periodical audits of the system.

For more information:
info@airaudit.com.pk www.airaudit.com.pk

Energy Costs Dominate Compressed Air Systems Cost over 10 years



ATS ENGINEERING

SALES & SERVICES
ISO 9001:2008 CERTIFIED



Solar Home Solutions

Solar Pumping System



Solar Street Lights

Solar Water Heater



Range of Industrial Fans



Head Office: Plot No. 69, Street No.3, Main Street No.1, I-10/3, Islamabad.
Ph: 051-4440973, 4442429 Email: info@atsengg.com Web: www.atsengg.com
Branch Office: No.5, Raja Plaza, Rawalpindi Bypass Road, Chakwal. Ph: 0543-552565



ECU
WORLDWIDE
Geography Simplified



300+ Offices

520+ Destinations

2300+ Direct Trade Lanes

Reaching Out In All Dimensions



ECU WORLDWIDE PAKISTAN (PVT) LTD.

www.ecuworldwide.com.pk

MORE THAN
10 YEARS
EXPERIENCE

Pakistan's pioneer in solar energy with more than a decade experience in :

- **Engineering**
- **Design**
- **Supply & Installation**

SOLAR ON-GRID

The most financially lucrative solar system in Pakistan using state of the art equipment with guaranteed life.

Installation in Mega Watts



Industrial system



Household system



Commercial system



Call Now :



KHI (92 – 21) 35865896-7
LHR (92 – 42) 35948890
ISL (92 – 51) 2348617-8

We are licenced with Federal govt to assist for net metering connection.



adaptive
technologies

SERVICES

PROJECT DEVELOPMENT

Feasibility Study
Preparation of RFP Documents
Financial Modeling
Bid Evaluation
EPC Technical & Commercial Negotiations
Power Purchase (PPA),
Fuel Supply Agreements Negotiations

ENGINEERING DESIGN

Conceptual Drawings
Basic Design
Detail Design
Construction Drawing
"As Built" Drawings

PROJECT & CONSTRUCTION MANAGEMENT

Site Management
Scheduling and Budgeting
Preparation and Implementation of QA/QC Plans
Preparing HSE Manuals applicable to the construction site
Preparing Project Documentation
Punching List
Warranty Management & project progress reporting

POWER PLANTS OPERATION & MAINTENANCE

Management & Training Staff
Preparing Health and Safety Procedures
Preparing and Implementing Operating Procedures
Developing Procurement Procedures and Inventory Control
Plant Performance and Efficiency Improvements
Performance Condition Monitoring

CONSULTANCY

Performance Monitoring
Risk Engineering Surveys
Advisory Role Plant Improvements and Best Practices
Due Diligence of plants, with complete, detail reports on plant and equipment condition
Independent Lender's and Owner's Engineering Services
Testing and trouble shooting
Independent Engineer's Services

OMS (PVT) LIMITED TRUSTED PARTNER FOR POWER BUSINESS

OMS is a multinational company founded in year 2005 with a vision to provide full set of world class consultancy services ranging from development to construction, and from commissioning to operation & maintenance of power generation, transmission and grid system projects. We have strong belief in our people and desire to do whatever is required to ensure 100% success for valued Clients.

OMS is currently handling projects of over 9,000 MW in the emerging Power markets of Asia and Africa

OMS has already provided various services for project development, construction, O&M, risk assessment and Due-Diligence for around 38,000 MWs in the power sector.

OMS is ISO 9001:2008, ISO 14001:2004 and OHSAS 18001:2007 certified company.



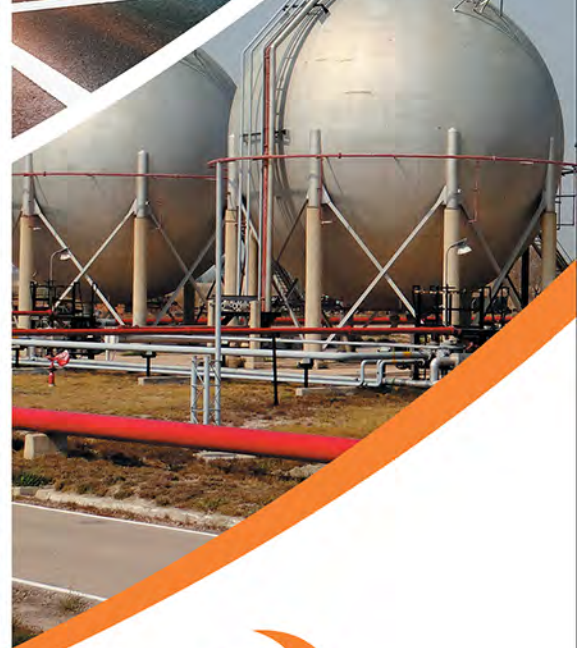
251-CCA, Block FF, Phase-IV, DHA Lahore
Tel: +92-42-35748650, 35748660
Fax: +92-42-357-18665

Energy Lifeline for the Nation

Growing through Expansions and Acquisitions

Pak-Arab Refinery Ltd. (PARCO) is a successful joint venture between the Government of Pakistan and Emirate of Abu Dhabi

- Pakistan's most modern refinery (100,000 barrels of crude oil/day)
- Energy lifeline of the country with over 2,000 km pipeline network
- Combined strategic oil storage of about one million metric tons
- Retail network in joint venture with TOTAL of France
- Marketing and nationwide distribution of LPG
- Production and sales of high quality asphalt



PARCO
Biturox



PAK-ARAB REFINERY LIMITED
A Pakistan-Abu Dhabi Joint Venture

ISO 9001, 14001 & 45001 CERTIFIED ENERGY COMPANY



ConsTech



IP68

IP67

IP66

IP65

CE



CMP PRODUCTS



postal address: First Floor, 94-D3, Wapda Town, Lahore-Pakistan
showroom: 452-64, Main Boulevard, Johar Town, Lahore-Pakistan

mob: +92-321-47-67-980
tel: +92-42-353-111-50

e-mail: info@constech.com.pk
website: www.constech.com.pk