

**Coal burning may cost
to country's climate**

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ahead for Pakistan**

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08.....	Editorial
09.....	Letters to the editor
10.....	Coal burning may cost to country climate
12.....	Government needs to protect environment from coal generated pollution
13.....	2014: The challenges ahead for Pakistan
14.....	Gas shortfall in winter
16.....	Ownership of Oil & Gas
19.....	Interview: Feihzen Lu, CEO, Hisel Power
20.....	No way to overcome energy crisis
22.....	IP gas pipeline or pipe dream?
24.....	Event Reports: 4th Fire & Safety Convention & Awards 2013
30.....	NFEH holds 2nd Regional Seminar on CSR 2013
32.....	OGDCL: CSR Activities 2013
35.....	Towards a solar sub continent
36.....	SGS Summit on Asset Integrity Management
37.....	Archroma Sustainable Effluent Treatment unveiled
38.....	Amazing news
41.....	The non sweat summer
42.....	A Strategy
43.....	Energy News

- By Ismat Sabir

Coal burning may cost to country climate



10

- By Yasir Ameen

No way to overcome energy crisis



20

2014: The challenges ahead for Pakistan

By Salahuddin Haider

13



From the editor's desk...

Adhocism aggravating energy crisis

Government's adhocism policy has ruined the functions of Public Sector Entities (PSEs) without permanent heads. It seems that PML(N) is lacking a competent team of experts at the top or the will of appointing capable and talented officials in State corporations to pursue their own hidden agenda.

More than seven months have passed and all that the government did was to appoint CEOs of PSEs on temporary basis who naturally failed to deliver, indulging in non-productive activities or peripheral tasks at the expense of country. Similarly, the bureaucracy has been shuffled in a manner that many of the officers are unaware of their fate or about their next assignment in other ministry or department. Hence neither the bureaucracy nor the management at PSEs are committed to their work, or performing duties, causing collapse of vital organisations which in the past have been contributing to exchequer, but are now mere want to use their offices for a pastime.

The plight of these public sector organisations in energy sector were hit far more harshly, suffering from gross public neglect. Financial liabilities mounted, and operational segments suffered beyond imagination.

The situation is pathetic and anticipating that the government's intention towards honoring promise of public service is now a distant dream. The performance of these corporations, especially in energy sector, is linked closely to country's economic health. A total insensitivity is evident, which would not do us any pride. Its priority is to deal with the Taliban issue.

The present government's policy theme—Economy, Energy and Extremism—should be equally reflected on its performance instead of focusing on one issue of extremism which is beyond its control because of international factors.

Nevertheless the announcement of Power Policy was a welcome step. Resolution of circular-debt issue within 45 days was encouraging though its implementation requires solid will of those at the helm to rescue the countrymen from deepening crisis. Government's adhocism philosophy caused accumulation of circular debts to a horrifying level of Rs 280 billion again which we had earlier predicted. Likewise, multiple crisis in energy sector will re-emerge with much more graver intensity than seen for last several months.

The menace of persistent and never-ending load-shedding of natural gas for, different energy sectors, hopefully, will reduce in next two months but the scenario of power outages for long hours will resume once again, which unfortunately seems to have become a permanent feature. The country has continued to suffer from one crises to another, with no end in sight.

With the beginning of new calendar year, the government must decide its direction and appoint a capable team of officers who not only can improve the efficiency of PSEs but also reduce corruption culture in various government departments.

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Letter's to Editor

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Energy crisis: alternative source

THIS is apropos article 'Towards a solar subcontinent' (Nov17). In Pakistan, a lot of efforts are required to be made for renewable energy. All of our sunlight that's available in every nook and corner of the country is going to waste.

Similarly, the wind resource in a 60km-long wind corridor from Gharo to Keti Bandar in Sindh and the coastal area of Balochistan is being wasted. The private sector is shy of investing in this form of energy due to long and linking procedures involved, besides tariff problems and graft. In renewable energy the raw material is free like sunlight and wind in case of solar and wind energy. The only investment is in solar panels and wind turbines. And once these panels and turbines have been installed, they would keep providing service for 25 years without any break. And also no further investment would be needed.

After 25 years of service, the wind turbines can further be refurbished and given a new lease of life for another 10 years. In the field of renewable energy, we can learn a lot from India. It is now producing more than 17,000 MW of energy from wind alone, which is approximately equal to the total energy requirement of our country. It is a pity that we are importing tomatoes and other vegetables from India. Why shouldn't we acquire wind turbines from that country? The truth is that we all will be writing our hearts out and filling the pages of newspapers with thought-provoking ideas; but then, there has to be somebody in the government to read them and take timely action too on these suggestions.

Pages after pages have been written on the proposed Gadani power corridor that the government intends to establish in Balochistan with the help of China. As far as setting up of solar parks is concerned, it is an excellent idea and the government should go ahead with it with full force. But as regards the installation of four coal-fired power plants, reservations have been shown by various specialists. To run such plants, coal will have to be imported in huge quantities without any break which, on the one hand, would be an extremely costly proposition, besides keeping us hostage to the import of coal for times to come.

On the other hand, it would result in an environmental disaster. Also, if Pakistan is successful in drilling new oil or gas wells, or Dr Samar Mubarakmand succeeds in producing electricity from the underground coal gasification process in Thar, what would be the utility of these plants on which billions of dollars would have been spent by then?

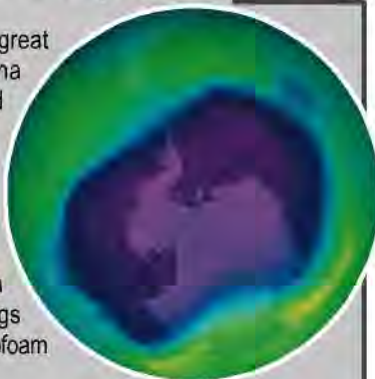
I think Pakistan should spend its energies and efforts in boosting renewable energy alone which is available in abundance in this country. It is our future. If we have been lacking in this field till this date, we should start now. Let us bring all our specialists to Pakistan who have been working for decades on such projects in Europe and America. Let us offer them fabulous salaries which they have been drawing while working abroad. Many countries of the world have done it and progressed. Let us believe in our own resources and expertise.

AIR CDRE (r) AZFAR A. KHAN, Rawalpindi



Hazards of ozone depletion

THE purpose of the great discovery of Mario Molina and F. Sherwood Rowland is to just highlight the harmful effects of CFC, the combination of chlorine (Cl), fluorine (F) and carbon (C) atoms, which are being used in a multiple number of things such as refrigerators, Styrofoam and aerosol.



The ozone layer protects the earth from dangerous ultraviolet radiation (UV) which can cause mutations.

In humans, a depleted ozone layer would likely mean higher rates of skin cancer, cataracts and immune system problems.

Further, an increase in UV radiation could affect plants and marine ecosystems in unpredictable ways which could, in turn, trigger other ecological changes.

The United Nations should take serious action against the production of CFCs and it should be internationally banned.

SAJJAD BALOCH Turbat

Power theft losses

THIS refers to a press conference by Minister of State for Water and Power Abid Sher Ali at the Wapda House, Lahore (Nov 9), wherein he stated that total losses owing to power theft amounted Rs242 billion last year. "How can any government tolerate such leakage in the system?", he asked and promised that not only power thieves but all Wapda officials helping the power thieves will be held responsible.



I believe the nation would support the minister in his endeavour and wish him success. As a matter of fact, we have been hearing this rhetoric regarding controlling power theft from the PML - N political leadership since the last election campaign. However, we see no action and positive result on this important matter. It is generally believed that all honest consumers have been paying for the electricity stolen by corrupt influential consumers.

But it cannot continue like this indefinitely. I believe that one big factor of loadshedding is power theft and it must be controlled as soon as possible to ensure regular power supply to all domestic, commercial and industrial users so that economy keeps moving in the right direction.

I suggest that the government should prepare a professional plan indicating clearly the time span required to achieve the target and share with the public on a regular basis the success achieved in controlling power theft.

EJAZ AHMAD MAGOON, Lahore

Coal burning may cost to country's climate

By Ismat Sabir

Although Pakistan is a coal rich country but this sector has been neglected for the last three decades due to lack of infrastructure, insufficient financing and absence of modern coal mining technical expertise.

Pakistan has large coal reserves and their discoveries can meet increasing demands. Share of coal in energy sector of Pakistan increased from 6.5 percent, 2003-04, to 7.6 percent in 2008-09 that later fell back to 6.7 percent in 2010. This figure should have been more than its predecessor.

Pakistan is ranked 7th internationally lignitic coal reserves but, Pakistan steel industry has imported coal every year between 2006 and 2011. This expenditure can be saved and technology development. Besides, thermal power plants can also use indigenous coal reserves to increase electrical power supply. Developments for coal resources are necessary as many coal fields remained under developed. It is also necessary to acquire technology to use the mixed lignitic, bituminous coal because majority of the reserves are lignitic in Pakistan. Sindh is lignitic and available in grand quantity. Its development should be initially vertical shaft mining method. Alternatively, open pit mining but ground water may cause trouble in this regard.

Now the Government is trying to facilitate private investors to do investment in coal development and coal power generation.

Coal is a cheap indigenous energy resource and, after the discovery of 175.5 billion ton of coal in Thar area of Sindh, Pakistan's coal power potential has increased manifold. According to rough estimates, the total coal resources of Pakistan are more than 185 billion ton.

It is estimated that if properly ex-

Table -1

(Million Ton)

Province	Measured	Indicated	Inferred	Hypothetical	Total Rese
Sindh	3339	11835	56646	113637	185457
Balochistan	79.45	150.45	183.5	45.3	458.7
Punjab	57	31	2	145	235
Khyber Pakhtunkhwa	3	5.75	109.24	5	122.99
Azad Kashmir	1	1	6.72	-	8.72
Grand Total	3479.45	12023.20	56947.26	113832.30	186282.41

Province	Resources in Million Ton	Heating Value (Btu/lb)
Sindh	184,623	5,219-13,555
Balochistan	217	9,637-15,499
Punjab	235	9,472-15,801
KPK	91	9,386-14,217
AJK	9	7,336-12,338
Total	185,175	

source: Geological Survey of Pakistan

exploited, Pakistan can generate more than 100,000 MW of electricity for the next 30 years.

Vast coal resources are found in all four provinces and in Azad Jammu and Kashmir.

The Environmental Impact of Coal use to Generate Electricity

The environmental impact of the coal industry includes land use, waste management, and water, air pollution caused by the coal mining, processing and the use of its products. In addition to atmospheric pollution, coal burning produces hundreds of millions of ton of solid waste products annually, including fly ash, bottom ash, and flue gas desulfurization sludge, that contain mercury, uranium, thorium, arsenic, and other heavy metals.

There are severe health effects caused by burning coal. According to the reports issued by the World Health Organization and by environmental groups coal particulates pollution are estimated to shorten approximately 1,000,000 lives annually worldwide, including nearly 24,000 lives a year in the United States. Coal mining generates significant additional independent adverse environmental health impacts, among them the polluted water flowing from mountain top removal mining.

Historically, coal mining has been a very dangerous activity and the list of coal mining disasters is a long one. Underground

mining hazards include suffocation, gas poisoning, roof collapse and gas explosions. Open cut hazards are principally mine wall failures and vehicle collisions. In the US alone, more than 100,000 coal miners have been killed in accidents over the past century with more than 3,200 died in 1907 alone, indicated wikipedia.

The electric power industry is the largest toxic polluter in the countries generating power from coal. In America coal is used to generate over half of the electricity produced is the dirtiest of all fuels.

From mining to coal cleaning, from transportation to electricity generation to disposal, coal releases numerous toxic pollutants into the air, waters and onto the lands.

The cumulative impact of all of these effects showed that enormous quantities of coal burned each year, nearly 900 million ton, is creating environmental problems. Promoting more coal use without providing additional environmental safeguards was to increase the toxic abuse of the health and ecosystems.

The pollutant elements in coal are a large group of diverse, with a number of healths and environmental effects. This is a public health concern because at sufficient exposure levels they adversely affect human. Some are known to cause cancer, others impair reproduction and the normal development of children, and others damage the nervous and immune systems. Many are also respiratory irritants that can worsen respiratory conditions such as asthma. They are an environmental concern.

Power plants also emit large quantities of carbon dioxide (CO₂), the "greenhouse gas" largely responsible for climate change. The health and environmental effects caused by power plant emissions may vary over time and space, from short term episodes of coal dust blown from a passing train to the long term global dispersion of mercury, to climate change.

Because of different factors like geology, demographics and climate, impacts will also vary from place to place. For instance, effects from coal mining may be the biggest concern in the coal field regions of the country, while inhalation exposure may be the foremost risk in an urban setting and, in less populated rural America, visibility impairment and haze may be of special concern. ■

There are severe health effects caused by burning coal. According to the reports issued by the World Health Organization and by environmental groups coal particulates pollution are estimated to shorten approximately 1,000,000 lives annually worldwide, including nearly 24,000 lives a year in the United States.

Government needs to protect environment from coal generated pollution

By Yasir Amen

The emergency in the energy sector has been observed for past five years in the country with shortfall of electricity production against its swelling demands from domestic to industrial sector but unfortunately the resources are not available to generate power to meet gradually the consumption need of the country.

The power theft is rampant in the country whereas the recovery of wide range of customers has broken financial backbone of many power producing and supplying entities in the country. Yet, there is an issue of unavailability of natural gas that divided sectors of manufacturing, CNG and power and ultimately power producing companies utilize gas as fuel have received pressures from supplies sides and limited reserves in the country. In the absence of gas, furnace oil is the only choice remains with power producing companies but its ever rising cost made all gencos enabled to operate in such challenging environment.

Late but right, the government finally reached a consensus to convert power producing companies from furnace oil to coal which is a cheaper way of electricity production and readily available to power sector. The conversion will be costlier for environment which is source of lives to millions of souls in the country.

The generation of electricity from coal is a worldwide practice as all developed countries including US and China generates hundred thousands of megawatts electricity for their consumption from domestic, commercial and industrial sector.

The widespread use of consumption in the power sector leads to environment hazards at massive level as the emission of power producing companies are high poisonous for environment and living beings. But these countries have developed alternatively a protection system to curb hazardous gas optimally through different ways.

The government initially planned to convert 2,840 megawatt on coal through IPPs including a 1350 megawatts thermal power station (TPS) of Muzaffargarh (Unit1-6), 850 megawatts TPS Jamshoro Units(1-4),640 megawatts TPS Guddu with multi-lateral financial assistance.

In addition to these IPPS, more companies have decided conversion from furnace oil to coal permanent basis such as Hubco with capacity of 1,200 MW; AES Lalpir with 350 MW, AES Pakgen with 350MW and

SABA with 125MW.

The conversion at power production companies will be seen at massive level in Pakistan in next three to five years as coal will be used massively through its burning in bowlers emitting huge volume of hazardous gas which include sulfur dioxide, nitrogen oxides, particulate matter (PM), and heavy metals, leading to smog, acid rain, toxins in the environment.

These all toxic gases emit by the coal-fired power plants will disseminate harmful respiratory, cardiovascular, and cerebrovascular effects in the air causing immeasurable destruction in the society mainly animals and people.

But country like Pakistan could not run on fuel oil. The utility of coal is indispensable for the energy needs of electricity to people and industries though alternative arrangement could be done to minimize the harmful impacts of coal-fired electricity.

Naeem Mughal Director General Environment Protection Agency (EPA) expressed his concern over projected increase in toxic gases to be emitted by power producing companies for generating electricity from coal.

All power producing companies are liable to submit an assessment report of emission gas to EPA before generating electricity from coal, which is mandatory requirement under regulation of environment in the country. Later, they have to enforce protection laws in their system.

Accordingly, power producing companies must inform the agency the level of gas emission and measures to curb its toxic impacts in the air and climate. Surely, there must be air pollutants realized from the combustion of coal but they are procedures that controlled or weaken their affect significantly.

If power producing companies do not comply with Pakistan's Environmental Laws, they should be imposed penalty by the government.

Power producing companies have to invest an allocated sum at the installation of equipments that contain harmful gaseous affects of coal in the air, Mughal said. The technology to curb hazardous effects of gas in the air is available in the world that could

be deployed at power plants to reduce the harmful impact of electricity production.

Plantation comes the second but foremost option to curb the coal-combusted effects in the climate. Plants obviously not only enhance the greenery and beautification of the environment but it also fights against elements which are hazardous for human health.

Dr Samiuzzama Siddiqui, a renowned environmentalist, said that power producing companies must allocate a big budget on plantation for a wide area nearby their plants to reduce carbon emissions disadvantages in the nature.

Every power plant should carry out plantation more than four times than the emission of carbon it will do for electricity production. The plantation that challenges carbon emission is a little technical as different sorts of plants are good to absorb carbon dioxide with chlorophyll to make its food. On the other hand, the generate oxygen in bulk which is good for human being.

Though plantation for curbing carbon emission is a technical process but it is easier and a must-do procedure to do by the power producing companies to do their business with protection of climate safety as a national duty. ■



2014 The challenges ahead for Pakistan

By Salahuddin Haider

The dawn of the New Year, would naturally replace despair with hope, and with government focusing on energy sector, both nuclear and conventional, situation is bound to improve.

The first of the few new nuclear plants in Chashma and at other place, being built with Chinese assistance, will be operational in two years time to add much needed 600 megawatts of power to the energy-starving industrial and domestic segments.

The problem, although perennial, worsened during the 2008-2013, when the PPP government was in power. Lack of initiative, vision and even, combined together to weave a cobweb of complexities, which Nawaz as prime minister, is trying to overcome. The task is far more difficult than it appears to be. However, Human endeavour, is a massive asset for rebuilding of the society.

Industries in Pakistan, are in urgent need of gas and electricity. Unfortunately for the country, gas reserves too have been sliding down, and now CNG is rationed in most

major cities. Fertiliser factories, thriving on gas and CNG, are now at a certain loss. Constant and unchecked rise in power rates, and increase in petroleum prices have, not only, frustrated further progress for industries, but has actually caused a downward slide. Promises to produce coal deposits to generate power, seems being fulfilled, but at a painfully slow pace.

Forecasts from international agencies like the International Monetary Fund (IMF), the World Bank, and the Asian Development Bank (ADB) have mostly been bleak but black money remains a blessing in disguise, being the dominant factor in providing the much-needed funds for the cash-strapped country. The government has now allowed free flow of foreign currency in the name of investments, which though detested by foreign donors, has become the official policy of the state.

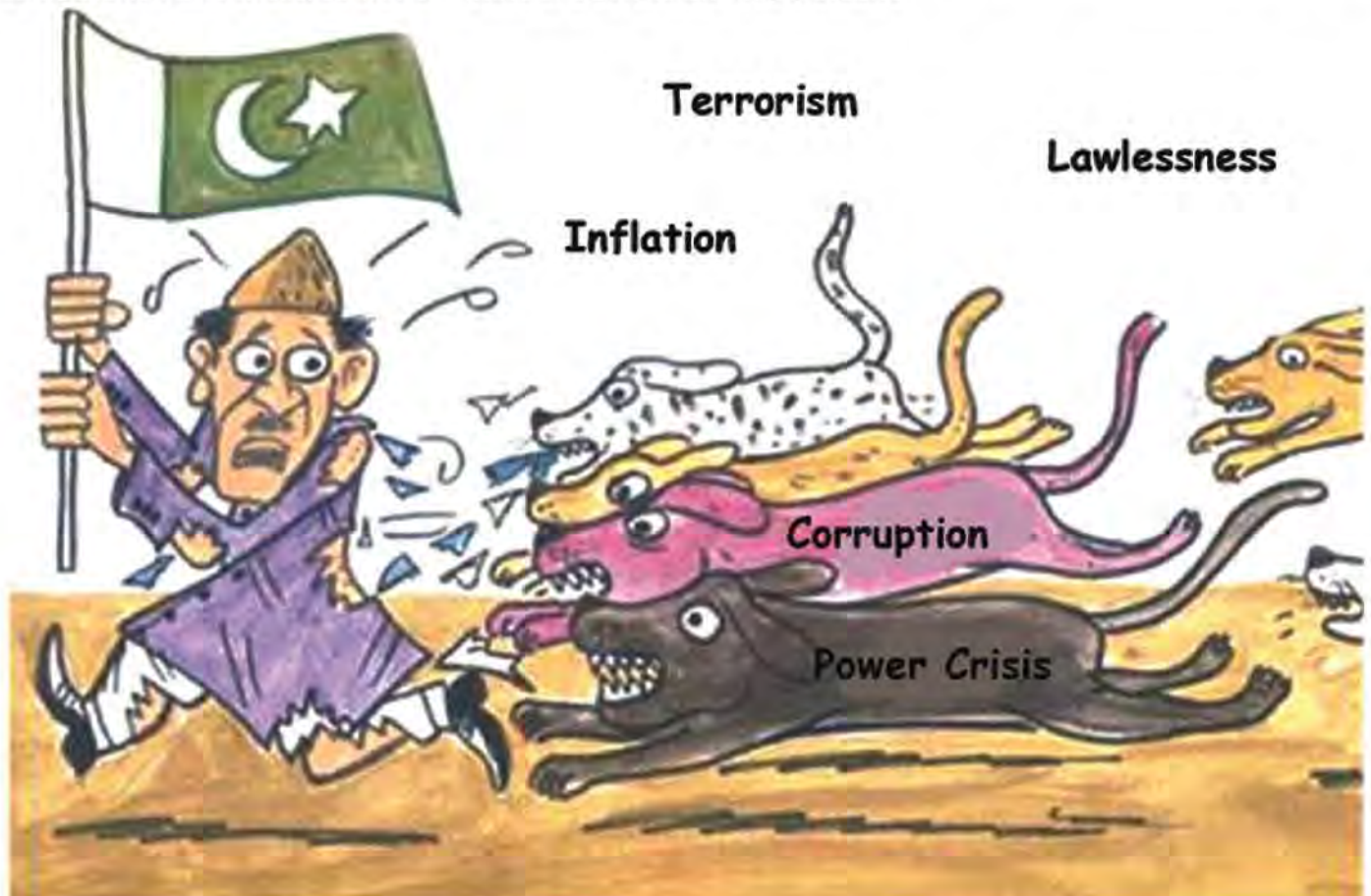
An Oxford Analytica study says that transition in the military leadership, its unwillingness to seize power, and the emergence of a government with a decisive

parliamentary mandate and its success in securing another IMF loan (\$6.6 billion) has created unusual political stability in Pakistan since May.

The GDP remains static almost at 3.51 percent and although per capita income displayed a slight rise, confidence in government bonds and inflation rate being static at 10.65 percent, means little optimism for future.

A government taking over last June with a fanfare of promise has done little to formulate education, labor or industrial policies. It did just the opposite by pushing up electricity and petrol prices drastically and reduced the rupee's purchasing power that added to peoples' woes.

Focus remained on mega projects, which hardly could ensure immediate solutions to peoples' problems. The premier has now realized that steps taken by his ministers have been creating problems for his government and therefore has ruled out further rise in electricity charges. ■



By Ismat Sabir

Gas shortfall in winter

A unique idea to solve problem

To solve the problem, the government has floated the unique idea of complete gas shutdown for three months, which is illegal and will result to destroy Rs450 billion CNG industries said Association. Sui Northern Gas Pipelines (SNGPL) has suggested that the gas should be suspended for three months for CNG stations in Punjab.

The average gas supply by the SNGPL and SSGC is about 3,734 mmcf/d per day and the demand supply position for the two utilities for winter shows a shortfall of 1,249 to 1,921 mmcf/d. Thus, the peak demand comes to 5,655 mmcf/d per day.

The All Pakistan Compressed Natural Gas Association (APC-NGA) rejected gas load shedding plan. It said that the complete gas closure for the CNG sector in winter is not acceptable under any circumstances. The closure of gas supply to CNG stations, during December, January and February, would face stiff resistance by the CNG operators, transporters and masses, warned Chairman Ghiyas Abdullah Paracha

He said that the decision might be taken to please influential sectors which will boost oil import bill, drain foreign exchange reserves, bring exchange rate under further pressure, imbalance trade and would result in heavy revenue losses.

He said the decision is illegal as government is bound to follow the agreement, which clearly said continuous supply of natural gas to CNG stations for 365 days a year and there was not mentioned any load shedding in the agreements.

Authorities should avoid hurting masses in the name of efficient use of natural gas. There should be reduction in line losses, curbing gas theft and ensuring just distribution of natural gas, APCNGA threatened to protest if CNG stations are closed for 3 months.

Pakistan is the fastest growing country of the world with the most CNG converted vehicles, as over 26 percent of the vehicles on the roads consume CNG. The NGV Global said that Pakistan has made the fastest growth in CNG converted vehicles since 2000. The number of gas vehicles rose to about 3.5 million from less than 100,000 vehicles in 2000. While Pakistan has the highest number of CNG stations in the world, 3,495 CNG stations.

As per Petroleum Ministry officials, from 2005-06 to 2010-11, CNG consumption increased at the rate of 24 percent, the highest rate as compared to any other sector. The growth is at the expense of other value added sectors such as fertilizers, general industry and the power sector. With growing number of cars ownership and CNG prices as compared to petrol, the CNG 'monster' is fast eating up the legitimate gas share of other sectors, said critics.

Paracha estimated that the government would need to import up to 70,000 ton of additional petrol per month to meet additional demand that would increase from 300,000 ton to about 370,000 ton per month. It was said that one of the main reasons behind the increase in demand of petroleum is the use of generators in domestic sector, which resulted an increase in the sales by 21 percent in FY13 to 3.3 million ton.

Oil import bill was \$9.525 billion on petroleum products and \$5.392 billion on petroleum crude, during 2012-13. Petroleum import constituted more than one third of the country's total



imports of \$44.95 billion, during the period under review.

CNG winter closure would also result in starvation of millions. The CNG Association said that closure of CNG stations in winter for three months is totally unjustified and will hurt investments, spark inflation, create transportation problems and leave millions job less. Government should not focus on CNG sector only for offsetting shortage of natural gas in winter but abide by the agreements and arrest illegal use of natural gas. The illegal provision of gas to influential people is creating problems for the domestic consumers.

Instead of implementing agreement the blame is being put on the CNG sector, said Ghiyas Abdullah Chairman Supreme Council APCNGA. He suggested that gas to CNG sector only for offsetting shortage of natural gas in winter but abide by the agreements and arrest illegal use of natural gas. The illegal provision of gas to influential people is creating problems for the domestic consumers.

As the winter was approaching the government was in a fix whether to provide gas to the domestic consumers or to run the wheels of industry and vehicles, which would otherwise be left at the mercy of imported furnace oil and diesel in the absence of gas supply.

Due to load shedding of gas domestic sector is once again face the same problem, like previous years, i.e. cold weather without the comfort of heating for atleast 6 to 10 hours. In September the country was facing 2 billion cubic feet gas shortage per day and there was no plan to decrease the import of crude oil. Imports of oil have increased in 2012-13 to 7,286 million ton valuing \$5,849 million, which increased from 6104 million ton valued \$5,058 million in 2011-12.

The Federal Minister said that the government is working hard

for smooth supply of gas to the domestic consumers in winter season. He said Pakistan is taking help of USAID and World Bank to lessen the crisis. Providing gas to households means that the industry will face a huge shortfall of gas that will result an unbearable loss and the only option will be to use imported furnace oil and diesel.

Moreover, the two bids for the LNG services contract, during this year, have been cancelled and the third one was underway. However, the board of directors of the inter state gas system accorded formal approval to award the \$2 billion contract to Engro Vopak Terminal Limited for fast track LNG imports for 15 years. This was claimed that LNG import may start from November 2014 and at an affordable price.

On the other hand, Aptma was assured of maximum gas supply in winter. The Prime Minister Nawaz Sharif was hopeful that gas supply to the textile industry during December will remain intact. But the gas load shedding started from 10th of December. Chairman Aptma, Punjab, Tanveer urged the governor Punjab to play his role in ensuring uninterrupted gas supply to textile mills in Punjab during December and January.

About 70 percent of Pakistani textile industry is located in Punjab and facing severe energy crisis. The gas was not available for industry for 245 days a year besides six to ten hours a day electricity load shedding. Textile industry is already being supplied with 30 percent of its total demand per annum. Moreover, if textile sector is deprived of this supply during winter, it would end up on units' closure, job retrenchment and substantial drop in exports. The Punjab based industry with Captive Power Plants (CPP) for in house consumption has a disadvantage of Rs72 billion in terms of inter provincial energy cost differential. ■

A historic power project

In what can only be termed a breakthrough deal, China and Pakistan have once again come together to develop better economic cooperation through action and not mere words. In what will no doubt be a historic project for our energy deprived economy, Prime Minister Nawaz Sharif broke ground on Tuesday at a ceremony to mark the beginning of a \$ 9.59 billion project with Chinese help to build a nuclear power plant for energy production on the coastline near Karachi. This is a major step towards tackling the country's mega energy woes and also a big move forward for China in becoming a top nuclear supplier to Pakistan. The nuclear power plant will generate as much as 2,200 megawatts of energy - a much needed sigh of relief for our energy-impooverished country. China is no stranger at coming to our aid to lessen our energy deficit. It has built reactors previously in Pakistan at Chashma.

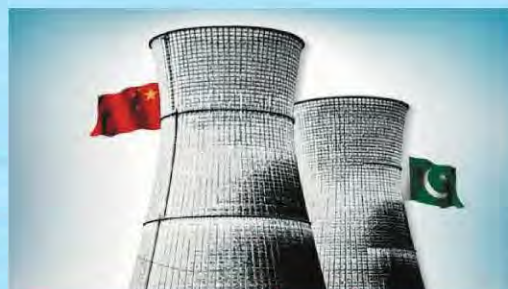
This mega project should not come as much of a surprise. We have been agitated at the fact that the US, our long-term ally, and India signed a civil nuclear deal in 2006. No doubt this is a countermove, with Pakistan turning to China after the US's refusal to do the same for us as it did for India. While India may have been guilty of diverting its peaceful nuclear programme to making nuclear weapons internally, we are considered the pariah state because we stand accused of international nuclear proliferation. The fact that we have a friend in China, which has trusted in us after our unenviable reputation where nuclear projects are concerned, should not be forgotten and the government should count its lucky stars. However, one hopes that this ambitious project will see fruition unlike another equally ambitious project started with another neighboring country. The Iran-Pakistan gas pipeline project is close to being abandoned because of our

fear of US reprisals. However, as far as that project is concerned,

now that Iran and the US have reached a deal on Iran's nuclear programme, there may be some chance of us getting the pipeline project back on track again.

The Pakistan government and all authorities need to be cautioned about the potential dangers that come with such nuclear ambitions. The fact that the plant is being constructed along the coastline has its own set of risks. The Fukushima nuclear power plant in Japan suffered a meltdown when hit by a tsunami in 2011 causing massive damage to habitation, the water supply, and marine life. The fact that Fukushima is still a problematic area for a developed country like Japan ought to give us pause considering how ill-equipped we are in Pakistan to deal with just such an emergency. There is also the issue of nuclear waste disposal. Where the toxic waste would be disposed off? The fact that the government is looking towards a better, more sustainable energy solution is a step worth welcoming. Pakistan is too far down the sinkhole when it comes to energy and power generation. We need all the help we can get and China seems ready to deliver. Pakistan needs to look elsewhere also, including investing in renewable energy to bring power to even isolated, scattered communities. Whilst this project is welcome, the government cannot afford to dismiss any further efforts and steps in fixing our mammoth energy crisis. ■

courtesy: Daily Times



Ownership of Oil & Gas

A MOST fundamental change ushered in by the 18th Amendment is making the province an equal owner of oil and gas found on its territory. Earlier, only the federal government had ownership of oil and gas. The changes in Article 172 make both the provincial and federal government equal owners.

The two coastal provinces, Sindh and Balochistan, have also been given the additional advantage of sharing ownership of oil and gas that may be found within Pakistan's territorial waters. In other words, both Sindh and Balochistan, by virtue of the amendment in Article 172, are equal owners of oil and gas resources found in their waters and that fall into three distinct legal regimes.

The first regime pertains to the internal waters within the indents of the coastline including those within creeks. However, this excludes the water in port areas which will continue to belong to the federal government as such waters are generally covered under a notification issued by the centre under the Ports Act, 1908.

The second comprises the water body inside the base line of Pakistan which is notified under the 1982 UN Convention of the Law of the Sea read together with the 1976 Maritime Zones Act.

The third regime includes the territorial waters up to 12 nautical miles that are granted to Pakistan under Unclos and would otherwise be viewed as federal territory. However, by virtue of Article 172, any oil and gas reserves present up to 12 nautical miles are declared as being in joint ownership of the coastal province which in this case is Sindh and Balochistan along with the federal government.

Article 172 also makes it clear that the area beyond 12 nautical miles and up to 200 nautical miles, comprising Pakistan's Exclusive Economic Zone (EEZ), is in effect a 'province' of the federal government and the ownership of all minerals and resources in this economic zone vest with the federal government to the exclusion of the coastal provinces. The same is the case with Pakistan's continental shelf that extends up to 350 nautical miles (inclusive of 200 nautical miles of the EEZ).

In this regard, Pakistan has successfully pleaded its claim to control over the continental shelf before a special commission set up under Unclos. Oil and gas, and mineral and fish resources found within the limits of the EEZ and the continental shelf belong to the federal government which has the right to dispose of them through a licensing regime or another contractual framework. Article 172 is not self-executing. To execute it properly to confer equal title to the provinces with the right to dispose of the oil and gas by becoming a co-licensor the Regulation of Mines and Oil Fields and Mineral Development (Government Control) Act 1948 and several rules made thereunder require extensive amendments.

Further amendments in rules governing the downstream and upstream activities of oil need to be carried out to delineate a clear role for the provincial governments. Without these, Article 172 will not be executable in its true spirit.

It should also be noted that Article 172 protects ongoing commitments made to existing licensees and foreign investors. In other words, it is effectively prospective, and legally speaking will be applicable to new discoveries and oil fields that provinces may explore directly or through a licensee. Article 172 does not bind an existing licensee to share the money with the provinces simply on account

By Ahmer Soofi

of the conferment of a province's additional title under Article 172. Existing licensees are to continue in their dealings and relationship with the existing licensor that is the federal government.

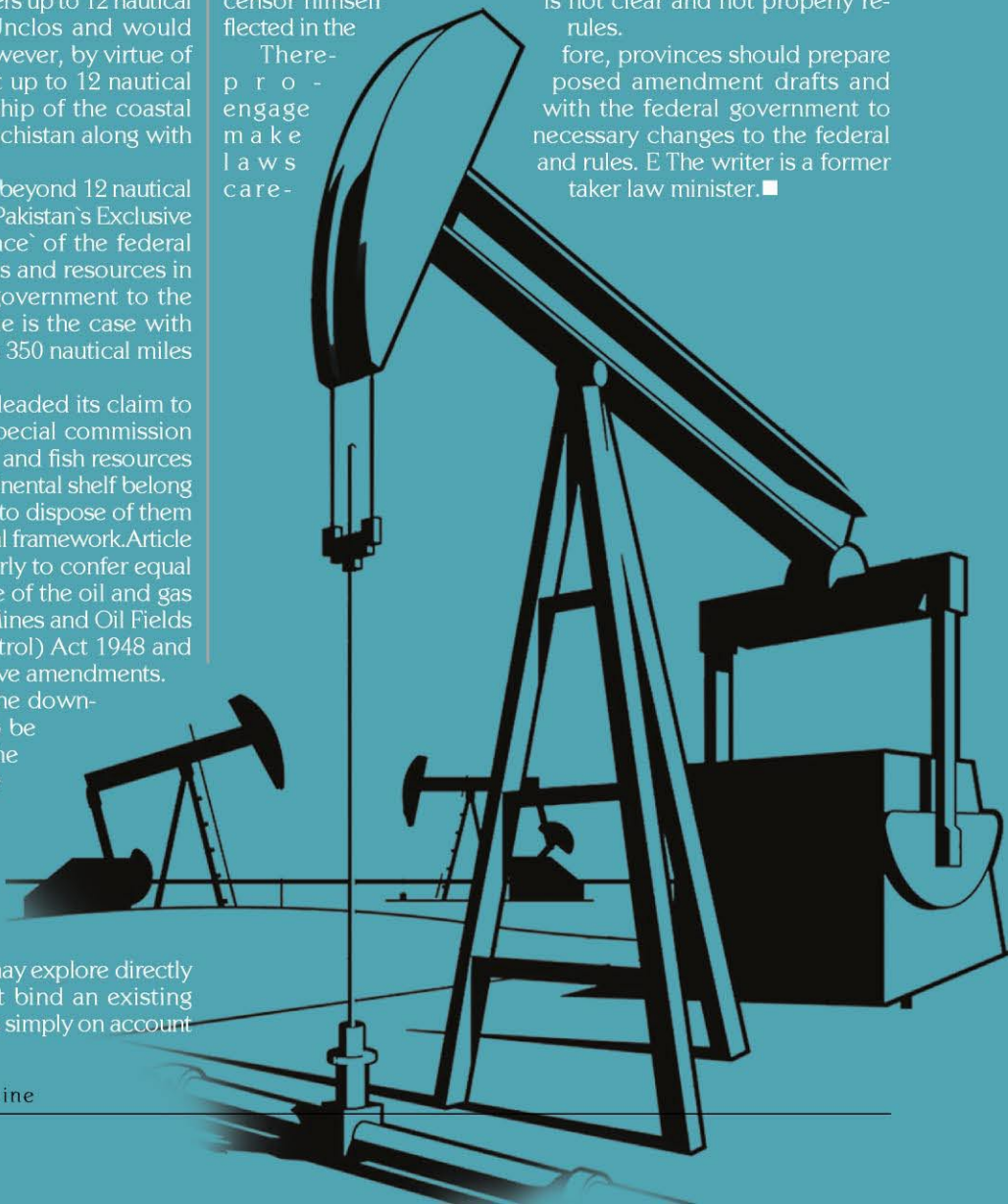
The provinces need to discuss and make a decision on the legal approach to legislative changes in petroleum rules. For example, one approach is to become a co-licensor. Or the office of the director general, petroleum concessions, may be changed to a panel that can include a provincial representative as a licensing authority.

Another approach is that the province be given a role in executing the terms and conditions of the licences. Yet another way forward could be to amend the term 'federal government' to mean both the federal and provincial governments. These are broad suggestions and the provincial experts need to examine them. It must also be ensured that amendments do not prove disruptive to the otherwise dependable methodology of granting licences for oil and gas.

To execute Article 72, the changes above are also necessary because the foreign investor will never be advised by his legal advisors to invest in a province where the title of the licensor himself is not clear and not properly reflected in the

There-
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fore, provinces should prepare proposed amendment drafts and with the federal government to necessary changes to the federal and rules. E The writer is a former taker law minister. ■





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Sun shine guarantees shining power sector

Feihzen Lu, CEO of HiSEL Power Corporation and Executive Director and Founder of HiFi Solar Energy

EU: What are businesses of HiSel Power Corporation and HiFi Solar Energy?

Feihzen Lu: HiSEL Power Corporation is a renewable energy company located in Ontario, Canada. It focuses on solar photovoltaic (PV) system design, integration and application, as well as energy storage with its offices in Canada, China and Pakistan. HiSEL develops and provides integrated PV systems from small to medium sized solar projects to large solar farms, including small solar residential kits for urban areas and remote villages in emerging markets, small to medium commercial solar systems for isolated grids in emerging markets; telecommunication towers, water pumps etc. HiSEL also develops solar project, provides EPC and brings financing services. HiFi Solar has been established in 2010. It is an Ontario-based solar PV system integrator and turnkey solution provider. HiFi Solar also develops and finances solar power projects with suppliers and investors. Its long-term vision is to build the company into a leading new energy and clean technology company. On June 24, 2010, before a state dinner attended by President Hu and Prime Minister Harper, HiFi signed the joint venture agreement with Sungrow Power Supply at a high-profile business signing ceremony.

EU: How do you see the potential of Solar Energy in Pakistan?

Feihzen Lu: I personally believe that Solar Energy is one of best solutions for Pakistan in the present situation particularly at times when the electricity crisis is looming and tariff is becoming increasing because of high cost of production. Pakistan should utilize its natural Sun Shine which is available in abundant and easily caters the needs of country in every aspect at affordable rates viz-a-viz easy investment.

The Solar Energy is very conducive alternative, easy and long-term solution for developing countries particularly because the electricity cost through fuel is uncontrollable and has been skyrocketing every year. On the other hand, the Solar Energy is becoming attractive for developing countries including Pakistan with prices of equipments and solutions are going down towards the reach of every country, government, company and individual. As recently, the overall cumulative cost has reduced by 80 percent on Solar panel devices in last couple of years. It is high time for Pakistan as well to tap natural Sun Shine and start producing electricity from Solar energy.



Feihzen Lu is the CEO of HiSEL Power Corporation and Executive Director and Founder of HiFi Solar Energy. She has done valuable contribution towards the development and innovation of solar-based energy solutions across the world with advanced and cutting-edge technology. Lu owns extraordinary skills in diversified business fields having great influence of leadership among the fraternity of innovative entrepreneurs. She is also MD at China-America Link Inc. and Vice Chair at Canadian Chinese General Chamber of Industry & Commerce.

EU: Solar energy equipments manufactured in China is not considered as reliable and durable in Pakistan? What is your strategy to market your products and solution as successful in Pakistan?

Feihzen Lu: China is hub of producing Solar equipments for worldwide as 70 to 80 percent panels are manufactured in China by top six leading companies of the world. The country is dominating in the globe with advance and emerging technology and its different aspects.

Hence there is variety of Solar panels and its quality depending upon its costs and affordability of the customers.

At HiFi Solar Energy, we have committed to provide high quality equipments to our customers. In this regard, specialist teams of experts work for our company in China and Canada. We guarantee for our products because quality is our life. We have observed that quality and reliability of the products is still an issue in Pakistan as lots of importers having no technical backgrounds introduced this technology inappropriately that caused bad fame to Solar technology as unreliable and immature for Pakistani market though the technology is widely and rapidly expanding across the world and countries have designed projects in megawatts by 2015 to generate environment friendly and cheaper electricity. We test our products and equipments in-house for ensuring the best standards of technology. Particularly, we update our products as per requirement of country's condition as if in the case of Pakistan and market our equipments afterwards.

EU: What are your different businesses other than Solar Energy?

Feihzen Lu: Our companies deal with different businesses related to electricity power including energy conservation, energy storage and backup, telecom towers, industries, LED lights. We have established our network all over the world being a global company having operation continue to expanding in all parts including South Asia

EU: What are your views on platforms for promoting advance energy as EGO Pakistan?

Feihzen Lu: This is wonderful event not for customers and stakeholders but it is good for promoting technology and doing networking with people of common interests and businesses. ■

NO WAY TO OVERCOME ENERGY CRISIS

By Yasir Amen

The energy situation in Pakistan is worst than earlier with no respite to the public who are paying exorbitant bills to electricity supplying and generating companies despite long-hour loadshedding and unannounced outages that have taken toll to their economic activities and damaged peace of life.

The previous government, which claimed to be supported by popular vote of public, has miserably failed to deliver the masses from the most wanted need of electricity and now the new government seems to suit of lip-service while doing nothing enough to bring reform in the energy sector for long-term and sustainable solutions to future generation.

The PML (N) led government has chalked out Power Policy 2013 as a roadmap to achieve self-sufficiency in energy as commendable effort. Yet, it has resolved earlier an issue of circular-debt which is emerging again, but it has apparently lost all potential opportunities of the nation leaving themselves and their future generation in the lurch.

As the winter season started in the country, the gas loadshedding is going to be worst particularly in the northern region of the country ultimately thousands of commuters will face difficulties with the closure of CNG stations at the expense of hundreds of employees' livelihood.

In the coming months, the energy situation will repeat its history of the recent past (worst than the regime of PPP-led government) denting commercial activities, national economy and public lives.

The situation of energy-gas and electricity was quite stable in the month of November and December's but it will getting worst with rising demands of natural gas to domestic and



commercial sector going forward, said renowned experts of energy sector Munawar Baseer Ahmad.

PML(N) government has defined its strategy for overcoming power crisis but all projects including Nandipur Power Plants are time-taking from 3 to 5 years. Public is hungry of electricity and gas for now and plans are made for the future.

The government should set strategy for short-term basis first based on six months, one year and then two to three years, which is called long-term but all projects have been designed for unseen future which no one knows about that, Baseer said who was former MD of Sui Southern Gas and former Chairman of PEPCO.

Iran-Pakistan pipeline gas is eye-wash as the government does not seem serious to work on it because the construction of the pipeline has not completed. Its roadmap is undecided with lots of complications. The financing of the project is unavailable. The security is also a big issue for pipeline, he said.

If Iran's government has taken a u-turn, the Pakistan's government could convince it but what the political leadership needs to do is to show seriousness and advancement towards project.

Baseer said the coal remains a future area of power generation as nothing has been done visible practically to set up power plants there though it is decided that once a foundation is laid for the plant, the project will take at least three months to be completed at fast track.

The government failed to get support through exploiting diplomatic strategy for civil-nuclear partnership with United States of America. It was given answer by Iranian gov-

eminent not to continue project with Iran.

But there are different projects remained at the desk of policymakers and bureaucrats which unfortunately become victim of their poor decision-making skills, slow-paced work and inefficiency towards initiatives.

The US-backed gas pipeline project "Turkmenistan Pakistan Afghanistan and India" (TAPI) got into attention once again but it is not an easy task in terms of financing for the government. Though security is more important issue as far the construction and route of pipeline is Afghanistan.

There will be three states and their leaderships to whom Pakistan policymakers have to deal with. If they could not convince one state of Iran for IP gas project, it will be difficult and tiring process to bring all stakeholders including India on the same page for any agreed terms for financing and gas supplies, said Kaleem Siddiqui, another energy expert.

Pakistan needs to arrange financial resources for any massive project but leadership has not shown their skills so far to take concrete steps towards the direction of mega power projects.

There is a chance to control energy crisis through project of LNG but the project has been involved undue complexities which caused delays and seemingly stand in uncertainty. The conversion of Independent Power Plants (IPP) from fuel to coal is good initiatives but the drive will take three years with no respite for public in the present tense.

The government announced nuclear and costal power plants with capacity to generate 6,200 megawatt will also take four to five years to be matured. There will be detail financial and technical studies need to initiate construction and design of the project besides transmission which comes in the later stages.

Siddiqui said the government could

only bring improvement in the existing power plants to generate extra megawatts of electricity but it depends on its will and performance. Besides, renewable energy including Wind and Solar energy, is the only option which could generate electricity at short-term basis provided that the government actively takes up the area as trouble-shooter and develop projects on war footing.

All mega projects that have been planned or to be planned in future needs financial strengthen to the government that could resolve the issue of energy crisis however the income of the government is standstill with no intention to generate taxes from elite class.

The feasibility of the projects suggested that cost is getting increased as dollar has appreciated fast which has enhanced automatically the projected expenses of the mega projects. ■

Big boost to N-power

On the socio-economic front if one is to identify Pakistan's most crucial issue it is the yawning energy deficit. But for this we would have been today as vibrant an economy and developed a country, if not more, as any of the 'emerging economies' and 'Asian Tigers', who happened to be far behind this country in terms of per capita income at the time of Independence. Not only has the lingering curse of loadshedding stunted the economic growth, it has also taken a heavy toll on social harmony. How all of it has come about and who should be held responsible for the crippling shortages plaguing us today, this is certainly an issue and must be looked into to fix responsibility. But far more pressing today is the need to look ahead and plan for the future. And in that perspective, the government's decision to construct two more 1100 MW each nuclear power plants is a huge step forward. Prime Minister Nawaz Sharif performed the groundbreaking for nuclear complex, called Coastal Power Project K-2 and K-3, which are expected to come on stream in about six years. Costing nearly \$10 billion, the project will be constructed with the help of the Chinese, who had earlier helped Pakistan set up two nuclear power reactors, each of 330MW capacity, at Chashma near Mianwali. Present at the ceremony was a high-powered delegation of China's atomic energy scientists and officials and Ambassador Sun Wei Dong. Presently, the share of nuclear energy in the national energy mix is only about 5

percent, which is much less than that it should have been by now given that the country has a larger reservoir of experienced nuclear scientists and engineers. They are in this field for about four decades, since 1973 when Canada left Pakistan in lurch as it walked out of the 130MW Karachi nuclear plant as 'punishment' for the crime committed by India - that was the 'Smiling Buddha' Pokhran test using fissile material produced at a Canada-gifted reactor - with an immaculate accident-free record and tested capacity of prolonging the shelf life of Karachi reactor and augmenting the generation capacity of the PINSTECH lab plant. Pakistan would welcome investments by the Chinese companies, which is almost a done thing, and in a big way, with prime minister saying they would support the project "in every way".

Nuclear power is safe, clean, climate-friendly, and cheap and a key to the development for a country like Pakistan which is far behind because hardly 5 percent of its electricity is produced by its three nuclear plants now in operation as compared to 13 percent of the world average. As against our three units the rest of the world has 437 nuclear power plants, in 31 countries, in operation while another 8 are under construction, of which (as of January 2013) the United States has 104, France 58, Japan 50, South Korea 23, Russia 33, India 20 and Canada 13. Therefore, there is no plausible reason for others (except perhaps India which will - though

for no plausible reason given the fact that it keeps receiving generous help in this field in spite of it being a non-signatory to the Nuclear Non-Proliferation Treaty) to make a case against Pakistan. If there is a perception that the Chinese help to Pakistan is a 'counterpoint to nuclear axis between US and India', then that is right. China of course, of late has signed up the Treaty and became member of Nuclear Suppliers Group (NSG), but these protocols are not binding on it insofar as Pakistan is concerned because the present agreement is the continuation of the original when it was free to do so - a position called 'grandfathering' by Beijing. It's our hope the NSG would reconsider its position on Pakistan and open its doors on it for the exchange of nuclear technology and know-how. Given Pakistan's peculiar security environments and its energy needs the fact has to be accepted by all and sundry stakeholders that its nuclear programme has come to stay. Its capping should not be demanded because that is just not a viable option. On the other hand, it is imperative that the international community, particularly the NSG, should reframe its outlook and open its doors on all who are nuclear capable both by virtue of their experience and track record. Should there be progress in this there can be movement on other nuclear-related protocols including the Fissile Materials Cut-off Treaty (FMCT). ■

Courtesy: Business Recorder

IP gas pipeline or pipe dream?

After the success in reaching an interim but landmark deal with G5 Plus One on its nuclear programme which led to the lifting of debilitating sanctions on trade, including petrochemicals, Iranian President Rouhani's diplomatic offensive turned towards enhancing regional trade during the two-day meeting of the Economic Co-ordination Organisation (ECO) which was attended, among others, by Sartaj Aziz, Special Advisor to the Prime Minister on Foreign Affairs.

President Rouhani stated that ECO member states' total trade was around 817 billion dollars per annum while trade within the region was only 83 billion dollars, or 10 percent of the total. While part of the reason for this may well be that the region itself remains extremely important from a geopolitical prospect with Russia and several powers, particularly the United States, competing for greater influence yet another reason may be due to the fact that most of the trade of ECO member countries, particularly the seven Central Asian Republics, (CARs) is in fossil fuel (oil and gas with the emerging prospect of trade in hydel electricity from the energy-rich CARs to energy-starved South Asia) with few other products in demand regionally. In addition, using the land route to trade, the cheapest form of transport that makes regional trade attractive, remains a challenge with Afghanistan's law and order problems considered the main impediment.

There is massive potential to trade in energy and regional countries have been engaged in developing projects that envisage gas and hydel electricity sales from CARs to Afghanistan, Pakistan and India (not a member country). Three projects have been under consideration: (i) Central Asia South Asia Regional Electricity Market (CASAREM) which aims to develop electricity trade amongst four countries in the region initially through a set of projects and concomitant investments, underpinned by the relevant institutional arrangements and legal agreements. The initial four countries involved are Tajikistan and Kyrgyz Republic (potential exporters) and Afghanistan and Pakistan (potential importers). It is envisaged that other countries, including India,

may join as trade expands; (ii) Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline was deemed economically and financially viable, within certain gas pricing constraints. Initial price was agreed to be above Turkmenistan's prevailing price to Russia's energy giant Gazprom and below prevailing price of LNG landed in India and/or Pakistan to ensure a win-win situation for all parties concerned; and (iii) increase imports from Turkmenistan by supporting a 400-km-long transmission line of 500kV in Turkmenistan to the border of Afghanistan. To date there have been several agreements between countries brokered by several multilaterals as well as the US; however many physical (lack of finances, lack of freedom of movement across borders and security situation in Afghanistan) and non-physical impediments (notably mistrust between countries) remain. The ECO countries would have to work on these issues before the region can take advantage of enhanced regional trade which, all are agreed, would be a win-win situation for all.

With reference to the Iran-Pakistan (IP) gas pipeline the Foreign Office stated that Sartaj Aziz and his Iranian counterpart discussed - on the sidelines of the ECO meeting - the need to fast-track discussions. The expected lifting of sanctions on Iran would remove what was regarded as a major impediment to the project namely US opposition; however in recent weeks and months the newly-elected Pakistani government has indicated that it would seek to renegotiate the gas price agreed earlier, which Iran has reportedly agreed to, and seek more than the 500 million dollars already offered by Iran to complete the pipeline on the Pakistani side of the border, to which Iran has not agreed. True, Iran's nuclear agreement with the West has unfrozen around 4 billion dollars of Iran's yet the Pakistan government must be aware of the fact that with the lifting of sanctions, Iran is enabled to begin oil exports to the West (or refine it to higher value adding LNG). In other words, Pakistan's leverage as a buyer has declined and therefore one hopes that negotiations are carried out with this in mind. ■





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National Forum for Environment & Health (NFEH) and Fire Protection Association of Pakistan (FPAP) organize 3rd Fire Safety Award's ceremony at a local hotel. Minister Environment, Dr. Sikanar Mandro, Naeem Qureshi President NFEH, Tariq Moeen & Farhat Hussain of FPAP are seen in the picture. 28 companies awarded the best safety arrangements through a professional criteria and verification.

4th Fire & Safety Convention & Awards 2013

Rescue 1122 to introduce soon in Sindh, Chief Secretary Sajjad S. Hotiyana

On pattern of Punjab, Sindh government is working to develop rescue service of 1122 in the province to help people in times of need during disasters and emergencies. An effective plan is being worked out to introduce this service at provincial level and will be soon introduced.

This was informed by the Chief Secretary Sindh Sajjad Saleem Hotiyana while speaking at the inaugural ceremony of the 4th Fire and Safety Conference & Safety Awards held here at a local hotel. The flagship annual award convention was organized by the National Forum for Environ-

ment and Health (NFEH) in collaboration with Fire Protection Association of Pakistan (FPAP).

This full day convention and award ceremony was aimed to promote fire safety awareness, knowledge and necessity of fire protection measures among our industries, corporate sectors, builders, commercial and residential buildings, NGOs etc.

Chief Secretary Sindh further shared that a delegation of Sindh Government is on a visit to Punjab and is engaged in negotiation with matters relating to introducing the Rescue Service of '1122' in Sindh

as well. "Suggestions and recommendations submitted by NFEH will be carefully and thoroughly reviewed and all necessary actions and arrangements for the implementation of the same will be undertaken, Sajjad Saleem Hotiyana assured.

He praised the initiative of NFEH and FPAP for their unrelenting efforts and cited the convention as an essential and vital activity in order to promote awareness about fire hazards, their prevention and safety in daily life. Chief Secretary stressed the need of such awareness programs taking place more frequently in the metropol-



Chief Secretary Sindh Sajjad Salim Hotiyana, Muffasir Malik, Vice President, KCCI, Hussain Sabz Ali of HBL, Fawad H. Barry of Haseen Habib, M. Imran of Envirograph, Tariq Moin, Secretary FPAP and Naeem Qureshi President NFEH addressing at inaugural session of 4th Fire & Safety Convention 2013.



Minister Environment Sindh Dr. Sikandar Mandhro, Anchor Najia Asher, Saman Khalil, Faheem Siddiqui, Farhat Hussain, Ali Irfan, Dr. Salman Safdar, Engr. Nadeem Ashraf, Khalid Iqbal and others addressing at different sessions of 4th Fire & Safety Convention 2013

itan city for the education of masses.

Speaking on the occasion, chief guest Dr. Sikander Mandhro, Minister Environment, Sindh applauding the role and services of NFEH & FPAP said that much focus should also be given to effective rescue operations' training which is the primary step before relief and rehabilitation. Admitting the primary responsibility of government he urged the civil society and corporate entities to come forward and further strengthen such initiatives in spreading the awareness and knowledge on the subject at district, tehsil and grass root level.

Earlier Naeem Qureshi, Presiden, NFEH in his welcome address said that the topic of fire safety needs utmost importance and realization in the society but unfortunately public awareness and training on this subject is extremely low and thus NFEH's this initiative is a step in the same direction.

Chairman NFEH Dr. Kaiser Waheed, Project Head Nadeem Ashraf and Tariq Moeen also spoke on the occasion.

Farhat Hussain, President, FPAP underlined the need for a comprehensive planning, legislation and implementation of regulations of fire and safety management & training on genuine basis to ensure safety of people.

Capt. Fahim-uz-Zaman, former Administrator Karachi suggested government and private sector to engage educated young breed of people towards fire safety & fire fighting as careers in order to entice professionalism in this field and to make this profession a choice as well. He also called for redesigning the curriculum of fire and safety in academic institutions according to the changing environment to produce experts for ensuring safety of people.

Ms Najia Ashar, Senior News Anchor & Producer and Faheem Siddiqui, Senior Investigative Journalist & host from Geo News television also shared their views on

the role of media in reporting fire incidents. They were of the view that media while reporting fire incidents tries to identify and report the degree of fire, the exact location of the incident and extent of damage with progress on rescue work, however it was agreed amongst the panel members which also included Madam Saman Khalil, an Environment Consultant that special training needs to be imparted to media reporters to tackle such reporting hurdles.

Fawad Atee Bari, MD, Haseen Habib, Adil Masti Khan, GM, Soorty Enterprises, Ali Irfan, Director, FPAP and M. Imran, Director of Envirograf with the help of their informative and interactive presentations enlightened the audience with the technicalities and difference usage of fire safety and prevention equipments. Moreover, Hussain Sabz Ali, Fire Chief, HBL and Wajahatullah Khan also shared the stage to vocal on fire safety drills, fire prevention methods, effectively tackling the panic situations and other edifying topics with related to fire safety. It was followed by

question-and-answer session.

Later on NFEH Corporate Excellence Awards on Fire Safety & Environment were bestowed to 28 leading corporate houses with distinguished fire safety measures at their workplaces. The award ceremony was followed by the lucky draw for the participants.

Salman Safdar, Head, Sub-Office, Karachi of United National Office for the Coordination of Humanitarian Affairs (UNOCHA) and representative of Bums Center Karachi also addressed the gathering and briefed regarding their remarkable contribution for the humanity. Tariq Moeen, Secretary General, FPAP moderated the convention with decorousness dedication and appealing professionalism.

The Marketects Club (TMC) joined hands with NFEH in social media promotions of fire safety awareness campaign and as a result, the Trend of NFEH & Fire-Safety topped the Twitter ranking in Pakistan during the Event. ■



NFEH team along with Minister Environment Sindh Dr. Sikandar Mandhro and President NFEH Naeem Qureshi

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NFEH holds 2nd Regional Seminar on CSR 2013

Education can resolve all problems, says Governor Punjab Ch M. Sarwar



Governor Punjab Ch. Muhammad Sarwar, Irfan Babar, Sharukh Hassan, Azhar Salim, Naeem Qureshi, Dr. Kaiser Waheed, Mehmood Tareen, Tariq Cheema, Shahid Khan and Mumtaz Hussain addressing at CSR Seminar

LAHORE: Terming market access under the Generalized System of Preferences (GSP Plus) a great achievement for the country, Governor Punjab Chaudhry Muhammad Sarwar has said that it will help in providing jobs to youth besides earning foreign exchange for the country.

He was addressing the 2nd regional seminar on "Corporate Social Responsibility - A Promise of Rural Development and Service Delivery" organized by National Forum for Environment and Health (NFEH) in collaboration with Oil & Gas Development

Company (OGDC), Pakistan State Oil (PSO) and Human Development Foundation (HDF), here at a local hotel.

He recalled that there had been stiff resistance from various countries about giving access to products from Pakistan. Several EU states have raised issues about



A group photo of Speakers and Organizers with Governor Punjab Ch. Muhammad Sarwar



Naeem Qureshi, President NFEH presenting memento to Governor Punjab



Irfan Babar, GM OGDCL receiving memento from Governor Punjab



Azhar Saleem of HDF receiving memento from Governor Punjab



Farah Majid of Pak Oasis receiving memento from Governor Punjab



Shahrukh Hassan MD Jang Group receiving memento from Governor Punjab

terrorism, women and workers rights. However, we told them that over 50,000 people sacrificed their lives during ongoing war on terrorism while thousands other military men rendered similar sacrifices. The overall financial impact of this war has been calculated at \$80 billion. We tried to convince them that market access was immensely important for country like Pakistan. The jobs created as a result of this market opening would help in provision of employment opportunities to the youth and women. It will indirectly lead to strengthen our fabric of society besides financial gains.

Governor said he was not so hopeful about getting access under GPS Plus. However, we managed a win with a margin of one vote. Talking about CSR activities in the country, he said, work must be done for provision of clean drinking water for all especially children studying in schools. The contaminated water has been primary reason of deadly diseases in the country. He shared his vision with the audience

about his initiative in this regard. As a test trial, he said, I ordered collection of water samples of 30 schools including three schools located in Governor House. I was astonished to see the results of samples as prevalence of arsenic was five times higher if compared with permissible limit. In order to tackle this grave problem, we have engaged various NGOs for the provision of clean water to children in schools. As a first step, state-of-the-art filtration plants have been set up in three affected schools while steps are being taken to resolve this problem in the remaining schools. He said same project is now being replicated with the personal interest of Governor Khyber Pakhtunkhawa.

Governor Punjab Chaudhry Muhammad Sarwar said that it is our collective responsibility to work for the betterment of poor and destitute people of our society. The small businesses are family owned while bigger businesses belong to the society.

He especially appreciated work done by various companies on CSR front, extending full support of Punjab and federal government. However, he stressed the need to further consolidate CSR activities in the far-flung areas.

NFEH President Naeem Qureshi, while throwing light on the objectives, said that the 2nd regional seminar on CSR 2013 aimed at encouraging healthy competition among organizations to soar higher in CSR initiatives and to recognize their efforts for the benefit of deprived people,

community groups, society and the nation at large. He said that it also aimed to create awareness about CSR initiatives and its philosophy in Pakistan; it also aimed to gather latest information including development, advancement and best practices in our Corporate Social Responsibility.

Later, Azhar Saleem, CEO, Human Development Foundation, in his address, spoke about the understanding the core concept of CSR and the role of NGOs in it. Bashir Malik, Chairman, Bin Qutab Foundation, spoke about the healthcare delivery system in rural areas. Besides, Oil & Gas Development Company (OGDC) General Manager Irfan Babar, Project Director Mahmood Tareen, World Congress of Muslim Philanthropists, CEO, Dr Tariq Cheema, NFEH Chairman Qaiser Waheed, Vice President Shahid A. Khan, veteran journalist Arif Nizami, Shahrukh Hasan, Ejaz Sheikh, Mumtaz Hussain and others also spoke on the occasion. ■

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OIL & GAS DEVELOPMENT COMPANY LIMITED

CSR ACTIVITIES 2013

The Company focuses to be a Responsible Corporate Citizen of E&P community. The Management of the Company is well conscious of its Social obligations and has used latest techniques to achieve the good gesture in the vicinity of its operations for the benefit of the locals affected by its E&P activities. These include employment opportunities for locals and financial assistance for numerous projects to improve the quality of life of people and communities with which OGDCL interacts. Corporate Social Responsibility (CSR) activities carried out for the compliance with the law and Poverty Alleviation.



Scope Of Work

OGDCL work in the sectors of Education, Health, water supply infrastructure and etc for the upgrading of living standers of the locals communities in surrounding of its operations areas.

Free Eye Camps

Regaining the capability to witness the beauty of nature has always been extreme desire of human being. Bringing eye sights back to marginalized and hopeless people living in rural areas in surrounding of OGDCL fields and winning happiness for them was a pleasant and superior experience by OGDCL. The camps for Free Eye treatment were held in 2013 at different locations of Sindh and Punjab.



The camp itself invited several hundreds of people from its surrounding villages for eye checkup, required operations and free medicines. Total 7,601 patients with cataracts and other serious eye problems were registered during these camps. Out of these 1932 patients were given free vision glasses, Rigid IOL surgery was performed to 485 patients and Folding IOL Surgery to 456 patients. All patients were treated totally free of cost. The milestone was achieved by CSR Department through a team of experienced doctors from Society for Prevention of Cure and Blindness (SPCB), Karachi under the supervision OGDCL Medical and CSR Department



Provision of Medicines to Mother and Child Care Centre

The Company provided Medicines to Medical Superintendent Mother & Child Care Centre, Taluka Hospital Ghotki of Rs. 1,400,000. Chief Guest Hon: Chief Sardar Muhammad Bux Khan Mahar MPA Distt. Ghotki Sindh, appreciated the contribution and efforts of OGDCL - Joint Venture for providing basic facilities to the institutions for poor / local community in District Ghotki such in Health Care under CSR / welfare program and desired to be continued in future. Notables, Health and Education deptt. Officials of the areas greatly appreciated the donations on behalf of OGDCL - Joint Venture.

Establishment of TB Clinic at Tando Alam Oil Complex

OGDCL has established T.B Clinic in Dispensary at Tando Alam Oil Complex. Local patients suffering from TB and other chest diseases are getting free consultation, treatment and medicines at clinic. The expenditures incurred on treatment of patients annually are amounting to Rs. 1.742 million.



Education

Company spend an amount of Rs.514,000/- for provision of School Items i.e Computer set, Generator, Electric water cooler and Multimedia Projector to deprived and poor students of Al-Rehman Public (Model) High School Mullah Chutto Kalwar Kohuhara Distt. in a simple but graceful ceremony which have been attended by District Education Officer (Mr. Inyatullah Khahuro), Dy. Director (School & Colleges) Distt. Ghotki, notables of the area, and parents of the students attended the ceremony. RC Sukkur (Mr. Manzoor Ahmad Mangrio) was also present on the occasion.

Distribution of School Items

The school equipments of Rs. 255,000 i.e Multimedia Projector, Electric Microscope, Electric Ceiling fans and Electric Water cooler handed over to Principal Govt. Higher Secondary School Umer Daho under CSR /Social welfare progamme in a simple but graceful ceremony. Hon: Chief Sardar Muhammad Bux Khan Mahar MPA Distt. Ghotki, was the Chief Guest of the Ceremony at Qadirpur Gas Field. Also other District Health Deptt. Officials, (Dr. Zu-





Ifiqar Sli Shah DHO, Dr. Mushtaq Ahmad Bachkani M.S Taluka Hiospital Ghotki) and notables of the area attended the handing over ceremony.

Technical Training School at Quetta (Balochistan) and Karak (KPK)

In education, OGDCL has two Technical training institutes at Karak and in Quetta, where local boys are being provided training in field of the petroleum industry, with an annual expenditure of



about Rs.9.036 million. In these Institutions, about 200 students are annually trained in various fields of oil & gas industry and providing assistance to them for getting jobs in oil industry as well as other related institutions.

Technical Training School

OGDCL spent Rs. 6.928 million for provision of books, uniforms and school bags to underprivileged and meritorious students of Dera Bugti. Students from four (04) FC schools were selected. FM Pirkoh, Mr. Maqsood Ahmad honoured the occasion and distributed the articles. This activity was warmly hailed by local notables and FC high ups.

Distribution Of books, uniforms, shoes and bags among students of FC Public Schools, Dera Bugti.

Installation of Water Tube Wells

Provision of safe drinking water to the local community is one of the priorities among Baluchistan- CSR projects. OGDCL under its social welfare installed water tube wells at Pirkoh, District Dera Bugti an amount of Rs. 19.000 Million.

Supply of Drinking Water

OGDCL is providing free portable drinking water to local communities in all four Provinces through water



tankers/bouzers. OGDCL spending Rs.84.160 Million annually for the provision of water.

Flood Relief Activities

Heavy rains caused major infrastructural damages in various areas of Pakistan. In the wake of massive disaster, OGDCL being a responsible Corporate at the national grief, played an exemplary role.



Under corporate social responsibility, OGDCL took concrete steps for extending relief to flood affected people. As part of such efforts, the Management approved Rs 50.000 million for relief and rehabilitation of flood affected people in province Balochistan and 3.000 Million for Sindh to help ease the woes of the flood affected people who were in urgent need of food. The company arranged Food Hampers to flood victims and saved many precious lives. Food hampers were distributed in the presence of Public Representative (MNA) and a member from District Government.

CSR Conference

OGDCL is aggressively involved in the CSR activities in the area of health, education, water supply, sanitation infrastructure and training in all four Provinces of Pakistan where the company is working as a largest player in E&P sector, this was stated by Wahab Manager CSR OGDCL at CSR conference held in Lahore.

In addition to spending through production bonus and 10% of royalty allocated for concerned district, my company allocated of its 1% its annual net profit which is over 900 million annually allocated only for CSR activities, he said.

OGDCL took prompt initiatives to contribute immediately in any national disaster like flood earth quake. Millions of rupees spent near Qadirpur during flood in 2013 and contributed an amount of rupees 50 million for rehabilitation of earthquake affectees at Awaran, Balochistan.

OGDCL is working to facilitate local administration to rehabilitate the displace Bugtis through provision of cultivation tools tractor etc. It built water supply infrastructure at Dera Bugti through boring of tube wells an improvement in water supply lines.

The company is constructing a number of dispensaries in different field locations to facilitate the local patients through provision of free medicines and provision of Ambulances for shifting of critical patients to nearby hospitals.

During the year 2013, OGDCL conducted a number of free eye camps all over the country to facilitate thousands of deserving and very poor patients through free consultation including provision of glasses, rigid lenses totally free of cost.

The company has spent Rs 60 million for the construction of girls' hostel at Quaid-i-Azam

I congratulate the NEHF to conduct such a wonderful gathering to highlight the most important topic of corporate social responsibility and thanked Governor Punjab Chaudhry Ghulam Sarwar. ■

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Towards a solar subcontinent

By Rina Saeed Khan

Pakistan's vast renewable energy potential remains largely untapped for a mixture of reasons: political instability, inadequate budgets, minimal investment in research and poor indigenisation of technology. Despite the increase in small scale renewable energy installations in the country in the past year (solar photo-voltaic panels, micro hydropower plants, solar wind hybrids and wind energy), Pakistan still needs considerable investment for the development of large scale renewable energy-based projects.

Perhaps Pakistan could learn from its next door neighbour India whose renewable energy sector is now 5.5 per cent of its energy mix and growing by the day. The installation of grid-connected renewable energy (excluding large hydro) in India has grown from 3.5GW in March 2002 to 28GW in March 2013, which means an annual growth rate of 23pc. Last year, 51.23 billion kWh of electricity was generated from grid-connected renewable power to meet the annual requirement of about 60m people.

The goal of the National Solar Mission that was launched in 2010 in India is to produce 22,000MW of solar power by 2022 (both solar photo voltaic for direct electricity supply and solar thermal for heating/cooking). This will increase domestic manufacturing capacity, develop manpower and support research and development in solar energy.

By 2020, 15pc of the electricity in India is to be produced from renewable sources and there is a preferential tariff for wind, biomass, and small hydro and solar energy. There is even a tax on polluting coal (\$1.0/tonne) to fund clean energy. According to Chandra Bhushan, the deputy director general of the Centre for Science and Environment in New Delhi, "the question is how do we keep conventional power plants idle? We should only operate them when there is no wind or no sun (to run the alternative energy plants). Renewable energy is possible in the South Asian region. We could set up a regional grid from Dhaka to Islamabad but how to fund it? Reduce the price of renewable by increasing demand".

Despite falling costs, however, renewable energy is still expensive, but as Bhushan points out, "the era of cheap electricity is over!" Fossil fuels and nuclear energy, which make up around 80pc of India's energy mix, are becoming quite expensive since both the price of oil and coal is going up, and then there are environmental costs as well. The burning of fossil fuels creates

air pollution and the carbon dioxide that is released contributes to climate change.

Bhushan recently visited Germany, which is the country that has done the maximum work on renewable energy, and he noted that: "In Germany it is the people, the co-operatives, municipalities and communities that are setting up solar and wind power projects, not the big companies." Germany is planning to shut down all their nuclear power plants by 2030. They have recently lent one billion Euros to India in a soft loan to expand its grid by adding renewable energy.

India is also becoming a regional leader in wind technology.

Given their 49,000MW potential in wind energy, they have already achieved 17,352MW. Their target for 2012-2017 is to produce another 15,000MW. "We have achieved 70pc indigenisation up to 500kW in wind technology," pointed out Alok Srivastava, joint secretary (wind projects) at the union ministry of new and renewable energy, government of India. Yes, India has its own dedicated federal ministry for renewable energy!

Critical components of wind turbines such as gearbox, rotor blades, generators and controllers have all

been indigenised in the last few years. Srivastava stated that India has around 20 manufacturers of wind technology and they have even started exporting now to the USA, Australia, China, South Korea, Japan and Sri Lanka. "It is a well established technology up to 2.5MW single turbine." India is also ramping up its small hydropower projects (run of the river) as well as investing in biomass (1150MW achieved so far) and bagasse (produced by sugar mills with 1985MW achieved so far).

Renewable energy needs huge subsidies at the moment but one has to give financial incentives and come up with tariff policies to take renewable energy forward as India has done. Thanks to the government's push for renewable energy, dedicated research institutions have been set up, wind and solar radiation has been mapped and small hydro project sites have been identified. India now has world class manufacturing facilities, extensive suppliers across the entire value chain and employs over a million people in this new and growing sector. Another lesson that Pakistan can learn from India is that most of these renewable energy projects have been developed under the private sector thanks to a strong spirit of entrepreneurship. ■



SGS Summit on Asset Integrity Management

SGS, in partnership with the Pakistan Engineering Council (PEC) and the Federation of Pakistan Chambers of Commerce (FPCCI), hosted first international summit focused on fostering information exchange on plant integrity and extending the lifecycle of industrial assets.

Moot discussed that plant and equipment were the backbone of many utility and manufacturing industries, and also one of their most costly investments. Ageing industrial plant and equipment increases the need for proactive management. This can ensure continued usage with maximum reliability and safety whilst at the same time helping to achieve a minimum of planned, and unplanned, stoppages and/or failures.



Khalid Mansour
CEO, HUBCO



Munawar Baser
Ex. MD, PEPCO



Guest



Guest



Guest



Yasin Rizvi
VP, Total Oil



Rasheed Jung
Ex. MD, PARCO



Guest



Kalim Siddiqui



A group photo of Speakers & Organizers of Summit



Huma Mir

The Asset Integrity Management (AIM) Summit explored many topics across several industries, including Oil and gas upstream and downstream, Energy generation and transmission, Chemical and process plants, Consumer goods manufacturing.

AIM gathered distinguished industry experts from many sectors to deliver a packed schedule of feature presentations, case studies and panel discussions.

The key themes of the event are making businesses safe, reliable and profitable. It covered issues related to specific categories of plant equipment, such as tanks, pressure vessels, pipelines, piping and rotating equipment.

The Summit also featured an exhibition space highlighting the latest developments in solutions and services. ■



Business Leader SM Muneer presenting memento to a foreign speaker, MD SGS Farrukh Mazhar, Deputy Director, A Razzaq Lakhani, Sohail Wajahat, Mian Zahid Hussain and others are seen in the picture



Archroma Sustainable Effluent Treatment based on Zero Liquid Discharge Jamshoro Inaugural ceremony held recently



Archroma Sustainable Effluent Treatment based on Zero Liquid Discharge Jamshoro Inaugurated by Mr. Alexander Wessels , CEO Archroma Group.

Archroma Sustainable Effluent Treatment unveiled



Alexander Wessels



Mujtaba Rahim



Ali Gul

Christoph Bubb, H.E. Swiss Ambassador, lauded the Archroma leadership in Pakistan for its effort in exploring new and environmentally compatible solutions to address future challenges while maintaining profitable growth over many years.

He said that Archroma group has invested Rs371 million, the biggest ever investment in Pakistan, to implement environmental standards in line with the company's strategy to attain operationally and technologically sustainable, profitable and social acceptable growth.

Alexander Wessels, CEO Archroma says, "We are constantly exploring new and environmentally compatible solutions at Archroma. Our special focus on innovation and sustainability, in particular in the textile area, is what makes us a recognized long-term partner for our customers."

Archroma's Jamshoro site is one of our biggest textile chemicals sites in the world, with a production capacity of 50,000 tons per

year.

Thomas Winkler, President Textile Specialties of Archroma, "Sustainable Effluent Discharge" (SET) facility in Archroma's site in Pakistan is a highlight in the history of our textile business: the facility based on a zero liquid discharge objective, is a first of its kind among textile dyes manufacturers worldwide.

Textile manufacturing requires huge amounts of water, in particular during the so-called fabric preparation processes: first for de-sizing and bleaching of the fabric, and second for the dyeing, which with its subsequent rinsing, is the most water-consuming process of the fabric preparation.

Mujtaba Rahim, CEO Archroma Pakistan, said that company contributed comprehensively towards the welfare of the Pakistani community particularly the affected people of floods three years ago.

First, in order to provide immediate relief to the communities living in the vicinity of the Jamshoro site, our employees and our company together donated more than Rs 3.61 million for building new houses for affected families, rebuilding water treatment plant for the nearby Chaker Khan village of about 500 inhabitants and providing 30,000 gallons drinking water per day to the flood-affected area. ■



Group Photo From Left Musaddiq Aziz, Abdul Salam, Ali Gul, Nadeem Ashraf, Ruqiaya Naeem, Naeem Qureshi, Thomas Winkler, Mujtaba Rahim, Alexander Wessels, Marc George and Kalus Huemke during inauguration ceremony of sustainable effluent treatment facility based on Zero Liquid Discharge of Archroma Pakistan Limited at Jamshoro plant.

AMAZing

An Ancient City Is Discovered Underwater. What They Found Will Change History Forever

The city of Heracleion was engulfed underwater 1500 years ago. This grand city had been mentioned by the Greek writer Herodotus, the 5th-century BC historian. He had told a wonderful tale of Helen of Troy, who traveled to Heracleion, then a port of 'great wealth', with her Trojan lover, Paris.

When French marine archaeologist Franck Goddio stumbled upon some relics, it led them to one of the greatest finds of the 21st century; a city underwater. The discovery took place when Goddio had been in search of Napoleon's warships from the 1798 Battle of the Nile, when he had been defeated by Nelson in these very waters, but to his surprise, he stumbled upon this magnificent discovery.

The discoveries include the colossal statues of the Egyptian goddess Isis, the god Hapi, and an unidentified Egyptian pharaoh, all preserved in excellent condition by their muddy burial shroud. Along with these 16ft statues there are hundreds of smaller statues of Egyptian gods, among them the figures that guarded the temple where Cleopatra who was inaugurated as Queen of the Nile. Dozens of sarcophagi have also been found, containing the bodies of mummified animals sacrificed to Amun-Gereb, the supreme god of the Egyptians. Many amulets, or religious charms, have been unearthed, too, showing gods such as Isis, Osiris and Horus.

Evidence shows that Heracleion slipped into its watery grave sometime in the 6th or 7th century AD. The discovery of Heracleion will now add depth and detail to our knowledge of the ancient world, because among the discoveries, there are perfectly preserved inscribed pillars decorated with hieroglyphics.



Researchers say they found oldest Buddhist shrine

KATMANDU: Archeologists in Nepal say they have discovered traces of a wooden structure dating from the sixth century B.C. that they believe is the world's oldest Buddhist shrine.



Kosh Prasad Acharya, who teamed with archeologists from Britain's Durham University, said that the structure was unearthed inside the sacred Mayadevi Temple in Lumbini. Buddha, also known as Siddhartha Gautama, is generally thought to have been born in about the sixth century B.C. at the temple site. Acharya said the traces were tested using radiocarbon and luminescence techniques, which found they dated from the sixth century B.C. The team has been working on the site for the past three years.

Will icy comet survive close encounter with sun?

For months, all eyes in the sky have pointed at the comet that's zooming toward a blisteringly close encounter with the sun.



The moment of truth comes on Thanksgiving Day.

The sun-grazing Comet ISON, now thought to be less than a mile wide, will either fry and shatter, victim of the sun's incredible power, or endure and quite possibly put on one fabulous celestial show. Talk about an astronomical cliffhanger.

Even the smartest scientists are reluctant to lay odds.

Should it survive, ISON, pronounced EYE'-sahn, would be visible with the naked eye through December, at least from the Northern Hemisphere.



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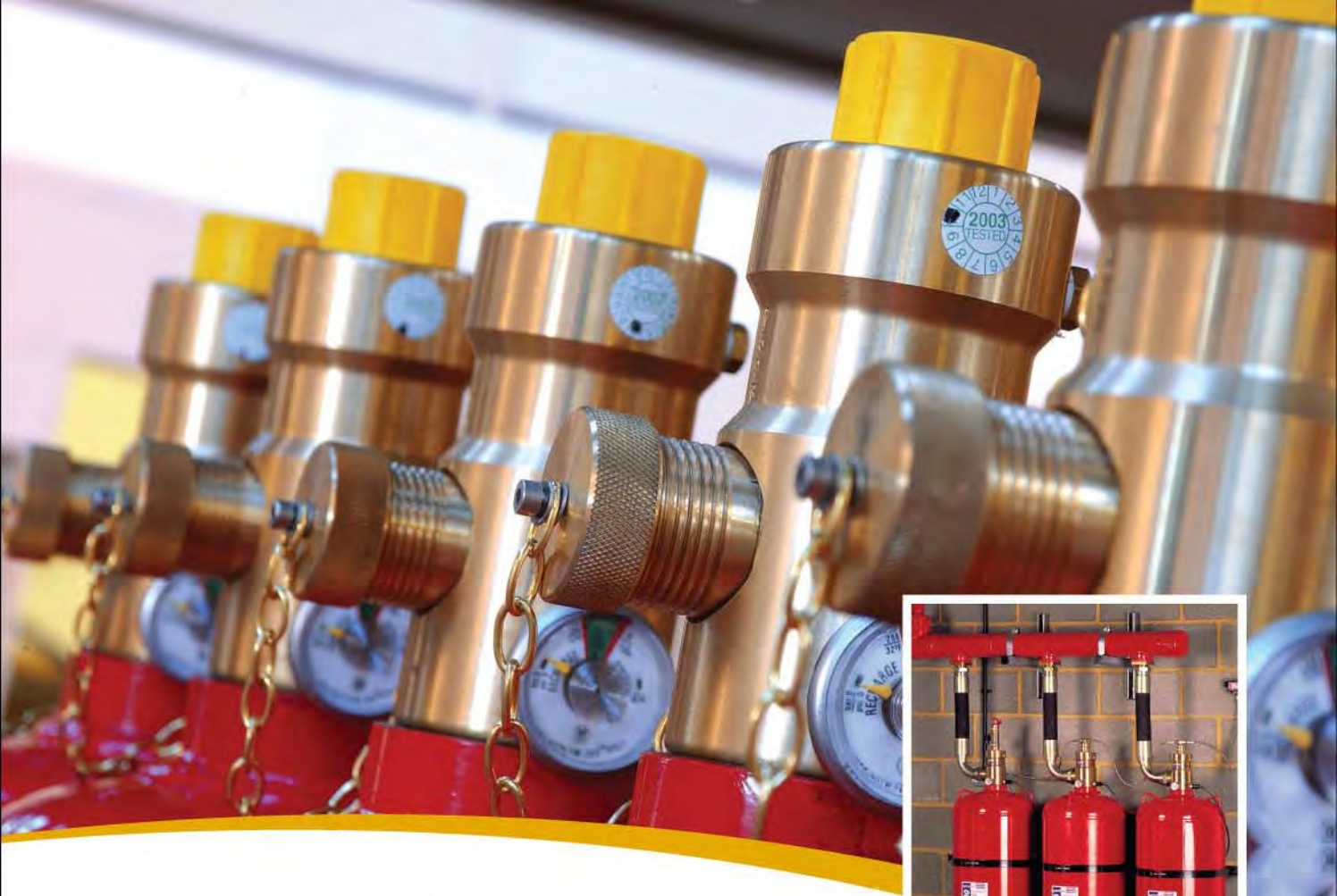
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The Non-Sweat Summer

By Xari Jalil

On an average summer's day when the rest of Lahore sullenly waits in the heat for the electricity to return, Shahid Razzaq's family lounges peacefully, their air conditioner running and all appliances working. While in other households the sudden and frequent power blackouts are greeted with groans and resigned sighs, the Razzaq family doesn't even notice. And they certainly never have to switch on a generator.

That's because they're almost completely 'off the grid', having tired of the vagaries of Wapda some time back. Instead, they turn to what they consider to be a far more reliable source of power: the sun. And in a city that experienced up to 20 hours of loadshedding in a single day last summer, this is no small blessing.

Fed up of the never-ending power crisis, Razzaq took the plunge and installed solar cells on his roof. Of course he hasn't yet fully cut the Wapda cord.

"We actually have a hybrid system running," he says. "During the day when the sun is out, we use the solar cells. At night we shift to Wapda. Usually before we switch over, we know that we have about eight hours of backup electricity that has been generated during the day." Razzaq appears to be content with this solution, as would anyone who isn't sweating thanks to what is one of the most persistent problems in Pakistan.

Appliances that run on solar power in this house include two freezers, a television, computer, iron, microwave and, amazingly enough, two air conditioners.

"I can use anything and everything at home," says his wife. "Never has life been so peaceful."

Razzaq says that he has installed solar cells of six kilowatts. "But one can even get higher wattage and run only on solar power instead of using a hybrid line. In fact we have a surplus of electricity during the day time."

Unfortunately, this surplus is more or less wasted here. In other countries surplus electricity is given back to the grid station and the same amount is returned to the consumer in the shape of free units through smart meters. But not in Pakistan.

"If only we could have this advantage, things would be so much easier and fair for the average citizen trying to actually conserve electricity," he says.

His son-in-law, Moez Naseer, who is coincidentally a software engineer in a solar power firm, explains that if the government shifts ever so slightly with regard to its



policies and introduces one that allows citizens to generate their own electricity, everyone would be better off.

"Think of all the benefits of just one simple policy," he says. "The government's provision of electric power would meet the demand better, instead of being at a deficit all the time. For the consumer, it would be slightly expensive but at least he would get uninterrupted power, and it would be a relief to solve your power issues on your own."

They both stress that if the government would take this into serious consideration, this would prove to be a landmark step towards the future of energy in Pakistan.

It is true that the initial investment cost was high for Razzaq. "For our six kilowatt solar panels, including the batteries, the invertors, installation, etc. it all came to about Rs900,000. But that is nothing com-

pared to the running cost of fuel used in a generator, not to mention the fact that you're using up fossil fuels, and causing both air and noise pollution. Our decision to install solar panels did not just revolve around the financial aspect, although of course that was a major part of it. Our decision was also based on the environmental aspect."

Razzaq has installed 34 solar panels of 235 watts each, costing up to Rs80 per watt. Cleverly he has not been sucked into branding and has instead imported unbranded panels from China, and has had them installed separately. The batteries are of 200 Amp each and he must use eight batteries to provide him for four hours backup everyday.

"We use the ACs but if someone doesn't want to consider putting up an AC in his house or office, then the cost can come down greatly," he says, giving an estimated decrease of about Rs0.5 million at least for the initial installment. "There is really no maintenance cost, except taking care of the batteries and having them changed every seven years or so. But that is nothing compared to the maintenance cost of generators."

With this investment, they find that the durability is a lot to boast about. The batteries can last up to seven or eight years (there are dry ones that he uses but wet batteries can also be used), while the solar cells can last up to 25 years. In winter or in an overcast day the yield will definitely be less, but then so is the overall pressure on the grid. But perhaps the greatest sign of the success of his approach is the amount of people who ask him how his system works.

Razzaq argues that the more people who opt to go solar, the lower the overall cost will become. Not only will there be greater competition in the market, but banks may also launch products that make it easier to finance solar-powered solutions. And there is certainly a great deal of interest in solar power, as evidenced by the interest people show in Razzaq's solution.

"A lot of people have shown interest in this and have asked me to help them out," he says. "The best part is that there is no harm being done to the environment in any way, and that there is just no 'wastage' of electricity: it's clean energy, and Pakistan should seriously tap into this on a local and governmental level," he says. ■

courtesy: Daily Dawn

By SHAHID-UR-REHMAN

THE groundbreaking ceremony of the K-2 and K-3 nuclear power plants on the Karachi coast last month took many people by surprise because no government document had ever mentioned the feasibility of such a big project in Karachi or at any other site in Pakistan.

Surprisingly some western diplomats have pointed out that "no reference point" exists for a 1,100MW power plant in China, which means that China has not built or operated a 1,100MW nuclear power plant to date and would be building its first such plant for export to Pakistan.

This is not extraordinary or uncommon in Pakistan-China relations. China's first export order for a 210MW thermal power plant was meant for Guddu in 1980 followed by three identical plants at Muzaffargarh. Today, China is exporting thermal power plants all over the world.

In 1990 when Benazir Bhutto and former Chinese prime minister Li Peng signed the agreement for setting up a 300MW nuclear power plant at Chashma in Mianwali district, China was operating a solitary 300MW nuclear power plant, for which a pressure vessel was supplied by South Korea. When it was known that China would supply a second 300MW plant to Pakistan, all members of the Nuclear Suppliers Group (NSG) refused to supply the pressure vessel for this plant.

It was said that China would not be able to build the thermal power plant, but China built the pressure vessel indigenously with participation of engineers from the Pakistan Atomic Energy Commission (PAEC). Today China has supplied four 300MW nuclear power plants to Pakistan, of which two are in operation and two are nearing completion.

Local contribution of these four plants has progressively increased over the last 20 years as Pakistani engineers and scientists have taken part in the setting up of these plants from the designing stage to construction. Thanks to the expertise and base set up for indigenous contribution to these plants, today Pakistan can embark upon the indigenous construction of 300MW nuclear power plants, including pressure vessels.

It can be said with confidence that revision of the PAEC target to generate 40,000MW nuclear energy by 2050 from 8,000MW by 2030 is not merely building castles in the air, as can be said about

several other mega projects in the energy sector, which have been in the pipeline for decades.

As K-2 and K-3 are among the few nuclear power plants being set up after the March 2011 Fukushima disaster in Japan, they all made frequent references to lessons learnt from Fukushima.

"Seismic, oceanic, tsunami and other related data of the last over 50 years was collected, analysed and incorporated in the design of K-2 and K-3," Tariq Binori of the Arms Control and Disarmament Affairs section at the Strategic Plans Division told the seminar.



Tahir bin Tariq, director safety, PAEC said that while preparing contingency plans and safety measures for Kanupp (K-1), K-2 and K-3, the tsunami that hit the Gwadar and Makran coast in 1945 was extensively studied. Several additional safety measures have been incorporated based on lessons learnt from Fukushima.

He recalled that in the Fukushima tsunami waves had run over the barricading walls breaking the emergency power system and a hydrogen explosion in the reactor build-

ing had led to a meltdown of the reactor core.

It is also said that facing acute financial problems, funding of nearly \$10bn nuclear power projects would be difficult for Pakistan. However, people are unaware that nearly 45pc of the cost would be covered by China, in the shape of state and suppliers' credits. This means that Pakistan would be required to arrange \$1bn per annum over the construction period. The PAEC's nuclear power plants are being treated by Pakistan as independent power projects, which means that their tariff comprises of capacity payments and energy charges. The energy charges of thermal IPPs have bogged down Pakistan in the vicious circle of circular debt. On the other hand, the energy component of a nuclear power plant is marginal as compared to thermal IPPs as it is only indexed to uranium prices and the cost of fuel fabrication.

Pakistan boasts it has a hydro potential of 60,000MW but has managed to develop only 6,000MW to date while mega projects like Kalabagh, Bunji, and Bhasha dams are still on the drawing board. ■

The writer is author of Long Road to Chagai, a history of Pakistan's nuclear programme.

UAE Energy Group holds energy saving contest for students

Informa Energy Group, organizers Middle East Electricity, the region's largest and longest running energy event, has introduced Future Generation, a new competition focusing on energy conservation open to undergraduate engineering students in the UAE. The challenge for each participant will be to design and develop an innovative energy conservation / alternative energy solution and present their ideas to visitors attending Middle East Electricity, taking place from 11-13 February 2014 at the Dubai International Convention and Exhibition Centre. ■

WWEA, RAWI sign MoU for Renewable energy projects

The Secretary General of the World Wind Energy Association and the President of the Russian Association of Wind Power Industry RAWI signed Memorandum of Understanding at Renewable Energy Forum Moscow 2013 REF2013 to intensify their cooperation and to accelerate the deployment of wind power in Russia and worldwide



Accordingly, The World Wind Energy Association WWEA and the Russian Association of Wind Power Industry RAWI both work for the same objective: to accelerate the deployment of wind power utilization and increase the share of wind power in the electricity supply. RAWI is mainly focussing on the national level in Russia while WWEA is working for this objective on the global level.

Both associations aim at strengthening the wind industry in Russia and worldwide and working closely with the related companies and investors. Both RAWI and WWEA aim at advising government organizations on good policies and regulations for a fast growth of wind power in Russia and worldwide. ■

UAE's Masdar project indicates Pakistan as valuable for solar energy



United Arab Emirates' investment of \$15 billion on its Masdar initiative for finding renewable sources of power have succeeded in generating 850MW of solar and wind energy in projects within and outside the country - indicated a great potential to tap the solar resources in countries like Pakistan.

UAE energy experts in collaboration with international partners have been able to generate 100MW of energy in the west of Abu Dhabi, 630MW from off-shore wind energy in the United Kingdom and 120MW in Spain and now was looking for investment opportunities in the world including Pakistan, a top UAE expert Badr Lamki, director of clean energy told APP here.

Masdar is an Abu Dhabi Renewable Energy Company which is working with 50 international partners on renewable sources of the energy on its pilot project at Masdar situated in outskirts of the capital of the country.

Masdar pilot project is a strategic initiative of the government, with the objective to invest, incubate and establish the new energy industry for reducing dependence on oil for meeting its energy requirements, said an official of the project while briefing a group of visiting journalists who visited Masdar project here. ■

Seventh IPTC in Doha to Set New Records

By Waleed Refaay: Held under the Patronage of His Highness Sheikh Tamim bin Hamad Al Thani, Emir of the State of Qatar, the 7th International Petroleum Technology Conference (IPTC) is poised to set new records, as it will feature the biggest exhibition and technical conference programme in IPTC's history.

The 7th IPTC will feature a 7,500 square metre exhibition area including over 95 exhibitors from more than 27 countries - marking a substantial increase from the last edition in Beijing. The event will have a nine-stream conference, featuring 67 technical sessions with over 400 technical presentations, and is expected to draw some 7,000 attendees.

With the theme, "Unlocking Energy through Innovation, Technology and Capability", IPTC Doha captures what the industry needs to do in the face of evolving global energy trends and to overcome the technical challenges at present.

IPTC Doha highlights the importance of technological innovation and international cooperation in ensuring the industry's continued growth and development in the coming years.

The industry landscape has changed significantly - with a steep increase in energy demand, new oil and gas reserves and resources have been discovered - and major shifts are beginning to happen amongst the world's energy producers and consumers.

Through IPTC, Qatar is not only supplying energy to power a brighter, more promising future, but it is also demonstrating how to solve our shared challenges-from responsible energy development to social advancement. ■



Sir Anwar Pervez inaugurates UBL Sports Arena and Boys Hostel at IBA Karachi

Sir Anwar Pervez, OBE H Pk, Chairman Bestway Group inaugurated the Institute of Business Administration (IBA) University of Karachi's UBL Sports Arena and Boys Hostel.

The inauguration ceremony was graced by the Governor, State Bank of Pakistan, Mr. Yasin Anwar. The event was hosted by Dr. Ishrat Husain, Dean of IBA; in attendance were captains of industry, diplomats, faculty members, students and alumni of IBA.

The UBL Sports Arena at IBA is an international standards sports facility and has been constructed over a period of two years. Bestway Foundation has Pakistan donated substantially for the Boys Hostel.

In recognition of Sir Anwar's entrepreneurial successes and selfless philanthropic endeavours, Dr. Ishrat announced that IBA has decided to name the Boys Hostel as Sir Anwar Pervez Boys Hostel.

On the occasion, Bestway Group Chief Executive Mr Zameer Choudhry who has been championing the Group's corporate social responsibility initiatives said; "Bestway Group prides itself at being at the heart of the community. As the country's leading foreign investor we have actively contributed towards the capacity enhancement of IBA, Pakistan's premier public business school, thus facilitating the creation of an enviable alliance between academia, enterprise and philanthropy". ■



Pakistan's acid attack survivors 'Smile Again'

LAHORE: There is a beauty salon in the city that is unlike any other. Here, the employees do not have the complexions you would see on the cover of a fashion magazine. The scarred and charred skin on their faces lets you know they are victims of acid attacks. They greet customers with warm smiles and inform them about the services.

These survivors are what make the parlour special - they are the beauticians who help women with similar experiences to their own, reported the Deutsche Welle, Germany's international broadcaster.

Duplex Smile Again salon was founded by renowned Pakistani human rights activist and makeup artist Musarrat Misbah. She has treated hundreds of acid attack victims.

Misbah takes immense pride in giving a "new life" to these women: "A few years ago, a young girl clad in burqa entered my salon and asked for help. I thought she was a beggar so I told her to leave. But she stayed. Then she revealed her almost completely burnt face to me and said, 'You are a beautician, right. Can you fix my face?'"

After the initial shock of seeing the girl's disfigured face, Misbah told DW, she decided to establish the Smile Again organisation, which gives treatment to acid attack survivors in 33 Pakistani cities and provides 50 free cosmetic surgeries annually to people who cannot afford it.

Rights groups in Pakistan estimate that more than a hundred people, mainly women and girls, are disfigured in acid attacks every year, usually in cases of domestic violence. In 2013, around 80 women were attacked. Most incidents, however, go unreported, with women suffering silently at home rather than seeking help. Despite continuous efforts by non-government organizations to stop the crime and pressure the government to hand out strict punishments to the perpetrators, this form of violence against



women is still rampant in the country.

The issue of acid attacks on women in Pakistan gained international attention in 2012 when Pakistani filmmaker Sharmeen Obaid-Chinoy won an Oscar for Best Documentary (Short Subject) for her film "Saving Face." acceptance speech at the 84th Academy Awards ceremony in Hollywood, Chinoy dedicated the award to Pakistan women.

Activists say such films definitely create awareness about the issue but a lot more needs to be done. In 2012, the Pakistani Senate unanimously passed two bills imposing strict punishments on people who attack women with acid.

The passage of these bills was hailed by liberal sections of the country as a historical achievement. But activists say the government does almost nothing to curb the violence. The main issue, they say, lies in the implementation of the laws.

"Pakistan is facing huge problems; there is an energy crisis, we have health issues, there is a dearth of clean drinking water in the country. Who gives a heck about a burnt girl? When we talk to government officials about these issues, they say: 'How many people are attacked in Pakistan? It's a country with a population of over 180 million,'" Misbah said.

Bushra Shafi, another acid attack survivor working at the Smile Again salon, said she had lost hope in courts after seeking justice for more than six months. She was attacked by her husband for not giving his family a sufficient dowry.

Sabira Sultana came to Duplex Smile Again eight years ago as a patient after being attacked with acid by her ex-husband. Now, she is the organization's coordinator.

The 16-year-old Anam - the youngest survivor at the organization - said she found a new life at Misbah's salon. One of her acquaintances - a young man she had known for some time - threw acid on her face in broad daylight, disfiguring her face. ■

PPL signs MoU with international university

Aligned with its efforts to develop technically qualified human resource and lead innovative initiatives in the Exploration and Production (E&P) sector, Pakistan Petroleum Limited (PPL) signed a Memorandum of Understanding (MoU) for industry-academia collaboration with NED University of Engineering and Technology (NED) and Norwegian University of Science and Technology (NTNU).

The MoU extends PPL's role in facilitating industry-academia linkages in the field of Petroleum Engineering besides training E&P professionals and enhancing research and development projects. The

The highlight of the event was to mark the establishment of the Norwegian Centre of Excellence for Petroleum Studies at NED in collaboration with NTNU under the Pak3004, Pak-Norway Institutional Cooperation Programme.

Federal Minister for Petroleum and Natural Resources Shahid Khaqan Abbasi, who was chief guest on the occasion, unveiled the plaque for the centre and congratulated those involved in the effort. Minister of State for Petroleum and Natural Resources Jam Kamal Khan was also present.

In his address, Abbasi underscored the need for academic and technical competence to service the E&P industry and step up exploration activities to meet the country's rising energy demand. He also reiterated the government's support for such initiatives.

Speaking about the project, Head, Petroleum Engineering Department, NED Professor Abid Murtaza Khan, highlighted its significance, a sentiment echoed by Professor Emeritus, Stanford University, USA Dr. Khalid Aziz.

For his part, Asim Murtaza Khan gave an overview of the E&P industry as well as initiatives taken by the Ministry of Petroleum and Natural Resources to incentivize E&P business and draw local and foreign investment. He also stated that the tripartite MoU, the first-ever instance of international collabo-



MD and CEO, Pakistan Petroleum Limited Asim Murtaza Khan, Vice Chancellor, NED University of Engineering and Technology Prof. M. Afzal Haque and Head Dept. of Petroleum Engineering and Applied Geophysics, Norwegian University of Science and Technology Prof. Egil Tjaland sign a MoU for industry-academia collaboration on behalf of their respective institutions. Federal Minister for Petroleum and NR Shahid Khaqan Abbasi and Minister of State for Petroleum and NR Jam Kamal Khan also present.

ration between Pakistan's E&P industry and academia, will go a long way in training qualified professionals and applying innovative technology in line with industry imperatives, especially as technology takes centre stage in E&P business. ■

Pak-Kuwait agrees to boost cooperation on energy projects



The Federation of Pakistan Chambers of Commerce and Industry (FPCCI) asked Kuwaiti government and the business community to boost economic cooperation with Islamabad to help overcome Pakistan overcome energy crisis and other problems, said President FPCCI

Zubair Ahmed Malik.

Speaking to a high-powered delegation of Kuwaiti investors, he said that Kuwait should support mega energy projects and invest in up-gradation of the existing projects as energy crisis has slowed our economy.

He said that Kuwait should use Gwadar port as a gateway to central Asian states to enhance its presence and trade in the unexplored region.

Pakistani traders as well as laborers should be given relaxations in visas so that they can work with peace of mind, earn with dignity, and help their country, said Zubair Ahmed Malik.

The FPCCI President said that the private sector of both countries should explore commercially feasible joint ventures in oil and gas, agriculture, mines and halal meat sectors. ■



UBL joins hands with Buksh Energy

United Bank Limited (UBL) has partnered with M/s Buksh Energy (Pvt) Limited to provide financing for alternate energy (Solar) solutions to individual farmers, meeting their irrigation as well as domestic power demands. With this partnership, UBL aims to serve the farming community through financing of Solar Tube Wells for energy conservation. Buksh Energy will be providing all engineering and after sales services to farmers for running and maintenance of the solar equipment.

Mr. Ali Hasnain, on the occasion commented "With over 20% of Pakistan's GDP accounted for by agriculture, UBL realizes its significance to the country's economy. That is why the bank offers a diverse mix of agricultural based finance products. UBL Agriculture Finance aims to facilitate farmers via production and development loans-with flexible tenors". ■

CCP recommends OGRA to remove entry barriers in flare-gas distribution

The Competition Commission of Pakistan (CCP) has issued a Policy Note to Oil & Gas Regulatory Authority (OGRA) recommending it to exercise its powers under the OGRA Ordinance and take a decision regarding license applications by potential new entrants, in the flare-gas distribution, at the earliest to remove entry barriers and encourage new investment in the sector.

The CCP made the recommendation after receiving concerns from potential market entrants in the market for flare-gas storage, distribution and transportation. Market entrants need to apply for license to OGRA, however, CCP was informed by a potential entrant that its application remains pending although all formal processes were completed. The CCP therefore decided to assess possible anti-competitive impacts of such an impediment. Flare-gas is regarded as a by-product during the extraction of petroleum.

Using flare-gas can help in augmenting the supply of gas in the country. Till now flare-gas has not been utilized in Pakistan but it may provide a stepping stone for new entrants that are aspiring to enter the market for supply of natural gas. Flare-gas can be compressed for easy storage and transportation using gas bowlers.

OGRA, in its response to the CCPs queries, noted that the monopoly of Sui Northern Gas Pipelines Company Limited (SNGPL) and Sui Southern Gas Pipelines Company Ltd. (SSGCL) for transmission and distribution of gas ended on 30th June, 2010. OGRA stated that the current flare-gas policy issued by the Federal Government did not provide any guidance to determine: (i) producer price for flare-gas; (ii) tariff applicable for future similar



cases; and (iii) tariff applicable for potential consumers.

The CCP noted that OGRA's mandate was to foster competition and increase investment in the midstream and downstream market for petroleum. However, in the matter of issuing license for flare-gas distribution where prima facie all the requirements for issuance of license were met, not taking a decision on the issuance of license created a barrier to entry in the market.

The CCP was of the view that institutional delay in the issuance of license lengthened the time for a new entrant to enter the market thus benefitting the existing firms and making the market less competitive. It also noted that, at a time when Pakistan was facing an energy crisis, barriers to entry in sectors such as natural gas were a cause for concern as they restricted much needed investment.

It therefore recommended OGRA to take a decision on the issuance of license at the earliest as doing so would not only help in attracting much needed investment but would also incentivize incumbent service providers to be more efficient and innovative which would in turn benefit consumers. ■

Pakistan Energy Forum 2014 will held on Feb 27

The 6th Pakistan Energy Forum 2014 (formerly Pakistan Oil & Gas Country Forum) organized every year by SHAMROCK Conferences International will be held on Feb 27, 2014 at the Marriott Hotel, Islamabad. The annual conclave of practitioners is expected to attract several investor groups from countries who have desired to assist Pakistan with its energy requirements. The concerned ministries, regulatory bodies, exploration and production sector, power producing and distribution companies, oil marketing companies and organizations engaged in renewable resources will also be featured in the meeting.



Menin Rodrigues, Chairman of the Conference said, "Pakistan's energy demand is growing rapidly, production is insufficient and power shortages have challenged industries and regulators. The oil and gas industry, the power sector and alternate renewable sources have the answer to come up with sustainable solutions; additionally attractive investment opportunities need to be packaged for FDI."

The Forum will feature distinguished collaborators, moderators and panelists in the four designated sectors namely Oil & Gas, Power Generation, Alternates/Renewable and Investments. The participants are expected to discuss threadbare critical issues that continue to remain as stumbling blocks in addressing energy problems in Pakistan, and conclude with decisive recommendations for its immediate redressing. ■

Canada to work on energy projects in Pakistan

Pakistan and Canada have a great bilateral potential in investment and trade, especially in agriculture, agri-products and energy sectors. Samir Dossal, President Canada-Pakistan Business Council



(CPBC), who is here to attend the Vision 2025 conference, told a selected group of journalists after meeting the Punjab Chief Minister Shahbaz Sharif.

"Currently Pakistan and Canada are engaged in bilateral trade worth US \$700 million but according to Dossal the figure could easily touch a billion dollars mark. CPBC comprises 1200 members and is strictly a Canadian organisation comprising businessmen and professionals. During my meeting with the Chief Minister we spoke about the solar technology projects in Pakistan and Canadian businessmen would be keen to invest in this sector also," he added. ■

Growing role of Asia in energy markets

The World Energy Outlook-13 unveiled last week is underlining in explicit terms; "the foundations of the global energy systems are shifting."

Conceding developments all around, it projects that the share of fossil fuels in the global energy mix would fall from 82 per cent to 76pc in 2035.

Low-carbon energy sources (renewables and nuclear) is to meet around 40pc of the growth in primary energy demand.

And nearly half of the net increase in electricity generation would come from renewables.

Steadily rising oil prices to \$128 per barrel (in year-2012 dollars) in 2035 continues to support the development of these new resources, the report deduced.

The pace of oil demand growth too slows steadily, from an average of 1mbpd per year to 2020 to just 400,000 bpd thereafter, as high prices encourage efficiency and fuel switching, and the decline in OECD oil use accelerates.

The report also highlights growing role of Asia in the energy markets.

The centre of gravity of global energy demand is to move decisively towards emerging economies - they would account for more than 90pc of net energy demand growth to 2035.

The Middle East too emerges as a major consumption centre, emerging as the second-largest gas consumer by 2020 and third-largest oil consumer by 2030.

New types of resources, such as light tight oil and ultra-deepwater fields, that were until recently considered too difficult or expensive to access, would cause Middle East share to shrink. Yet it underlines that the energy rich Middle East would remain significant to the global energy balance. "Although rising oil output from North America and Brazil reduces the role of Opec countries in quenching the world's thirst for oil over the next decade, the Middle East - the only large source of low-cost oil - takes back its role as a key source of oil supply growth from the mid-2020s."

Warning against any complacency in new investments, the IEA said key Gulf producers have been adopting a "wait and see approach" to investment, because of the perception that the US shale revolution would produce an "abundance of oil." And

this could be disastrous for the global energy balance.

"Due to the limited resource base (of US tight oil), it is going to plateau and decline. After 2020 there will be a major dominance of Middle East oil," Fatih Birol, the principal author of the report said, urging the region to be prepared.

The report also touches the issue of regional energy pricing. Natural gas in the United States currently trades at one-third of import prices to Europe and one-fifth of those to Japan. Average Japanese or European industrial consumers pay more than twice as much for electricity as their counterparts in the US, and even China's industry pays almost double the US level. And courtesy this pricing anomaly, the US would see its share of global exports of energy-intensive goods slightly go up by 2035.

In contrast, the share of European Union and Japan in global exports would decline - a combined loss of around one-third of their current share.

The WEO-13 too highlights the losing battle against global warming. Energy-related carbon-dioxide emissions are now projected to rise by 20pc to 2035, leaving the world on track for a long-term average temperature increase of 3.6 °C - far above the 2 °C target. It also emphasises the importance of carefully designed subsidies to renewables, which totalled \$101bn in 2012 and expand to \$220bn in 2035 to support the anticipated level of deployment. From a producers viewpoint, there are a number of contradictory messages in the WEO-13.

It concedes that fossil fuel would still be required, yet it also underlines it would lose some market share. The WEO also underlines the need to abolish subsidies, so as to improve efficiency, yet it wants subsidies to renewables sector continue. And then despite the fact the growth in global consumption is slowing, and that a number of new energy frontiers are on immediate horizon, yet the WEO-13 is attempting to encourage the energy rich Gulf states to continue investing in the sector. Fatih that may not be granted in the current scenario!■

Selling Sunlight

"This solar panel will guarantee six hours of power while that solar lamp can give light for 12," said the bespectacled shopkeeper in Saddar's electronic market as he pointed to his wares. The power crisis has been something of a boon for him, as more people are looking for alternate energy solutions for both domestic and industrial use. The installation of solar solutions may require a significant upfront investment but one can steadily recoup the initial expenses with substantial savings. Running energy-intensive devices such as air conditioners, refrigerators and water motors on solar power can reduce power costs by 70per cent - which means that a 5KW solar solution would have a normal payback period of about three years with 5pc yearly electricity price inflation. Poorly-made solar panels can cause charge losses and only the ones with Microgeneration Certification Scheme (MCS) certifications should be used for best results.

There are plenty of solar options now available in the electronic markets at Karachi's Regal Chowk and Soldier Bazaar. One can find solar-powered lamps, radios, fans, and clocks. Batteries charged by solar panels are very popular.

These have sockets into which one can plug in devices to charge them or run them directly from the power source. The market is inundated by low-cost Chinese goods which can be found even on roadside kiosks and wholesalers at rates as low as Rs500 and going up to Rs5,000 for the most heavily-laden model.

The prices vary depending on the make and capacity with the lowest capacity UPS selling for around Rs6,500 and hiking to hundreds of thousands for a unit that can run heavy machinery such as air conditioners, water pumps, refrigerators, water geysers, irons, and other cooling and heating units.■



Poor work ethic

According to media reports, the productive sectors of the country have advised the government to revisit the policy of two weekly holidays with the objective of conserving energy because the policy has patently failed. The demand-supply energy gap has not declined due to two weekly holidays, those engaged in the industrial and commercial sectors maintain, and the only outcome of the two holidays has been a marked decrease in productivity of the public and private sector, leading to lower growth levels than would have been otherwise possible. Two weekly holidays is the norm in the West where productivity is near installed capacity yet in Pakistan the two holidays have further compromised the ability of the public and private sectors to operate efficiently defined as at levels near capacity. And to add to the travails of the economy those operating in the public sector routinely take Friday as half day and rarely return to their offices after Friday prayers.

The productive sectors also lamented the number of days lost due to strike action as well as the closure of the country for an entire week during Eid holidays which in effect implied "no contact" business-wise with the outside world by those engaged in the export and import sectors with obvious negative repercussions on our foreign trade. In all fairness, the private sector too does not operate at capacity and while part of the reason maybe the number of government holidays, be it for reasons to do with strike action or announced holidays by the government that allows for an additional holi-

day adjacent to the weekend, another part can be attributed to obsolete machinery and working practices that simply fail to maximise output.

The energy sector is subject to low efficiency with most of our generating units operating well below capacity with severe negative repercussions on supply, while the Pakistan Steel Mills has received several bailout packages over the past five years and has been operating sometimes at as low as 12 to 13 percent capacity. As far as the public sector is concerned, there is a need to link performance with promotion instead of merely seniority which mistakenly presupposes that a performance-linked promotion system is in place. Prime Minister Nawaz Sharif promised appointments on the basis of experience and qualifications but in less than five



months he has taken some decisions without following due process which led to the apex court striking down those appointments. The selection of the Chairman of Pakistan Cricket Board has yet to take place but has already been rendered controversial. One would urge the Prime Minister to appoint non-controversial Boards of Directors and allow them to appoint chief executive officers.

In the private sector too the situation is not much different. In the textile sector for example, a major industry in the country, the machinery is obsolete and the number of workers operating the machines more than what is the norm in more productivity conscious Western nations. This has accounted for a steady erosion of our work ethic with major implications for our ability to achieve efficiency by operating at or near capacity.

There is therefore an urgent need for the federal as well as the provincial governments to take the lead in ensuring that holidays are kept to a minimum, strike calls are not supported, the private sector should not be mollycoddled tax-wise after a period of 10 years or so, and only new entrants should be allowed incentives because as matters stand today industrial units that should by now have been competing internationally continue to expect, canvass for and receive tax concessions which merely encourage inefficiency. And finally, the government must acknowledge that merely by privatising state-run units productivity would not be at optimum capacity and it must play its due role in developing a work ethic defined as 'a belief in the moral benefit and importance of work, and its inherent ability to strengthen character' - a sure way to reaching the ranks of developed nations. ■
courtesy: Business Recorder

Getting older A privilege denied to MANY

A group of chaps, all age 40, discussed where they should meet for lunch. Finally it was agreed that they would meet at the Ocean View Restaurant because the waitresses there were gorgeous, with tight skirts, perky breasts and nice bums.

Ten years later, at age 50, the friends once again discussed where they should meet for lunch. Finally it was agreed that they would meet at the Ocean View restaurant because the food and service was good and the wine selection was excellent.

Ten years later, at age 60, the friends again discussed where they should meet for lunch. Finally it was agreed that they would meet at the Ocean View Restaurant because they could dine in peace and quiet and the restaurant had a beautiful view of the ocean.

Ten years later, at age 70, the friends discussed where they should meet for lunch. Finally it was agreed that they would meet at the Ocean View Restaurant because the restaurant was wheelchair accessible and had an elevator.

10 years later, at age 80, the friends discussed where they should meet for lunch. Finally it was agreed that they would meet at the Ocean View Restaurant, because they had never been there before and heard it was quite good!!!!!!!!!!!!!!!!!!!!!!!!!!!!!! ■



Journalists to be taken on board to promote sustainable transport concepts in Pakistan



A sensitization seminar for media on transport sector and related issues in Pakistan was organized under the Pakistan Sustainable Transport (PAKSTRAN) Project here in Karachi today. The event aimed at effectively engaging media to report on the social, economic/developmental and environmental issues related to transport sector in Pakistan. It was attended by select representative of print and electronic media in Pakistan.

Speaking on the occasion, Mr. Mahmood Akhtar Cheema, Country Representative, IUCN Pakistan mentioned that IUCN as a partner in the PAKSTRAN project has initiated several activities to raise awareness about the issues related to transport sector in Pakistan, through adopting a strategic approach. He said the role the media is playing for raising awareness is considered crucial to educating people about the concept of sustainable transportation. Mr. Cheema added that the enhanced awareness about sustainable transport is expected to eventually pave the way for planning and development decisions that are to be taken in Pakistan regarding sustainable urban transport concepts, thus influencing the achievement of PAKSTRAN's objective.

In his remarks Dr. Saleem Janjua, National Project Manager, PAKSTRAN, Ministry of Water and Power, Government of Pakistan said that the objective of PAKSTRAN project is to reduce the growth of energy consumption and reduce emission and add toward the global efforts in mitigating the emission and improve the urban development. While talking about the event, Dr. Janjua said that the tool of awareness raising has been made integral part of PAKSTRAN and it is expected that effective involvement of media would help in promoting understanding about the sustainability concepts related to urban transport sector, which can influence a wider cross section of the society. Dr. Saleem further mentioned that the focus of all awareness raising activities under the project should be towards a gradual behaviour change in order to cause a shift to sustainable mode of transportation.

While making a presentation on the impact of transport sector on environment in Pakistan, Dr. Raza Mehdi mentioned that the road transport is the largest source of air pollution in Pakistan. Prof. Dr. Shabbar Ali, Chairman, NED University of Engineering and Technology made a presentation on sustainable transport system and said that there is need to adopt the technology which serves our needs. He stressed on integrated mass transit system as a main solution and the way forward. ■

SSGC saves over \$3 million through advance technology

Sui Southern Gas Company through regular induction of best business practices has saved more than \$3.8 billion with adoption of technology by dint of enhanced performance and curtailing operational expenses.

The highly skilled and talented team of Information Technology department along with associate departments recently accomplished yet another triumph that stands huge by all standards. The team saved well millions of dollars by upgrading the prime technologies entirely through the deployment of its own personnel and resources, without taking the help of external consultants.

The team saved over USD 1.8 million in upgrading Company's Enterprise Resource Planning (ERP) whereas over USD 2 million were saved in the up-gradation of Customer Care and Billing (CC&B). 15 modules of the Oracle eBusiness Suite were upgraded from version '11i' to version 'R12' whereas the database was upgraded from version '9i' to version '10g'. The CC&B's database was upgraded from '10gR2' to '11gR2' with its applications enhancing from Oracle's version '1.5.20' to '2.3.1'.

The personal skill enrichment of IT team members involved in this project remained as a big bonus that can be further utilized in training the juniors in the team. These feats were achieved through the support of stakeholder departments and end users under the meticulous supervision of Company's IT Chief Irfan Zafar who was ably assisted by Rauf Aslam Butt and Kashif Qadeer. ■



Sindh under fire due to no environment policy

Owing to bureaucracy failure and lethargy of relevant authorities, Sindh government has badly failed to introduce environment policy, letting people to suffer from multifarious pollutions, environment experts told PPI.

Mohammad Naeem Qureshi, President, National Forum for Environment and Health said that despite passage of 18th Constitutional Amendment, the PPP government in Sindh could still not introduce environment policy which was mandatory to keep environment clean and green.

Qureshi deplored bureaucracy sitting at environment ministry of Sindh and Environment Protection Agency (EPA) for ignoring stakeholders demand for introducing provincial environment policy.

He said that environment degradations had risen to dangerous levels in Sindh, particularly in Karachi; therefore, it was the need of the hour to devise environment policy forthwith.

He said recently IUCN had organized a consultative meeting in which it was emphasized that Sindh government must have an environment policy to improve status of degrading environment in Sindh. Environmental policy is mandatory to address environment issues, he said. ■



NFEH
National Forum for
Environment & Health
www.nfeh.org

Energy deficit to expand to 110.8 million TOEs in 15 years: PIP

Pakistan's energy deficit will expand to 110.8 million TOEs in the next 15 years as its demand is projected to grow to 147.78 million TOEs by 2027-28 against the domestic resources of 36.90 million TOEs in the same year, if the average GDP remains around 4.5 per cent.

This forecast has been made by the Petroleum Institute of Pakistan (PIP) in the Pakistan Energy Outlook (PEO) 2013-2028, which was launched recently. PIP is a representative body of the oil and gas sectors in the country. PIP Chairman Dr Asim Hussain said: "Pakistan Energy Outlook (PEO)" is a flagship document of the PIP as it is prepared with the help of independent consultants taking into account energy demand, supply models based on the economic realities of Pakistan.

"The set of recommendations identified in this document provides the long-term energy solutions for Pakistan for securing



Chairman PIP, Dr. Asim Hussain addressing the event. Akhtar Raza, Tariq Rizavi, Asim Murtaza Khan & M. Aslam Sanjrani also seen in the picture

higher GDP growth and economic development on sustainable basis," Hussain explained. Hussain maintained in the PEO that mobilising and generating affordable and environment-friendly energy resources are one of the key challenges for the government hence it is important that it works

together with the petroleum industry in framing the policies. Presenting the outline of the PEO Akhtar Raza of ENAR Petrotech, who is a consultant to PIP, said that the energy deficit will have to be met through the import of coal, oil and gas as do-

PSO dominates market

The public sector marketing company-Pakistan State Oil's (PSO) market share in different product groups witnessed significant growth over the past five months. According to official source, from August onwards, PSOs share in the HSD market rose from 50% to 57% while share in MOGAS remained steady at 50% despite stiff competition in the market.



The Company's share in the lubricants market also rose from 16% to 28% amongst OMCs across Pakistan within a period of just three months, the source added. The source says, "During the five months period of July to November 2013, there was not a single bank default on account of non-payments of Letters of Credit (LCs) due to prudent fund management."

This is especially significant as during the preceding five months (February - June 2013) there were four defaults amounting to Rs 17 billion on different dates, the source adds. During the period July to November 2013, PSO successfully fulfilled the Furnace Oil demand of the public sector and private sector electricity generating companies, and catered high demand of Motor Gasoline in the country due to low availability of CNG. Gasoline import has been 30% higher than that during same period last year.

According to an official source, in the first quarter financial year 2014, PSO reported highest ever quarterly after tax earnings of Rs 7.8 billion in comparison to Rs 4.3 billion during same period last year, witnessing a growth of 81%. The source said PSO would also setup a oil refinery in Khyber Pakhtunkhwa as part of the efforts to make the leading public sector company an integrated energy company.

The source added the PSO had signed a Memorandum of Understanding (MoU) with the Government of Khyber Pakhtunkhwa (GoKP) for the establishment of a state-of-the-art oil refinery in the province. As per this MoU, the refinery would have a capacity of 40,000 Barrels Per Day (BPD) on about 400 acres of land in district Kohat - Khyber Pakhtunkhwa. ■



Governor Sindh Dr. Ishrat-Ul-Ibad, Ishaq Dar Federal Minister Finance, Naeem Qureshi, CEO, Publicity Channel are seen at Conference on Islamic Banking at Governor House.



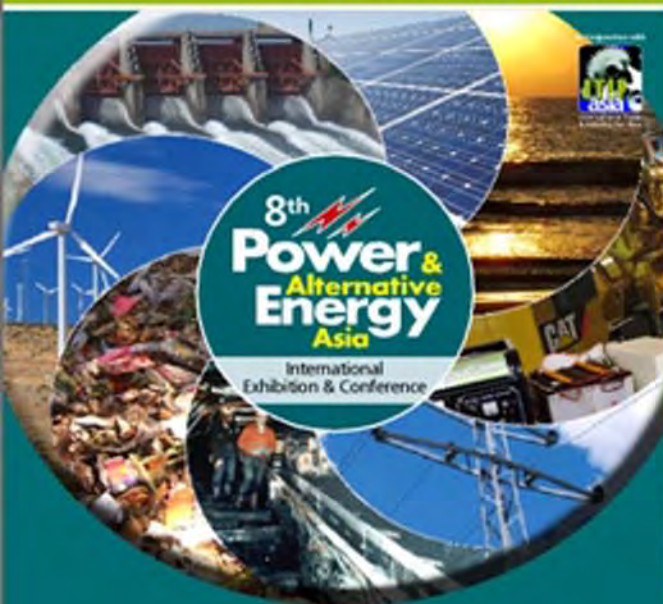
MD PSO, Amjad Parvez Janjua and the senior management of PSO Ltd visited The Lahore Stock Exchange (LSE) to participate in the Corporate Briefing Program (CBP).



Country Head, Kuwait Petroleum, Talat Jabeen Congratulating CG of Oman H.E Ali Ahmed Al-Qassimi and his wife on the occasion of Oman National Day in Karachi Pakistan.



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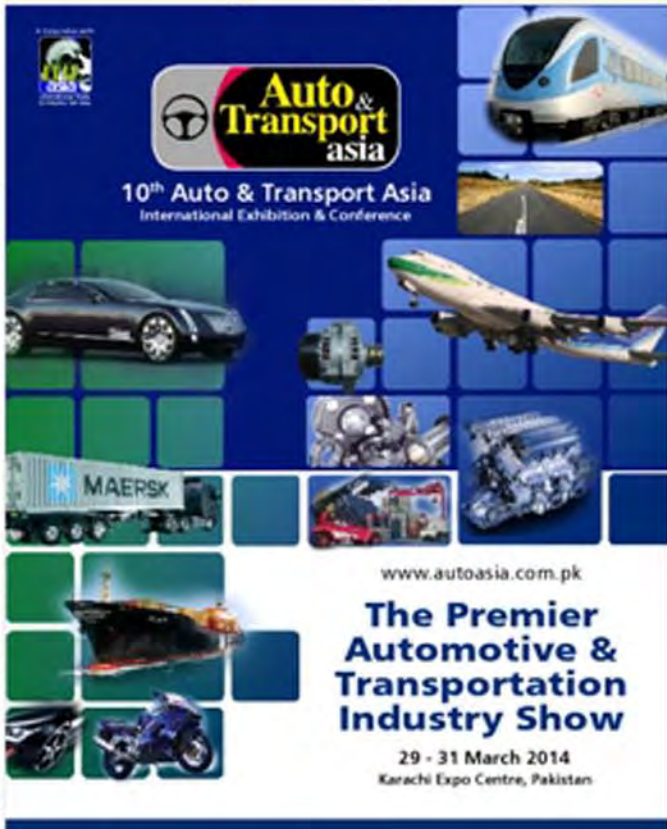
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Carbon	39.33 %
Sulfur Gross Calorific	Less than 1%
GCV Value ADB	6,500 Kcal/kg
Type	Bituminous Coal
Shape	Lump form Greater than 20 mm

Value Local Coal Specifications

Moisture	8 to 10%
Volatile Matter	38.69%
Ash	15 to 20%
Carbon	37.55%
Sulfur	3.00 to 5.00%
GCV	5,950 Kcal/kg
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Shape	Lump

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