

MONTHLY **Energy** UPDATE

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Event Report:
**8th CSR Summit
& Awards 2016**



\$16 billion LNG deal with Qatar



**Biggest ever crash in
Petroleum Prices**

Energy security is vital

**Pak-India war brewing
over water dispute**



Ministry of Water & Power
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are jointly organizing



8th Annual **Power Gen**

Conference & Showcase 2016

March 30, 2016 - Marriott Hotel, Islamabad

About Event:

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From the editor's desk...

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Govt. enjoying forced profits of falling POL prices

The entire nation is very keenly eyeing on the government to make a significant reduction in petroleum prices as the global prices of POL hit the record low in the last thirteen years and a big drop in local prices is a must as the present regime has made an insignificant but forced profit of \$11 billion since it came into the power. The current scenario is demanding from the Rulers to at least reduce petrol price to the tune of Rs40 per litre considering another price drop after which it is staggering at \$27 per barrel. Situation may even go worse after the Iranian government's decision to pump its oil into the international market and US government's decision to depend on more of its indigenous sources besides drop in oil demand in China.

It is not only surprising but extremely worrisome that in Pakistan, the oil prices have not shown any big drop as yet because the government has often raised taxes to meet its budgetary target.

On November 1, 2015, while partially adjusting the impact of rising global oil prices in taxes for November, the government had announced a hike in the prices of petrol and High Speed Diesel (HSD) but kept the rates of kerosene oil, High Octane Blending Component (HOBC) and Light Diesel Oil (LDO) unchanged. The petrol price was increased by Rs2.50 per litre from Rs73.76 to rest at Rs76.26 per litre.

Ironically, the Oil and Gas Regulatory Authority (OGRA) had also recommended an increase of Rs5.73 per litre in the price of HOBC, a fuel used in luxury cars, but the government did not grant the hike. On August 31, 2015, the government had announced reduction in prices of petroleum products by Rs3 a litre on all denominations.

The price of Light Diesel Oil had also been lowered by Rs3 per liter from Rs56.59 per liter to Rs 53.59 per litre. On June 1, 2015, the prices of all petroleum products in Pakistan were increased by about Rs3.50 per litre for the month of June. The price of petrol was thus increased by Rs3.50 to Rs77.79 from Rs74.29 per litre. The levy on petrol was reduced from Rs10 to Rs8.30 per litre, but the GST was increased by two per cent.

The price of high speed diesel (HSD) was raised by Rs3.51 to Rs87.12 from Rs83.41 per litre. Petroleum levy on HSD was slightly brought down to Rs7.76 from Rs8 per litre and the GST by four per cent. The price of kerosene was increased by Rs3.50 to Rs64.94 from Rs61.44 per litre. The GST on kerosene was kept unchanged and petroleum levy reduced from Rs6 to Rs3.41 per litre.

The government has falsely claimed that it had borne the brunt of Rs6 billion revenue losses by passing on to consumers only half of the increase recommended by OGRA. On March 31, 2015, the government had increased the petrol price by Rs4 and diesel by Rs3, while kerosene oil's price had remained unchanged. The new price for petrol was Rs74.29, while the price of diesel had stood at Rs86.86. On February 1, 2015, the Federal

In January 2015, the petrol and diesel prices in Pakistan had stood at Rs78.3 and Rs86.23 per litre respectively. It is imperative to recall that on September 24, 2012, the price of petrol in Pakistan had rested at Rs108.45 per litre considering the highest price of the decade internationally. The government has no more right to deprive the nation of passing on the benefit of price differential.

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By Sajid Aziz

Pakistan finally signs LNG deal with Qatar

LNG to cost \$5 mmbtu, Pakistan-Qatar to ink \$16 billion deal

Prime Minister Nawaz Sharif has signed much-awaited LNG import contract with Qatar Gas on G2G basis this month. This LNG will cost below or 5 dollars per MMBTU, EU learnt.

According to sources in Ministry of Petroleum, the country is facing shortfall of almost 1200 MMBTU gas per day. At present 400 MMBTU LNG is being pumped into the system on daily basis through Engro-Elange LNG Terminal at Port Qasim, Karachi. Engro-Elange had promised to provide 600 MMBTU LNG per day but it is providing only 400 MMBTU LNG per day.

Another LNG Terminal is being built at Port Qasim, for which tender will be floated in due course of time. It is expected that keeping in view the present government will complete this project before the elections to get political mileage. The next general elections are scheduled to be held in 2018.

The new terminal will also provide 600 MMBTU LNG per day but it is expected that the new terminal will also pump in 400 MMBTU LNG per day as being done by Engro-Elange Terminal thus leaving shortfall of 400 MMBTU gas per day.

Ministry of Petroleum has decided to provide gas to CNG stations in Punjab on weekly two-day basis from next month. Sui Southern and Sui Northern gas companies may keep the consumers, especially CNG stations providing supply for some extra days as the situation of line-pack is better in ongoing season.

Pakistan will buy LNG from Qatar at 13.37% of Brent crude price, which amounts to almost \$5 per million British thermal units (mmbtu) when oil is sold for \$35 per barrel. This also includes port charges of \$320,000 per vessel.

On the other hand, India is buying LNG at 12.66% of Brent crude price plus \$0.6 constant and \$0.33 shipping cost. This is equal to \$5.361 per mmbtu based on \$35-per-barrel crude price.

Average re-gasification charges in Pakistan stand at \$0.66 per mmbtu whereas in India these are \$0.90 per unit.

Pakistan has planned to import 3.5 mil-



lion tons per annum compared to Indian purchases at 8.5 million tons per year.

Pakistan and Qatar are all set to sign the \$15 billion LNG deal in the next few days, which will be the first long-term agreement for the former that will place it on the world's energy map.

The government has succeeded in persuading Qatar to revise the price downwards, compared to the initial pricing formula agreed between the two countries, leading to annual savings of \$40 million.

During the previous government of Pakistan Peoples Party, Qatar was willing to offer LNG at 14.5% of Brent oil price. However, later Doha agreed to revise the price downwards to 13.9%.

In the meantime, Pakistan State Oil floated a short-term tender for LNG supply over five years, in which Gunvor won the contract at 13.37% of crude price, which was lower than the price the government had agreed with Qatar.

This provided an opportunity to the government to seek renegotiations with Doha, which agreed to match the price offered by Gunvor.

According to officials, the government is going to sign a commercial agreement with Qatar during Prime Minister Nawaz Sharif's visit to Doha on February 9-10. Under the agreement, PSO will bring 1.5 million tons of LNG in the first year and receive 3.5 million tons from the second year.

Energy giant Royal Dutch Shell had also got the short-term contract at 13.8% of

crude price. However, the government later scrapped the contract and decided to import the same volume at the lowest price of 13.37%.

Pakistan produces 4 billion cubic feet of natural gas per day (bcfd) against the demand for over 6 bcfd. The government considers LNG as a fast-track solution to the energy shortages.

Under the proposed arrangement with Qatar, the long-term contract will be for 15 years, but it will be renegotiated after 10 years. The two sides can end the contract if they fail to develop consensus over the price.

Past governments had made five attempts and floated tenders to set up an LNG terminal and import the gas but failed. According to the officials, the country has suffered a loss of \$3 billion due to delay in LNG imports as it has to rely on expensive furnace oil and diesel to run power plants.

Now, the country will be able to save \$2.5 billion a year when LNG is consumed in power plants.

Owing to the poor energy mix, the major fuel source for power generation is oil, which results in piling up of circular debt. Since long, governments have pumped trillions of rupees into the energy sector to clear the debt and the present PML-N administration also cleared Rs480 billion worth of debt after coming to power in June 2013.

Still, the circular debt is haunting the energy sector and the national economy is losing three percentage points every year due to the power crisis.

However, the use of LNG in power plants will help to tackle the debt. The country will have a sustainable energy solution following a long-term deal with Qatar. It will help to eliminate or substantially reduce power outages, which are damaging the industrial sector and crippling the lives of ordinary citizens.

In the current winter season, gas is supplied to only 60% of domestic consumers in Punjab. In this area too, LNG will be the only solution and the government is planning to build two more terminals at Gwadar and in Karachi. ■

15-year LNG import deal to be game changer

Pakistan signed on Wednesday an agreement of billions of dollars with Qatar for importing liquefied natural gas (LNG) for 15 years.

Prime Minister Nawaz Sharif and Qatar's Emir Sheikh Tamim bin Hamad bin Khalifa Al Thani witnessed the signing of the agreement by Minister for Petroleum and Natural Resources Shahid Khaqan Abbasi and the Chairman of the Qatargas Board of Directors, Saad Sherida.

Talking to reporters at the ceremony, Mr Abbasi said that the LNG deal would be a game-changer for Pakistan.

He said 3.75 million tons of LNG would be imported annually on a government-to-government basis, at comparative rates, which would meet close to 20 per cent energy requirements of Pakistan.

Minister says 3.75m tons of the fuel a year will help save billions of dollars

Mr Abbasi said the deal would help revive the non-functioning electricity generation units of 2,000 megawatts and three fertiliser plants, and also mitigate the hardship faced by domestic consumers and the compressed natural gas (CNG) sector.

It would save the country \$1bn a year besides \$600m in diesel cost, he said.

The minister expressed the hope that the government would steer the country out of the energy crisis during its tenure.

In addition to the long-term LNG sale



and purchase agreement, memorandums of understanding on cooperation between the two countries in the fields of radio and television, health and academic research were signed.

The MoU on cooperation in broadcasting (radio and television) was signed by Prime Minister's Special Assistant on Foreign Affairs Syed Tariq Fatemi and Qatar's Foreign Minister Muhammad bin Abdurrahman Al Thani.

Finance Minister Mohammad Ishaq Dar signed the memorandum on cooperation in health sector with Qatar's Health Minister Hanan Muhammad Al Kuwari; and on academic research and cooperation by Pakistan's Ambassador Shahzad Ahmed and Qatar Armed Forces' Commander of Strategic Studies Maj Gen Saud Ali Al Naeemi.

Earlier, Prime Minister Sharif was wel-

comed on arrival at Doha International Airport by his Qatari counterpart Sheikh Abdullah bin Nasir bin Khalifa Al Thani.

The Emir welcomed the delegation at a ceremony held later at the Diwan-i-Emiri. Both leaders reviewed a guard of honour.

They held a one-to-one meeting and exchanged views on regional and international issues of mutual interest. Delegation-level talks were also held, followed by the signing of the MoUs. Qatar's ruler visited Pakistan on March 23-24 last year. His country hosts over 115,000 Pakistanis ■

LNG deal with Qatar cheapest in SA

The government said the deal sealed with Qatar for import of Liquefied Natural Gas (LNG) at the price of 4.78 dollars per mmbtu was the cheapest of its kind in South Asia.



Prime Minister's spokesman Dr. Musaddiq Malik at a press conference said the landmark deal would save Rs. 100 billion per annum and would contribute to meeting the country's energy needs by 25 percent.

Malik said the settled price was the 13.37 percent of the Brent and was cheaper than the gas to be imported through Iran-Pakistan and Turkmenistan-Afghanistan-Pakistan-India (TAPI) gas pipeline projects.

He said even the India's LNG contract was expensive by 30-35 percent than Pakistan's deal with Qatar.

He mentioned that LNG would be cheaper than Pakistan's indigenous gas.

He said the import of LNG from Qatar would start within 60 days.

The spokesman said the cabinet in 2013 had given the approval of the government-to-government deal between Pakistan and Qatar for LNG's import.

He said the negotiating committee comprising members of the two countries undertook 12 rounds before agreeing at the price.

He said Pakistan had signed the contract of non-disclosure of LNG's price till the signing of agreement, which was inked during Prime Minister Nawaz Sharif's visit to Qatar. He said the price of LNG was inter-linked with global oil prices and would increase or decrease accordingly. ■

FPCCI hails historical deal



Abdul Rauf Alam, President FPCCI has appreciated the historic agreement of LNG supplying from Qatar and said that this agreement will be a milestone in resolving the energy crises. While applauding the efforts of Prime Minister Mian Nawaz Sharif, he said that four agreements and MOUs have been signed with Qatar to increase cooperation in diverse fields between Pakistan and Qatar which have been witnessed by Prime Minister of Pakistan Mian Nawaz Sharif and Qatar Amir Sheikh Tamim Bin Hamad Bin Khalifa Al-Thani. The most important agreement is import of Liquefied Natural Gas (LNG) from Qatar, which shows keen interest of our Prime Minister to remove the energy crises in next 2 years, he added.

The President FPCCI further expressed his expectations that after import of LNG from Qatar the issue of the shortage of Natural gas will be resolved and the industrial units in Punjab will remain in operation without any seasonal interruption. While giving the details he quoted the report of Economic Survey Pakistan 2014-15 and said that natural gas production has been stagnant at the 4,000 Million Cubic Feet per Day (MMCFD). There exists constrained demand for natural gas of 6,000 MMCFD against a supply of 4,000 MMCFD while the unconstrained demand for gas is estimated to be 8,000 MMCFD or more than double the current domestic production. In the same survey the industrial gas consumption was recorded 259,032 mm cft Gas consumed by the Industry. Under the agreement Pakistan will import 3.75 million tons of LNG annually from Qatar which will fulfill twenty percent need of Pakistan.

Rauf Alam further said that uninterrupted supply of Natural Gas to the Industrial consumers will favourably affect the industrial production, investment and employment in the country which will ultimately be transferred into the higher rate of GDP growth. ■

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By Dr Farid A Malik

Energy security is vital

And what are we doing about it?

In the mid seventies energy security of United States of America was breached. The oil strategy was formulated and implemented by four fertile minds (Zulfikar Ali Bhutto, Shah Faisal, Mian Anwar Ali, Ahmed Sakkaf). Something very similar happened in Pakistan last year when fuel supplies were disrupted. The wheels of the nation came to a grinding halt. President Jimmy Carter promised his nation that such a scenario will never happen again. He formed a separate Department of Energy (DoE to ensure energy security of his country).

Research was initiated in several universities to develop solar, wind, biogas, coal, bio-fuels, nuclear, ocean waves etc. Almost all sources of energy were tapped with workable commercial applications. At one time in USA 56 percent of power was generated using coal as fuel. With environmental considerations it is now down to 40 percent. Currently, the shale gas is dominating the US energy basket.

In Pakistan the Sui Gas deposits, discovered in 1952, provided energy security to the country. With 12TCF of gas it was the largest deposit of the world at that time. Three companies were involved in pumping and then distribution of this resource that positively impacted our lives. Pakistan Petroleum Limited (PPL), a joint venture of British Petroleum and Government of Pakistan, is responsible for purification and pumping of gas which is then distributed through two public sector companies: Sui Northern Gas Pipelines Ltd (SNGPL) and Sui Southern Gas Company (SSGC). Today the country has one of the finest gas networks of the world which is spread over 20,000 KMs. For power generation the country relied on its water resources. Two large dams (Mangla, Terbela) were built for this purpose. Then came the deadlock of Kalabagh Dam. Since then no dam or major water reservoir has been constructed. To add to the miseries of the nation, in nineties oil based Independent Power Producers (IPPs) were introduced on very unfavourable terms to the consumers.

Instead of building the Kalabagh Dam, the Musharraf regime diverted gas as a means of inexpensive power generation. As a result today we are out of fuel and our energy security is at stake. According



to the Minister for Water and Power, we are at the mercy of oil mafia. With an import bill close to \$14b, this is big money. Instead of energy autarky, the government has decided to import Liquefied Natural Gas (LNG) and coal thereby conceding more territory to the mafia dons.

Energy is serious business; that is why the US hit back hard when its security was breached. It has several energy options today and it made sure that no fertile mind ever dares to encroach again on its fuel domain. All the four energy strategists who were responsible for the "Oil Embargo" were physically eliminated. ZAB through a judicial murder, Shah Faisal through palace intrigue, Mian Anwar Ali was poisoned while Ahmed Sakkif was assassinated. When an attempt was made to hand over Sui Gas fields to private entity in the nineties, President Farooq Leghari took a stand against the government of his own party which permanently strained the relationship between two political partners. Finally, when he dismissed the Benazir government, they parted ways forever and she never forgave him till her death.

Food and fuel ensure survival of a nation. In case of Pakistan they are interlinked as food is grown using diesel driven tube wells. The country needs to develop a fool proof "Energy Security" plan for its sovereignty and sustainability. For over six decades, the Sui Gas deposit in Dera Bugthi area has provided fuel for the nation. Its misuse and mismanagement has driven us

from an energy surplus to an energy deficit country. Successive governments since 1958 have failed to expand our energy basket. ZAB's administration tried to explore similar deposits by forming the Oil and Gas Development Corporation (OGDC). In the nineties Thar Coal was also discovered which is one of the largest single deposit in the world (175 billion tons).

Fuel should not be confused with electricity. I am a supporter of hydel power generation but as a nation we have run out of fuel. Dams can only provide electricity and water and that too in a cyclic mode when the spillways are opened. Reliance on imported gas while our own discoveries remain untapped or burning imported coal, ignoring our indigenous deposits of 200 billion tons, does not make sense.

There has to be an energy strategy with short, medium and long term goals. Pakistan is a developing country, it lacks the muscles to capture energy rich countries or assassinate its leadership, and only superpowers have that latitude. Our solutions have to be indigenous and our fuel resources within our own control. Unfortunately, our energy security is being seriously compromised. No alarm bells are ringing. With foreign exchange reserves of only \$ 20b and annual oil import bill of \$14b, as a nation we remain on the edge. So far we have been able to provide both food and fuel without external borrowing, but it may change soon. Are we being choked as a nation?■

Biggest ever crash in Petroleum Prices

In spite of investors' efforts lifting oil prices, the prices were 12 years lowest on worries that Iran is flexing its muscles to add its barrels to flood global market sooner than expected after lifting the sanctions by USA. Global crude Brent declined below \$30 a barrel as Iran has curtailed its nuclear program, paving the way for sanctions to be lifted against its oil.

Brent crude fell as low as \$29.73, its weakest since February 2004. Brent had lost about \$7 a barrel, almost 20 percent of its value. Although US crude's West Texas Intermediate (WTI) was up 88 cents at \$31.36 a barrel but it was still 12 year low of \$29.93 earlier.

It is assumed that Iran will produce almost 700,000 barrels a day or more in the fourth quarter of 2016 than over the same period in 2015. Iran's Atomic Energy Organization said the core of its Arak nuclear reactor had been removed and UN inspectors were set to visit the site to verify that as a crucial step toward the lifting of the sanctions. Tehran aims to raise its crude exports by 1 million barrels a day within six months of sanctions being cancelled. It is to be noted that sanctions were lifted on 16th January 2016.

Due to sanctions, oil and gas projects worth \$380 billion have been postponed or cancelled since 2014 only as companies slash costs to survive the oil price crash, including \$170 billion of projects planned between 2016 and 2020.

International Energy Agency (IEA) said that the global supply flood is likely to deepen next year pull on prices. Oil prices continued to slide in the price, thus many people think this might reflect a weak global demand, coupled with the prospect that the Fed may start to raise interest rates later on.

Due to global oil price decline the Government of Pakistan fully benefitted and saved Rs252 billion that was not passed on to the petrol consumers. Neither oil prices reduced nor rate of electricity reduced for consumers of less than

300 units of electricity. The

Minister for Water and Power

Khawaja Muhammad Asif

said that consumers

of 300 units

electricity and

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Due to global oil price decline the Government of Pakistan fully benefitted and saved Rs252 billion that was not passed on to the petrol consumers. Neither oil prices reduced nor rate of electricity reduced for consumers of less than 300 units of electricity.

ready been heavily subsidized. He said benefits of fuel adjustments are being provided to consumers of over 300 units. However, the government is considering reducing the tariff to the consumer of 50 to 300 units.

He said the government is charging Rs2 per unit from the consumer to the slab of 50 units, Rs4.11 from 50 to 100 units, Rs5.79 from 100 to 200 units and Rs8 from 200 to 300 units. The recovery of electricity bills has been increased from 88 percent to 93 percent while line losses have been decreased by 1 percent.

Despite the above statement of minister the high cost of doing business is already made viability of textile industry, particularly the large units dependent on electricity supply in Punjab, which is resulting into fast closure of textile units, textile exports and consequent fast increasing unemployment.

Petrol Prices in Pakistan on 11th Jan, 2016, due to the major fluctuation in international oil market, effects directly to the petroleum products prices in Pakistan. The petroleum products are proposed by the Oil and Regularity Authority of Pakistan (OGRA) to Ministry of Petroleum at the end of the every month to decide new revised prices of petroleum products for the next month.

Pakistan Readymade Garments Manufacturers and Exporters Association (Prgmea) Chairman Shaikh Mohammad Shafiq said that the government should cut petro-



Table-1: Petroleum Prices

Date	HOBC	Premium	HS Diesel	LS Diesel	Kerosene
Jan 01, 2016	Rs.80.66/Ltr	Rs.76.26/Ltr	Rs.80.79/Ltr	Rs.44.94/Ltr	Rs.48.25/Ltr
Nov 02, 2015	Rs.79.79/Ltr	Rs.76.26/Ltr	Rs.83.79/Ltr	Rs.53.59/Ltr	Rs.57.11/Ltr
Sep 01, 2015	Rs.79.79/Ltr	Rs.73.76/Ltr	Rs.82.04/Ltr	Rs.53.59/Ltr	Rs.57.11/Ltr
Aug 01, 2015	Rs.82.78/Ltr	Rs.76.76/Ltr	Rs.85.05/Ltr	Rs.56.59/Ltr	Rs.60.11/Ltr
Jul 01, 2015	Rs.83.8/Ltr	Rs.77.79/Ltr	Rs.87.11/Ltr	Rs.61.51/Ltr	Rs.64.94/Ltr
Jun 01, 2015	Rs.83.8/Ltr	Rs.77.79/Ltr	Rs.87.12/Ltr	Rs.61.51/Ltr	Rs.64.94/Ltr
Apr 01, 2015	Rs.80.18/Ltr	Rs.74.29/Ltr	Rs.83.61/Ltr	Rs.57.94/Ltr	Rs.61.44/Ltr
Jan 31, 2015	Rs.80.18/Ltr	Rs.70.29/Ltr	Rs.80.61/Ltr	Rs.57.94/Ltr	Rs.61.44/Ltr

Table - 2 (2015) (US\$/Barrel)

Month	Price	Month	Price
January	44.3	July	54.1
February	54.0	August	45.4
March	52.4	September	44.8
April	57.3	October	45.0
May	62.1	November	40.5
June	60.2	December	33.6

leum prices by Rs20 per liter as international crude was reduced to around \$31 per barrel. Therefore, the petrol prices to bring down to Rs40 per liter.

Lasbela Chamber of Commerce and Industry President Maqsood Ismail said that global crude prices were constantly falling but the government remained reluctant to pass on the relief to masses. Besides, electricity and transport fares including trains and airlines, should immediately be reduced.

All Pakistan Textile Mills Association (APTMA) Chairman Tariq Saud demanded the Prime Minister Nawaz Sharif to pass on the impact of falling oil prices in full to the industry, that would revive the closed capacities on the one hand and attract new investment to the textile sector on the other.

To compete in the international market the tariff should be rationalized & Rs3 per unit reduction in industrial tariff be adjusted. Textile industry cannot be passed on to the consumers the inefficiencies and line losses wrongly inflicted upon it in the name of tariff rationalization surcharge.

The present average net of fuel price adjustment tariff for industry is Rs12 per Kwh. Supply of electricity at tariff less than Rs9 per unit would be a major step in restoring the industrial viability.

The oil experts say prices could go below \$18 a barrel when Iranian sanctions were lifted as expected in the coming months and the country ramps up exports. A price war is getting underway already in Europe as Saudi Arabia discounts to shore up market share. It is predicted that as oil prices go down gold may be the 'safe-haven' for investors.

Three reasons of fallen oil price below \$35 a barrel.

Renewed hostility between Saudi Arabia and Iran, two major military powers in the Middle East and two of its most significant oil producers, might have been expected to boost a weak oil price.

1. Tension could be negative, for supply. The powerful 13 nation Opec cartel accounts for the majority of global production. Saudi Arabia and Iran are the first and third largest producers in OPEC, respectively.

2. Over supply is still the big issue and the excess supply fundamentally remains the dominant issue in the market. Output exceeds demand by as much as two million barrels a day at the moment and that is before Iran adds hundreds of thousands of new barrels when sanctions are lifted in the near future, BBC said.

3. Concern over demand among China slowdown
China is one of the world's largest oil consumers, so this prompts worries over demand that needs to remain high to eat through persistently high supply. Add into the mix the unseasonably warm winter weather that is resulting in reduced demand for power for heating.

It provides the monthly OPEC basket crude price for 2015. In the first quarter, global markets absorbed the shock from the shift in OPEC production policy at its November 27 meeting in Vienna, crude prices began to stabilize.

The decrease in crude prices means that the incremental

500,000 barrels per day will now generate less net export revenue for Iran than exporting only one million barrels at \$45 per barrel.

Iranian Oil Minister Bijan Zanganeh put investment at \$6 billion in 2014, and given the continued decline in prices in 2015, investment likely at best remained at this level. Saeed Ghavampour, strategic planning general manager in Iran's oil ministry said the investment requirement at \$100 to \$500 billion, over the next five years.

The next several months should prove, and tense for oil producers, investors, and consumers. Markets will be waiting to see whether Oil Minister Zanganeh can fulfill his claim that Iran can add an incremental one million barrels to its crude export in the 2016, as well as for the Iranian government to prove it can attract substantial foreign investment to its oil industry, at such a low prices.

Lost in the financial market turmoil in the first weeks of 2016 has been the abrupt change in Iran's public posture on its post sanctions oil export strategy. Several times in the past week, Iranian petroleum industry official stated that Iran export strategy to make worse pressure on crude prices.

Iranian Oil Minister stated that "Production will rise immediately by a half million barrels per day, and after four to five months, by an additional half million barrels.

The decrease in crude prices means that the incremental 500,000 barrels per day will now generate less net export revenue for Iran than exporting only one million barrels at \$45 per barrel. Assuming that increasing the total incremental export volume to one million barrels per day would cause the OPEC basket price to drop an additional \$5, to \$25 per barrel, net revenues would fall further.

Iran will generate more net revenue exporting 1.5 to 2.0 million barrels daily than it will exporting only one million barrels at \$30 per barrel. However, Iran desperately needs foreign investment in its oil industry.

In oil sector Iran put investment at \$6 billion in 2014, and given the continued decline in prices in 2015, investment likely at best remained at this level. Iran's oil ministry put the investment requirement at \$100 to \$500 billion over the next five years. The requirements \$30 billion over five years, and envisaged 350,000 barrels per day.

Iranian officials have planned to start the bidding process on oil projects in March and they still may hold to this timetable. They also likely will draw some participants like Russian, Chinese, and Indian companies among others. ■

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Pakistan needs to raise forest 25pc for green environment: report

Pakistan should raise its forest cover from 5 per cent to 25 per cent to meet its economic, employment and green environment needs because forest is the source of economic support, employment, oxygen generation, livestock grazing, furniture products, boats, household oven fire, hotel fuel in cities and town, sports goods, and construction industry, according to a new research conducted by Preston Institute of Management Science and Technology's (PIMSAT) MBA final year students which was released to PPI on Sunday.

The research was conducted by three students of PIMSAT - Syeda Bushra Hasan, Mehwish Saqib, and Dinsha Vania.

Briefing on the research, Bushra said that trees play vital role in economic support and green environment; hence, there is need to conduct mass tree plantation in villages, towns and cities. "There is also need to make tree plantation at new avenues like road sides, highways, streets, houses and gardens. Environment has become big sector of life; therefore, it needs more attention and funds from government. Trees also absorb oxygen and provide clean oxygen for survival of human beings and animals," she noted in the research.

Mehwish Saqib said that the government needed to make mass tree plantation in Karachi like Lahore, while all towns and other cities also require mass tree plantation for reducing air pollution and providing clean air to citizens for their good health. "Those people who have space in their houses should plant at least one or two trees of fruits like mango and guava. This will also provide them fruit," she said. According to the ministry of climate change, Pakistan's current forest area is 5 per cent of its total land area which is low in the world, so it should be raised to a significant level," Mehwish said.

Dinsha Vania told PPI that Pakistan needs mass tree plantation at plain, hilly and other empty areas with the support of private

organisations and government. Funds should be sought from corporate sector because government funds are not enough, he noted.

According to the research, massive forest hacking is being done in the country. Estimated 5,00,000 workers are employed in forestry, and its related business like logging, carpentry, and timber products manufacturing, and tourism. The forests contribute only 0.3 per cent to GNP due to low area. Forest products are exported abroad. Forest is also source of tourism. But massive corruption has plagued this vital sector.

As per international environmental standards, Pakistan needs 25 per cent forest area for economic stability and environment protection. A healthy tree with length of five meters creates oxygen for four people daily.

Mangrove forests along coastal areas stop cyclones or divert them. Some 50 per cent oxygen in the atmosphere is created by forests and trees, while other 50 per cent is generated by oceans, according to NASA report. The annual forest budget of each province should be doubled for reforestation, tree plantation and their safety. The federal government funds should also be provided to each province for this cause. Funds from IUCN, WWF, World Bank, ADB, USAID and other agencies should be sought for this purpose.

An action plan comprising suggestions of all stakeholders should be prepared. Seminars and conferences should be arranged for raising awareness about the importance of forests and trees. Tube-wells should be installed for supply of water to forests. Separate forest police backed by Rangers should be introduced at tehsil level. District task force comprising three judges, two NAB officials and 20 local community people should also be formed with high salary package, health cover, insurance, and security, the research suggests. ■



By Naeem Qureshi

Oil prices crash has stopped burgeoning circular debt

About 4,500 MW electricity to be added in the system by 2018: CEO, Hub Power Khalid Mansoor



"Given the present day momentum for making addition to the national power generation capacity, I would not have seen such kind of momentum in my last more than three decades of experience and for this a lot of credit goes to the present government. The CPEC (China Pakistan Economic Corridor) initiative is going to be a game-changer for the country as well," said Khalid Mansoor CEO of Hub Power.

Recently the editorial team of the Energy Update (EU) held an in-depth discussion with Chief Executive Officer of Hubco Khalid Mansoor in which he shared his views on a number of relevant issues keeping in view his over 35 years experience in energy and petrochemical sectors.

Some of such issues are expansion of his own company being the biggest IPP (independent power producer) in the country, its social contribution as part of its Corporate Social Responsibility related drive, present energy scenario of the country and Hubco's involvement in Thar Coal for exploiting the vast indigenous energy resource, and efforts to allay environmental concerns regarding Thar Coal.

EU: What is the power generation capacity of Hubco?

Khalid Mansoor: Our total installed capacity at the moment is 1600 MW with three power plants. One is through our Hub power plant having total capacity of 1292 MW and we are dispatching from it 1200 MW. The second is a thermal-based power plant in Narowal having installed capacity of 225 MW and through it we provide 215 MW to the grid. The third is only hydro-based IPP in the country i.e. Laraib. The company owns majority 75 per cent equity in it. In total we dispatch 10 per cent of the dependable capacity of national grid.

As regards our growth initiatives are concerned, there are two initiatives we are working on in parallel. Firstly the Hubco is one of the joint venture partners with Engro and Sindh government for realization of Thar coal project. The project entails 3.8 million tons of open-cast mining in the first phase and 02x300 MW power project as that project has already achieved its financial close. It is also included in CEPC's list of power projects. The project is finally entering into its execution phase.

The second one is also a joint venture between Hubco and China Power Investment Holdings (an offshore subsidiary of fourth largest power company of China i.e. State Power Company of China). The plan is to construct power plants having capacity of 06x600 MW based on imported coal. The first phase of the power project is 02x600 MW power plant with an integrated jetty.

The third initiative will be going to be a renewable initiative as being the only hydroelectric IPP of the country we are going through our last leg of mandatory tariff ratification.

EU: What are your views regarding efforts of the government to overcome power crisis?

KM: For this, we need to look into our power supply-demand gap as on peak level gap goes as high as 7,000 MW because in these days we have very little contribution from hydroelectricity from 6,500 MW installed capacity going down to just 1,000 MW during peak winter days. More-



over, our power demand is kept on going.

Then there are several projects being implemented for adding to the national power capacity include those in CPEC. Then are several projects based on solar and wind power also being implemented. When I analyze the entire power profile of the country for year 2018, I foresee 4,000 MW to 4,500 MW are being added to the national grid. Then there are large coal-based power projects, which would be materi-

alized by 2019-20. So total power projects of 10,000 MW capacity are seen to be added in a few year's time and that is very significant given only 17,000 MW dependable capacity of national grid. It is a paradigm shift, which is happening as from point of view of timing, optimism would certainly generate as the political government would say that they would overcome the crisis by the end of their term.

But we have to be pragmatic as far as commissioning of these projects is concerned as we don't want to see another Nandipur. These new power projects have to be constructed very professionally and once they are commissioned, they should run rather than going back to square one.

EU: What is effect of significant reduction in oil prices on power sector?

KM: With IPPs accounting for 51 per cent total power generation in the country and 38 per cent to 40 per cent of power generation dependent on furnace oil, the reduction in oil prices will have significant impact on energy sector. The issue of circular debt in power sector since reduction in oil prices has stopped from growing anymore. The government is now paying us on regular basis as earlier Wapda had ran out of finances to pay our fuel cost component for which we were often compelled to get help from Ministry of Finance to get release our subsidies. In case the government would some more extent tolerates the present situation and would not significantly reduce the power tariff, then issue of circular debt would be resolved at the national level to a large extent.

EU: What is your viewpoint on environmental concerns regarding coal-based power generation?

KM: You to have see that still today majority of power generation all over the world is based on fossil fuel as we need base-load plants using thermal power for ensuring interrupted power supply to industrial sector and for overcoming the issue of power load-shedding. When we talk about pollutant factor in furnace oil sulphur is having 3.5 per cent presence. Now if we see our regional countries, majority of their power generation system is based on coal. As far as Pakistan is concerned, virtually its zero per cent dependence is on coal-based power generation. Our carbon footprint as regards power generation is one of the lowest in the world. So we are one of the poorest nation with an expensive choice made for electricity generation.

In the neighbouring countries of China and India, there is enormous dependence



on coal-based power generation. In India, 70 per cent of power generation is based on coal but they are not much cognizant about the environmental issue as their technological selection is very primitive and they are not investing in technology to control environment.

In China, 80 per cent of power generation is based on coal but they are upgrading the technology, moving from sub-critical to super critical. Now all latest coal-based power plants are based on Super-ultra critical technology. China's power plants have technological interventions for all sorts of gaseous and liquids effluents.

As far as coal is concerned there is only one per cent Sulphur content in it as compared to 3.5 per cent content in furnace oil. Then there should be proper environment and social impact studies done for using coal-based power generation with right selection of technology for the IPP involved in the project and that should be Super-critical for the purpose of environmental control.

Then there are national and provincial-level environmental watchdogs, which would also monitor the situation and take the corrective measures whenever needed.

We have been able to develop Thar Coal as nobody earlier believed in Thar Coal. Nobody earlier went into such kind of detailed study as this was the first time public-private partnership used for doing study for bankable feasibilities for the project. As far as the legislation in the country is concerned, all the power plants should be compliant with national environmental quality standards but these coal-based power plants would be one step higher as they would all be compliant with World Bank's standards so there would be no issue of environmental degradation with use of coal for power generation.

EU: Tell us about CSR-related activities and investment of Hubco?

KM: We feel that we are responsible for the communities around us as they prosper, we also prosper. It is for the first time that policy of the company is to allocate one per cent of the profits for CSR-related activities. As in this regard we are investing in four main pillars concerning the communities living around us i.e. health, education, physical infrastructure, and livelihood. We are investing more than Rs70 million annually in all of these areas.

In this regard, we have adopted several schools. While right outside Hub there is the high school of TCF (The Citizens Foundation) where interrupted power supply is ensured through solar plant. For this school, we provide transportation facilities for hundreds of students living in nearby villages whereas they are also provided teachers, uniform, and syllabus. They are also provided clean potable water facility.

Our initiatives related to physical infrastructure are related to hygienic conditions of the area as we are doing projects for setting up reverse-osmosis water filtration plants. Moreover, we enroll in our plant 13 to 14 trade apprentices, every year from local communities around Hubco, who are given hands-on training and classroom teaching in our power plant. Afterwards these trade apprentices are either absorbed in our own plant from employment point of view or they go to Middle East and other regional countries for doing lucrative jobs.

We have realized our responsibility as that is what we are doing but we are doing it in a much more structured and cognizant-manner as these contributions of the company for social uplift of the society would continue. ■

By Naeem Qureshi

SSGC is facing major challenges in meeting supply-demand gap

MD SSGC, Khalid Rahman spells out future plans

The Managing Director, Sui Southern Gas Company (SSGC), Khalid Rahman said that the share of natural gas in energy resources is about 50 per cent and it was company's responsibility to provide this energy source to its every consumer equally to the industrial, commercial and domestic sectors. He was deliberating upon the energy scenario in the country while talking to EU. He said that coverage of the SSGC is only 30 to 35 per cent but the demand is much bigger than supply so that the company has a daunting task to provide this natural resource to each and every needy consumer. We are relying upon indigenous source of natural gas though we are moving towards import of gas in bulk. The import of LNG was commenced in March last year and there is very ambitious programme of gas import is going forward. However, we never thought about conservation of gas in the past. Considering the current scenario there should be a very clear direction of gas conservation. Replying a query he said that there is a lot of work going on towards exploration of new resources but unfortunately there was no major discovery in the last many years. The reason behind this was that we have gone to high prospective areas whereas oil and gas exploration companies were a little apprehensive of going to medium risk areas. But local companies that are government owned companies like PPL and OGDCL are doing a lot but there are capacity constraints for them, so going forward there is a plan of off-shore exploration but in the current scenario when the oil prices have come down fairly substantially the economic does not support the sort of activity that you require but the government is trying to incentive this exploration. The government has taken measures for exploration by license management and doing whatever is possible to speed up these activities but this is not my area as my area is transmission and distribution of gas and there are two challenges that come out very clearly they are major gas supply and demand and conservation of gas and the third one is that if we are bringing in expensive gas into our system we would have to take very drastic actions on the unaccounted for gas.

About line losses Khalid said that there are many reasons for unaccounted for gas or line losses including obsolete pipeline, old metering system and we have issues relating to maintenance plus issues relating to theft which is becoming more predominant now. We have various programs to overcome these problems that have cropped up over the last many years. We may appreciate that we have a transmission network of over 45,000 kilometers so that address that issue requires not only substantial financial resources but also requires substantial and competent human



resource besides good governance that must prevail everywhere. I believe that we at SSGC are quite successful in maintaining good governance. Replying a question that how he handles the line losses and thefts in the SSGC's network he said that for the company it's just not possible however we are seeking assistance from all stakeholders and government of Sindh is kind enough to allocate a police station for SSGC exclusively. We have a lot of support from Balochistan government as well while all law enforcing agencies support us. He said that his selection as MD SSGC was not just imposing him but was through a process.

He said that the major program that is going is to lay a 350 kilometer transmission pipeline at a cost of Rs60 billion in a year's time that is unprecedented in the history of the company. There is a lot going on and the SSGC Board has full confidence on him and he assures everyone that if he would not be able to deliver he would not stay. He said that in Sindh-Balochistan zone there is no consumer has been deprived off as we are providing gas as per priority set by the government and that there is no load-shedding of gas is going on in Sindh. While agreeing to the fact that SSGC's financial results are not made public for the last three and half years, he said that it was mainly due to want of quorum in OGRA's board, there was certain reasons due to which company was in litigation with OGRA. There was lack of clarity and once the matter is clarified which is expected during this month we would be coming forward with our results. We have a big problem in receiving our dues particularly from K Electric and Pakistan Steel. Pakistan Steel is a major concern as it owes us Rs40 billion and as a consequence we have discontinued major supply of gas to steel mills. We are facing liquidity problems as gas prices too were not revised upward for the last two and half years. ■

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- o In a wardrobe of clothes, 75% of them are rarely worn.
- o Out of whole life's earnings, 75% stays behind for others.
- o In every human being, 75% of the talent is not utilized So, how to make full use of our 25%?
- o Go for medical check-up even when you feel fit.
- o Drink more water even if you're not thirsty.
- o Let go your ego, whenever you can.
- o Give in even if you are right.
- o Be humble even if you are very powerful.
- o Be contented even if you are not rich. Have a Great Life!



By Sajid Aziz

Pak-India war brewing over water dispute

India has built over 100 energy projects over Pak rivers

India, our nearest neighbour has remained the nastiest ever country to Pakistan has never recognized Pakistan as an independent and sovereign country. This enemy within has so far built as many as 100 medium and major dams on Pakistani rivers.

India has completed the construction of 6 hydropower plants on River Chenab, including 450-MW Baglihar 1 and 690-MW Salal 2. Construction on two projects completed, including the 450-MW Baglihar 2 and 15MW Ranja-Ala-Dunadi.

Furthermore, India has planned an additional 56 hydropower projects on River Chenab, including some big projects such as the 1200-MW Sawalkot (1 and 2), 715-MW Seli, 1000-MW Pakaldul

(1 and 2), 1020-MW Bursar (1 and 2), 690-MW Rattle (1 and 2) and 600-MW Kiru.

India has completed 15 projects on River Jhelum, including the 480-MW Uri-1, 105-MW Lower Jhelum and 105-MW Upper Sindh.

Six projects are under construction, including the 240-MW Uri 2 and 330-MW Kishanganga. India also plans to initiate 74 projects on River Jhelum, including a few big projects such as the 165MW Sonamarg Storage, 100MW Gangabal Storage and 280MW multipurpose Ujh Storage.

The International Court of Arbitration (ICA) though has barred India from any permanent works on the controversial Kishanganga project in response to Pakistan's appeal for 'interim measures' against the dam which may inhibit the restoration of the river flow to its natural channel, India had never stopped working on these projects. Some of the projects constructed by India have been contested by Pakistan, including the Baglihar dam on River Chenab. Even when the matter was taken before a neutral expert against its construction, the verdict was given against Pakistan.

It is quite evident from the massive projects on Pak waters, India plans to make Pakistan a dry barren desert. India plans to achieve this by cutting off all river flows into Pakistan. India is following a well thought out strategy to render Pakistan's link canal system redundant, destroy its agriculture and turn Pakistan into a dependent nation.

Continuing its sinister designs, India has built more than 62 dams and head works on over 65 % of river flows of Pakistan. 4 big dams and 16 small dams are functional in India, built on

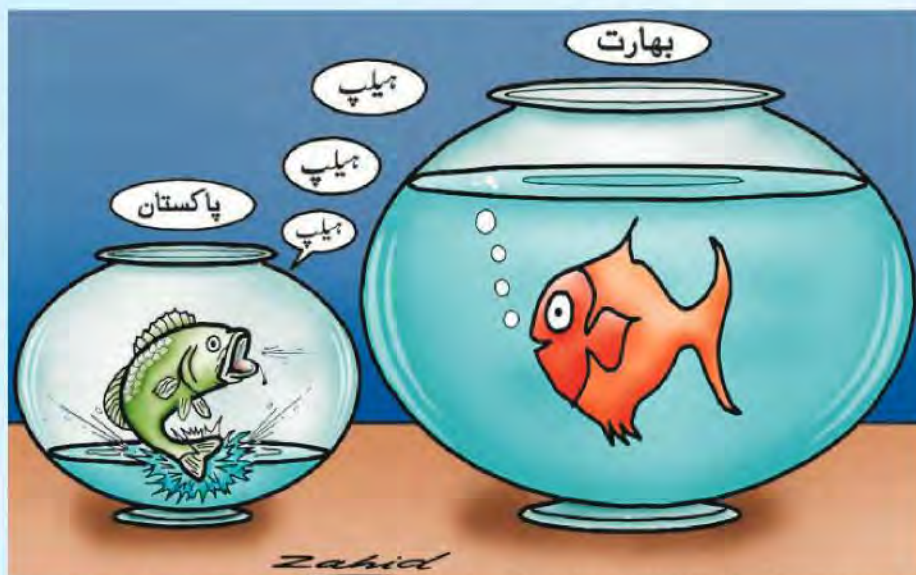


Pakistani rivers. India plans to build the third largest dam in the world on river Chenab, with the capability of blocking 47% of Pakistan's water. Moreover, it plans to build a total of 300 big and small dams to gain the total control of the three rivers of Pakistan. Baglihar dam project on river Chenab stores water in a reservoir behind the gated spillways depriving Pakistan of its share of Chenab water.

Similarly, the Wular Lake Barrage disrupts the flow of water into Jhelum River. The water before entering the river first flows into the lake. The respected barrage has the potential of effectively damaging the 3 canal systems in Pakistan used for irrigation, consisting of; Upper Jhelum Canal, Upper Chenab Canal and Lower Bari Doab Canal. India can very easily contaminate the water flowing into Pakistan and successfully destroy crops.

Despite the evident violation of the World Bank brokered Indus Water Treaty, India continues to argue about how its designs are actually in the favor of Pakistan. The construction of Bhsaha dam is supposed to increase the life of the Tarbela dam by 35 years. Obviously with no water flowing in the rate of sedimentation will definitely, significantly decrease. In addition, India further says that another project, The Tulbul Project is again beneficial for its neighbor brother as it would regulate the supply of water to the Mangla dam. What India fails to deliver with such arguments is its genuine sincerity for Pakistan. The obvious absence of guarantee, when India promises to not to hinder the flow of water into Pakistan is worrisome. What more is the fact that the complete control of Pakistans water flow of water in the hands of India.

History has revealed the manipulating wicked games India has been playing to jeopardize Pakistans journey to success. Not only is India working on to deprive Pakistan from the basic necessities of life, it is also waging a war through water terrorism. Modis government adamantly seems to follow the blood flows or water



agenda thus, killing thousands of Pakistanis by releasing water during monsoon season without any warning and consequently, flooding acres of land and destroying crops as well as the infrastructure.

On 16th August, 2011 India spilled more than 70000 cusecs of additional water into Sutlej without prior information to Pakistani authorities inundating dozens of villages in Gand Sighwala area of Kasur district. In 2014, only 80000 and 100000 were released into Pakistani rivers after its dams were filled and could no longer accommodate additional water. After the blatant violation of the Indus Water Treaty, India further steals water from the Pakistani rivers by building dams on rivers flowing into Pakistan from the Indian occupied Kashmir.

Every year the state of Kashmir experiences floods and destruction on a massive scale. Rescue teams and welfare groups from the Indian side are known to be biased and save only the lives of Hindus residing in the region. Muslim lives in the Indian occupied Kashmir are not given any priority. Indian government continues to flood the region after evacuating the Hindu Majority villages especially when the Muslims are in a position to resist even slightly.

In 2014, the US Senate released a report which warns about the impending failure of the Indus Water Treaty to avert wars between India and Pakistan, acknowledging that the dams India continues to build in the occupied Kashmir will seriously limit the supply of water to Pakistan at crucial moments. The most controversial dam is the 330 MW dam on the Kinshana Ganga River which is a tributary of River Indus.

The cycle of flooding and depriving Pakistan of water plays a key role in India's strategy of weakening Pakistan and crumpling its economy. India not only actively executes its evil plans, it also encourages Pakistan's western neighbor, Afghanistan to partake its agenda. India succeeded in convincing Karzai regime to build a dam on River Kabul and set up Karma Hydro-electric project using up to 0.5 MAF of Pakistan's water. In return, India offered technical assistance to Afghans on the project.

On one hand, India efficiently works on jeopardizing Pakistan's economical future and has no value whatsoever for human life. On the other hand, the Pakistani leadership remains tightlipped due to untold reasons on this matter even when the existence of the country and the nation is at stake. Serious repercussions on the water flow in River Indus were made. Pakistan's leadership's failure to construct large reservoirs during the last 30 years to meet the growing requirements of the ever-increasing population is not yet to be dealt with. The increasing instability in the parliament has hindered the decision of making the dams to improve the quality of life of an average Pakistani.

India's sinister designs that continue to aim to deteriorate Pakistan in any way possible is amplifying the ability of India to be accomplish what Jinnah had opposed in the 1940s.(SA). ■



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After COP21: Does Pakistan have a Climate Change Plan?

A landmark agreement at the U.N. Conference on Climate Change in Paris this December saw representatives of 195 nations pledge to cut greenhouse gas emissions to a level that will limit the global average temperature to a rise 'well below' 2 degrees Celsius compared to pre-industrial levels. But as the euphoria of delegates at the U.N. climate talks fades, and individual governments turn towards the palpably more difficult task of implementing agreed-upon proposals, Jinnah Institute turned to three climate change policy experts from Pakistan to speak about Pakistan's role at COP21, ask whether or not the present government has a credible plan to combat the effects of climate change, and what policy steps - if any - need be taken at the federal and provincial levels in the coming weeks and months.

Adil Najam, Dean Frederick S. Pardee School of Global Studies at Boston University, took the view that the global climate negotiation enterprise is likely to become

more hectic after Paris. With wind behind its sails, a notional 'agreement' in hand, the need to put meaning into the general clauses agreed upon at Paris, and the momentum of what so many wish to see as a 'breakthrough,' interlocutors are likely to see an uptick in the intensity of negotiations in the coming years; including on the key issue of resourcing and implementing the Paris accord. Despite Pakistan's lackluster performance at COP21, there is opportunity - indeed, responsibility - for Pakistan to play an important role in this process. With India and China no longer willing or able to lead the developing world, there is a leadership vacuum among 'middling' developing countries. As a frontline state in terms of climate impacts and given its historical record, Pakistan should, and can, fill this vacuum. For Pakistan to be able to influence and possibly lead in future climate change pol-



icy negotiations: (a) political capacity, buy-in and interest need to be (re-)created, particularly amongst parliamentarians and in the federal and provincial cabinets; (b) institutional confusion and turf tensions - particularly between the Foreign Office, the Ministry of Climate Change, and the Planning Commission need to be resolved; (c) professionally competent and stable negotiation expertise needs to be developed and deployed; (d) policy and negotiation capacity has to be nurtured and housed within government while deeply involving and consulting Pakistan civil society and experts; it should benefit from, but certainly cannot and should not be outsourced to international consultants or experts.

Malik Amin Aslam Khan, former minister of state for environment and the Global Vice-President of the IUCN, asserted that while Pakistan was not



short on plans, strategies and policies, the implementation of these grand plans remained to be seen. While Pakistan has a national climate change policy, a dedicated Ministry, a notified inter-ministerial task force chaired by the Prime Minister and a framework for action, actual implementation has been weak on all these fronts. On the subject of Pakistan's performance at the U.N. Conference on Climate Change, Mr. Khan noted that Pakistan has historically played a lead role in climate negotiations - from the G77+China, as well as individual country platforms. This time at COP21, for unknown and incomprehensible reasons, Pakistan chose to undermine its role and remained apologetically marginalised from global negotiations. This backslide began with the scrapping of a well-researched Intended Nationally Determined Contributions (INDCs) brief for a pathetic one-pager that was criticised as the shortest climate plan submitted by any country, and was followed by an even shorter, insipid speech delivered at the Global Leaders Forum. Pertinently, Pakistan has a strong case when it comes to climate change, being a highly impacted country facing up to the global challenge with its own resources while taking steps to meaningfully contribute to its redressal. However, a golden opportunity was lost to register these concerns and make a strong national case at COP21. Looking to the future, Pakistan now needs to focus on ensuring climate resilient infrastructure development, climate-proofing existing infrastructure, effective flood plain management, early warning systems, and urgent research on adaptive agriculture and disaster risk reduction systems for both exposed urban and rural populations (i.e. climate adaptation measures). On the mitigation side, Pakistan needs to shift towards low carbon pathways through the deployment of best available technologies, tapping into its renewables potential in solar, wind and hydro-, as well as arresting and enhancing its depleting forest resources. Khyber-Pakhtunkhwa is one province leading these efforts through its 'Green Growth Initiative', which encompasses most of the above steps through actual on-ground projects, particularly with regard to forestry (the Billion Tree Tsunami initiative) and clean energy (365 mini hydro- and other hydel projects). KP also happens to be the only province aiming for 'carbon-neutral' economic growth in Pakistan.

Rina Saeed Khan, a freelance environmental journalist based in Islamabad who covered COP21 in Paris, explained that Pakistan's federal cabinet had approved a comprehensive National Climate Change Policy under the last PPP government, and it was launched in 2013 just prior to the general elections. However, this was shelved by the PML-N government which came to power. While the new government did appoint a federal Minister for Climate Change, he was forced to resign following controversial comments given to the media. The present government has since appointed Zahid Khan, a lawyer who drafted the Pakistan Environment Protection Act in 1997, as federal Minister for Climate Change. At the U.N. Conference on Climate Change in Paris, Zahid Khan

announced the implementation of a National Climate Change Policy (2014-2030) to mainstream climate change. However, Pakistan has been severely criticised for its 350 word-long Intended Nationally Determined Contributions (INDCs) brief submitted to the U.N. Framework Convention on Climate Change shortly before the Paris summit. In contrast, other developing countries provided detailed INDCs giving targets and showcasing their contributions. In this lackluster document, which was not the original document prepared by the Ministry for Climate Change, the federal government offered no specific targets for emissions reductions, and failed to highlight Pakistan's extreme vulnerability to the impacts of climate change (floods, droughts, sea-intrusion and glacial melt). During the negotiations, Pakistan held a side-event alongside Sri Lanka, organised by Pakistani civil society. The Pakistan government's tiny booth at the Paris summit was also secured by NGOs, while poorer countries like Benin and Peru had bustling pavilions. The federal Minister for Climate Change was new to the job, and although he made an effort to try and understand and follow the complex negotiations, his delegation itself did not contribute meaningfully as it had done in the past when the Foreign Office played a leading role in the G-77 group of developing countries. The only positive news out of Pakistan at the conference was the Khyber-Pakhtunkhwa government's pledge to restore 384,000 hectares of degraded land via reforestation under its 'Billion Tree Tsunami' initiative at a side event held by the Bonn Challenge, a global initiative that plans to restore 150 million hectares of degraded land around the world by 2020. Going forward, Pakistan needs to submit a new and revised INDCs document soon as it is foreclosing itself to future climate funding and indeed even World Bank and Asian Development Bank assistance. The present government also has to realise that the Paris agreement is a signal to businesses and governments that the transition to a low carbon economy has begun, and Pakistan needs to become an active part of this future economy. Investing in dirty coal power plants at this late stage is not a wise decision, especially when renewable energy is becoming increasingly affordable and future funding and some transfer of technology will soon become available in this sector. Pakistan also needs to start implementing its National Climate Change Policy as soon as possible, and start taking its Ministry for Climate Change more seriously as a coordinating agency that can help the provinces implement and mainstream policy into existing development initiatives. ■ courtesy: Jinnah Institute 2015



FPCCI appointed Gulzar Firoz

Mr. Gulzar Firoz, Chairman, PTA has been once again appointed as Chairman, FPCCI Standing Committee on "Environment" for the year 2016 by Mr. Abdul Rauf Alam, President, FPCCI. Gulzar Firoz has been the Chairman of this Committee since last 04 years and is also recipient of Tamgha-e-Imtiaz in the field of Environment as well as conferred last year ECO Green Industry Award during 5th ECO Ministerial Meeting on Environment, Istanbul, Turkey. ■



Pakistan's Fiza Farhan appointed member of UN's panel on women

A Pakistani woman has been named as a member of the United Nations body dedicated to the economic empowerment of women. Fiza Farhan was elected as a member of the first ever High-Level Panel of the UN Secretary-General on Women's Economic Empowerment. Fiza is CEO of Buksh Foundation and director of Buksh Energy. She was also part of the '30 under 30' list by Forbes magazine for Social Entrepreneurs in 2015. ■



Electricity generation through biomass is eagerly awaited

Sugar mills yet to offer any power despite issuance of EOI

Electricity generation through biomass still remains a dream as none of the projects announced whether in public or private sector have yet to start producing power across the country. The Alternative Energy Development Board (AEDB) that was established some years back for the purpose of contributing in addressing the power-shortage through producing electricity through alternate sources. According to Chief Executive Officer, Alternate Energy Development Board (AEDB), Amjad Ali Awan there were as many as nine companies and sugar mills had been issued Letter of Intents (LoIs) to generate about 271 MW biomass based electricity in different areas of the country some months back, however any of these projects are yet to take off despite the fact that sugar mills do not need much time to start producing biomass electricity as they already have basic infrastructure.

"In order to tap the potential of electricity generation from the sugar mills in Pakistan, the government on recommendation of AEDB has already announced the Framework for Power Co-Generation (Biogas/Biomass)," Awan said.

Giving details of these biogas projects, he said these included Etihad Power Generation (Ltd) with capacity of 67 megawatt, Layyah sugar Mills with capacity of 41 megawatt and Almoiz Industries with capacity of 36 megawatt. Awan said that other mills that have been issued LoIs to generate biogas electricity included Hamza Sugar Mills (15 MW), Alliance Sugar Mills (19 MW), Safina Sugar Mills (20MW), Shahtaj Sugar Mills (15MW), Chanar Energy (22MW), and RYK Energy (36MW).

Awan said AEDB has been following standard security documents (Energy Purchase Agreement (EPA) / Implementation Agreement (IA) for biogases based co-generation projects under Framework for Power Co-Generation of 2013 (Biogas / Biomass). He said that NEPRA has also announced an Upfront Tariff of Rs10.7291 per kWh (Levellized) for biogases based co-generation projects under the Framework.

It is pertinent to mention that Renewable Energy (RE) sector has attracted foreign investment of over \$ 3 billion during the last one year, clearly indicating investment potential in this particular sector and the outcome of initiatives taken so far to exploit such resources for the betterment of the country.

"Due to the potential, robust policy framework, lucrative tariff structures and bankable security documents, Pakistan has become a choicer investment destination for private investors," Amjad Awan told. He said, the government was taking pragmatic steps to harness the available renewable energy potential, diversify its



energy mix and ensure energy security and sustainable development in the country.

He observed that owing to the promotion and development of RE technology in the country, a record investment has been witnessed in just one year, revealing the interest of investors in this sector.

The AEDB's CEO said that detailed resource assessment of wind, solar and biomass was carried out in the country through ESMAP's (World Bank) assistance. Ground installations for measuring of solar irradiation have also been made in several parts of the country he added

The AEDB had embarked upon an ambitious plan to enhance the energy mix up to 20-25% by adding 3000-3500 megawatts of wind-based electricity to the national grid by 2018.

"Out of this, as much as 1,396 megawatt wind-based electricity will be included in the system by 2017 as the AEDB would complete several projects initiated for alternative power generation," Awan said. Currently, wind projects with 255 MW power generation capacity were operational across the country. "Another 28 ongoing wind projects of 1396 MW capacity would be completed by 2017 and would play a major role in overcoming the energy crisis," he said, adding that nine out of those 28 projects (477MW) had achieved financial close and were under construction.

He further said that strategies had been devised to include 1% energy through the alternative sector. "However, we aim to raise it up to 20-25% by 2018. "The power tariff for wind power projects has been reduced to 10.4 cents which indicates that this could prove a promising sector for future investments".

Awan said Pakistan is naturally gifted in alternative energy resources as identified by mapping assessment of wind, solar and biomass in the country through ESMAP's (World Bank) assistance. "The AEDB has identified high-potential regions including Southern Sindh, Balochistan and Punjab where electricity generation through wind has promising potential. "Some of the wind potential areas have solar intensity, so in such regions both wind and solar energy could be generated simultaneously and this may also be very attractive for the investors," he pointed out.

The year 2017 is not too far so let's see whether the next year proves to be the end of power crisis in Pakistan as claimed by various functionaries in energy sector including ministry of water and power. ■

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Delay in Sindh's drought mitigation policy

THARPARKAR, one of the country's largest arid regions, continues to suffer harsh weather conditions for the last four years. The rain fed area did get scanty rainfall last year but not sufficient enough for cultivation of crops like beans and millet. Child mortality has emerged as a serious issue.

Remedial measures taken by the provincial government were: provision of clean drinking water through reverse osmosis (RO) plants and distribution of free wheat to drought-stricken community and upgradation of health facilities.

And its agenda included the establishment of Thar Development Authority (TDA) and Sindh Drought Mitigation Policy 2014.

A 26-member steering committee of the Sindh provincial assembly has drafted the proposed legislation. Both the documents are pending for the government's approval or vetting by the elected house.

The Sindh Local Bodies Department had modelled the TDA on conventional wisdom not so specific to the Thar conditions. The bill is to be tabled again.

"Sindh Drought Mitigation and Management Policy will help the government handle the situation arising out of drought in any part of the province like Kachho, Nara, deserts in Sanghar, Umerkot and Tharparkar districts," says Dr Sono Khangharani, a social activist and one of steering committee members.

As Thar district has its own dynamics, the TDA will have its board to take decisions for addressing issues before or during the drought period, he argues. "We have covered all important sectors that impact life of common man and even that of livestock during the dry spell," he adds.

The TDA draft lists a number of

measures required for sustainable development and environmental management in the wake of looming threat of climate change. Proposed TDA's functions and intervention include: research; supplementing/complimenting the initiatives of different departments; water sector management; provision of irrigation water; water reservoirs; livestock and wildlife sanctuaries; gauchar (pastures) land and fodder bank and checking soil degradation. All these sectors are directly linked with local population's source of livelihood.

Varying mortality figures of newborns continue to pour in from Thar notwithstanding the fact that it is winter. Summer season is still a couple of months away that would ultimately increase drinking water consumption and groundwater remains brackish in desert barring some pockets.

The Sindh government, time and again, has pledged to develop infrastructure and health facilities. Some promises are fulfilled like: upgradation of Mithi district headquarter hospital and distribution of free wheat. Primary healthcare facilities, by and large, remain dysfunctional.

Around Rs5bn was released to Special Initiatives Department for RO plants. Yet Mithi's two million gallons per day plant, billed as Asia's largest, failed to meet required drinking water supplies as envisaged. The problem is yet to be fixed. Similarly, Thar has around 6.5-7 million livestock population with acute shortage of fodder. The government had announced to establish chiller plants across Tharparkar to collect milk from the community, but they are yet to be set up. Livestock vaccination drive, whose pace accelerated in 2014 when mortality had increased, has somewhat slowed down. ■

Courtesy: Daily Dawn

Mithi's plant, billed as Asia's largest, has failed to meet required drinking water supplies as envisaged. The problem is yet to be fixed



By Amna Nasir Jamal

Noise pollution in Pakistan touches all limits

Ehen the regulators wake up from deep slumber

More than 100 nations of the world express concern towards safe environment. But, how far it is true that agencies concerned are considering the environment important in Pakistan? If we talk about the recent trends in climate change in Pakistan along with urbanization and the problem of solid waste management then noise pollution is a big problem as it is touching all limits now.

No one can deny that excessive noise in communities is a public hazard which can degrade the quality of life of residents. Once noise from commercial activities does have to be excessive or disruptive to residents in neighboring communities but now residents of small houses are also responsible for violating air quality and noise pollution via installation of heavy strength gas generators. When low frequency noise such as bass in music can be particularly bothersome as it easily penetrates walls and can be clearly audible even with windows and doors closed then one should imagine about high frequency noise.

As the energy goes on, the emphasis on general public is to buy the largest and most powerful gas and diesel generators that are easily available in the market. The issue is not with the installation of gas generators only but also alarming that day is not far when there will be a competition to play active role to disturb air quality. Poly-aromatic hydrocarbons released by diesel-powered vehicles are known carcinogens, while smoke from diesel engines and generators has aggravated already elevated levels of airborne soot. Nitrous oxides are emerging air pollutants with the highest concentrations recorded in Karachi, followed by Lahore, Quetta, Peshawar, and Islamabad.

Noise pollution is subject to a variety of legal controls. Impact of noise demands different treatment, bearing in mind particularly the very limited period during which the human ear would subject to high intensity impact. Experience suggests that in general an increase in the noise level (the scale of decibels from nought to 120 can be divided into colloquial descriptions of noise by the use of words: moderate, loud, and so on. Between 80 and 100 it is very loud and from 100 to 120 it is deafening).

Across the often disparate areas that go to make up environmental health, it may be of importance to identify the circumstances in which information is available, from what source, for what purpose and to whom. I would jot down information relevant to environment pollution, like outset with general information availability, particularly on those occasions when statute obliges and administrative agency to bring environmental information into public domain, or to require others to do so. Beyond the matter of general information availability and the power to obtain or convey information is the need for the law to define (as precisely as possible) what is comprised in the term "information".

Pakistan Environment Protection Act, 1997 (PEPA), gives powers to deal with statutory noise pollution, was designed to give more effective control over the transient noise problems posed by human activities. It provides and ensures freedom to access and disseminate of, information on the environment held by public authorities.' One wonders when it has been defined then why EPA can't check those who impair or damage environ-



ment. A local authority (City District Government) may serve a notice imposing requirements as to the way in which works/activity/noise are to be carried out. A notice may specify any plant or machinery which may be used for hours of working and noise emission levels from premises. A notice stipulate the time for compliance with its requirements and contravention is an offence punishable on summary conviction.

Regulations are made by the concerned authorities which require the use of silencing devices on plant or machinery and limit noise levels from machinery as used on site. No doubt, under PEPA a duly authorized officer of a local authority may enter premises and to check or confiscate machinery (like generators) responsible for "reasonable cause for public nuisance".

Under Environment Protection Order, Environment Protection Agency may, after a person responsible for such emission, disposal, handling, act or omission an opportunity of being heard, by order direct such person to take such measures that the Federal Agency or Provincial Agency may consider necessary within such period as may be specified in the order. In particular and without prejudice to the generality of the foregoing power, such measures may include: Immediate to stoppage, preventing, lessening or controlling the discharge, emission, or to minimize or remedy the adverse environmental effect; Installation, replacement or alteration of any equipment or thing to eliminate or control or abate on a permanent or temporary basis, such discharge, emission, disposal, handling, act or Commission; Action to remove or otherwise dispose of the effluent, waste, air pollutant, noise, or hazardous substances; and action to restore the environment to the condition existing prior to such nuisance or as close to such condition as may be reasonable in the circumstances, to the satisfaction of the Federal Agency or Provincial Agency.

The economic and financial turmoil sweeping the globe is a true wake-up call, sounding an alarm about the need to improve upon old patterns of growth and make transition to a new era of greener, cleaner development. The world also needs a 'Green New Deal' focused on investing in renewable sources of energy, eco-friendly infrastructure and energy efficiency. ■

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NFEH's 8th International CSR Summit & Awards 2016

60 companies get International CSR Awards

Govt aims to increase R&D budget from 0.29% to 1% of GDP: Fed. S&T minister



Federal Minister for Information, Broadcasting & National Heritage, Senator Pervaiz Rashid, Federal Minister for Science & Technology, Rana Tanveer Hussain, President NFEH, Chairman, Kaiser Waheed, Ruqiya Naeem, General Secretary NFEH, Engr. Nadeem Ashraf, Project Head, NFEH & Award recipients in a group photograph during 8th Int'l CSR Summit and Awards 2016

The present federal government has been trying to increase budgetary allocation of funds for scientific research and development (R&D) from 0.29 per cent to 01 per cent of GDP (Gross Domestic Product) so that it could be best used for welfare projects related to social sectors.

This was stated by Federal Minister for Science & Technology (S&T) Rana Tanveer Hussain as he along with Federal Minister for Information & Broadcasting Senator Pervaiz Rashid were jointly presided over the ceremony of 8th International CSR Summit and Awards-2016 organized by National Forum for Environment and Health.

Chairman of Privatization Commission and State Minister Muhammad Zubair and

State Minister for Education and Professional Training Baligh Ur Rehman were other guests of honour on the occasion.

Some 60 leading national and international companies received awards for their commendable performance in 30 different categories of Corporate Social Responsibility during the past one year.

S&T Minister said that present government had the aim that R&D budget would be ultimately increased to 04 per cent to 05 per cent of GDP of economy at par with budgetary allocation for the same purpose by some of prospering nations of Southeast and Far East Asia including Japan and South Korea.

The federal minister said that these

were the developed countries of the region, which had contributed a lot for improvement of social sectors of their economies.

He said the subsidiary organizations of Ministry of Science & Technology including Pakistan Science Foundation would always provide all sort of support and assistance being sought for completing projects related to social sector development.

He said the best utilization of science and technology was that such initiatives and projects in fields of S&T should be conceived and done, which would be helpful in alleviating basic social sector problems related to poverty, health, and education.

Mr. Tanveer Hussain said that private



Group Photo of CSR Award winners and Participants at the ceremony held at local hotel. Picture shows Commissioner Karachi Asif Hussain Shah, M. Ali Shaikh VC SMIU, Ovais Asad Khan NBP, Mirza Ishtiaq Baig CG Morocco, Rehmat ullah Shaikh DMC East, President NFEH M. Naeem Qureshi, Ruqiya Naeem, Nadeem Ashraf and Others are seen in the picture.



President NFEH M. Naeem Qureshi, Fawad Soomro, J.H. Lee, Shahbaz Islam, Federal Minister Baligh ur Rehman, Marvi Memon, Senator Pervez Rasheed, Farhan Hanif, Malik Amin Aslam, Muhammad Zubair addressing at 8th CSR Summit and Awards 2016

sector companies undertaking CSR-related projects had been doing a wonderful job as they had been contributing a lot for mitigating situation of social sectors of Pakistan given unstable state of Pakistani economy.

He said that even in developed part of the world, corporate entities had been contributing well through provision of funds and other resources for social sector development.

The Minister for S&T said that Benazir Income Support Programme and Endowment Fund for education were some of the



Commissioner Karachi Asif Hyder Shah, Mirza Ishtiaq Baig, Prof M. Ali Shaikh, Ovais Asad Khan, Dr. Kaiser Waheed, Rizwan Jaffar addressing at CSR dialogues and Award.

initiatives of the government for social sector development.

In his brief remarks on the occasion, Federal Information Minister Pervaiz Rashid said the CSR Summit and award ceremony was a commendable effort as being an event to acknowledge companies and people engaged in serving the people.

"Those being recognized today are more superior than me as these are the people who earn through their abilities and instead of spending their income on their own selves spend it on doing good deeds," said the Senator Rashid.

He said that such corporate entities and persons should continue with their good work in education, health, and environment sectors.

"Those people getting benefited by your welfare projects like students enrolled in schools and patients treated at hospitals being run for charitable causes, their prayers are the best award for all of you more than the award you are receiving today and the supreme award would be the one given by God," said the federal minister while particularly addressing award winners of the ceremony.

State Minister for Education and Professional Training Baligh Ur Rehman said the government had been faced with the major challenge in social sector of 21 million children from age of 05 to 16 who had been out of schools.

He said the govt had the resolve to bring to school each and every child not getting education in the country. For the purpose, the present govt had been trying to create maximum fiscal space

with current budgetary allocation for education sector present at 02 per cent of GDP that had to be increased.

He said the non-formal community-based schools functioning in remote parts of the country had been doing a wonderful job for provision of education to millions of children belonging to under-privileged communities.

The State minister urged the corporate sector doing philanthropy work that it should adopt some of such non-formal schools.

Privatization Commission Chairman and State Minister Muhammad Zubair said that present govt had been divesting from commercial, business, and industrial sectors in line with practices of developed economies so to have maximum funds for spending on social sector. He said that through privatization programme the efforts had been under way to cope with the situation of much poorer performance of the govt in the past in the health, education, transport, and such social service sectors so to have the services of enabling private sector.

Malik Amin Aslam, project head of Green Growth Initiative of govt of Khyber Pakhtunkhwa, said that 113 million trees had been planted all over the province so far under the programme of provincial govt under which a billion trees would be planted till year 2018.

He said the under "Billion tree tsunami" programme of KPK the provincial govt could generate revenue up to 800 million Dollars through earning of "Carbon credits" in view of improvement of environment with plantation of trees and increasing forest cover. He said the billion tree programme of KPK govt was the only project presented from Pakistan in the recent Global Climate Change Summit held in Paris.

Chairperson Benazir Income Support Programme MNA Marvi Memon said that Pakistan at present had been facing seriously alarming situation regarding nutritional, health, and physical growth needs of mothers and children.

She said the corporate, business sector, non-governmental organizations, and international community should come forward to provide assistance to the government's efforts to address health and growth needs of women and children for sake of upkeep of next generation of the country.

Australian High Commissioner to Pakistan Margaret Adamson, speaking on the occasion shed light on Australian assistance and aid being provided to Pakistan in social sector. ■



By Prof. Ahsan Iqbal

Is Pakistan ready for a take-off?

The latter half of the 20th century has seen many countries successfully emerge as regional powerhouses. Unfortunately, Pakistan has been struggling to make this happen despite being endowed with rich resources. In the 1960s, Pakistan was touted as a rising economic power like Japan but its progress was derailed due to the 1965 war. In the early 1990s, Pakistan again captured the attention of the world when it took the lead in pioneering economic reforms in South Asia. However, this dream once again proved to be short-lived as the country plunged into a decade of political instability. Governments lasted no more than two years, and eventually the country was caught in the talons of martial law. In 2013, the Western media was calling Pakistan the most dangerous country in the world. Just two years later, due to economic reforms and security-related measures taken by the government, Pakistan is being projected as an emerging economic success story by the same media. Today, we are again poised for an economic take-off. The improving security situation, improving economic indicators and the establishment of the China-Pakistan Economic Corridor (CPEC) offer many opportunities for the country. The million-dollar question is whether we will seize this moment for an economic take-off or will once again squander it.

There cannot be a better analogy to understand Pakistan's trajectory than learning from the concept of 'take-off' in aviation. In order for a plane to successfully take off, besides having a clear runway and favourable weather conditions, in the tug of war between opposing vertical and horizontal forces of lift versus weight, and thrust versus drag, the forces of lift must prevail over weight and the power of thrust must prevail over drag. During a take-off, all the weight on the aircraft must also be stable, otherwise the take-off can turn into an accident. The aircraft cannot take off if its engines are not working in sync to provide the required thrust. An aircraft can land with one of its engines shut down, but it can never take off without all engines working together. If all these conditions are not met, the plane can't take off successfully.

This example is instructive in understanding Pakistan's potential for a take-off. Firstly, we are a nation of 200 million people, of which almost two-thirds consists of the youth, with heightened aspirations and

expectations. Our institutions are weak due to a fractured political history featuring long shadows of various martial laws. Moreover, due to the lack of investment in human capital over a prolonged period means that we still have high levels of illiteracy, disease and poverty. This translates into a heavy weight of social underdevelopment that has to be lifted. We need an extraordinary force of lift to overcome the drag and downward pull and achieve a successful take-off. We possess a rich endowment base. However, this can only be harnessed effectively by adopting the right strategies and implementation mechanisms with a clear focus on the economic agenda. Additionally, just as an aircraft can't take off if the runway isn't clear and is not of the desired length, countries also need to ensure that their policies are sound and provide a consistent and stable span for take-off. Finally, equally important is the favourability of the socio-political weather, as political thunderstorms and social jolts are capable of subverting take-offs.

The nation's institutions must work harmoniously to produce the positive synergy required for an economic take-off. It is absolutely critical that all national institutions align themselves with a national vision and function with harmony to overcome the inertia of forces of the status quo to ensure a national take-off. Pakistan is an evolving society in which new power centres are emerging alongside traditional structures of power. After the Eighteenth Amendment, provinces have assumed added responsibilities and roles. Coordination between the federal government and provinces for realising the national development agenda has become critical. The media, the private sector and civil society are new and powerful players in national affairs. The judi-

ciary has assumed a new role in the wake of Judges Restoration Movement. The role of parliament and the legislatures has become critical for effective democratic governance. The civil and military bureaucracy play a key role in our context.

Based on these fundamentals and lessons from our history, in order to ensure Pakistan's take-off, it is critically important that all stakeholders, institutions and players join hands for a team effort. Political differences must not come in the way of the pursuit of national goals. Vision 2025 has been developed through elaborate and extensive consultation of all stakeholders. It has been approved with the consensus of all political parties represented in the governments of our federation, with the PML-N at the Centre and Punjab, the PTI and the Jamaat-e-Islami in Khyber-Pakhtunkhwa, the PPP in Sindh and the nationalist parties in Balochistan. The nation has declared its aspirations and intent to join the league of newly emerging economies with the goal to be among the top 25 economies of the world by 2025. In order to reach this goal, we will need to achieve an annual growth rate of over seven per cent. Though this may seem daunting, with the great dividend of the CPEC in our grasp, this goal is achievable. However, to realise this dream we need to follow the rules of a successful take-off - maintaining favourable political weather, ensuring a smooth platform of consistent policies, and working together as a united, determined and focused nation. ■

The writer is the Federal Minister for Planning, Development and Reform
courtesy: The Express Tribune



Only indigenous resources can resolve energy crisis

Pakistan can utilise Thar coal for 50 to 100 years

People think coal is a dirty fuel and will contaminate our environment but with the passage of time new and better technologies have developed, which can utilize coal in a cleaner way. Generally people talk about SO_x, NO_x and Particulate matter (PM) but the technologies are available for emissions control. Low NO_x burners, Fuel staging, Flue gas desulfurization (FGD Systems) and Electrostatic precipitator (EP) are now integral part of the power plants.

of November SGS Pakistan organized "International Coal Conference" with slogan "The Old King Coal". SGS provides a great platform for awareness among people about coal. Coal rightly called the "KING" among all the fuels because it is being used most abundantly for power generation around the globe from last century. All the presenters from Pakistan and other countries did a good job. All credits goes to SGS Pakistan and their sponsors.

We all know countries like the US, China, India, Malaysia, Russia and Germany produce power by the burning of coal. The International Energy Agency (IEA) forecasts coal use in electricity generation to grow 33% by 2040. According to the International Energy Agency coal is an important source of energy for world. Twenty-first century high efficiency, low emission (HELE) coal technologies have huge potential. Dr Shahid Munir, Director Centre for Coal Technology has written so many articles about coal. He being an expert has advised the right path of doing semi mechanized mining and converting the existing oil based power plants to Coal. Almighty Allah has blessed Pakistan with around 185 billion tons of coal resources. Thar is the largest reserve with 175 billion tons of coal.

The issue was how to utilize this resource, but Engro Coal Mining Company is doing a fabulous job there. It could be a right and positive step in organizing the future demand of energy

Due to global oil price decline the Government of Pakistan fully benefited and saved Rs252 billion that was not passed on to the petrol consumers. Neither oil prices reduced nor rate of electricity reduced for consumers of less than 300 units of electricity.

through coal reserves of the country. Everyone has appreciated the role of Sindh and Punjab government for taking the initiative for establishment of coal-fired plants and expressed the optimism that the government would ensure its facilitation for the successful completion of Coal fired power plant. In Punjab work is in process on (660 x 2) 1320 MW Sahiwal coal fired power plant and 300 MW indigenous coal fired power plant in Salt Range by Chinese Companies. If we discuss Punjab, the Salt Range (Punjab) alone has about 600 million tonnes of coal that can be exploited. This is backed by an international resources estimation report done by an Austrian Consulting firm M/s Snowden (2012). Major issues in Punjab are non mechanized mining

and no proper trading and pricing mechanism and due to lack of facilitation, coal market is not grooming properly.

On the other hand number of industries including cement, steel, paper, textile, glass, ceramic and brick had already started utilizing coal for power generation and steam production but still there is a need for awareness sessions about this great resource. The way forward should be creation of "Coal Technologist's Counsel" which should be backed by the Government Organizations in association with mine owners association and industries to provide technical solutions and implementation plans to investors and industrialists. It should also organize trainings and seminars for awareness about use of coal in energy mix of Pakistan. All Coal Technologists should be on one platform and share their research and technical expertise to overcome the energy crises. Progressive countries develop their economy by using coal as their primary fuel. Countries like Pakistan have to use coal for at least 50 to 100 years to grow their economy and for fulfilling its growing power needs. ■



Unlocking Solar market

WHILE the solar power potential in Pakistan stands at 2.9m megawatts, only 100 megawatts of grid-tied solar power have been commissioned to date.

Wind power proposals have seen an upsurge since 2012 with at least 477 megawatts projects reaching financial closure to date, demonstrating a viable market for renewable energy.

Last month, Nepra announced a new round of solar tariffs valid until June 30, 2016.

Eying the business potential, the International Finance Corporation has released a guide for investors to develop renewable energy particularly solar projects in the country.

The IFC handbook 'A Solar Developer's Guide to Pakistan' provides vital information for international investors and developers implementing solar projects, outlining development procedures and explaining the legal and regulatory mechanisms around them.

It also explains the requirements surrounding the preparation, agreement, approval and implementation of projects up to financial close.

The country's first step towards firm support of renewables in its energy mix came in 2006 when it announced 'Development of Renewable Energy Generation Policy' which dealt with wind, solar and small hydro projects up to 50MW.

While initial progress has been slow, investors' interest has gained momentum over the last five years particularly in the wind and hydro sector and more recently in solar. To date, however, the only grid connected (100MW) project is the one commissioned by the Punjab government in May 2015.

The Alternative Energy Development Board (AEDB) reports that 35 projects with a capacity of 1,111.4MW are under development within the board's framework. Upfront tariffs have been approved for 10 developers and of those three projects of 100MW each have signed a power purchase agreement.

The IFC guide also spells out challenges and recommendations, identifying major issues with the input of various developers, tariff determination and industry norms.

Referring to timeline and policy uncertainty, the guide points out that no privately financed solar IPP has reached financial close in Pakistan. It is understood that projects awarded tariffs under the 2014



Eyeing the business potential, the International Finance Corporation has released a guide for investors to develop renewable energy, particularly, solar projects in Pakistan

and 2015 determinations have been stalled as the Central Power Purchase Agency (CPPA) has been waiting for a lower tariff.

This has impacted investor confidence. Nepra is clear that the CPPA must honour those tariffs and has been consistent in granting timeline extensions to developers for reaching financial close, where the government organisations have not been cooperative. In addition, the issuance of letters of intent (Lols) by the AEDB and provincial agencies had stalled in 2015 on the basis that a new tariff was expected. It is hoped that the issue will be resolved after publication of tariffs for 2016.

Land identification is one of the main hurdles for international developers looking to enter the Pakistani market. If a local partner is not found who already has land

access, it may take some time to identify lands that are suitable for a solar project.

The lack of access to good digitalised maps makes things more difficult. The AEDB and the Sindh government are trying to make the process more investor-friendly by identifying suitable lands.

Referring to transmission issues, the IFC guide points out a number of applications for solar projects are pending with the National Transmission and Despatch Company (NTDC) which, owing to a regulatory uncertainty, has not been processing them as quickly as timelines require.

Under the 2006 policy, the NTDC is required to provide grid interconnection but this can take time and requires funding. The IFC has recommended that the NTDC be approached by investors as soon as possible. The developers should work with them and local consultants to identify areas that are most

suitable for evacuation of power and that do not require substantial construction of transmission lines.

In the distributed solar space, the market has also been developing. With the rising costs of electricity and unreliable grid supply, more industries and commercial organisations are turning to captive solar solutions. There has been a strong surge in domestic installation of rooftop photo voltaic panels in big cities. The private sector imported 350MW of solar panels in 2013.

For projects under 1MW, net metering regulations came into effect in September 2015. This sector is expected to see significant growth in the coming years. Pakistan is targeting at least one million customers and adding approximately 3,000MW of solar power through net metering.

Under the 2006 policy, solar power project developers can also enter into direct bilateral sales contracts with end-use customers to sell part of the power generated by them to their direct customers and the rest to the utility company for general distribution. For direct sales, they are required to pay wheeling charges for the use of the transmission/and or distribution grid network used to transport the power from the plant to the purchaser. Until now, there are no known solar projects that are selling power on a bilateral basis. ■

Courtesy: Daily Dawn

Scientists Detect Gravitational Waves, Prove Einstein Right



Scientists said on Thursday they have for the first time detected gravitational waves, ripples in space and time hypothesized by physicist Albert Einstein a century ago, in a landmark discovery that opens a new window for studying the cosmos. The researchers said they detected gravitational waves coming from two black holes – extraordinarily dense objects whose existence also was foreseen by Einstein – that orbited one another, spiraled inward and smashed together. They said the waves were the product of a collision between two black holes 30 times as massive as the Sun, located 1.3 billion light years from Earth. The scientific milestone, announced at a news conference in Washington, was achieved using a pair of giant laser detectors in the United States, located in Louisiana and Washington state, capping a long quest to confirm the existence of these waves. The announcement was made in Washington by scientists from the California Institute of Technology, the Massachusetts Institute of Technology and the LIGO Scientific Collaboration. Like light, gravity travels in waves, but instead of radiation, it is space itself that is rippling. Detecting the gravitational waves required measuring 2.5-mile (4 km) laser beams to a precision 10,000 times smaller than a proton. The two laser instruments, which work in unison, are known as the Laser Interferometer Gravitational-Wave Observatory (LIGO). They are able to detect remarkably small vibrations from passing gravitational waves. After detecting the gravitational wave signal, the scientists said they converted it into audio waves and were able to listen to the sounds of the two black holes merging.

Pencil with a Seed



Now that's such a cool idea, pencil with a seed. When it's too short to use, plant it, water it & watch it grow.

2015 was hottest year on record



Last year's global average temperature was the hottest ever by the widest margin on record, two US government agencies said on Wednesday, adding to pressure for deep greenhouse gas emissions cuts scientists say are needed to arrest warming that is disrupting the global climate.

Data from the US space agency NASA and the National Oceanic and Atmospheric Administration showed that in 2015 the average temperature across global land and ocean surfaces was 1.62 degrees Fahrenheit (0.90 Celsius) above the 20th century average, surpassing 2014's previous record by 0.29 F (0.16 C).

Scientists at the United Kingdom's Met Office and East Anglia's Climatic Research Unit also published data on Wednesday confirming the US agencies findings.

World's first passenger drone unveiled

There are hundreds of drones competing for attention in Las Vegas at the 2016 Consumer Electronics Show. But one definitely stands out. This is the Ehang 184, the world's first passenger drone. It doesn't have any flight controls because it's not meant to. The UAV is completely autonomous, relying on sensors and computers to navigate from take off to landing.



"So the people sitting in there is not going to be a pilot. You know, you don't need to get a license in the future. You're just a passenger. You are going in there (the drone) and sit in there and enjoy the flight," said Derrick Xiong, co-founder of Chinese UAV company Ehang.

The only user interface in the drone is a tablet which gives the passenger the options to take off and land as well as adjust the air-conditioning. Currently the drone can carry one passenger to a height of 11,500 feet (3505 meters).

According to the company, the drone is equipped with a multi-rotor system with 8 propellers, giving better odds to safely land even if multiple systems fail. But in the event of an emergency, Ehang plan on monitoring all flights with a remote control center that is capable of intervening if the need arises.

Upgrading Warsak power station

ENERGY experts believe that the only solution to the prevalent energy crisis, which is causing electricity shortage of almost one-third of the total demand, is the optimal utilisation of hydropower resources. To achieve the objective, it is projected that the share of hydropower generation needs to be restored to 70pc in the total energy mix (which was maintained until the 1980s) from the current 32pc.

The development of hydropower, of which Pakistan has huge identified potential, slowed down in the past decades due to a variety of factors. The most important of these were their long gestation periods and the large amount of funding required for developing medium and large projects.

Also read: Germany to lend 40m euros for Warsak power station

It is therefore a step in the right direction to undertake rehabilitation, upgrading, modernisation and capacity expansion of the existing hydropower stations, primarily with a view to achieve designed installed capacity and to optimise water-flow availability. Wapda has already launched rehabilitation projects for Mangla, Tarbela and Tarbela Fourth Extension.

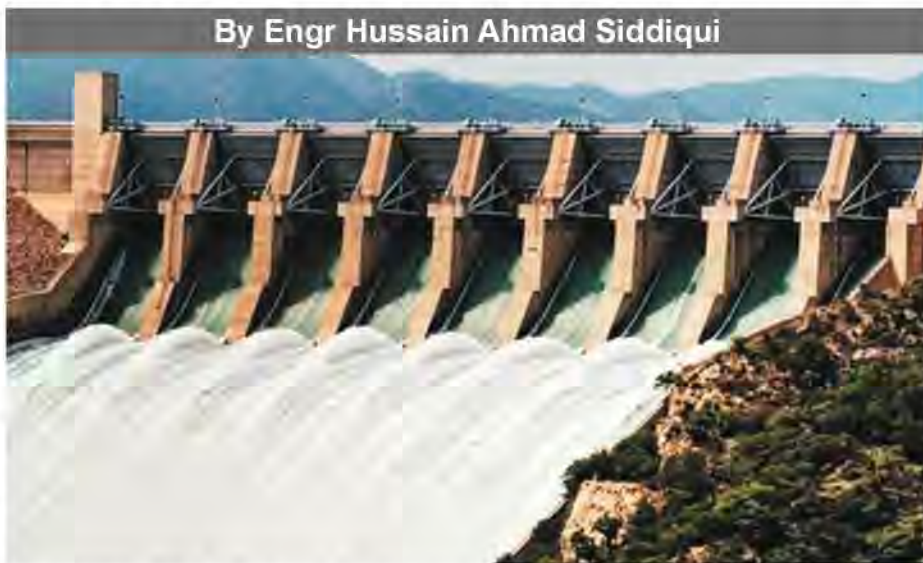
And on July 9, the Executive Committee of the National Economic Council (Ecne) approved the second rehabilitation project of the Warsak hydroelectric power station, located near Peshawar, at a total cost of Rs23.36bn, including a foreign exchange component of Rs12.18bn.

After the project's completion (scheduled within seven years), the installed capacity of the powerhouse will be restored to its original designed capacity of 243MW and enable it to generate 1,236GWh of energy.

International financial institutions, including France's AFD, the European Investment Bank and Germany's KfW Development Bank, have agreed to finance the project to the tune of 140m euros. In addition, an EU grant of 4.5m euros will be available through the AFD for community development around the project area and for a study of the resilience of the Warsak Dam project to climate change.

Constructed during 1952-1960, the Warsak Dam is the first medium/large multi-purpose hydropower project, having four turbo-generator units of 40MW each and a 132kV transmission system. It was a precursor for the large hydropower stations at Mangla (1968) and Tarbela (1977). Two additional units of 41.48MW capacity each were commissioned at Warsak during 1980-81, resulting in a 243MW cumulative installed capacity.

During these years, the project, which



is located on the Kabul River, has largely contributed towards improving socio-economic conditions of the area through electrification and irrigation. The dam had more than doubled the irrigated area adjacent to the river, providing irrigation diversion for 60,000 hectares.

And while the Warsak power station has been operating largely trouble-free, it has been facing a number of problems since the early days.

One of the major problems is the excessive quantity and abrasive nature of the silt carried by the river water. Operations of the turbo-generating units during the monsoon season with river water, which is laden with silt containing quartz, causes rapid erosion in the hydraulic equipment, which results in severe and chronic operations and maintenance problems.

Remedial measures like regular repairing and rebuilding the worn equipment and replacement of turbine components are therefore adapted. Still, the powerhouse remains vulnerable to frequent breakdowns due to its ageing and obsolescent machinery. Thus, its installed capacity of power station has been de-rated to 210MW, which has necessitated major rehabilitation.

Yet, the Warsak powerhouse plays a critical role in stabilising the voltage of the national grid later in the year when the output from other hydropower stations drop due to decreased water flows from rivers other than Kabul River.

To ensure optimal and reliable functioning of the dam, the rehabilitation project aims to replace four generators, electrical components of four units, all transformers, and install a new Scada system and replace all six runners with erosion-resistant special coating, in addition to civil works. After

rehabilitation and upgrading, all the turbo-generating units will be operable for another 30-40 years, well beyond the dam's designed useful life.

There is structural deformation of the powerhouse due to high sediment concentration of the river water, which results in concrete deformation in the building and the spillway.

Consultancy services for establishing a sustainable sediment management concept for the dam and reservoir and other related activities are being acquired as a major component of the rehabilitation project, for which expressions of interest have been issued by Wapda.

The study, to be completed by 2017, will investigate the present conditions of sedimentation in light of previous studies and propose the adoption of latest methods and techniques to solve the problem. A new 375MW capacity underground power project at the Warsak site has also been planned and its construction is expected to commence next year at an estimated cost of \$400m.

And Wapda has already fast-tracked the project, namely the replacement of the crane and the wire-rope spillway hoist, associated civil works and the procurement of a new trash rack cleaning machine.

The political will, however, seems to be lacking. The PC-I for the project was approved by the government after one-and-a-half years. The government will be well-advised to not create any financial or administrative hitches in the effective implementation of the rehabilitation project. ■

The writer is a retired chairman of the State Engineering Corporation
courtesy: Daily Dawn

Plight of being Pakistani.....

I am a hopeless, hapless citizen of Pakistan whom pays 30 different taxes, cesses plus 'bhattas', bribes in addition to exaggerated utility bills, excessive bank markups, very high prices for necessities of life and astronomical house rents. Yet I do not get justice from judiciary, cannot stop massive corruption despite having institutions of checks and balances. My pillars of state, my state institutions, my governments, my leaders and my business tycoons are all bankrupt in integrity, in dutifulness and in responsibility. My corporate sector has lost the meaning of CSR. All know one thing very well more money and even more money while I get very little in return after paying billions to support their presence yet they do not appear to be present.

I pay heavy payroll to my LEAS yet have no peace and security. After spending billions, my armed forces are a permanent threat to the existence of whatever system of government I have while external threats and internal threats are in their place. My parliament and my elected representatives are working day and night against my national interests all the time quarrelling with each other to take the lead in loot, plunder, nepotism and in building family empires. My homeland is butchered by traitors and hired assassins in front of my eyes yet my forces are not in my sight.

What the hell is going around me, how and why am I accepting it. My health and education is in doldrums and I foresee no future for my children with no electricity no water and no job. How on earth am I an idiot tolerant of all this high handedness and cruelty. Where is my self-respect that my woman is raped and my child is abducted in broad daylight yet there is no one to listen to my cries and wipe tears from my eyes. My Creator kindly spares a few moments to look at how I am being treated and how I have been sentenced to live like a destitute in my own home land despite your assurance that I am your best creation in the heavens and on the earth. Dear young of the nation and the media men and women

Good day and my best wishes.

The rotten current world leadership with chaos, confusion, corruption, death, destruction, insecurity, poverty, hunger, deprivation, rampant pornography, rape, murder and fornication, loot, plunder, heavy taxation, illegitimate wars and disputes, waste of direly needed money for



health and education in irregular activities, the current world leadership is rotten and must be replaced and eliminated at all costs and by all means. It is at the same time not at all self sustainable. Its time has come.

What we do not have in today's world to make our lives heavenly with so much surplus in resources, production capacity, technological advancement, information technology and a lot more conveniences for development and advancement plus yet un-tapped abundant natural resources but the world has become hostage in the hands of a few unscrupulous, utterly corrupt and criminal elements and their collaborators in vested interests, the vested interests in arms, energy, oil, tobacco, finance, politics and the rest.

Albert Einstein says that "the world is a dangerous place, not because of those who do evil, but because of those who look on and do nothing".

Talking about nation's wealth-A kick back of a billion dollars means a loss of a trillion dollars in the form of national interests compromised and ten trillions dollars in terms of long term impact. We are being persistently dragged to a dog and Cat life with lack of education and poor living conditions, forced to live like destitute within our homelands. We have been weakened to the extent that we cannot do anything while we are being raped killed and looted in broad day light viewed thru media cameras, supposed to be under protection

of our courts and armed forces, hell we are.

World Peace: Support and consensus should be gathered of all 57 OIC countries to make good use of sovereign funds of Gulf Royals 'with help and guidance from learned amongst the 1.7 billion Muslim population' to lobby in favor of a real good presidential candidate in next US elections, if you wish to reform the world, first put the White House in order. No need to wage wars or topple governments while we can do all the reforms all over the world through an effective UNO general assembly with Veto powers withdrawn, NATO dismantled and UNO peace keeping force in the making. We all do not need to waste tax payers money on sitting armies and on war preparations as boundaries have been settled and world forums are available to sort out our day to day differences with a forceful implementation of UNO resolution 242 on Kashmir. "All human beings are born free and equal in dignity and rights. Universal declaration of human rights, producers, suppliers, transporters and traders of arms and ammunitions including chemical weapons and all such hazards to humanity should be taken to task and shall be terminally disciplined so as safe haven countries for looted money. The rules and concepts that govern trade and politics, war and peace, statecraft and global governance will have to be negotiated anew between us all on this planet of earth. ■

By DR TEHMINA MANGAN | GHULAM MUSTAFA NANGRAJ

Entrepreneurship extension services for rural females

Rural females are the least empowered segment of society. They do not have professional/entrepreneurial ability to do agribusiness and avail themselves of earning opportunities

RURAL women work 16 hours a day and are heavily burdened by their double roles as paid or unpaid workers and family care providers. About 70pc rural female labour force is engaged in farm production and related jobs.

Women are also responsible for performing household activities, looking after their family members, preparing food for them three times a day and fetching drinking water and fuel for cooking.

They are the least empowered segment of society and do not have professional/entrepreneurial ability to do agribusiness and avail themselves of earning opportunities. Gender norms dictate the role of women and their nature of work restricting their time and mobility for schooling, training and for economic activities that could empower them.

Rural females, with limited access to productive assets, are socially, physically, economically, politically and educationally deprived and need to be empowered in

their own environment and within the ambit of local customs.

For sound and sustainable economic activities, "Agriculture and Livestock Rural Female Entrepreneurship" is, for now, the best option. As rural females are deeply involved in agriculture and livestock activities, they just need to shift from their paid and unpaid labour to entrepreneurship. For achieving this objective their professional/entrepreneurial capacity building becomes essential.

The writers of this article conducted a research study in eight districts of Sindh to assess the status and potential of rural females and tested best options for their empowerment. The study found that females of 89pc of rural households were involved in agriculture and livestock activities but no regular entrepreneurship extension services were available for them.

Over 86pc female respondents say they need entrepreneurship extension services for their capacity-building, value-addition and marketing of primary farm produce which can help them to start their own agri-business and earn direct income.

On the basis of survey results, a Female Entrepreneurship Centre (FEC) was estab-

lished in village Hot Khan Laghari, District Mirpurkhas under the Australia-Pakistan Agriculture Sector Linkages Programme, Social Research Project executed by Sindh Agriculture University Tandojam and ACIAR-University of Canberra Australia.

In the FEC, separate product-based groups were formed for value-addition in mango, dairy, vegetable etc and fruit nursery for professional/entrepreneurship-based training after which they started sale of their products, and market linkages were also developed with the help of Social Research Project.

Along with that a Female Agriculture and Livestock Entrepreneurship Services (FALEES) Model was also developed and tested. Two females, who were actively participating in the FEC and Social Research Project, were trained and mobilised for providing extension services to other women. They visited their own village households and neighbouring villages and conducted entrepreneur extension service sessions. This helped village females to initiate their own entrepreneurships. ■

Courtesy: Daily Dawn



Regulating the regulators

WHILE the history of regulation in the region is not ancient, Pakistan is far behind other peer countries in this area.

With mounting investment in the private sector in the last three decades, a wide network of regulators has been visible in all major sectors, such as electronic media, power, oil, banking, trade, corporate, telecommunication and education etc.

The prime mandate of a regulator is to rationalise pricing while aligning the balance to safeguard the interest of all stakeholders. And setting tariffs does not mean simple mathematical and financial calculations; it is a complete science and takes a solid business plan to make a utility financially and operationally viable while setting social, economic, commercial and financial goals.

The regulators are supposed to transform the policymakers' socioeconomic goals through pricing. While setting prices, they need to ensure that the rates, say of energy companies, will be affordable by everyone so that the government does not have to enter into any subsidy regime.

The financial viability of any sector is vital for its existing and potential consumers. But just for the sake of financial viability, inefficiencies should not be transferred to end-consumers. A well-designed and judicious pricing framework is inevitable for eliminating inefficiency and cross-subsidies. In order to remove inefficiencies, regulations should be sophisticated and mature enough to be exercised.

There are foreign bodies getting licences through the Securities and Exchange Commission of Pakistan, which is contrary to the ICMAP Act and the ICAP Ordinance. This not only raises questions on the regulatory mechanism but also severely affects the economy as it facilitates huge outflows of hard-earned foreign currency.

Meanwhile, the Higher Education Commission protects the interest of academia by ignoring professionals who can enter and rise in an academic environment. There is a need to regulate this side whereby professionals should also have a career track in universities.

This will not only help the universities in producing graduates who will have practical knowledge but will also let them become sources of attraction for the corporate sector to induct fresh graduates without putting the experience bar.

Similarly, the fees of schools and universities are not regulated. There are government boards and school-monitoring authorities but they seem to be ineffective or least concerned about setting and controlling fees, even though it is a major public concern.

In the power sector, the ongoing crisis could have been over much earlier if Nepra had acted at the right time. The circular debt emerged due to delayed tariff determination and non-reflection of the actual cost of generation in the tariff. Nepra came into existence in 1999 but determined the first tariff in 2007. Meanwhile, the distribution companies filed their first tariff petition in 2003, which then remained pending with Nepra for a long period.

Fresh tariff petitions were followed by review petitions against Nepra's decisions. The severity of the power crisis and the emergence of the circular debt deepened after the determination and notification of Nepra's tariff.

When Nepra works under the influence of a political government, it favours short-term gains over long-term market objectives. And if any political government concedes autonomy, the authority tends to overlap its mandate. The power sector couldn't bring efficiency, equity and even cost recovery after the activation of



Nepra in the country.

After going through cumbersome procedures, Nepra fixes tariffs and sends them to the federal government for notification. Here, a political government has to take the responsibility to rationalise the tariffs to make them affordable for the end-consumers.

The financial viability of the power sector is pivotal, but it does not mean transferring all the unjustified inefficiency costs to the end-consumers.

Instead of setting competitive and acceptable prices, Nepra leaves it to the government to devise the pricing mechanism.

The regulators and the policymakers are strategic partners. It is Nepra's primary responsibility to make the power sector efficient. If there is some idle capacity, it is the regulator's responsibility to intimate the government at the right time to take appropriate measures to optimise production. It is not sufficient to only publish a report at the end of the year mentioning that there had been idle capacities.

Nepra's pricing mechanism - cost-based tariff for ex-Wapda discos and multitier tariffs for K-Electric and Fesco - has not delivered, as demonstrated by the circular debt and the power subsidies.

Then the question is, who should regulate the regulators? The answer is the regulators themselves. They have to build their capacity in areas of pricing, operations, standard setting, legal, economy, customer services, IT, overall market and future global regulatory trends. ■

*The writer is Vice-President, ICMA Pakistan
Courtesy: Published in Dawn*

Marriage is give and take. You'd better give it to her or she'll take it anyway.

My wife and I always compromise. I admit I'm wrong and she agrees with me.

A successful marriage requires falling in love many times, always with the same person.

You're getting old when you enjoy remembering things more than doing them.

By SOHAIL SARFRAZ

Service provider companies: NAB decides to investigate minimum tax

The National Accountability Bureau (NAB) has decided to inquire the matter of Minimum Tax under Section 153(1)(b) of the Income Tax Ordinance, 2001 for service provider companies and examine the issuance and subsequent withdrawal of Circular No. 6 of 2009 as well as SRO 1003 of 2011.

Sources told Business Recorder that the decision was taken in last NAB's Executive Board Meeting (EBM) Chaired by Chairman Qamar Zaman Ch at NAB Headquarters. EBM decided to authorise Complaint Verification against officers/officials of Federal Board of Revenue (FBR) in issuance and subsequent withdrawal of Circular No. 6 of 2009 as well as SRO 1003 of 2011 issued by FBR.

Earlier, Transparency International had drawn attention of NAB Chairman towards allegations of misuse of authority by FBR as well as Appellate Tribunal Members. The Transparency has received a complainant from a tax lawyer wherein it was alleged that four senior officials are involved in providing illegal benefits to service provider companies which has resulted into huge loss to National Exchequer.

When contacted a tax expert told this correspondent that law was amended by Parliament through Finance Act 2009 and the service providing companies were made chargeable to 6% Minimum Tax under Section 153(1)(b) of the Ordinance. The FBR had issued various clarifications informing the field formations that service providing companies have been charged to minimum tax @ 6 percent. However, FBR issued Circular 6 dated 18.09.2009, claiming that service providing companies were exempt from Minimum Tax. The FTO took notice of this unlawful act of FBR functionaries under Own Motion intervention in Waheed Shahzad Butt Vs Secretary Revenue Division (2012 PTD 554) and recommended action against the concerned officers who were responsible for issuing this unlawful circular. The FBR withdrew Circular No. 6 of 2009 on 26.04.2011.

Tax lawyer further added that the FBR inserted Clause 79 in the Second Schedule of the Ordinance declaring service providing companies as exempt from Minimum Tax through SRO No. 1003 dated 31.10.2011, without any change in the provisions of statutory law, i.e., Section 153(1)(b). Although FBR had withdrawn the Circular No. 6 of 2009, yet Review Pe-



tition Secretary Revenue Division Vs Waheed Shahzad Butt (2013 PTD 2159) was filed before the FTO in support of Circular No.6, which was rejected and the FTO held, on the strength of judgment of Supreme Court in an identical case, that insertion of Clause 79 was against the provisions of law and, therefore, malafide and unlawful.

In the year 2015 FBR attempted to make an amendment in Section 153(1)(b) proposing amendment through Finance Act 2015 to exempt service providing companies from Min. Tax retrospectively with effect from Tax Year 2009. But due to intervention/recommendations by the Senate, this proposal to exempt service providing companies was withdrawn by the government as this proposal involved loss of revenue which runs into Billions for the period from tax years 2009 to 2015. While drafting law by placing income tax deducted under Section 153(1)(b) of the Ordinance as Min.

Tax for all taxpayers including corporate taxpayers vide Finance Act, 2009, the intention of Parliament is unambiguous but Circular 06 was issued in 2009 and when the Own Motion proceedings were initiated by the FTO, a void SRO No. 1003(1)/2011 was issued. Having issued SRO 1003(1)/2011 without approval of the Parliament lawyer added.

During the pendency of review (RA 12/2012) before the FTO the Appellate Tribunal heard and disposed of a dept'l appeal ruling against the decision of the CIR(Appeals) that Min. Taxation u/s 153(1)(b) of the Ordinance applied to all categories of service providers, corporate and non-corporate and that Circular 6 of 2009 was of no avail to corporate service providers in avoiding the Minimum Tax levy. An extraordinary feature of the above cited judgment rendered by the Tribunal is that the Tribunal has reproduced verbatim much of the written deposition made by an FBR officer, before the FTO when he was summoned by the FTO in proceedings to dispose of Dept'l Review Application No.12/2012 and explain his role as the then Member (DT) FBR in the issuance of Circular No. 6. Now the NAB has decided to inquire the matter of Minimum Tax and examine the issuance and subsequent withdrawal of Circular No. 6 of 2009 as well as SRO 1003 of 2011. NAB in EBM has decided to authorize Complaint Verification against Officers/Officials of Federal Board of Revenue in issuance and subsequent withdrawal of Circular No. 6 of 2009 as well as SRO 1003 of 2011 issued by FBR. ■

Courtesy: Business Recorder

PSO board clears LNG deal with Qatar

The management board of Pakistan State Oil (PSO) has approved the state-run oil importer's entry into and execution of LNG Sale Purchase Agreement (LSPA) with Qatar Liquefied Gas Company Limited² (QG2). According to a stock filing, the multibillion dollars deal was signed between PSO and QG2 as, respectively, buyer and seller in Doha, Qatar. The 15-year long-term LSPA envisages PSO importing LNG from Qatar at relatively lower price of 13.37 percent of British Brent.

The reduced Qatari offer came, reportedly, to match a bid received by Pakistani side from Russian energy firm Gunvor for five years. The LSPA signing was made possible after the Economic Co-ordination Committee of the federal cabinet allowed PSO on 13th of last month to sign the much-awaited deal with QG2 for the import of re-gasified commodity. ■



Exploiting Azad Kashmir's hydropower potential

A FRENCH-funded strategic hydropower project of 48 megawatts for Azad Jammu and Kashmir, scheduled for commissioning in June last year, could not take-off owing to poor governance.

It is only last month that international tenders for award of the engineering, procurement and construction (EPC) contracts for Jagran-II hydropower project were opened in Muzaffarabad, the last tender being scrapped.

The run-of-the-river hydropower project on the Jagran Nullah located in district Neelum about 90km from Muzaffarabad and originally of 43.5MW capacity was approved on March 30, 2009. In 2010 a detailed bankable feasibility study established viability of a 48MW power station.

The French Development Agency (AFD) on July 7, 2012 signed an agreement to give a soft loan of \$68m (over Rs7bn) for the project whereas local portion of Rs785m was to be provided by the AJK government. Work on the project was to commence in FY 2011-12 for which an initial sum of Rs18m was allocated.

Tenders for design, manufacturing, supply, erection, testing and commissioning of power station were opened in September 2013, but the letter of award could be issued to selected bidders only after almost a year, in September 2014. Only two bids were received, both from Chinese firms, Sinohydro Corporation and China International Water and Electric Corporation (CWE), at



Rs6.9bn and Rs7.4bn, respectively. Intriguingly, both companies were blacklisted by the World Bank Group and thus become ineligible to participate in the tender according to the PPRA Rules. However, a letter of award was issued by Power Development Authority (PDO) of AJK in favour of CWE, which was contested by Sinohydro.

The tender was cancelled and reissued in January 2015. Last date for receiving bids was extended a number of times. The response has been much wider this time. Interestingly, AFD had also financed Jagran-I power station of installed capacity of 30.4MW, executed by a consortium of French and Swedish companies in 1993 and completed in 2000, at a revised cost of Rs4,646.8m.

Over a dozen hydropower projects of cumulative capacity of about 150MW are in various stages of completion by AJK PDO since long, having missed scheduled completion targets a number of times. These

include 40MW Dowarian and 35MW Nagdar hydropower projects. Technical and financial proposals for EPC contracts were invited in April 2015, but last dates for receiving bids for both projects have been extended a number of times, from June until November last year, and their present status is not known. The under-construction projects too have been inordinately delayed, such as Rehra (district Bagh) of 3.2MW capacity and Sharda (district Neelum) of 3MW capacity.

In spite of being hub of hydropower generation, the AJK suffers from a severe energy crisis. The region, located at proximity of 50-150km from national grid, has one of the lowest per capita annual electricity consumption. The AJK government is not totally dependent on national grid for power supply and has constructed a number of power stations over a period of time, utilising its own resources. Currently, a total of 12 small, mini and minor hydropower stations are in operation, with cumulative installed capacity of about 45MW, besides various community-based power units. Considering the growing electricity requirements for agro-based industry, mineral-mining, tourism and trade, the demand is projected to increase over 1,000MW by 2020 with its unexploited potential of developing 8,830MW hydropower. Speedy implementation of power projects in the pipeline is turning into an imperative. ■

Courtesy: Daily Dawn

CHINA COLLAPSED?

This is a credible leaked document which US intelligence services sent on the 8th of February 2016. This is serious....it is happening in China now, read on:

American CIA agent in China sent an urgent report back to headquarters today, China exhibits signs of collapsing. All factories stopped work, all shops closed their doors, Government offices have all stopped, shares not trading, the wealthiest have dragged their family from their homes and gone overseas, locals busy buying rations n foods, most houses doors display red notices verses of seeking n begging, social disorder with people generally not doing anything except drinking & gambling the young & children going around in groups begging for money, the whole country seem to have collapsed....."

CIA HEADQUARTERS REPLY: Idiot!
They are celebrating Chinese New Year



WHAT A COINCIDENCE!

Man In Bar Orders Kingfisher Beer.
Lady Next To Him: What A Co-incidence, Even I Have Ordered Kingfisher.
Man - I'm Celebrating.
Lady - Me too.
Man - What A Coincidence.



Why are you Celebrating?
Lady - My Husband & I Have Tried 4 Years For A Baby, Today I'm Pregnant.
Man - What A Coincidence! I Am A Farmer For 4 Yrs My Hens couldn't lay any eggs Today All are Laying Eggs
Lady - Wow! How Did That Happen?
Man - I Used A Different Cock
Lady Smiled & Said, WHAT A COINCIDENCE!

Municipal agencies, NGOs, and citizens should form an alliance to overcome environmental pollution



The concerned municipal bodies, non-governmental agencies, welfare organizations, and citizens at large have to play a proactive role in collaboration with each other for making Karachi clean, green, and pollution-free amid menacing degradation of environment.

This was stated by speakers at a training and informative workshop on plantation and greenery drive jointly organized by Saylani Welfare International Trust and National Forum for Environment and Health (NFEH) the other day.

The workshop was attended by 200 prospective volunteers associated with different concerned NGOs and municipal agencies in six districts of Karachi and interested to take part in any initiative meant for doing plantation and greenery in the city. Parti-

cipants of the workshop were informed about all relevant technical information for getting maximum results and benefits from any plantation drive at mass scale.

The patron-in-chief of Saylani Welfare Trust Moulana Muhammad Bashir Farooqi said in his presidential remarks at the event that concerned people should come forward and play a proactive role for doing plantation in Karachi as the government and municipal agencies responsible for the situation had not come up to expectations of general public in this regard creating disappointment among them at mass scale. He said the Saylani Trust would contribute 12,000 plant and tree saplings to be planted in different parts of Karachi for the upcoming initiative for promotion of greenery.

Administrator, District Municipal Cor-

poration East Rahmantullah Shaikh said on the occasion that public awareness should be spread among the masses regarding plantation drive in order to tackle issues related to increase in level of environmental pollution. He said that DMC East would provide all out support to the upcoming joint initiative of NFEH and Saylani Trust for promotion of greenery in Karachi.

NFEH President Muhammad Naem Qureshi said that this year the Sarsabz-o-Pursakoon campaign of his forum would be revived soon under which 100,000 tree saplings would be planted all over the city in the upcoming months of spring and summer seasons.

An interactive session was also held towards end of the workshop where participants asked questions from the environmental experts present on the occasion to get pertinent information on plantation drive. The participants praised the joint effort of NFEH and Saylani Trust for organizing the workshop and underlined the need of holding more such informative sessions for increasing their knowledge base on issue of environmental degradation and related preventive measures.

Environmentalists Nadeem Mirbahar, Rafi ul Haq, Aamir Madani Raza of Saylani Welfare Trust, other experts of the field also spoke on the occasion. ■

Wetlands are disappearing, environmentalists show concern Legislation need of the hour to save wetlands

IUCN Pakistan in collaboration with the Ministry of Climate Change, and Fatimah Jinnah Women University celebrated the World Wetlands Day at the IUCN Islamabad Programme Office on February 02, 2016. The theme of the year 2016 is "Wetlands for Future: Sustainable Livelihoods". Marriyum Aurangzeb, Member National Assembly was the Chief Guest of the event.

Marriyum Aurangzeb talked of the Pakistan Wetlands Programme that has been implemented successfully leaving a number of benchmarks and appreciated the participation and interest of youth on wetlands and associated issues. She suggested that the wetlands' policy debate be taken up in the parliament for approval. She also emphasized on the role of the International Partners by taking the national priorities ahead of the global priorities and the parliamentary plans should also be developed according to the national priorities. She said that restoration and conservation of the wetlands is a huge task therefore gov-



ernment cannot carry it forward on their own. She invited the civil society and other stakeholders to come forward for this cause. She was of the view that the country needs well a thought and long term approach instead of short term projects and programmes.

She highlighted that lack of awareness at the district management level or the implementation level is the main hindrance in taking proper actions. She suggested multi-dimensional approach at the government, national and provincial levels to

engage the private sector by creating demand.

While appreciating the initiatives of Fatima Jinnah Women University and encouraging youth, she also thanked the MoCC, IUCN and FJWU for organizing the event.

The participants included representatives from Ministry of Climate Change, civil society, academia, international partners including UN, ADB, EU, AKF, students of Fatimah Jinnah Women University, IUCN. ■

Engro Powergen Thar Ltd signs deal in Shanghai

Another important milestone is achieved for both the mining and associated power plant project for Thar Coal Block II as Sindh Engro Coal Mining Company (SECMC) and Engro Powergen Thar Limited (EPTL) signed local and foreign financing agreements in Beijing, China. Negotiations to secure the loan financing for the Thar Coal Project in Thar Coal Block II have been ongoing since term sheets for the same were signed during Chinese President Mr. Xi Jinping's visit to Pakistan earlier this year. Under the Finance Agreements signed, a syndicate of local banks including conventional and Islamic financing institutes will be providing Rs52 billion for the mining Project being undertaken by Sindh Engro Coal Mining Company and Rs22 billion for associate power plant being established by Engro Powergen Thar Limited. The syndicate is led by Habib Bank Limited (HBL), United Bank Limited (UBL), Bank Alfalah Limited (BAFL), and Faysal Bank Limited (FBL). The Foreign syndicate consists of Chinese Banks namely, China Development Bank (CDB), Construction Bank of China (CBC) and Industrial & Commercial Bank of China (ICBC) are providing loans amounting to USD 820 million.

The drafts of the aforementioned agreements were approved by the Ministry of Finance earlier this year and the Government of Pakistan has provided Sovereign Guarantee of \$700 million to underwrite the loan taken by SECMC fully backed by Government of Sindh (GoS). The Project's addition to the China Pak Economic Corridor (CPEC) as 'priority' earlier this year paved the way for



its financing to be completed in a timely fashion.

In addition, Sponsor Support Agreements for both projects were also signed, whereby the Sponsors, namely, Government of Sindh, Engro Powergen Limited, Thal Limited, Hub Power Company, Habib Bank Limited, and China Machinery Engineering Corporation agreed to inject USD 490 million into the project to ensure that the companies have the funds available for the smooth execution of the project. The project is expected to be commissioned by 2018. In phase 2 of the Project, the mine will be expanded to a capacity of 7.6 mtpa and another 660 MW power plant facility will be added, this expansion has also been included into the CPEC.

Earlier this month, the GoS signed an Implementation Agreement with SECMC and Water Utilization Agreement with Engro Powergen Thar Limited. Under the Implementation Agreement with SECMC, the Government committed to provide the required infrastructure to facilitate the mining Project amounting to USD 600 million (PKR 60 billion).

This marks the start of an era which will usher energy security and economic prosperity for Pakistan as both mining and power projects move closer to financial close, which is expected by the end of this year. The Project will prove to be a game changer, providing a sustainable energy landscape for Pakistan by utilizing its indigenous energy resources at the same time bringing prosperity to the local people of Thar. ■

A business tycoon passed away. He left for his widow 1 Billion USD in the bank. The widow remarried one of her husband's young employees. The employee said, "All this while I thought I was working for my boss. I now realize that my boss was all the time working for me!"
Moral of the Story: It is more important to live longer than to have more wealth.

Solar-powered vehicles must for zero emission

The day witnesses the initiative jointly taken by "Alternate Energy Education Model Park" & "C.O.P. - Council of Professionals" to shape up the developing scenario of Karachi with scope of our social contribution in Global Climate Change phenomena by adopting Alternate Energy as the primary source of our energy requirements.

Event started off with the presentation by Prof. Nasim A. Khan about converting vehicles on Solar Power from conventional fuel sources as off this may make us able to save fossil fuel for the longer stretch of time and also this would help in preventing the global environment as these solar vehicles are based on zero carbon emission.

Followed by the presentation by Mr. Tauseef Alam, Chief Metrologist Officer from K.M.C. where he emphasized the need for adopting energy economical life style and adopting means to prevent environment.

Next then was the presentation given from K-electric by Mr. Abdul Fawad, D.G.M. Energy Conservation sharing useful information about energy economy and conversation down to the point where he stated that by the step taken to close Marriage halls before midnight has saved around 50 MW of electricity for Karachi and that's saving is being passed on numerous NGOs in Karachi free of cost by K-electric officially.



Followed by the presentation of Prof. Jawed Askari stressing the need of spreading awareness and knowledge about practical steps can be taken to ease out energy crisis in individual capacity.

The conference coordinator, Syed Arshad Alam, emphasized in his speech, the need of the involvement of Education sector in raising the awareness of renewable energy among students by designing the curriculum with the support of energy experts.

The president, Youth Parliament, Mr. Rizwan Jaffer also address the event telling the global scenario that how leading nations of the world talking about global environment and alternate energy as the remedy left to cure global environment damage

On concluding note Mr. Musaddiq Ali Baig, Project Director, Alternate Energy Model Education Park thanked the audience and highlighted the need to adopt different ways to educate and make masses aware of Alternate Energy and its Advantages. ■

LPG/ NGL Plant III set to enhance production from PPL's Adhi Field

Federal Minister for Petroleum and Natural Resources (MP&NR) Shahid Khaqan Abbasi inaugurated Liquefied Petroleum Gas (LPG)/ Natural Gas Liquid (NGL) Plant III at Pakistan Petroleum Limited's (PPL) Adhi Field in Gujjar Khan, Rawalpindi recently.

Members National Assembly Raja Javed Ikhlas and Malik Ibrar Ahmed were also present on the occasion along with provincial and local government officials, media and PPL management and staff.

The decision to install Plant III was based on a compositional reservoir study carried out in Adhi Field during 2010-2011, which indicated potential for considerable production enhancement. The study resulted in the formulation of a drilling plan for eight additional development wells, six of which have already been drilled, along with installation of the plant. With a capacity of 25 MMscfd gas, 150 tonnes of LPG and 5500 barrels per day of crude oil/ condensate, the new plant, partially commissioned in early November last year, is expected to enhance production considerably.

Welcoming the federal minister and other distinguished guests, MD and CEO PPL Syed Wamiq Bokhari highlighted the company's recent achievements and milestones along with Corporate Social Responsibility projects initiated for disadvantaged stakeholder communities around its operational areas, especially Adhi.

In his address, Abbasi congratulated PPL and its joint venture partners Oil and Gas Development Company Limited (OGDCL) and Pakistan Oilfields Limited (POL) on the formal inauguration of the plant. He urged the companies to redouble efforts to



optimize production of hydrocarbons so that much-needed oil and gas can be added to national supply at the earliest.

Located about 70 kilometres south of Islamabad in the Pothwar region, Adhi Field is a joint venture with PPL as operator together with OGDCL and POL. Currently, 16 wells are on production at the field, delivering daily average production of around 50 MMscfd gas, 2000 barrels per day NGL, 4500 bbl oil and 155 tonnes LPG. To further optimize production from Adhi Field, PPL is carrying out development work, which includes drilling of additional development wells and installation of wellhead compression. ■

IP, TAPI pipeline projects are close to completion



Federal Minister for Industries and Production, Ghulam Murtaza Khan Jatoui has said that development work of only 60 kilometers of Iran-Pakistan gas pipeline was left which, on its completion along with the project of Turkmenistan-Afghanistan-Pakistan-India (TAPI) Pipeline and setting up of LNG Terminals, will surely help in fully resolving the gas shortages being faced by the country by the end of 2018. Exchanging views during

his visit to the Karachi Chamber of Commerce and Industry (KCCI) recently, the Minister said that with lifting of sanctions on Iran, work on IP project was likely to pick up pace and it will be completed soon as only 60km work on pipeline was left.

Chairman Businessmen Group and Former President KCCI Siraj Kassam Teli, President KCCI Younus Muhammad Bashir, Senior Vice President KCCI Zia Ahmed Khan, Vice President KCCI Muhammad Naeem Sharif, Former President KCCI Iftikhar Ahmed Vohra and KCCI Managing Committee members were present at the meeting.

Murtaza Khan Jatoui said that the present government was trying its best to resolve the energy crisis being faced by the country which will all be over by the end of 2018. He said that the previous government never bothered to pay any attention to the energy crisis, resulting in a massive shortfall of 12,000 megawatts. Thus, this shortfall was inherited by the present government and it was one of the prime vision of Prime Minister Nawaz Sharif to effectively deal with this serious issue. He said that the government has taken many initiatives to overcome electricity shortfall and they were focused on improving the country's power gener-

ation capacity by setting up Hydro, Gas, Coal, Solar and Wind Power Plants. Jatoui further stressed the need for effective coordination amongst Ministry of Industries & Production, Ministry of Finance and Ministry of Commerce etc. so that issues being faced by the business and industrial community could be resolved. Highlighting the facilities being offered at various export processing zones in Karachi and other parts of the country, the minister advised the business and industrial community to consider setting up their units at these export processing zones, particularly those export zones situated in rural areas with a view to create maximum number of employment opportunities for the rural youth of Sindh.

Chairman Businessmen Group & Former President KCCI Siraj Kassam Teli, in his remarks, stated that the industry plays the role of a backbone so the country cannot run smoothly unless its industry runs smoothly. He pointed out that more than 16,000 industrial units were operational in all seven industrial towns of Karachi city, providing employment to around 2 million labors, which means these industrial units have been providing bread and butter to more than 8 to 9 million people, if the families of these 2 million labors are also included. BMG Chairman was of the opinion that it was mandatory to ensure availability of infrastructure along with uninterrupted supply of water, gas and electricity to smoothly run industries. All these elements were the basic requirements for the industrial units located not only in Karachi but also in all other provinces of the country, he opined. He said that it was not just the business and industrial community of Karachi city which faces water, electricity and gas crisis but the industrialists of Punjab and other provinces were also facing the same, which was mainly happening due to lack of proper system and the decisions were being imposed without considering the ground realities. ■

ADFD offers \$46 million in loan for Renewable Energy Projects in Africa



The International Renewable Energy Agency (IRENA) and the Abu Dhabi Fund for Development (ADFD) today announced USD 46 million in concessional loans for four renewable energy projects in developing countries. The loans will fund a wind and solar project in Antigua and Barbuda, a solar project in Burkina Faso, a solar and wind project in Cabo Verde and a solar project in Senegal. The four projects will result in nearly 12 megawatts of new renewable energy capacity, reduce emissions, create jobs, and electrify rural com-

munities without access to modern energy services.

"Accelerating the energy transition to renewables requires all countries to take action to develop their own local renewable energy sources," said IRENA Director-General Adnan Z. Amin at a press conference today on the sidelines of IRENA's sixth Assembly. "While renewable energy resources are abundant in many developing countries, adequate finance can still be a barrier to deployment. IRENA and ADFD's pioneering partnership contributes to over-

coming this challenge, by selecting innovative projects for concessional funding."

"Increased availability of clean, affordable and reliable energy is an important priority for ADFD to drive sustainable development and positive societal changes across developing countries," said Mohammed Saif Al Suwaidi, Director General of ADFD. "Our collaboration with IRENA has significantly contributed to narrowing the energy divide that has long hindered development projects in developing countries due to the lack of reliable power infrastructure. Through this collaboration, we have ensured the availability of necessary financial resources to move the sustainable development agenda forward. At ADFD, we are committed to continuing to collaborate with international agencies to spur economic growth, ensure environmental protection and create jobs across the developing world." ■

WWEA extends support for Pakistan's wind energy market

The World Wind Energy Association, in collaboration with Heinrich Böll Stiftung Pakistan (hbs), has launched in Islamabad the policy paper - titled "Mapping the Growth of Pakistan's Wind Energy Market: Lessons learned and Policy Solutions". The report analyses the current status of the wind market in Pakistan and presents the main barriers that have been hampering the progress of wind power in the country. The analysis and conclusions are based on personal interviews with private and public stakeholders. WWEA Honorary Vice President Air Marshal (Rtd.) Shahid Hamid says that "Our country Pakistan needs desperately energy, and wind power in particular has to be the first choice, also for economic reasons. We are pleased to see that more than a decade after the launch of the first wind power programmes by the Alternative Energy Development Board, the Pakistani wind power market is now developing well although there remains a lot of work to be done, in particular related to grid infrastructure and administration."

"The update of our analysis of the Pakistani wind market comes exactly at the right time: Two weeks ago in Paris, all governments of the world have basically agreed to phase out fossil fuels by the middle of this century and to go for a 100 % renewable energy future - as the new normal. With our new report, we want to assist the government of Pakistan to take the right decision for a prosperous country which obtains all its energy by harvesting the abundance of renewable resources, for the benefit of the people of Pakistan", said Stefan Gsänger, WWEA Secretary General.

More than two years ago, WWEA, also in cooperation with hbs, had already analysed the main barriers on the way to an energy sufficient country, based on interviews with many of the key players of the Pakistani wind market. Two years later, the new study has analysed which progress has been achieved in the meantime. The first and good news: Pakistan has now become a real wind market, although still rather small. The second conclusion is that some of the previous problems have been tackled, but there is still some work which needs to be accomplished. According to the interviewed investors, this is the case in particular with regard to grid infrastructure, inconsistency in government policies and operational inefficiency. ■

Experts suggest renewable energy as solution for global warming



Over 500 leaders from government, business and civil society gathered at the headquarters of the International Renewable Energy Agency (IRENA) to discuss scaling up renewable energy as the cornerstone of global climate change mitigation. For the fourth consecutive year, the Financial Times-IRENA Question Time Debate provided a unique opportunity to discuss the international renewable energy agenda following the conclusion of IRENA's annual Assembly.

The event featured a special address by Ban Ki-moon, United Nations Secretary-General who spoke about the close partnership between the UN and IRENA since the Agency's founding nearly five years ago. The welcome address by IRENA Director-General echoed the sentiment of strong collaboration between the two agencies to scale up renewable energy. ■

Significant oil and gas discoveries by OGDCL

Federal Minister for Petroleum and Natural Resources Mr. Shahid Khaqan Abbasi has given the nation the good news of discovery of gas and oil reserves in Thal (Sindh Province) and District Kark Khyber Pakhtunkhawa (KPK) Province by OGDCL.

He disclosed this news to the media here today at OGDCL Head Office. These substantial discoveries will soon be the part of the system, he further said.

These discoveries include Thal East -1, which is located in district Sukkur, OGDCL 100% owned Block 2769-15 (Thal) Exploration Licence falls in district Khairpur, Sukkur and Ghotki of Sindh Province..

Structure of Thal East#01 was delineated, drilled and tested using OGDCL's in house expertise. The well was drilled down to the depth of 4468M, targeting to test the hydrocarbon potential of Massive and Basal sands of Lower Goru Formation and to any prospective sand of Sembar Formation, whereby reserves of hydrocarbon have been found in Basal Sand of Lower Goru Formation. The Zone has produced 23.50MMSCFD of gas through 36/64" choke at well head flowing pressure of 3820Psig.

The discovery of Thal East Well #01, will add to the significant hydrocarbon reserves base of the OGDCL and the country. One more Zone in Lower Goru formation Sand is available which is yet to be tested and hopefully it will add more reserves. The completion strategy will be finalized based on testing results of both



zones in the well.

In response to a question Mr. Zahid Mir MD/CEO replied that OGDCL is involved in the exploration and production of hydrocarbons in the province of Balochistan and currently possess 24 exploration licenses. OGDCL is actively drilling in Balochistan and also has started conducting 2D and 3D seismic data surveys in eight blocks in Balochistan. Some of the seismic acquisition is being carried out through third party foreign contractors as well. OGDCL is currently producing gas from its Uch, Loti and Pirkoh fields. The Company has been able to move into areas in Balochistan which were previously inaccessible due to the security situation for which I must em-

phasize and laud the complete commitment and full support of the current Government. OGDCL has started exploration work in Kup, Kohlu, Zin, and many other areas in Balochistan and expects to start exploration work in Block 28 as well, where the approval of operatorship is expected to be accorded by DGPC very soon. All in all, the Company is leaving no stone unturned in its efforts of bringing energy to our energy starved nation.

The Minister said that these discoveries will go a long way in bridging the gas shortage. He further added that domestic consumers are our top priority and we will mobilize all our resources to reduce the gas shortage to minimum possible level. ■

Investment seeking Chinese delegation calls on PBC

The Chinese investors' delegation comprising 100 entrepreneurs, has called on Pakistan Business Council (PBC) to explore investment opportunities in Pakistan. The session included B2B interactions with premier Karachi based businesses; the Chinese delegation was briefed about the investment opportunities and potential in various sectors of the country.

Ambassador Sha Zukhang, Head of the Chinese Delegation - who was also the chief guest of the session-briefed the attendees about the initiative and interest of Chinese businessmen in supporting the economy of Pakistan. He also admired the efforts made towards China-Pakistan Economic Corridor (CPEC) through dedication of various stakeholders in both countries.

A brief presentation to the Chinese delegates and audience was made by local stakeholders including Ejaz Ali Khan The Additional Chief Secretary for Planning and Development in Sindh, Wasif Abbas the Secretary for Energy, Director General Sindh Board of Investment (SBI) Ifrikhar Ali Shallwani, the Secretary for Commerce, Industries and Investment and Private sector representatives on the Thar Coal Project. The presentations summarized the investment opportunities and potential of the local market for the delegation.

Bashir Ali Muhammad Chairman of the Pakistan Business Council, while addressing the delegation said "The alliance between China and Pakistan has always been one of our strengths. This relationship covers many different areas, including industry, economics, energy, trade and investment, to name a few. I hope we continue to not only maintain this relationship, but to enhance it further through initiatives like this event".

He further added "It is not just about building road and railway networks or energy projects but also about a myriad of business and social activities that will create employment opportunities and lead to a higher level of growth in the country's GDP. It will have a positive impact, not just on Pakistan-China trade but will also encompass Central Asia".

The China-Pak Economic Corridor (CPEC) MoU, which was signed in July 2013, is the more recent development in the economic relationship between the two countries. It is expected to be a watershed in the trade and investment relations facilitating the prospective trade and investment opportunities arising from this game-changing project that have generated a lot of interest among the Chinese and Pakistani businesses. ■



The meeting of Marketing Association of Pakistan with Niaz A. Malik (Deputy CEO, Zong) in Karachi. Lucas Peter, Muhammad Azfar Ahsan, Talib S. Karim, S. Masood Hashmi and Anis H. Younus are also seen in the picture



Roshan Ali Sheikh, MD, Sindh Solid Waste Management Board briefing about the on going projects to the representatives of American Investment organizations



National Centre for Maritime Policy Research (NCMPR), Bahria University organized 3rd National Maritime Seminar



FPCCI's standing committee on 'Young Entrepreneurs' presenting a shield to Honorable Governor Sindh, Dr Ishrat Ullbad.



Dr. Ikhtiar Baig, Ishfaq Baig, Mr & Mrs. Emil Wyss, Agha Siraj Durrani, H.E. Piotr Opalinski, Syed Arifullah Hussaini & Omair Baig at a dinner reception in honor H.E. & Mrs. Piotr Opalinski Ambassador of Poland



CIU-Trucking component of PAKSTRAN Project signed MoU with NUST in which Mr. Hassan Nasir Jamy, Additional Secretary Ministry of Water and Power was the chief guest.



The second batch of startup technology businesses includes apps and web platforms for reviving street cricket, ordering fresh, organic produce at home, discovering shops and restaurants on the go and educating special children



Sheikh Khalid Tawab (SVP, FPCCI) presents crest to Muhammad Anees, Chairman, All Pakistan Paper Merchants Association (APPMA), along with Zulfiqar Sheikh, VP, FPCCI & Mumtaz Sheikh, Former VP FPCCI were also present in the picture.

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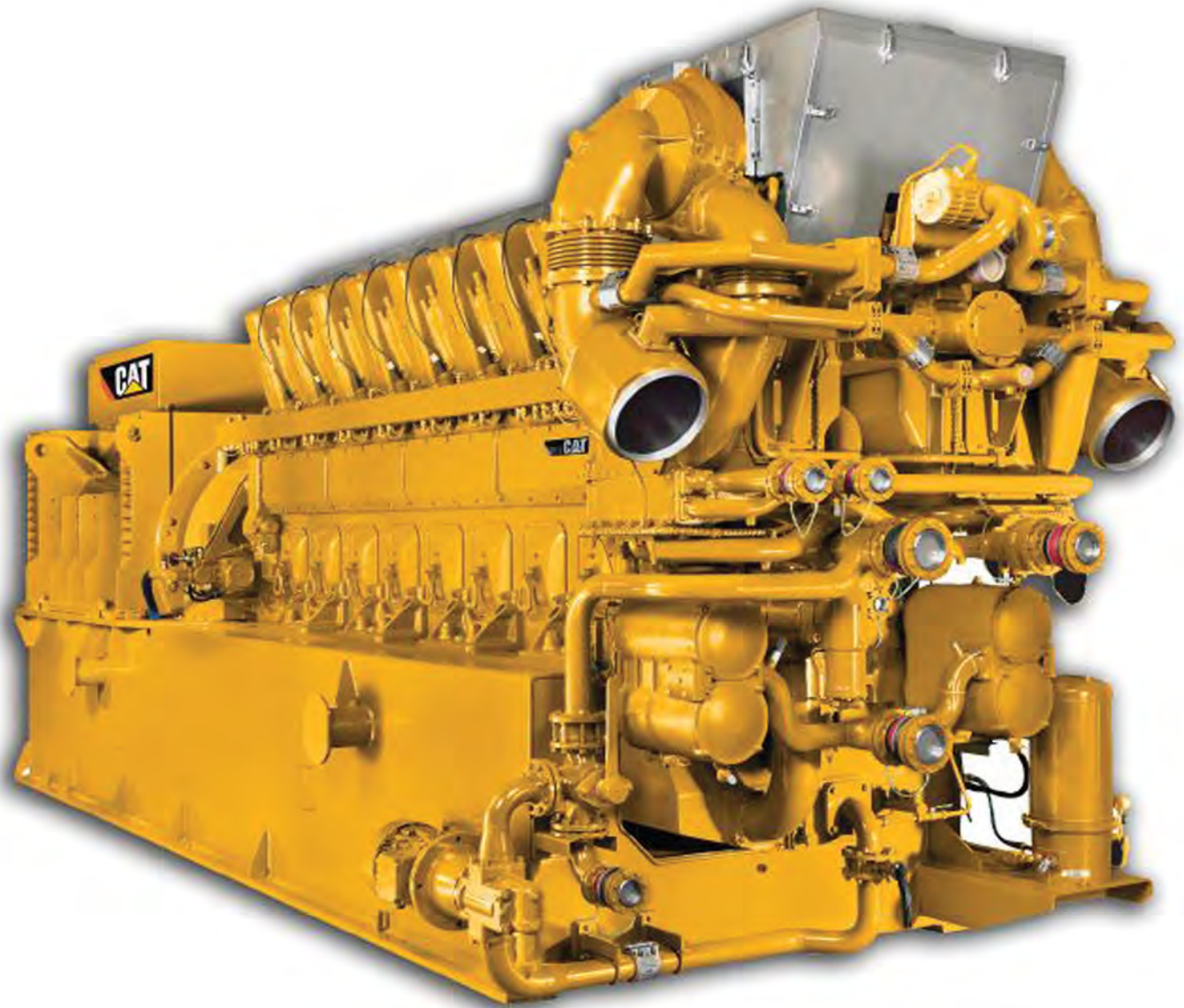
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ALL HE WANTED TO HEAR WAS, 'GO AHEAD'



And we heard him. At Bank Alfalah, we are doers, we strive to realise our goals and turn our ambitions into solid results. And we are drawn to people who share the same attitude.

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Because at Bank Alfalah, we believe that there is only one way - The Way Forward.



Bank Alfalah
The Way Forward