Monthly Energy Update

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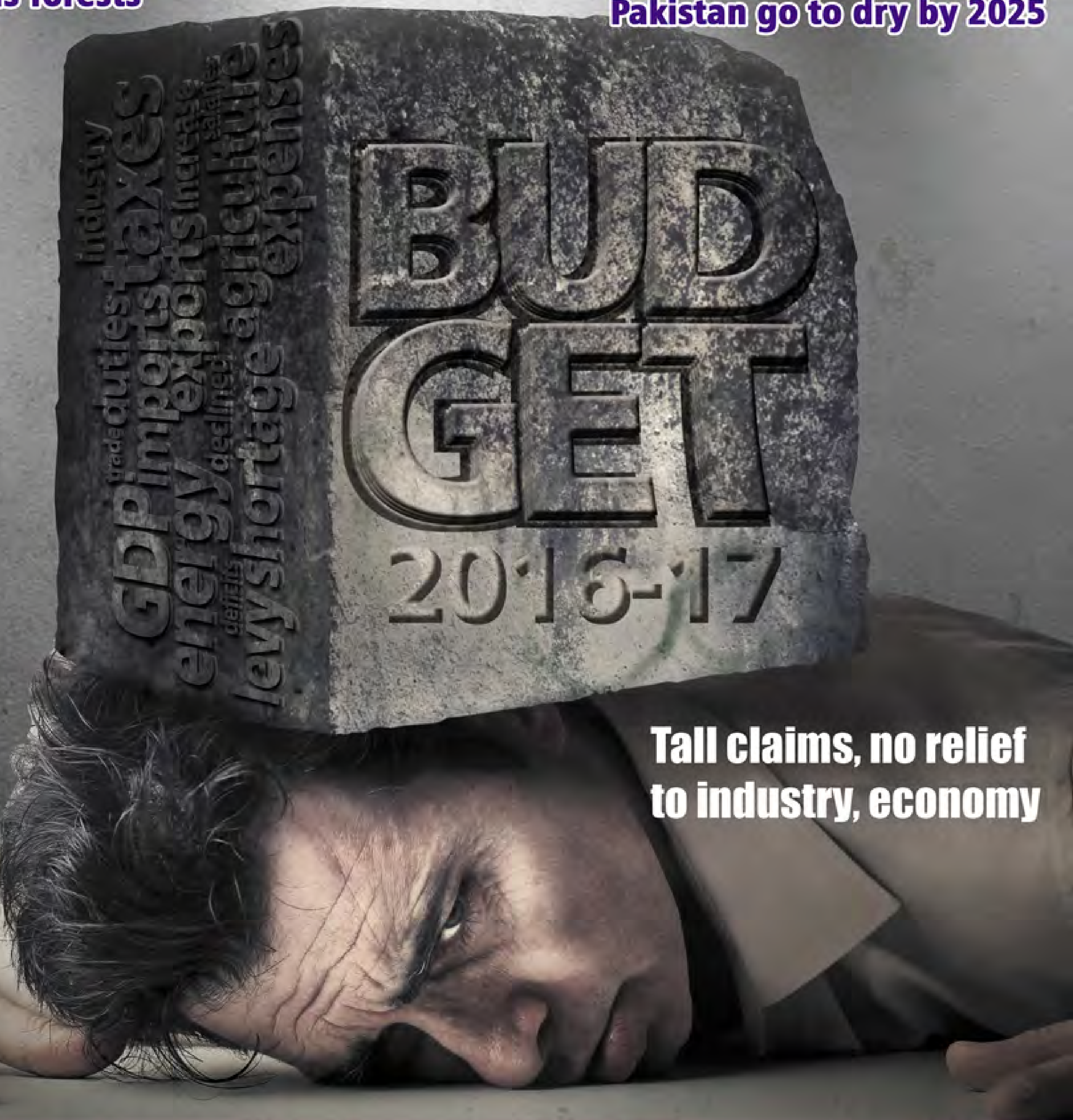
Fate of US-backed CASA power project in doldrums

Neelum Jhelum Project: 969 MW electricity to hit Nat-Grid by 2017

Pakistan go to dry by 2025

Pakistan fast losing its precious forests

Exclusive interviews of energy leaders



Tall claims, no relief to industry, economy

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For Award Criteria, visit
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Deadline for Nominations: July 20, 2016

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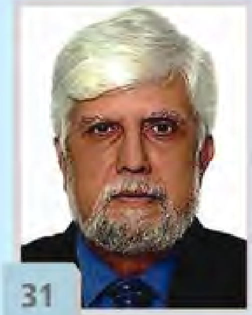
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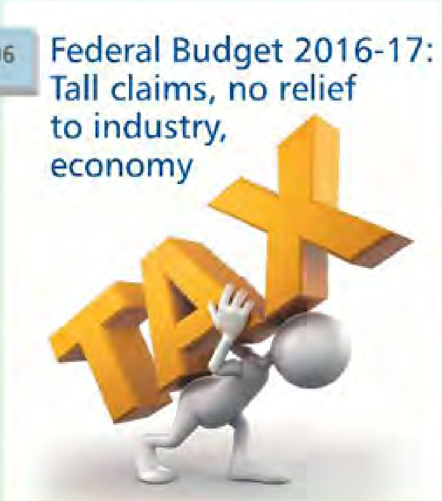

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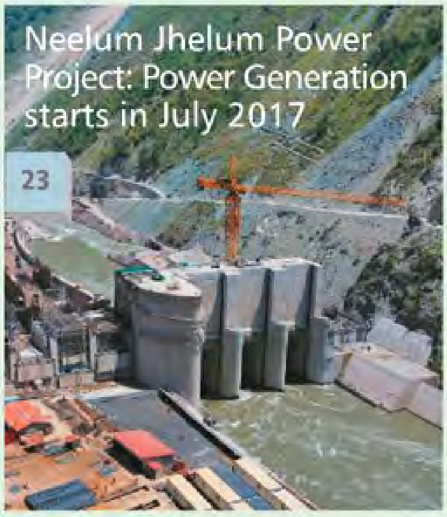
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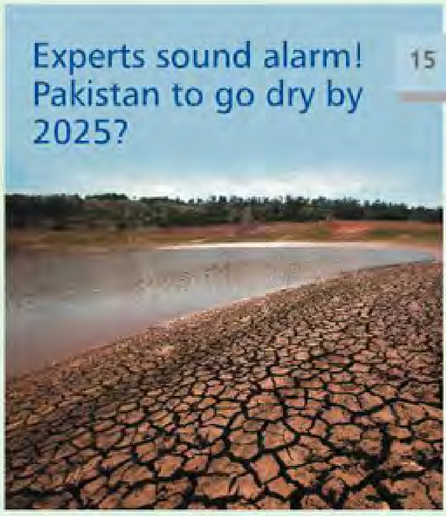

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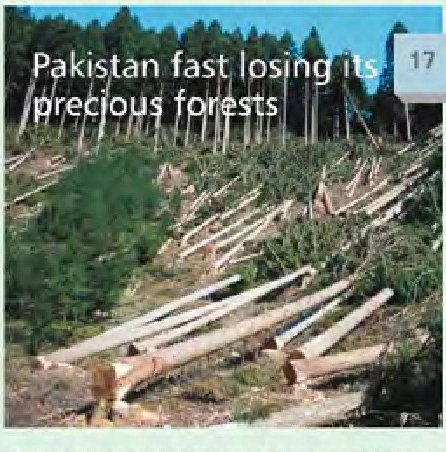
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From the editor's desk...

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Federal Budget offers nothing to the masses

The Federal Budget 2016-17 offers nothing to the masses as it's another replica of IMF's dictated document meant for revenue collection to pay the mighty debts. The budget is not at all "public friendly", but has been termed by the experts a jugglery of words, neither friendly with industry nor good for SME (Small and medium Enterprises) sector, not promoting business efforts for SME sector, it has only made death affordable for the poor, opined by the renowned tax expert, Waliullah Khan as he termed the budget speech delivered by Federal Finance Minister Ishaq Dar as disappointing. "This budget has failed to address the major priorities regarding national security, rehabilitation of Temporary Displaced Persons (TDPs,) poverty reduction, further economic stabilization, energy and infrastructure development that should continue to be the priorities of the government", he commented.

Labourers, traders and individuals belonging to other sectors shall suffer from the budget and the announcements made will not please the farmers as there is need for practical measures.

It was also a surprise that the present government that was much trumpeting its efforts to address the issue of energy crisis on top priority basis, has made insignificant allocation for this sector.

One has failed to understand that why the present government has penalized the indigenous industry by increasing import duties on its inputs despite the fact that the whole world is pampering its industry by extending many incentives in the shape of minimizing import duties on industrial raw materials in order to strengthen the economy. But on the contrary, the government is all for ruining the local industry by slapping it with duties and taxes while on the other hand budget makers have given unjustified benefit of duty reduction on import of finished goods. The ceramic industry is the major example of step-motherly treatment by the present government and FBR. Ceramic industry was already dying because of massive smuggling through the borders and dumping of cheap and sub-standard Chinese tiles in the local market. Several units of ceramic industry in Karachi and Gujranwala have already been shut down and over 70 per cent production has been affected. What was the reason behind this punishment to the industry is better known to Ishaq Dar and FBR but this move is termed as anti-economy and against the national interest. Almost every industry whether it is export-oriented or local industry is moaning due to budgetary measures that are meant for uprooting our industrial base. The budgetary measures against industry and export sector are sans any wisdom but will not yield any additional revenue to the government.

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By Sajid Aziz

Federal Budget 2016-17

Tall claims, no relief to industry, economy

Agriculture production has declined, exports are in a precipitous long-term fall and power and energy remain short

Power sector allocations astonishingly cut substantially as the country faces extreme power shortage

The Federal Budget for the fiscal year 2016-17 announced by the Federal Minister for Finance, Ishaq Dar has made the mockery of the people of Pakistan in general and the industry in particular as the budget comes out to be totally against the whims of the general masses negating the tall claims by the finance minister. He as a matter fact instead of making efforts for revival of the industry and economy, slapped additional taxes on industry. He even tried to kill the indigenous industries by increasing import duties on raw material but on the other hand he reduced duties on finished goods, is it a deliberate move to kill the industry? Ceramics industry is a classic example of his discriminatory treatment wherein the duties on its raw material increased and the same reduced on import of finished items, opening up a floodgate of ceramics tiles and other products into the country.

The economic experts having critical eye on the budget say that despite high claims, budget 2016-17 does little to address the real issues of the economy or to revive growth. They do not find a strong economic strategy driving the budget 2016-17. There is need to build productivity of agriculture and industry to revive the economy and place it on a path of sustained growth. While government has announced a series of measures for these sectors, experts prefer an approach that does not rely on fiscal incentives alone. These sectors need long term commitment to build competitiveness.

The Pakistan economy faces many challenges. Its growth has been moribund for several years. Agriculture production has declined. Exports are in a precipitous long-term fall. Power and energy remain short. The external sector is vulnerable, as government borrows new loans to pay off old ones. The performance of industry is mixed. Textile production is stagnant and some other key industries languish. Services, not the productive sectors, have fueled the economy's growth of 4.7%. The situation demanded a strong and well-considered policy response.

It is curious that the basis of government's mid-term and annual plans rely on population estimates extrapolated from the 1998 census. It makes suspect all planning and budgets.

In order to contain fiscal deficit the govt kept serving notices on non-filers and increase in withholding tax rates for them. 'Other taxes' too increased significantly by 35%. In a year of low energy prices and falling markup rates, non-tax revenue fell by 25%. Expenditure grew by 6.4%. However, development spending was well below budget. This was how GoP tried to control deficit. Similarly, for fiscal 2016-17 too, government has maintained a preference for stability. The budget aims for a fiscal deficit of 3.8% of GDP and a growth rate of 5.7%. While GoP's focus on continued stability is welcome, the deficit of 3.8% is too low for the economy's needs for infrastructure and other services. To its credit, FBR achieved the target of almost 20% increase in revenue in the current year. However, it will need to increase collection by a further 16.6% in 2016-17. This will mean a real rate of increase of 6% or more, if we take away inflation and growth expectations. Shortage in revenue will invoke cuts in development expenditure this fiscal as well. This will affect much needed improvement to infrastructure. It may also affect execution of CPEC projects.

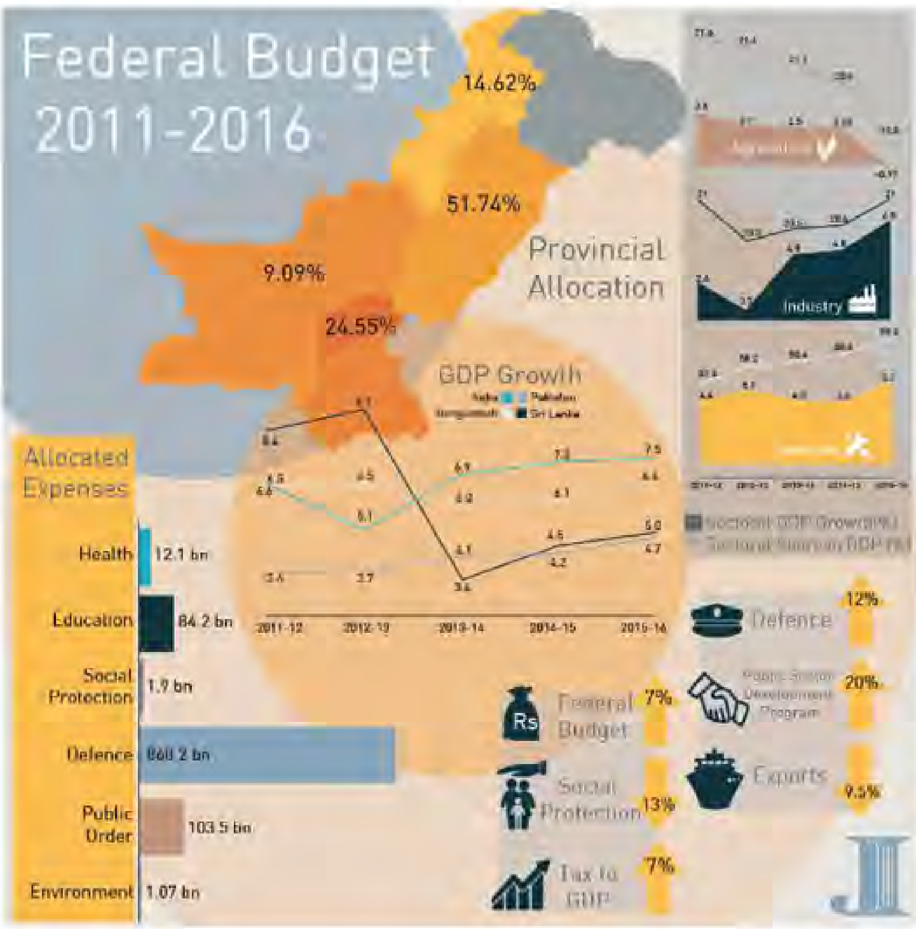
Limiting increase in current expenditure in 2016-17 to 3.6% over 2015-16 will be a challenge. In the ongoing fiscal year, current expenditure was set to reduce from the previous year, along with reduction in debt servicing. In effect, they grew by 6.4% and 19.5% respectively. Next year too debt-servicing expenditure will increase. Along with increase in allowances of government servants and in pensions, this will stress the fiscal framework and make it that much more difficult to achieve the deficit target.

The 2016-17 budget reduces provision for subsidies by 29% from the revised estimate of 2015-16. Over two thirds of this amount is for the power sector. As fuel price is on a slight increase, it seems that government plans tariff increase or further postponement of payment of the tariff differential subsidy.

The budget estimates provincial surplus of Rs339 billion. The fiscal deficit will go beyond the target of 3.8% of GDP if provinces do not yield the surplus amount. In a positive move, the Finance Minister announced GoP's plan to observe provisions of the fiscal responsibility law and to strengthen its provisions.

The target of a further Rs517 billion in taxes, will stretch the collection system. Over 45% of the additional tax revenue is to come from income tax, mostly in the shape of withholding tax. Enhancing holding periods for capital gains on securities and real estate is a positive move. Until recently, such unearned income and gains were exempted from tax. It restores a sense of equity and reduces excessive speculations.

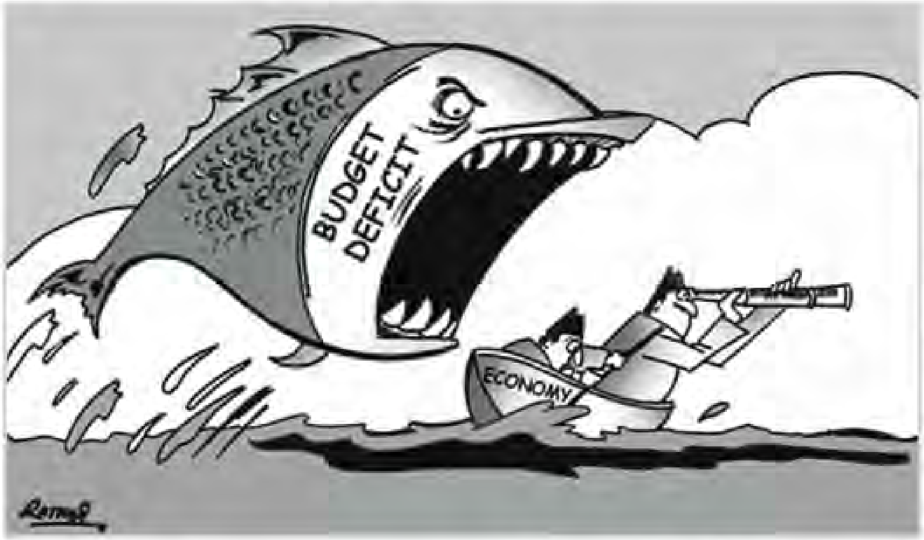
Recently, some members of the Tax Reforms Commission have expressed dismay for not relying on their recommendations. Most of these aim to strengthen tax administration and enforcement. They feel that adopting the recommendations could help reduce tax evasion. It is important to raise the cost of tax evasion and, especially, non-filing of returns. As a run up to the budget, some GoP officials seemed to favour this approach in their public statements.



Fifty five percent of the extra tax collection in 2016-17 comes in the shape of indirect taxes. These are desirable to the extent they withdraw exemptions. However, they could affect economic activity. Tax experts support use of withholding tax as a means to attract non-filers. However, the best course is for this tax to be collected through annual assessments. The govt in the budget has announced to retain five export sectors as zero-rated rating, no notification has yet to be issued.

As a matter of fact, the budget makes no big moves or set a strategic direction. Immediately, it will have no significant effect on the people. The budget has minimal relief for the people.

Present government's commitment and enhancement of the Benazir Income Support Programme (BISP) shows that it liked this scheme very much, which is a big source of corruption. This scheme is a worst ever scheme introduced by any government. The PPP regime had introduced it in order to find an easy way to usurp billions of rupees in the name of poor. The basic theme of such type of schemes is nothing but to make the poor's beggar. Decrease in subsidy or increase in power tariff, if they take place, will affect people in the lower quintiles. Increase in GST, FED, and import tariff on a large number of consumer and industrial items will increase prices and burden on the poor. It will also



increase inequality.

The development budget directs few resources towards reducing the social deficit. Admittedly, this is a subject for the provincial and local governments to address. However, some of the incentives to revive agriculture and industry should have a positive effect. Reduction in cost of agriculture inputs will help farmers. It is to be seen how the rest of the incentives benefit growth.

The Federal PSDP of Rs800 billion is short for the many needs of the economy. It is about 2.5% of the country's GDP of Rs.31,466 billion. Including provincial budgets, Pakistan's total public investment will barely exceed 5% of GDP. The federal PSDP is merely 18% of the total federal budget of Rs.4,418 billion. Low allocation for development is reason for concern. The Pakistan economy has been in low to modest growth for several years. The people of Pakistan expect jobs and economic activity to grow. Serious infrastructure gaps and social deficit constrain business development and depress living standards. It is important for the economy to provide a stimulus and enhance business competitiveness.

To reiterate a problem that has existed for long, the Public Sector Development Programme (PSDP) minimally meets the needs of an oversized projects portfolio. The modest scale of the PSDP contrasts with the enormous size of the federal government's public investment programme. Compared to the revised PSDP of Rs700 billion for 2015-16, next year's budget shows an increase of 14%. Since 2015-16, cuts have been placed in some critical areas. The combined allocations for higher education and federal education and training are a billion more than last year, but Rs5.4 billion below 2014-15. The allocation for HEC mostly meets stipends for students studying abroad. Many HEC projects which has a total throw forward of Rs142 billion would stall. Allocation for health has increased by Rs4 billion, but it is still Rs3 billion less than 2014-15. As noted above, water is a big cause for concern. As a water stressed country and with high dependence on agriculture, this is alarming. Agriculture production has declined. Exports are in a precipitous long-term fall. Power and energy remain short.

Of the Rs130 billion for the power sector shown in the PSDP, GoP's budget is Rs74 billion. The rest is to be met by WAPDA, PEPCO, and NTDC. Of the Rs74 billion, Rs60 billion the two LNG power projects. Economic experts have stressed the need of such large amounts go to hydro projects and not to an expensive fuel source. In fact, other than LNG power plants, federal allocation for the power sector has declined substantially compared to 2014-15. This is astonishing when the country faces extreme power shortage. On the other hand, allocations to roads and highways have increased by 17.5%. Allocation for NHA had increased by a large 46% in 2015-16.■

The Success Triangle

by Jawaad Qureshi

Success in professional life whether in business, job or an entrepreneurial effort is based on common set of principles. These principles are commonly observable all around the world. According to my observations these principles can be summed up in to a triangular form with their 3 sides namely Positive Attitude, Focus, and Effective Communication. Any one of these factors missing may deteriorate your chances of a successful career/life.

The success gurus all over the world consider focus as an integral part of success because when you focus on any idea, thing or situation, you concentrate your energies fully in that direction leading you to think deeply and see the broader picture within that idea, thing or situation. The power to focus helps you to connect the past events with future opportunities to understand the possibilities to reach your ultimate goal that defines your success. It provides you a better vision to plan and energy to execute that plan. The power of focus is the single main factor that helps you remain persistent for achieving your goals.

Similarly effective communication is equally important as it helps you to present your ideas and available opportunities in an effective way to your superiors, employees and investors. This skill helps you to develop synergy with the right people who can accelerate your growth so that you can reach your ultimate goal that defines your success.

But these two factors are useless without the bond of positive attitude which generates the will power and ability to focus and communicate. When you focus your thoughts on the positive things in life and ignore the negatives, you develop an attitude of gratitude which opens the door to abundance and creates peace and satisfaction within. These feelings of abundance, peace and satisfaction leads to positive energy required to reach your ultimate goal that defines your success. Positive thinking provides you the strength to practice perseverance in the tough times to come over all the obstacles you face in your way o success. It also helps you create the right intent i.e. the intent of giving whether you are doing a job or running a business or managing your relationships with your family, friends, colleagues, superiors and the society as a whole.■

Inconsistent policies by the govt are major hurdle in revival of economy

Despite major challenges ARL made capital investment - Adil Khattak, CEO, Attock Oil Refinery Ltd

By M Naeem Qureshi

The CEO of Pakistan's major oil refinery Attock Oil Refinery says the government should make firm and consistent economic policies that must be investment friendly in order to bring more and more investment in oil and gas sector. While talking to Energy Update in an interview he says that.............

EU: What are the challenges you are facing for the development and progress in the sector in presence of other sources of energy?

AK: The crucial challenges confronted by the oil and gas industry including serious security concerns, inconsistent and retrogressive policies especially inadequate capacity of regulatory and government departments, unilateral withdrawal of concessionary duties and incentives that form basis of major capital investment, lack of clear cut down stream policy framework, circular debt issue in energy sector, lack of skills and technology including capacity issues of local vendors, poor infrastructure facilities including inadequate storage facilities/depots and massive congestion at ports.

In spite of the above challenges, ARL still went ahead and undertook Capital intensive Refinery Expansion & Up-gradation Project comprising installation/ Isomerization Unit (7,000 BPD), (to enhance production of Premium Motor Gasoline(PMG) by 70%); Preflash Unit (10,400 BPD), (to enhance refining capacity by 25%); DHDS Unit (12,500 BPD) to reduce sulphur contents in High Speed Diesel (HSD); and Expansion of existing Captive Power Plant (18 MW).

The total value of ARL's expansion and upgradation project is $251 million approximately and the project is in its final stages of completion.

EU: Why the govt could not benefit from falling POL prices for the last three years?

AK: The government did benefit from the falling of POL prices in the international markets. The falling prices have alone saved foreign exchange due to lower oil import bill to the tune of over $3 billion. The money thus saved could be spent on other goods and services.

EU: Why the consumers were not given price cushion of the rock-bottom prices of POL for the last three years?

AK: While managing its revenues from taxes on petroleum products, the government has given adequate benefit from the falling prices of petroleum products to the end consumers during the last few years. Prices of petrol and HSD have significantly come down during the last 3 years as per the given figures. Besides, power tariffs have also been significantly reduced due to decrease in prices of furnace fuel oil in the international markets.

Period	Product	Market Prices/Rs/Litre
October 2013	PMG	113.24 (Max)
March 2016	PMG	62.77
October 2013	HSD	16.95 (Max)
March 2016	HSD	71.12

EU: Why petroleum companies did not expand their business network despite historic price relief?

AK: This issue relates to Oil Marketing Companies (OMCs). Expanding retail networks and creating new storage facilities in the country have nothing to do with reduction in the oil prices. OMCs operate in Pakistan based on margins fixed by the government, which are still very low in comparison with other countries and need to be enhanced to an appropriate level for making the required investment in the above areas.

EU: What kind of govt. policies are the biggest hurdle in local as well as foreign investment in Pakistan?

AK: Lack of long term vision and policies and inconsistency in government polices is the biggest hurdle for investment in Petroleum sector duly hampered by bureaucratic and capacity issues. While the Upstream Sector has a formal policy framework, there is no formal policy framework for downstream sector. Focus is on day to day handling of issues rather than adopting a holistic long term approach.

EU: What was the reason that despite historic low rates of petroleum, oil consumption could not grow to the level as expected?

AK: As explained earlier in question 3 above, Pakistan's economy is growing at a steady rate and this growth is demanding higher energy consumption of the petroleum products in the country. The demand of motor gasoline and HSD is expected to grow at 10% and 2% respectively for 2016 and beyond.

It may please be noted that a record sale of motor gasoline of 553,000 metric tons was reported in March 2016 as against sale of 396,921 recorded in March 2015 last year.

EU: What were the circumstances that one particular oil company has been given monopolistic rights of retail outlets for 20 years on entire Motorway? Was it transparent under PPRA Rules?

AK: This is a policy issue and needs response from the concerned Government officials.

EU: Why your company stay away from bidding for the leasehold rights of Motorway?

AK: ARL is an Oil Refinery and not an OMC, hence this question is not related to us.

EU: Please share CSR policy and major CSR activities.

AK: Corporate Social Responsibility (CSR) is not a new concept for ARL; it has been part of the Company's core values since its inception. ARL's history of over 94 years is replete with CSR initiatives.

As per our policy on CSR, it is our foremost duty to consider the economic, social, ethical and environmental impact of our activities on our various stakeholders. ARL promotes community development to create the foundation for a more equitable, just, productive, competitive and knowledge-based environment. As a responsible corporate citizen, ARL has always believed in working as part of the community and all its CSR activities are sustainable in nature. ARL priority CSR areas are environmental compliance and energy management including renewable energy, health care, development of women skills, income generation, poverty alleviation, HRD, education, promotion of sports, provision of water, community development and conservation

EU: Kindly share your profile in detail including your educational background, professional experience and achievement?

AK: I have been associated with the Attock Oil Group in Pakistan for the last 39 years and become CEO in 2005. Prior to re-joining ARL as CEO, I worked for two years as Chief Operating Officer of Attock Petroleum Limited. I have extensive experience in engineering, maintenance, human resource management, project management and marketing.

I hold the positions of Chief Executive Officer of Attock Gen Ltd. (165 MW IPP), Attock Hospital (Pvt.) Ltd., and National Cleaner Production Centre (NCPC). Director on the Boards of Attock Information Technology Services Limited and Petroleum Institute of Pakistan (PIP). Also a member on the Boards of Governors of Lahore University of Management Sciences (LUMS), Ghulam Ishaq Khan Institute of Engineering Sciences and Technology (GIKI) Cadet College, Hasan Abdal, Sustainable Development Policy Institute (SDPI), Corporate Advisory Committee (NUST), Governing Council (PMQA), National Productivity Organization and Member Board of Studies, (Chemical Engineering) UET, Peshawar. Serving as President of Attock Sahara Foundation, an NGO, working for the poor and needy people of Morgah and its surrounding areas.

Holding a master's degree in engineering from Texas Tech University, USA have attended many technical, financial and management programs in institutions of international repute in Pakistan, USA, Europe and Japan.

EU: Detail of the products & services offered by your institution?

AK: ARL is producing a complete range of petroleum products comprising: "Liquefied Petroleum Gas (LPG), Export Naphtha, Premium Motor Gasoline (PMG), complete range of Jet Fuels (Jet A-1 and JP-8), Kerosene Oil, High Speed diesel (HSD), Light Diesel Oil (LDO), Jute Batching Oil (JBO), Furnace Oil including Low Sulphur Furnace Oil, variety of Asphalts including 60/70 & 80/100 grades, cutback asphalts, Polymer Modified Asphalt, Mineral Turpentine Oil (MTT) and Solvent Oil etc.

EU: What is your share/ rank in the market? Future growth of petroleum-sector in Pakistan?

AK: ARL share among local refineries production of finished products stands at 16.19% or 1.9 million tons per annum as per Pakistan Oil Report 2014-15. Total refineries finished products stand at 11.741 Million per annum during the above period. Pakistan's economy is growing at a steady rate and this growth is demanding higher consumption of petroleum products. Petroleum products consumption exhibited a growth rate of 5% on annual basis with consumption during 2014-15 recorded at 22.73 million as against 21.67 million during the corresponding period of 2013-14. The demand of energy products exhibited an increase of 8.12% during

2014-15, with transport & power sector being the biggest users with 50.59% and 40% respectively, followed by industrial and residential sectors etc. The demand of non-energy products exhibited a healthy increase of 14.9% during the above period.

As per the forecast given by Oil Companies Advisory Council (OCAC), the demand of motor gasoline and HSD is expected to grow at 10% and 2% respectively for 2016 and beyond.■

By Sakib Sherani

Stabilisation Straightjacket:

Budget 2016 and the growth bottleneck

Backdrop

A nation's budget and its overall economic policy framework are situated within a certain macroeconomic context.The mix of fiscal and other policies pursued by a government should respond to the challenges inherent in the economic environment. In this perspective, how well does the Federal Budget for 2016-17 deliver?

For the past several years,Pakistan's economy has been experiencing sluggish and below-par rates of growth. Average economic growth since 2008 has been a tepid 3.4 percent. New investment in plant and machinery, a key driver of growth, has plummeted - with investment by the private sector and by foreign investors leading the way. Exports have been falling since late 2014, while the agri-sector is experiencing declining output and plummeting prices in key crops.

Overall, the macroeconomic context since 2008 has been fairly difficult, shaped partly by exogenous developments but largely by domestic policy choices and self-imposed constraints. The country's internal security situation has remained disturbed since 9/11, affecting business environment and investor sentiment. However, the two biggest constraints the economy has faced are the inept handling of the power crisis, followed by a failure to introduce meaningful tax reform.

Against this backdrop, the economic policy context of the past three years has been one of fiscal consolidation and macroeconomic stabilisation under the aegis of a three-year IMF program. The fiscal deficit has been brought down from 8.3% of GDP in 2012-13 to 4.3% of GDP (estimated, provisional) for the current fiscal year.[1] A large part of the fiscal consolidation has been driven by a sharp increase of nearly 60% in FBR tax revenue collection since 2013. The tax to GDP ratio has risen to 10.5%, from 8.5% in 2013.

However, the bulk of the increase in tax revenue has come from existing taxpayers via an increase in tax rates; the levy of additional taxes, including a slew of new withholding taxes; an increase in customs tariffs; increased enforcement and auditing by FBR; and the non-payment of tax refunds.

The main specific measures taken since 2013 that have contributed the bulk of the tax revenue increase have included:

- An increase in the standard rate of sales tax, from 16% to 17%
- The imposition of the Gas Infrastructure Development Cess (GIDC)
- An increase in the minimum customs tariff from 0% to 3%
- New withholding taxes
- Levy of a "super tax" on large corporates
- Enhanced rates of petroleum taxation

While some effort has been made to broaden the tax net, these efforts have been modest and are yet to bear fruit (research by RAFTAAR estimates that the cohort of eligible but non-taxpaying Pakistanis is at least 4 million). Hence, the bulk of the unprecedented increase in tax revenue collection in the past three years has come from the large, documented, tax-compliant firms operating in the country's formal sector - or from average consumers via indirect taxation.

The combined effect of the government's tax measures since 2013 has been to add significantly to the cost of doing business as well as to the cost of tax-compliance in the country, as evidenced by the slippage in the country's global ranking on this score. Pakistan has dropped 10 places in the World Bank's Cost of Doing Business Index since 2013 (to 138), while on "ease of paying taxes" the country's rank is now 171st in the world - virtually at rock bottom.

Cumulatively, these measures have hurt the competitiveness of the formal sector - and restricted its ability to invest.

Key budgetary measures and impact

Against a backdrop of stifled economic growth, the federal budget for 2016-17

offers at least two moderately positive policy steps. For exporters, it brings the good news of restoration of zero-rating for sales tax for the five major sectors. For the farm sector, which has been under stress for the past two years, the budget contains several "relief" measures. (Of course, the utility of these budgetary measures is largely contingent on their implementation.)

Notwithstanding these steps, the main thrust of the policy measures is on revenue generation via new taxation measures. All told, the federal budget seeks to impose Rs252 billion via new taxes, the bulk of which are, once again, aimed at existing taxpayers. In terms of the impact on businesses, perhaps the most potent negative effect is likely to emanate from the move to disallow provincial sales tax paid by a business as input tax credit or adjustment. This move - if not rescinded - will add significantly to the overall cost for formal businesses, who are already burdened by new taxation measures of the past three years.

In terms of documenting the economy, the budget takes this government's strategy of creating a distinction between tax return-filers and non-filers, and setting up a regime of differential taxes,further. However, this approach is fundamentally flawed: it is not "first-best" (which would be the reform of FBR),and it has been tried unsuccessfully since the 1990s in the case of sales tax. At its worst, this approach of trying to collect revenue without fixing FBR is formalising the status quo and is providing the wrong incentive to non-filers: that they can pay a nominal differential and continue to legally stay out of the tax net.

With this context in view, it is clear that the economy needs policies designed to reduce the cost of doing business for formal firms, simplify the tax regime as well as increase its equity and fairness, and widen the pool of tax payers in the country. Better prioritisation of scarce fiscal resources is needed, away from show-case urban infrastructure projects to targeted interventions supporting new investment and the export sector. Examples would be: funding policy initiatives under the Strategic Trade Policy Framework designed to increase exports (which have been denied funds for the past several years); reducing the customs tariff on import of all new machinery back to 0%; and fully clearing the backlog of tax refunds of the export sector.

A continuation of macroeconomic stabilisation and fiscal consolidation policies in their current form will hurt Pakistan's growth prospects further.■

The writer is Senior Adviser for RAFTAAR - an advocacy platform for economic reforms.

PSO maintains supplies of 23,000 tones daily to power sector

Pakistan State Oil (PSO), the leading Oil Marketing Company (OMC) of the nation, continues to fulfill the energy needs of the country in a responsible manner.

During this summer, PSO is supplying approximately 18,000 MTs of furnace oil per day to its credit customers' i.e WAPDA/ GENCOs, HUBCO and KAPCO. Furthermore, PSO is supplying an estimated 5,000 MTs of fuel oil on a daily basis to its cash customers i.e. IPPs (Lal Pir, Koh e Noor, Pak Gen, K Electric, Gul Ahmed etc,). The supplies to cash customers/ IPPs may vary as per the orders.

Keeping in view the national interest, PSO is supplying furnace oil uninterruptedly to power sector, making an effort to reduce load shedding hours to ease the public during this hot weather and upcoming Holy month of Ramzan. PSO is trying its best to maintain furnace oil supplies on continuous basis to power sector despite of the fact that it owes PSO' s Rs. 201 billion.

PSO being the flagship OMC cognizant of its responsibilities towards the nation and striving hard to meet the energy demands of the nation in a timely manner. ■

BILL GATE in a restaurant.
After eating, he gave $5 to the waiter as a tip.
The waiter had a strange feeling on his face after the tip.

Gates realized and asked, "What happned?"

Waiter:"I'm just amazed because on the same table your daughter gave Tip Of ...$500... and you her Father, the richest man in the world Only Gave $5...?"

Gates smiled and replied with meaningful words, "She is daughter of the world's richest man, but I am the son of a wood cutter."

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Punjab cuts energy allocations massively in budget

The annual budget for Punjab province came with a suprise as it has allocated a meager amount of Rs9 billion for energy sector despite the fact that this largest province is also the biggest hit by energy crisis.

Punjab government has unexpectedly made a major cut in budget for energy projects and allocated mere Rs9 billion for different power generation schemes under Punjab Energy Department in budget 2016-17 as compared to the last year layout of Rs 31 billion.

The PML-N government claims the allocation has been reduced considering private sector investment on number of power projects which would produce more than 6,500 MW during next couple of years. It claims of working with leading financial institutions to create an energy fund of $2 billion for development of energy infrastructure in Punjab.

"Allocation for energy sector has been rationalised to Rs9 billion in public sector for the year 2016-17 which includes an allocation of Rs4.63 billion for hydel project under REDSIP," read the budget document.

The government's major targets and initiatives for 2016-17 are: completion of renewable energy development sector investment programme (REDSIP), hydel power generation projects at Marala, Pakpattan, Chianwali and Deg Outfall.

The other important energy projects under construction in Punjab with the investment of private sector and China are: 1,320 MW coal power project at Sahiwal in partnership with Chinese investor, 1,180 MW RLNG based power plants at Bhikki which according to the government's claim will complete in Dec 2017, 900 MW solar power projects with Chinese investment, 1,223MW power plant at Balloki which will complete in December 2017, 1,230 MW RLNG power plant at Haveli Bahadur Shah Jhang to complete in December 2017 and 135 MW hydro-power plant through IPP mode.

The PML-N government had established the Energy Department in its previous tenure by allocating Rs9 billion in budget 2011-12 with the purpose to solely focus on power generation in worst load-shedding hit province.

The provincial government had allocated Rs10 billion in financial year 2012-13, Rs20 billion in 2013-14, Rs31 billion in 2014-15 and Rs31 billion in fiscal year 2015-16 for various power generation schemes.■

Unchanged approach to budget-making

By MOHAMMAD HUSSAIN KHAN

Sindh Finance Minister Murad Ali Shah announcing subsidies for tractors, tubewells, agricultural implements and solar powered tubewells on June 11.

THE Sindh government's agriculture budget for 2016-17 has evoked a mixed response from growers. For some the budget presents no innovative ideas to pull farming out of its distressed state while others stress the government needs to ensure timely development spending to improve service delivery.

Some growers criticise what they call the government's misplaced priorities and its failure to address core issues despite agriculture growth falling to -0.19pc.

In his budget speech Sindh Finance Minister Murad Ali Shah announced subsidies for tractors, tubewells, 1,500 agricultural implements, 73 solar powered tubewells, etc.

The annual development programme for agriculture is pitched at Rs5.4bn against last year's Rs4.5bn, indicating an increase of 28.9pc.

Growers like Dr Syed Nadeem Qamar, president of Sindh Chamber of Agriculture (SCA), feel that the federal government has made a headway by announcing subsidies that were earlier withdrawn. He says that the Sindh government seems to be focusing on lining the main canals, such as Nara, which is a positive sign to ensure water conservation.

His anxiety is that important projects should be result-oriented and must have a positive bearing on the farm sector. He is concerned about the overall state of agriculture which, he says, is not encouraging. He adds seed development should be an area of concern. The cotton sector has been facing serious seeds issue which resulted in the drastic decline of cotton production.

According to the finance minister, a sum of Rs2000m has been provided for the Sindh Agriculture Growth Project and Rs3000m for the Sindh Irrigated Agriculture Productivity Enhancement Project. The allocations for ongoing schemes for development of agriculture are estimated at Rs4826.804m and for new projects at Rs967.196m.

Sindh Abadgar Board (SAB) president Mahmood Nawaz Shah is disappointed by the provincial budget and termed it a case of misplaced priorities.

"Ghotki is a cotton growing area and the cotton sector is not performing well for a variety of reasons. Regardless of this, the government is now going to establish an institute for a high delta crop like sugarcane instead of addressing current issues in cotton sector", he remarks.

Similarly, he asserts, the finance minister's budget speech doesn't reflect how the government plans to stop the declining trend in prices of commodities. While the federal government has taken some steps for subsidising vital inputs in order to reduce increasing cost of production, the Sindh government has not yet shared its own plans. SCA General Secretary Nabi Bux Sathio echoes similar concerns. He says that out of Sindh's total ADP of Rs225bn, the agriculture sector would get Rs5.8bn which is inclusive of allocations of Rs4.82bn for on-going schemes. Such allocation, he says, is probably about 2pc of the total development budget. He is dissatisfied with the meagre allocation of Rs266.43m for the research wing of the agriculture department against Rs439.78m of the extension wing; as with an ineffective research wing the agriculture extension department cannot do much. So, he says, these figures clearly reflect a disparity in allocations.■

By Ahmad Ahmadani

Fate of US-backed CASA power project in doldrums

Pakistan's Planning Commission has strongly opposed Casa-1000 power project, and said that Power Ministry in a bid to import 1000mw of electricity signed expansive energy supply agreement which would cost heavily to Pakistanis in the days ahead.

Raising serious questions over the multi-billion-dollar project – Central Asia-South Asia (Casa-1000), the Planning Commission said that sky-high tariff of US Cents 9.41.kwh of the project and its viability are highly questionable both in terms of profitability and risk profile. Surprisingly, the project being implemented is quite different than the assumptions of the feasibility study by SNC LAVLIN. It is an expansive energy supply agreement. And, Pakistani consumers will pay US$ 1.50 billion over the project life of 30 years.

The commission is of the opinion too that this project is against development of domestic energy resources and the West's handsome parting gift to Afghanistan at Pakistan's expense. It is being pushed forward with greater emphasis to counter the China-Pakistan Economic Corridor (CPEC) and gas import from Iran.

Documents available with this scribe disclosed that Pakistan, Afghanistan, Tajikistan and Kyrgyzstan had on May 12 signed a quadrilateral agreement for generation of electricity through hydropower projects in Tajik and Kyrgyz republics. Under the proposed project, Pakistan will get 1300MW of power by 2019 to meet the country's electricity deficit in peak summer times when the electrical demand is high.

Under the energy supply agreement and following the approval of tariff by the National Electric Power Regulatory Authority (Nepra), power tariff is set at 9.41cent/unit, which was proposed 4.98cent/unit in the feasibility study. The cost of supply of US 1.5 cents/ kWh from Tajikistan had been assumed in the feasibility study while actual agreement is based on US 5.15 cents/ kWh. Also, the transmission charges of US Cents 2.91 are ten times higher than that of NTDC and three times higher than that in Europe. Energy Wing of the Ministry of Planning, Development and Reforms in its recommendation has suggested that some subsidy, grant must be demanded from the project promoters and the donor agencies so that the cost of supplies to Pakistan becomes more attractive and competitive. Also, energy supply rate from exporter currently agreed at Rs. 5.00 per unit and Afghan Transit charge of Rs.1.5 per unit should be re-negotiated to a more reasonable and acceptable level. At least, there should be no escalation in energy charge. It should be a fixed price contract in USD. Also, the government should ask promoters of the Casa-1000 project to subsidise 1,200km transmission line and reduce export price of energy and transit fee to Afghanistan, the commission urged.

Expressing serious reservations about the safety and security of Casa-1000 project, the planning commission said that Afghanistan is probably not interested in the project which makes the project very risky and may result in lack of interest in securing the transmission line. The reason of lack of Afghan interest in the project also indicates the bad economics and risk profile of the project. Also, at present the country is being supplied energy at 3.5 cents/kWh from Tajikistan, and from Iran at 4 cents/kWh (including aid of 1 cents/kWh), and from Turkmenistan at 3 cents/kWh, while Pakistan has signed energy supply agreement at two times high rates.

On the other hand, National Transmission and Despatch Company Limited (NTDCL) in its response submitted with NEPRA made it clear that the energy supply (US Cents 5.15/kwh) and

transit fee (US Cents 1.25/kwh) was negotiated and finalized by the Governments after number of meetings. "At this stage it cannot be reopened as it is agreed position between the parties. However, transit fee is always a Government to Government affair and respective Government can reconsider it," NTDC said.

About the project's feasibility study, NTDCL said that several assumptions made in the feasibility study have now been changed in the signed documents (the PPAs and Master Agreement) and most of these changes have enhanced the viability of the CASA-1000 project. Also, the energy cost is one per kwh basis and the buyers would be required to pay for only the energy despatched and recorded by the meters (i-e., there are no fixed payments).

The NTDCL in its response further declared that the Afghanistan Transit Charge of US cents 1.25/kwh and Tajikistan Transit Charge of US cents 0.10/kwh have been fixed after several rounds of negotiations and in return to this fee, Afghanistan and will assume security responsibility during construction and operation of CASA project and its assets during their respective jurisdictions.

Regarding project viability and transparency, the NTDCL said that the World Bank and Islamic Development Bank are the lenders of this project. These banks conduct their own due diligence regarding project viability and transparency.

Planning Commission is of the opinion that CASA was conceived to provide alternatives to Pakistan obviating the need of gas import from Iran. With changing political environment and prospects of lifting of restrictions on Iran, the rationale for such projects may lose its appeal. In addition, Chinese; have also offered electricity exports via Khunjerab under CPEC program. Although such an offer is at an initial stage and feasibility study is yet to be carried out, Chinese energy may not suffer from risks and instability issues as compared to CASA1000 due to Afghanistan factor. "No wonder, project of CASA-1000 has been gearedup knowing to Chinese offer," Planning Commission said.

It is worth mentioning that CASA 1000 transmission project has been proposed to transmit 1,300 MW of surplus hydel power generated in the central Asian states i.e., Tajikistan and Kyrgyz Republic through Afghanistan to Pakistan. The total distance covered by these transmission lines is 1200 km. The full CASA-1000 transmission lines will move electricity at high voltages between the Kyrgyz Republic and Tajikistan (the first 477 kilometers) and from Tajikistan to Afghanistan and Pakistan (the next 750 kilometers). Each country will be responsible for construction of transmission line in its jurisdiction. The transmission lines covering a distance of 100 km from Pak-Afghan border to Peshawar are to be constructed along with converter station.■

By Sajid Aziz

Experts sound alarm! Pakistan to go dry by 2025?

Are we ready for drought like situation?

The Energy Update has carried many stories on water issue the most sensitive issue of the day. Many experts in the past too had sounded alarm about the looming problem of drying up of our water resources, most of them have been captured by India by building over a hundred dams on our rivers including Indus.

India has very aggressively against Pakistan to turn it a desert with the connivance of organizations like World Bank and enemies within like former Chairman, IRSA Jamaat Ali Shah, who helped India to build the dams on Pakistani rivers. He fled the country since the day he thought his connections with India have been exposed. He remains absconder since a few years.

Now very recently, the Pakistan Council of Research in Water Resources (PCRWR) has warned that the country will approach absolute water scarcity by 2025. It's not a joke as many experts on the subject have warned Gen, Musharraf, PPP and PML-N governments about the drought like situation in Pakistan that approaching fast as PCRWR has feared that Pakistan will go dry in little over a decade from now on.

Are we ready for situation wherein we would be searching for water like drought stricken countries?

In its report the PCRWR says that "Pakistan touched the 'water stress line' in 1990 and crossed the 'water scarcity line' in 2005.

If this situation continues, then chances are high the country will face acute water shortage or drought-like situation in the near future", the study predicts.

Water scarcity is the 'biggest threat' to Pakistan and to deal with the upcoming situation, there is a need to carry out research at various levels to find out the best possible solutions. "Unfortunately, the PCRWR has no funds to ensure sustainable research".

The PCRWR is an apex body of the S&T Ministry responsible for carrying out, coordinating, organising and promoting research in various aspects of water resources. The fund also aims to focus on water scarcity for agriculture and poverty alleviation by carrying out surveys at various levels without wasting time to obtain PSDP funds, the documents state.

The primary source of funds shall be from the income of the proposed endowment funds and the savings out of the research projects awarded by the international and national donors to the PCRWR with the seed-money of Rs50 million coming from the government.

Many oter experts have stressed the government to turn its attention to the availability of water.

Pakistan shares this crisis with a number of other countries. For several of them, including Pakistan, the changing climate is affecting water availability. A new report from the World Bank, High and Dry: Climate Change, Water, and Economy, suggests that by 2050, "an inadequate supply of water could knock down economic growth in some parts of the world by as much as six per cent of gross domestic product, sending them into sustained negative growth." China, India, Pakistan, the Middle East and much of Africa will be seriously affected. The African nations may enter the negative growth territory. "When we look at any of the major impacts of climate change, they one or way or another come through water," says Richard Domania, the lead author of the report.

There are a number of ways in which climate change affects water supply. All of them are relevant for Pakistan. It has been established that the Earth is warming more rapidly than scientists thought would occur because of the build-up of carbon dioxide in the atmosphere. Warmer temperatures can cause more evaporation from land which comes back to the ground in the form of rain. Global warming is also altering the flow of air which may result in severe droughts.

The World Bank report says that 1.6 billion people already live in nations that are subject to water scarcity. This group of countries includes Pakistan. Depending on the precise definition of the concept, other research has put that number even higher, up to four billion people who could be affected by water scarcity during at least some part of the year. Using its own definition, the World Bank fears that the number of people living with potential water threats will double over the next two decades. South Asia, Africa and the Middle East will contribute to this likely increase in the number of people likely to be hurt. "Growing populations, rising incomes, and expanding cities will converge upon a world where the demand for water rises exponentially, while supply becomes more erratic and uncertain," writes the World Bank. The Bank believes that in the next 30 years, "the global food system will require between 40 to 50 per cent more water, municipal and industrial demand will increase by 50 to 70 per cent, the energy sector will see water demand increase by 85 per cent, and the environment, already the residual claimant," may need more. Given these projections, what should be the policy response in Pakistan?

These challenges are not insurmountable, however, and smart policies that induce water use efficiency, align incentives across regional and trading partners, and invest in adaptive technologies can go a long way toward reducing or eliminating these negative effects. Since much of the water Pakistan uses comes down in the Indus River system, the country has to work with India, the upper riparian, to ensure steady flow. This is one area where the two countries were able to work together and agree on a water-sharing agreement. The 1960 Indus Water Treaty signed by President Ayub Khan and Prime Minister Jawaharlal Nehru has survived two wars between the two nations.

There are both differences and similarities in the power and water crises. Both are hurting the economy, both should be tackled by strategies that focus on the long term, and both are hurting the poor more than the well-to-do. Once the government turns its attention to managing the water crisis, it will have to adopt an approach different from the one used for tackling the power shortage. The focus in that case was on the supply side. But there is a major difference between the two sectors. Potentially, the supply of power is unlimited. That is not the case with water. There has to be greater focus on managing more efficiently the available supply. It is well known in Pakistan that much of the available water is wasted. Most of the water is used in agriculture where those who use it pay very little. The cropping pattern favours water-intensive crops. For instance, sugar cane cultivation uses a great amount of water but notwithstanding that, public policy favours its production ■

By Max Bearak

Tackling with deforestation, a hard nut to crack

Pakistan fast losing its precious forests

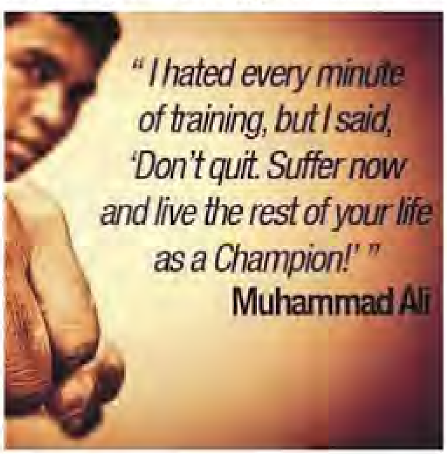
The country's hills were once home to endless stretches of pine and fir, but these days Pakistan's forest cover is somewhere below 2 percent. In the United States, that number is roughly 33 percent and in India 23 percent.

In an ambitious plan to counter this deforestation, which ecologists say is a major cause of deadly landslides, the government of a province along Pakistan's restive border with Afghanistan says it is a quarter of the way to a goal announced last year: planting 1 billion saplings. The so-called Billion Tree Tsunami campaign was recognized by the Bonn Challenge, a global partnership of forestry ministries to regain green cover.

Landslides killed 140 this April alone and destroyed hundreds of villages in northern Pakistan. Trees' roots help to keep soil in its place. Without them, hillsides more easily erode, and heavy mountain rain can bring whole slopes down - trees, boulders and all.

"The KP government has committed to not only reversing the high rate of deforestation but also shifting the current philosophy of treating forests as 'revenue' machines towards preserving them as valued 'natural capital,'" Malik Amin, an environmentalist who advises the government of Khyber-Pakhtunkhwa province.

"Timber mafias," as well as Afghan refugees and local themselves, have chopped down immense swaths of forest. Many in Khyber Pakhtunkhwa (once known as Northwest Frontier Province) don't have electricity, or don't get it regularly, and use wood fires for lighting, cooking and warmth. The so-called mafia refers to those who cut trees without a permit, and allegations that politicians engage in that business are common in Pakistan.



The provincial government has reportedly given $150 million to the project, which has raised 250 million saplings, and is shooting for a billion. To put that in context, a forestry expert interviewed two years ago by my colleague Tim Craig, The Washington Post's Islamabad bureau chief, said that Pakistan needs to plant between 1.5 and 2 trillion saplings to reverse the deforestation since its independence in 1947.Besides the fact that a billion trees may actually be insufficient, some ecologists have said that the provincial government, which is controlled by Pakistan Tehreek-e-Insaf, the party of populist politician and former cricket star Imran Khan, has mismanaged the project and the benefits will be scarce.

"Undoubtedly, the tree plantation campaign is a wonderful initiative, but our main concern is that the PTI-led government has identified wrong species for wrong places," Lal Badshah, an ecologist and assistant professor in the Botany Department at the University of Peshawar told. Non-native species, he said, could negatively impact surrounding flora, and birds were unlikely to use the trees for nesting.

Locals have complained to Pakistani media that the whole program puts them at an economic disadvantage. The region is one of Pakistan's poorest, and many rely on what's left of the forest for income. If they couldn't cut the trees for wood, some said, then new trees should produce fruit, which could be sold to buy wood. Reports indicated most of the trees in the "tsunami" would be pines.■

In order to confuse students, teacher decided to ask weird question.

He asked if aero plane is flying at the speed of 3000km/hour, train is moving at the speed of 160km/hour and car is having speed of 100km/hour, what is my age?

There was total silence in the class but one student got up and said, '40 Years, sir.'

Teacher was surprised and said, 'that is right but how did you reach to this conclusion? '

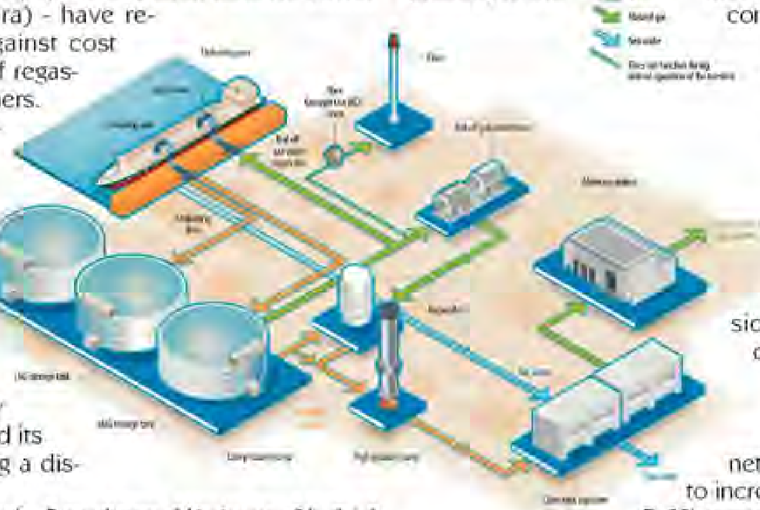
Boy got excited and said, 'sir, my brother is 20 years and people call him half mad

By Khaliq Kayani

LNG: 'cheapest' turns costlier

The decision making on the pricing and supply chain of liquefied natural gas (LNG) continues to remain cloudy even though the product has been in the system for more than a year now. When LNG import was originally taken in hand, it was approved by the federal cabinet as a cheaper replacement in power generation to expensive furnace oil. Then ministers were on record saying LNG, without being 15-20pc cheaper than furnace oil, import would be useless.

As things progressed, this was not the case to be as the government structured price factors. The two regulators - Oil and Gas Regulatory Authority (Ogra) and National Electric Power Regulatory Authority (Nepra) - have repeatedly held opinions against cost buildups to the end price of regasified-LNG (RLNG) to consumers.



As things stand now, RLNG-based power generation cost is significantly higher than furnace oil based power production. Although Nepra had to approve these costs to the monthly consumer tariffs as fait accompli, it has publicly criticised the government and its power companies for doing a disservice to poor consumers.

As if that was not enough, Petroleum Minister Shahid Khaqan Abbasi boasted before a gathering of foreign diplomats, businessmen, anchors and analysts that Pakistan had secured the lowest LNG price in the world. Perhaps, his advisors had taken him for granted as he finalised plans to increase current LNG flows from around 400m cubic feet per day (MMCFD) to 2,000 mmcfd (2 BCFD) by mid-2018.

His cabinet colleague Khwaja Mohammad Asif, the minister for water and power, could not explain why if LNG was the cheapest, Nepra was criticising its power generation for being costlier than furnace oil. "I cannot speak for Nepra", was his reply.

The fact of the matter is that High Sulphur Furnace Oil (HSFO) does not need any processing before it is dispatched for consumption at a power plant. LNG, on the other hand, after import and discharge from the tanker is to be re-gasified at a cost of \$0.66 per MMBtu. For example, the C&F price of HSFO in March was \$4.41 per MMBtu. The DES (delivery ex-ship) price of LNG for the month of March 2016 as reported by PSO was \$4.85 per MMBtu, after adding \$0.66 it comes to \$5.53 per MMBtu which is 24.71pc more than the price of HSFO.

Recent data shows the price of HSFO has been lower than the price of LNG. On ground, therefore, it seems that we are replacing a cheaper imported fuel (HSFO) with a more expensive imported fuel (LNG). This means that electricity prices are not going to come down if the HSFO is replaced by RLNG in the power stations. If we were to replace High Speed Diesel with RLNG in the combined cycles gas turbine stations (like Saif, Sapphire, Orient and Halmore power plants) only then would it make economic sense.

Here is a comparison of the prices of LNG imports for January to April by various Asian counties as reported by the US Federal Energy Regulatory Commission, along with LNG prices paid by Pakistan based on price circular issued by PSO. (See table)

Pakistan's rates are the highest in all the four months of this year. The end price of RLNG for April notified reached \$6.74 per MMBtu after inclusion of taxes and cost factors, \$6.69 for March, \$9.48 for February and \$10.45 per MMBtu in January this year.

As if these cost buildups were not enough, the ECC last week went beyond its jurisdiction to add another \$1.2bn per MMBtu cost to RLNG. For example, it ordered Ogra to charge actual unaccounted for gas (UFG) losses (about 11-12pc at present) to the RLNG price and \$0.025 per MMBtu commission to SSGC.

This is despite the fact that determination of both UFG and margins are outside the purview of the ECC or even the cabinet; for being the original jurisdiction of Ogra under the Ogra Act. Mainly because of this original jurisdiction of Ogra and various court decisions, the UFG for natural gas consumers continues to be 4.5pc in consumer tariff despite past ECC directives to jack them up, to turn gas utilities net losses into profit. An attempt to increase the UFG to 7pc had led to Rs82bn accountability cases currently being faced by a former Ogra chairman and former PPP prime minister Yousaf Raza Gilani.

Also, the ECC decision to allow \$1.45 per MMBtu processing charges to Engro Terminal instead of the 66 cents per MMBtu allowed by Ogra, and as approved by the federal cabinet, is beyond its legal powers unless approved by the federal cabinet once again. The cost jack up is also a question mark when a subsequent LNG terminal has attracted 44 cents per MMBtu processing charges; which too is contested by another disqualified bidder who is reported to have offered a much lower price.

The levelised processing charges could be increased but only by the federal cabinet because the original decision rates were approved by the cabinet. Nevertheless, these costs buildups will only add to the input costs of electricity, fertiliser, industry and the general consumers.

At a public hearing on May 26 led by Nepra's Vice-Chairman Himayatullah Khan, the Central Power Purchase Agency (CPPA) had put on record that furnace oil based power generation continued to be cheaper than gas based generation because of imported regasified liquefied natural gas (RLNG) factor.

The furnace oil-based generation had dropped by 13pc in April against 10pc increase in RLNG based power production. Mr Himayatullah was displeased that consumers were denied a relief of Rs4bn in April by not utilising furnace oil based plants and instead were producing energy from RLNG.

The CPPA reported that furnace oil based power generation cost stood at Rs5.38 per unit in April compared to gas based costs of Rs5.73 per unit where local gas based generation was less than Rs4 per unit.■

courtesy: Daily Dawn

By Mustafa Tahir

Pakistan facing 5 GW shortfall of energy

Solar energy would be a major source of electricity in Pakistan soon - Zhang Yan

An interview with Zhang Yan, Head of Jinko Solar, Pakistan

EU: How long has your company been engaged in the field of solar energy?

Zhang: We shifted our focus towards renewable energies in 2012. This is because, on the one hand, this sector is experiencing rapid growth and on the other it is urgently needed in our country. Demand is constantly rising. My goal is now to further expand our positive reputation in the market and also utilise our knowledge and expertise for other sectors.

EU: What were your first desert module projects?

Zhang: Our first project was commissioned in December 2014 and was compelling from the very beginning. It concerned a 10 kW facility. This was followed by a private system of 3 kW and then an 8 kW facility as well as a further facility providing 10 kW. We began in Lahore. We have now been an authorised distributor for many companies since January 2015. This represents another milestone in our company's history. Our aim now is to not only be active regionally but also across the whole country. We have accredited distributors throughout Pakistan who we are working with. This will establish Jinko as a reliable, well-known brand in entire Pakistan.

EU: How many DESERT panels have you already installed?

Zhang: In a relatively short period of time, outside the 'season', we have already constructed systems amounting to 30 kW. A further 150 kW are currently in the pipeline - these will come online in the course of upcoming months.

EU: What are your future plans?

Zhang: We want to expand our marketing activities in great manner and above all utilise social networks, messaging platforms as well as chambers of commerce. We aim to make our company, our philosophy, DESERT technology and the quality of Jinko products well known throughout Pakistan. This is why we are also organising road shows in order to raise awareness. And we are putting all our energy into this. So far we have only been involved in the government sector; this should now change. I am convinced that both sides will benefit from this. In all of this, we wish to uphold our entrepreneurial tradition, our philosophy of friendliness and appreciation of the customer. That is because this forms the strong foundations which I took over from my father. I intend to continue to move in this direction and lead our company to a bright future.

EU: Your views about Energy policy in Pakistan, positive outlook for solar energy?

Zhang: Currently, fossil fuels account for the largest share of electricity supply at over 60 percent; second place is

claimed by hydropower at 30 percent. Yet between what is known as peak demand and what the power plants can maximally supply, there was once a shortfall of around 5 gigawatts in Pakistan. The consequence was that power in the country would often be (and often still is) simply switched off - resulting in negative implications for living conditions as well as economic growth.

The government has set itself the goal of closing this supply gap by 2018 and substantially increasing the share of renewable energies. Photovoltaics shall also be used to cover the demand for energy, since rural areas in Pakistan are often not connected to the power grid. The regulatory body for energy, NEPRA, has therefore introduced a feed-in remuneration scheme for solar energy, divided among the regions. However, this scheme has also faced some criticism from energy experts. Patrick Thoma: "The conditions are not easy, but we see great potential for our developments and expertise in Pakistan. We also have a strong and reliable project partner for Pakistan in Royal Trading."■

Solar JinKO
Building Your Trust in Solar

Trade and investment is one such area where Australia and Pakistan need to work together

Australia may become major supplier of LNG to Pakistan

Margaret Adamson
Australian High Commissioner to Pakistan

"Bilaterally Australia and Pakistan are very good friends as the friendship reaches back many decades. Indeed our friendship is on a person-to-person and people-to-people level. We understand each other very well. We are both fellow members of (British) Commonwealth. We both play Cricket and Hockey. But trade and investment is one such area where we need to work to build this part of our relationship to a much better level".

The Australian High Commissioner to Pakistan Margaret Adamson stated this as the editorial team of Energy Update interviewed her in detail in order to know her vision and understanding of Australia-Pakistan relationship in areas of socio-economic, trade and investment where both countries could forge much stronger and prospering ties. The editorial team of Energy Update interviewed the Australian diplomat as she was in Karachi as part of the festivities of Australia Day in spring as this year's theme was engaging youth. According to the Australian High Commissioner, the Australian High Commission decided on this theme because of demography of Pakistan. She said that Pakistan has a very vibrant and young demography as Pakistani youth will play an important role in future in taking the country forward in terms of its exclusive and sustainable economic development. Here are some important excerpts of her interview with Energy Update:

By Naeem Qureshi

Energy Update: How Australia and Pakistan can grow their relationship in trade and business sectors?

Miss Margaret Adamson: We (Pakistani and Australian) are complementary economies. We have similar climatic conditions as both countries need to adopt sustainable approaches for water management. Then there is importance of agriculture in both the countries. All of these areas we see as opportunities to build our trade and investment relationship. But these are also areas of our support particularly in terms of education, agriculture, water, energy sectors including alternative and traditional forms of energy. Then in the energy sector, mining and infrastructure development are two areas where Australia could provide cooperation. These are the areas where we see good understanding between Australia and Pakistan. All of these areas we see as opportunities to work together.

EU: What progress you foresee between Australia and Pakistan in education sector?

Miss Adamson: We have strong engagement in education sector and that links to youth very directly. Australian government for decades has also been providing modest number of scholarships for foreign students. But many Pakistanis are choosing anyway to travel to Australia to study because of quality of Australian education that is delivered is world class. But what we are also seeing is partnerships between vocational and technical educational institutions there in Australia and partner institutions here in Pakistan. We are seeing a very strong interest in these kinds of partnerships because not everybody wants to go to university and instead interested in getting vocational training for becoming a skilful person.

I am aware that young Pakistanis travelling to Middle East to take up employment there. This is very important economic and social engagement as well. We hold here in Karachi the other evening a Pak-Australia business forum event in collaboration with Australian Trade Commission where we promoted the stories of young entrepreneurs that have a connection with Australia as well as we are promoting these kinds of connections because we feel that trade and investment area of our bilateral relationship could grow.

EU: How many Australian companies are working in Pakistan at present?

Miss Adamson: Very few (companies) at the moment. One of our major companies is in infrastructure and energy sector and is indeed present through its subsidiary companies in Islamabad and in Lahore. This company actually commenced its presence in Pakistan by an oversight operation being the quality control engineering company over sighting construction of motorway between Islamabad and Lahore. They have been here ever since as they are engaged in the whole array of projects in infrastructure whether that be in water sector, that be further road construction and in other engagements as well. One of its (Australian company's) subsidiary companies is engaged in traditional energy sector. They provide us a good example how one can successfully invest and operate in Pakistan.

EU: What are other areas where Australian companies can invest?

Miss Adamson: It is exciting to see uptake of alternative energy sector here in Pakistan whether that be in solar, wind, or some other areas. We speak about mining. I wanted to take note of this huge sector. Australians are actually at the apex being the world class indeed in entire mining sector. So any prospective international partner is not necessarily required to be associated just with the core mining function only so to extract the mineral deposited underground. It can be any associated part of that entire mining enterprise to do the investment. All of these areas are potentially opportunities for different Australian companies to invest whether one is talking about construction of a dedicated rail link for example from a mine to the point of next logistical hub.

Now we are moving towards a totally different sector. We have in Pakistan 75,000 dairy heads or cows. Major pillar of dairy sector in Pakistan is built on Australian cows that are crossbred actually from some stock coming from Pakistan. So they (Australian cows) are very well suited to climatic conditions of Pakistan. So question is where Australia can add value to these priorities in Pakistan. We are one of the aggressive agricultural traders in the world. Just like the mining sector we are at the top tier in the agricultural trade sector as well.

Our aid programme is one of a very modest scale but we connect with vision 2025 of Pakistani government. In the aid programme we have worked with Pakistan for decades now in agriculture sector and water-based research. So there is another level, building Pakistan's capacity for high level research.

EU: Tell us about Australian aid programme for Pakistan?

Miss Adamson: Our aid programme is one of a very modest scale but we connect with vision 2025 of Pakistani government. In the aid programme we have worked with Pakistan for decades now in agriculture sector and water-based research. So there is another level, building Pakistan's capacity for high level research. A number of Pakistan-based alumni have come back here from Australia after studying there in various agriculture-related disciplines. Now they are teaching in your universities or continue to do collaborative research with Australia or indeed with other international partners.

For a more recent stretch of a project, we worked in value chain for mangoes and citrus fruits here in Pakistan. As a result of this engagement with farmers in Pakistan for ten years right from farm gate till exporters, we have developed the capacity of Pakistani mango sector to become a much stronger exporter of the country. So Pakistani mangoes are heading out and moving towards the world market place, winning a place for brand Pakistan, which has gained a positive thing for soft side of Pakistan. It is not just selling more mangoes but selling more Pakistan. We also import Pakistani mangoes for Australian market, which is a nice bilateral thing between the two countries.

We are moving towards another phase of this agricultural support to Pakistan into a project, which will be supporting dairy/meat and other related high value products. In horticulture sector for example, we can build up the capacity through this value chain process. Our aid programme is pro-poor and pro-women. When one comes to agriculture sector, it is incredibly important employers of Pakistani work force and incredibly employer of women. So we are very much focused on these sectors as well as on the community. We want to build their livelihoods but also on the other hand, you have to have a value chain approach.

Pakistan is the 5th largest dairy producer in the world. Now just imagine with higher efficiency of dairy farming here in Pakistan and what an export opportunity this prospect offers for Pakistan. This opportunity not only covers the dairy products but also the associated meat products. Think about the market right next door in Middle East for example and elsewhere in the region.

EU: Tell us about importance of foreign and regional assistance Pakistan is getting in trade and business sectors?

Miss Adamson: You must know this region in global terms, as we talk about regional economic integration this region is the least integrated region in the world. This fact underlines importance of the effort currently under way to build the connectivity between regional countries so we can facilitate and build much stronger trade between regional countries. Pakistan is already a big market and a growing middle class and to attract international interests to this area of the world, getting investment and trade, and to get this regional connectivity going is a very positive thing.

I have observed since the time I have been here, growing number of delegations arriving here from outside the country. So

I don't just see what Australians are doing and taking interest in opportunities of Pakistan. I also take an interest where the delegations coming from, either the delegations coming from various EU (European Union) countries, Japan, or America arriving here to take a look at the investment and trade opportunities present here. With this regional dynamics underway and hopefully with continued improvement in security situation, then overall competitiveness of Pakistan would surely increase as a place to invest and to do business with prospects of growth.

EU: What is your opinion about China Pakistan Economic Corridor (CPEC) being built here?

Miss Adamson: The large scale of infrastructure is envisaged in the CPEC project as the corridor gets under way. Potentially it is an important building block of the important infrastructure of Pakistan. It will not happen overnight. Such projects entail very large investments. It is very substantial investment that is promised under the project. As I understand, it focuses on energy, again a very important requirement for any business in Pakistan whether local business or foreign business.

Look the way the CPEC could change overall attractiveness of Pakistan as a place to invest. I also anticipate the CPEC itself can attract international companies here as part of construction projects included in the corridor programme. So just the process of corridor getting under way should broader the number of international companies present here in Pakistan.

EU: Tell us what could be role of Australia in energy sector of Pakistan?

Miss Adamson: Australians have technology and competitiveness in the mining sector and other forms of energy. Australia is about to become global supplier of LNG (Liquefied Natural Gas). Right now in Perth, Western Australia, the global LNG moot i.e. LNG-18 is currently happening that takes place after every two years. That is a massive conference wherever it is held. Indeed this will draw attention towards Australia as an upcoming supplier of LNG. I do think that LNG will be an important part of Pakistan's energy mix. Australian foreign minister when she was here last May said that Australia would very much like to become supplier for Pakistan's LNG needs.

But I am also conscious that indeed it is not just traditional forms of energy production. Like Australia, Pakistan does not lack sun, we may both lack water. In terms of solar and wind energy, why not we both launch some collaborative research in these areas of alternative energy. Perhaps research collaboration in the arena of alternative energy sector could be forged with other countries as well. In this regard, wind is playing an important role in energy production in Australia.

EU: What are the salient features and importance of Australian aid programme for Pakistan?

Miss Adamson: Australian aid programme is providing funding for civil society partners. We are primarily working with other international partners particularly the UNO, the World Bank for example. We are working with a whole array of partners here. Sometimes there are also bilateral partners already working here in Pakistan. So we work in cooperation and consultation with Pakistani govt in terms of priorities under Vision-2025. We are also in touch with broader donor community.

So we are focusing on investing in Pakistani people so to provide them education, water, health, and agriculture sectors' support facilities to build the capacity to grow at national and provincial levels for the sake of stronger governance. But indeed it is an aid programme on a modest scale.■

Largest European energy company Eon/UNIPER Commodities entering in Pakistan

GASTECH international

uni per

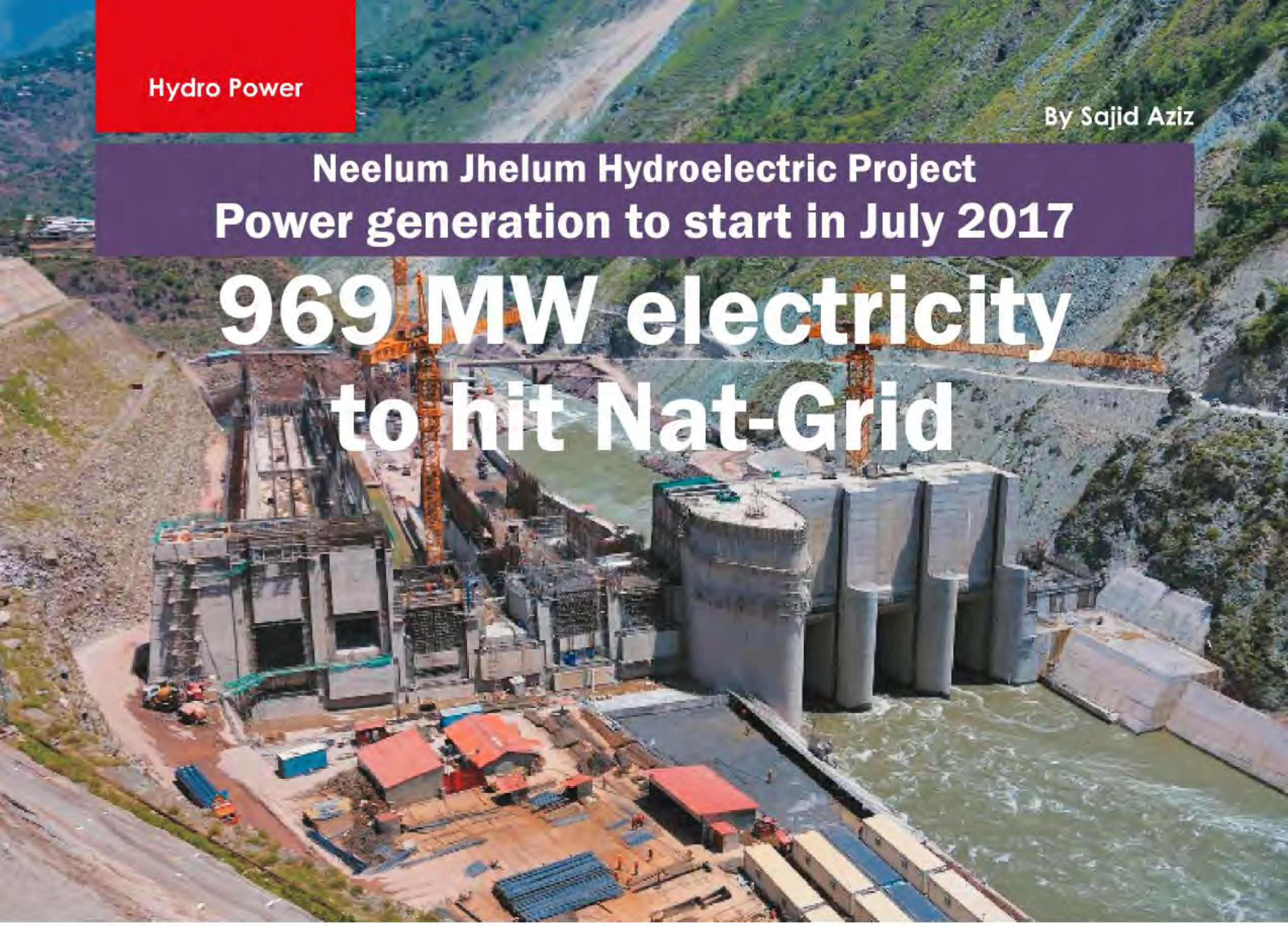
Under the strong commitment to serve Energy sector of Pakistan and the Vibrant performance of DEA group of companies (the Whole World of Energy Sector). DEA group of companies has announced through the platform of Gas Tech International have signed the agreement with largest European Energy giant Eon with its wholly owned subsidiary Uniper global. Uniper a combine balanced portfolio of technologically advanced large-scale assets with outstanding technical and commercial expertise. Gas Tech International and Uniper will both geared to contribute to social and economic development of the country in Energy Sector(LNG and Coal/Freight) .Uniper is world's leading LNG and Coal supplier and with the projects coming up in Pakistan , they are geared to support the project effectively. Further their value added Third party services will greatly benefit the Power plant operating in Pakistan with more effect manner. Uniper will be our partner in all potential projects and beyond for strong market penetration.■

GOIC signs a Memorandum of Understanding with ASTM

The Gulf Organization for Industrial Consulting (GOIC) signed a Memorandum of Understanding (MoU) with ASTM, globally recognized leader in the development and delivery of international standards and technical information. The MoU aims at fostering cooperation and coordination between the two entities to support Gulf industrial sector.The MoU was signed at GOIC's headquarters in Doha, Qatar. HE Dr. Ali Hamed Al-Mulla, Assistant Secretary General for Industrial Projects Sector signed on behalf of GOIC Secretary General Mr. Abdulaziz Bin Hamad Al-Ageel, and Mr. John Pace, Vice President of Publications & Marketing signed for ASTM.

Furthermore, its objective is to provide online access to all ASTM standards, all journals, eBooks, proceedings, bulletins, materials, research, standards and eLearning courses.

The MoU also explores potential collaboration in the areas of training, proficiency testing programs and other related products/services (new or existing) and to support GOIC events, conferences and exhibitions through the use of the ASTM brand, marketing channels, participation and experts.■



Hydro Power

By Sajid Aziz

Neelum Jhelum Hydroelectric Project
Power generation to start in July 2017
969 MW electricity to hit Nat-Grid

Neelum Jhelum Hydroelectric Project is a world class underground facility of immense national importance, located in vicinity of Muzaffarabad (AJ&K) with an installed capacity of 969 MW. The project envisages the diversion of Neelum River water through a Headrace Tunnel (HRT) 28.5 km and after producing power, out-falling into River Jhelum.

A Composite Dam (Gravity + Rock Fill) 160 m long and 60 m high is being constructed on River Neelum at Nauseri 41 km north east of Muzaffarabad. The HRT is accessed by eight (8) Adits for removal of excavated spoil and other works. Powerhouse Complex is located near Chattar Kalas, 22 km south of Muzaffarabad.

Neelum Jhelum Hydropower Company (NJHPC), a Special Purpose Vehicle (SPV) constituted as a subsidiary of WAPDA, is the executing agency of the project on behalf of WAPDA and Govt. of Pakistan.

A Joint Venture of five International and National firms has been engaged as Neelum Jhelum Consultants (NJC) comprising the following:-

- Montgomery Watson Harza (USA), Leading firm
- NORPLAN, Int. (Norway)
- National Engineering Services (NESPAK), Pakistan
- National Development Consultants (NDC), Pakistan
- Associated Consulting Engineers (ACE), Pakistan

M/s NJC has primary task to review the detail design and supervise the construction activities of the Project.

A Panel of Experts (PoE), comprising two Civil and one Electromechanical experts, has been engaged by WAPDA / NJHPC to examine the ongoing construction activities of the Project.

Construction Contract was awarded to a Joint Venture of China Gezhouba Group of Companies and China Machinery Engineering Corporation (CGGC-CMEC) at a cost of Rs. 90.90 billion and construction work on the project commenced on January 30, 2008.

Construction activities are at the critical stage, with day and night working in shifts, being simultaneously executed on all sites. The progress at Dam Site is 82% and 63.9km (93.12%) of tunnels have been excavated. 18.43km out of 26.64 km of HRT Concrete Lining has been completed (69.19%). The Powerhouse has been excavated 100% and concrete work (98%) is in progress. EMH equipment is being installed at all four Units.

Physical progress of the project completed by 82% and financial progress achieved at 64.1% (as per 3rd Revised PC-I 2015).

(Expenditure: Rs. 259 billion (including IDC) against approved

cost of 3rd Revised PC-I

The progress at Dam Site is 82%.For the construction of the Dam at Nauseri, 3rd Diversion of River Neelum has successfully been completed as planned. All three Radial Gates have been installed. (85 % progress). For the construction of Desander and Collecting Canal 100% excavation work has been completed. Intake structure and Inlet Portal of Head Race Tunnel (water inlet to the tunnel system) is in progress.

1,04 7,779m3 (78.46%) out of 1,327,773m3 concrete (Conventional and RCC) has been poured in Dam and allied structures. 5.38km out of 10.5 km (51.17%) Concrete Lining of HRT has been completed at C-1. Work on debris channel and rock fill dam is in progress.

A dedicated steel lining factory has been established at site for fabrication of steel cans. 96 Nos. steel cans have already been fabricated- total 122 cans are required.

Four steel cans have been shifted to the site. The engineer has finally determined the final length of steel liner (2 x 732 m) during the month of May 2016.

First ever experience in Pakistan, two tunnel boring machines (TBMs) have been deployed on the project for demining the most critical reach of HRT (20 km). The balance of the work as on 27 June 2016, TBM 697 is 922m and TBM 696 is 2835m and work will be completed by September 2016 and January 2017 respectively. TBM 696 is still in high over burden area and is facing five rock bursts on daily basis.

100 % powerhouse excavation and 98% concreting have been completed. EMH equipment is being installed. Unit # 4, 3 and 2 have reached at final level of 600.50 m and EMH equipment is being installed with full pace. Unit No. 1 has reached deck level (592.76m). 100 % Transformer Hall has been excavated, 99% concreting completed and 13 x 78 ton x 97 Mva transformers have been brought at site. Transformer Hall is being painted. Vertical surge shaft (353 m depth) has been successfully excavated. Concrete work is in progress; completion 18th December 2016. Penstock Steel Cans (108.864m length) have been placed in position in all four units and backfill concreting is in progress. Installation of Draft Tube Pieces & Embedded components of Bonneted Gate completed in all four units. Tailrace tunnel excavation completed upto 99%, benching and invert concrete laying in progress, Outlet structure concreting is 90% and overall progress is 68%. 3.3 km out of 3.4 km (97.9%) Concrete Lining of HRT has been completed at C-3.

Keeping in view the construction and financial challenges being faced during the project execution, the project stakeholders/WAPDA have agreed to Start Wet Testing of the Units by 31st July 2017.■

About 250 micro-level hydro projects to be operational by 2016-end

About 250 micro-level hydro projects, executed through community based local institutional mechanism, will become fully operational and start providing electricity to some 24,000 people in hilly areas of Khyber Pakhtunkhwa by the end of 2016.

This was disclosed by heads of various non-governmental organizations working on the construction of hydro projects while addressing a joint press conference at Peshawar Press Club. Contractors headed by Fazal Rabbi, chief executive officer of Hydrolink Engineering and Equipment Company (Pvt) limited sharing work experience with communities, said that people living in the remote localities of in Chitral, Dir and Batgram districts had highly welcomed launching of the micro-level hydro projects as they did not have power supply since independence of the country.

He said it was extremely sad situation that power supply lines had passed through different localities but some villages in the districts were not given the facility of electricity for unknown reasons.

The micro-level hydro projects, he said, were not less than blessing for the hitherto neglected localities.

Appreciating the Khyber Pakhtunkhwa government, Rabbi said that the hydro projects would help tap the water potential and enable people to get electricity on low cost to increase their income. Besides the people reduce dependence on imported fuel (kerosene) and would protect their forests.

He said that the hydro projects were more useful for local people as it was low cost from Rs2 to Rs4 per unit decided mutually by the local community.

"We, being the implementer, are confident that by the end of 2016 about 250 MMHPs will become fully operational and start providing electricity to some 245,000 mountain people through community-based local institutional mechanism.

The NGOs/construction firms, he said, were working with Pakhtunkhwa Energy Development Organization (PEDO) under close supervision and vigilance of Energy and Power (E&P) Department of Khyber Pakhtunkhwa since 2014, saying that the 356 MMHPs were purely government-funded community empowerment and participatory project working successfully."

"We have so far found PEDO's new management and E&P Department fully committed and working hard in reforming and transforming PEDO into self sustainable institution that will not only fulfil the provincial energy demands but also contribute to the national energy security," he claimed.

They were initiated in China and successfully practiced in Switzerland, Nepal, Indonesia, Sri Lanka, Bhutan and others with government support.

However, in Pakistan, the KP Government has for the first time initiated these MMHPs projects. He disclosed that the 356 MMHPs progress had suffered due to some initial challenges but the new management overcomes them in time. However, the overall progress and quality of work has no precedent.

The projects are very closely and regularly monitored by PEDO, E&P Department and provincial monitoring and evaluation (M&E) directorate. The quality of work has remained exemplary as compared to the costs. The progress has now been expedited after the removal of the procedural and technical hindrances■

Milestone achieved

By SHAHID IQBAL

Neelum-Jhelum power project gets record Rs100bn financing

A consortium of 16 banks has arranged Rs100 billion sukuk for the Neelum-Jhelum Hydropower Project in what is the country's biggest ever funds mobilisation for a public sector entity.

The National Bank of Pakistan (NBP), which leads the consortium, has the largest share (of around Rs35bn) in the funds being raised under Shariah-compliant tool.

Mufti Ahsan Waqar, chairman of NBP's Shariah board, told Dawn that financial closure for the sukuk has been achieved and the bonds would be ready to trade on the stock market after completion of other formalities.

A signing ceremony for the financing agreement was attended by President and CEO of NBP Syed Iqbal Ashraf, Water and Power Development Authority (Wapda) Chairman Zafar Mahmood, Wapda's Member Finance Anwaarul Haq and Neelum-Jhelum Hydropower Company (NJHPC) CEO Muhammad Zubair, among others.

The NJHPC, which is managing the 969-megawatt project located in Muzaffarabad (Azad Jammu and Kashmir), has assigned the NBP the role of 'mandated lead arranger' for the arrangement through issuance of rated, secured and privately placed sukuk to partially finance the construction.

Pakistan has struggled to attract foreign investment in the power sector, particularly for the hydroelectric projects which have vast scope for investment and profitability. However, the response was not positive except China which has agreed to invest in Pakistan's power sector under long-term loans for power generation.

Addressing the signing ceremony, Mr Ashraf said the sukuk was structured with a tenor of 10 years and was backed by the sovereign guarantee by the Government of Pakistan (GoP).

He said the bonds issue has received a preliminary rating of 'AAA' from JCR-VIS and is expected to have a wider impact on the financial market of Pakistan, helping augment a funding format that has been predominantly constrained to smaller deals with shorter tenors.

This sukuk is also expected also provide avenues for Islamic banks and mutual funds to invest their liquid funds in a tradable GoP-guaranteed Islamic instrument.

Apart from the NBP, other banks in the consortium are HBL, Allied Bank, United Bank, Bank Alfalah, Meezan Bank, Faysal Bank, the Bank of Punjab, BankIslami Pakistan, Askari Bank, Bank Al Habib, the Bank of Khyber, Dubai Islamic Bank, Pak-Brunei Investment Company and Pak-China Investment Company.

The Neelum-Jhelum project envisages diverting Neelum River water through tunnels which falls into Jhelum River after producing power. On completion, the project will be capable of producing 5.15bn units of electricity each year. This mega hydropower project has been undertaken long after completion of Mangla and Tarbela dam projects.

This 'green energy' project will fetch a total revenue of up to Rs50bn annually for Wapda as per existing tariff. The first turbine will start to operate by the end of June 2017.

Addressing the ceremony, the Wapda chairman said this was the biggest ever funds mobilisation for a public sector entity in the history of Pakistan. "Achieving this milestone reflects not only investors' confidence in the federal government and Wapda, but also indicates the potential of investment that hydropower sector offers," he said.

"This issuance... will go a long way in arranging funds for other hydropower projects as well to be initiated in the near future," he added.

"The project envisages 90 per cent construction work under high mountainous overburden and only 10pc above the surface. He said the construction work on the project is progressing at a fast pace and overall progress of the project is around 82pc so far."■

By Muhammad Usman Zafar

How to deliver mega projects on time

Mega projects - extremely complex ventures as opposed to major projects or projects - are endeavours that have multi-billion-dollar cost components and take a number of years to build.

They tend to be transformational for economies and their overall impact is felt by millions of people.They tend to transform the structure of a society in their area of impact as opposed to becoming a part of the overall economic scenario.

To take an example from the perennially shortage inflicted electrical sector, the 5400 MW Dasu hydropower project and the 4,500MW Diamer Basha project would be classified as mega projects as they would change the dynamics of the electrical sector, if completed as per schedule. This can be contrasted to a 425MW Nandipur Power Project, or 100MW solar project, which really does nothing to change the dynamics of the power sector apart from plugging in a part of the shortage.

It is estimated that about 8pc of global GDP is contributed by these complex mega projects which could take the form of anything ranging from infrastructure projects, oil and gas, communications, defence aircraft programmes etc. Given the economic footprint of mega projects it is impossible to ignore the fact that more than 90pc of projects run into cost escalations combined with time delays and this is something that has been valid over the last 70 years.

The practice for planning out mega projects has been a deterministic approach whereby managers assume factors for all variables that can impact a project as being static and driven in concrete timelines; commodity price, capital expenditure, interest rate, foreign exchange conversions etc. The implicit assumption is that the assumed base case figures are going to always materialise. Sensitivity analysis is done to define the limits of the variables within which the project will stay on track and within financial constraints.

However, the real world experience over several decades tells us otherwise: project delays cost overruns in majority of cases. This is true for both developed and developing countries. One just jneeds to look at state run organisations and projects in Pakistan to appreciate how endemic the problem is.

As Nassim Taleb argues, delivery of any project is a high risk, stochastic activity highly prone to black swans. The most recent example of this black swan is the oil price crash of 2014-15 which has stalled majority of capital expenditure in oil and gas exploration worldwide and put the industry in a survival mode.

The world is realising based on business evidence that the aggressive and subjective commitment to delivery in case of mega projects by executives and boards leads to negative outcomes. The world is not in anyone's control and cannot be modelled to perfection. So is there a way to improve our planning processes.

Management science suggests the use of Monte Carlo techniques and probabilistic analysis to develop an idea of the scale of uncertainty inherent in a project, and the negative outcomes that can possibly materialise. The application of Monte Carlo analysis to high risk, stochastic processes such as megaproject delivery extending over a number of years can tell us in probabilistic terms various financial and delivery metrics that management is normally interested in.

For example, as opposed to a capital expenditure figure of \$2bn for a hypothetical project, a Monte Carlo analysis can tell us that there is 40pc probability that total capital expenditure will exceed \$2bn. This alerts the management to be on guard for cost escalation and look proactively at inflation prone areas. Similarly this process can be applied to delivery timelines, revenues, valuation, cash flows, breakdowns, preventive maintenance among others.

Monte Carlo analysis is an extremely powerful tool in the right hands and as opposed to simple sensitivity analysis provides a full range of possibilities and allows the management to consider all events in the stochastic nature of project delivery. This ensures that the management is prepared for all eventualities and has contingency plans in place.

Pakistan is at a stage of further economic development that requires timely provision of infrastructural projects in such areas as power, education, health etc.

Given the state of current infrastructure in major cities and rural areas of Pakistan and the financial constraints, any properly thought out development plan in any mentioned domain would easily classify as a megaproject. Our policymakers need to prioritise among top priority projects.

It is essential that we utilise the latest management science and tools available to ensure that our hydropower and coal power projects based on Thar coal and CPEC are delivered on schedule and within budgeted amount.■

How to save & rehabilitate Karachi?

Experts stressed on ownership of Karachi

DGSEPA Naeem Mughal, Rehan Hashmi, Gulzar Firoz, Naeem Qureshi, Seema Taher and panelists

The Sindh Environmental Protection Agency (SEPA) has called upon the provincial government to revisit its policy to declare 32 main roads of Karachi commercial saying that such large scale commercialization has been done without conducting mandatory Environmental Impact Assessment (EIA) of any of the selected thoroughfares.

The call from SEPA to review the policy of declaring such large number of roads commercial in the city without prior environmental assessment of the move came from its Director-General Naeem Ahmed Mughal who took part and summed up a round table discussion held here on Saturday.

A large number of concerned stakeholders from the govt agencies, industry, business, academia, and non-governmental sectors attended the discussion titled "Mission: rehabilitate and save Karachi" organized jointly by National Forum for Environment and Health, SEPA & EMC PakistanThe moot was organized on the eve of World Environment Day, 2016.

The SEPA chief said on the occasion that the manner 32 roads in the city had been declared commercial would sure to create serious issues related to availability of needed civic infrastructure while resultant progress so done in Karachi would not be sustainable at all.

He said that instead of declaring so many roads commercial at a time, any specific area of the city should have been selected by the govt for block commercialization with the concept of high-density development but such selection should only be done after proper EIA of the proposed location.

The SEPA D.G said that land owning and civic agencies in the city should not be allowed to do conversion of land-use status of the area under their respective control without conducting EIA for such an act as commercialization and development so done without due examination would cause further damage to the environment.

He lamented the situation that certain institutions in Sindh related to industries, local government, land development and owning agencies, and other sectors considered that environmental protection act of the province was not at all applicable to them.

He said that land owning agencies in the city like KPT and DHA were reluctant to implement the environmental protection law of the province.

He said that different land owning agencies were not in a position to justify the massive commercialization being done in their respective territories including construction of high-rise buildings as such unplanned and unsustainable development resulted into rampant degradation of environment.

He conceded the situation that in the past the SEPA owing to resource constraints could not ensure implementation of the environmental laws on uniform basis on all the relevant stakeholders and agencies. "But it is high time for us to send a clear-cut message to all to duly observe the environmental law and take all the required measures to mitigate the situation in this regard as otherwise the law would take its own course," said the SEPA chief.

He warned the agencies and industrial units causing pollution that environmental tribunal was very much active in the province as it had been empowered under the law to impose fine up to Rs five million and sentence any person up to three years of imprisonment for causing damage to the environment.

He said the SEPA had started getting its act together and in the first stage it had targeted some 70 major industrial units in the province making it binding upon them to install their own waste water treatment plant and also prepare environmental management plans.

Regarding the high-profile issue of a Super Store recently inaugurated in Gulshan-e-Iqbal area of the city, Mr. Mughal claimed that the SEPA before launching of the store was very much cognizant of the issue created due to allotting an unsuitable place for the store to do its operations

He said the SEPA had even issued an environmental protection order to the store's management to shut down its working till resolution of the issues related to EIA of the shopping centre.

Rehan Hashmi, former MNA of MQM and chairman-designate of DMC Central in Karachi, said that authorities doing work for Green Line Rapid Bus Transit Service in the city had estimated that some 17,000 trees would be uprooted due to the construction work on the proposed route of Green Bus project while his won assessment put the number of trees likely to be uprooted at 25,000.

Event Report

8th Conference on Power Generation 2016

Ending power load-shedding by 2018 no more dream; Secretary

Fed. Sec. Water & Power Younus Dagha, Advisor to Ministry Petroleum Zahid Muzaffar, Chairman SBI Naheed Memon, German Ambassador Ina Lepel, Shahjahan Mirza, Dr. Ansar Pervez, Naeem Qureshi & other experts speaking at Power Gen Conference 2016

Secretary Ministry Water and Power Muhammad Younus Dagha claimed Thursday the government was taking concrete measures to end power loadshedding by 2018, across the country.

"Bringing power loadshedding to zero level is not a dream now, given so many power projects in line on the government's part, it will become a reality by 2018," the secretary observed while speaking as chief guest at energy conference held here by a group of Energy magazine.

The official said a multi-pronged strategy was being pursued to overcome the country's growing energy needs which would help jack up power generation up to around 20,000 MW in 2018 and around 53000 MW in 2022, the secretary projected.

Similarly, he added Alternative Energy Development Board had been established, which was also making several initiatives to add more power through renewable energy means.

He said 25 schemes were in line to harness wind and solar for power generation, adding around 1700 MW through wind projects and 1000 MW would be available through solar energy-oriented projects by 2018. He said the government was also pursuing plans to save energy through conservation and austerity measures and provincial governments were being consulted in this regard. He added energy conservative body was being revived to discourage wastage of energy and fine for not using efficient power devices.

He said the body would recommend energy efficient appliances, which would help a great deal to save energy. He said transmission infrastructure had been revamped and in past the system could not carry more than 15500 MW and now the system was gradually sustaining as more power was being added to the system, he added. He said confidence of private sector had been restored and circular debt had been capped at minimum level while in past the intra-corporate debts would add up to Rs 15 billion each month.

He said recovery measures had been launched yielding results and in 2015 Rs 51 billion were recovered, speaking highly volumes about sincerity of the government on this front. He said line losses had been restricted and dues had been cleared to power generation companies.

Speaking on the occasion, Shah Jehan Mirza, Managing Director Private Power Infrastructure Board (PPIB) said the board served as one window facilitator to promote private sector participation in the power sector of the country. He said the

Zahid Muzaffar, Naeem Qureshi, Ruqiya Naeem, Dr. Ansar Pervez, Sibtain Naqvi, Engr. Nadeem Ashraf, Khalid Iqbal, Naseem Usman, Irfan Babar & others at concluding session

Board facilitated investors in establishing private power projects and added investment friendly power policy had been introduced which offered a number of incentives for private sectors.

Among others, he said, the policy document featured an attractive return on equity in tariff, which had encouraged investment in the power sector.

Recently, he added, the board recently approved two private sector power projects based on Thar Coal. Hub Power Company Limited would build 330 MW Power Project at Block-II of Thar, Sindh while another 330 MW power project would be completed at the same block of Thar by Thal Power (Private) Limited.

He said the PPIB would also invite proposals for development hydro projects, which add more power to the system.

However, he underlined the need for taking effective measures to overcome certain challenges including making generation mix more sustainable for consumers, evolving medium to long-term integrated planning, expansion and upgradation transmission system and improvement in recovery from consumers to overcome supply and demand gap which had swollen upto 6000MW with annual growth of six to seven percent.

German Ambassador to Pakistan Ina Lepel said Pakistan was needed to take lessons from her country which had successfully overcome energy issues. She was of the view that Pakistan was needed to exploit renewable energy resources for bridging supply and demand gap, which had witnessed rise over the years.

Ex-Chairman, Pakistan Atomic Energy Commission (PAEC) Dr. Ansar Parvez expressed the hope that such events will be helpful for having fruitful discussion on different options to overcome energy crisis.

Project Director, China Pakistan Economic Corridor (CPEC) Maj. gen. (R) Dr. Zahir Shah said that the project was not only beneficial for two countries but for entire region, adding, the project was not against any country. He said that the component of the project including road network, industrial zones, power generation, upgradation and initiation of existing infrastructure of various sectors. He said that there was consensus on project of all political parties while certain recommendations of Khyber-Pakhtunkhwa province were also discussed in working group and other forums. He said that the government will ensure security of Chinese workforce while professionalism will be ensured in the project.

Director General, Pakistan House Rana Athar said that as there was energy deficiency so all sources of energy should be availed including nuclear energy to overcome demand and supply gap.

Coal Technologist- Punjab Mineral Company (Pvt) Ltd, Usman Zafar said that country has enough resources of coal and urged to give more focus on this sector.

Cake cutting ceremony 10th anniversary of Monthly Energy Update Magazine

CEO K-Electric Tayyab Tareen and Muhammad Naeem Qureshi, Managing Editor-Monthly Energy Update Magazine also spoke on the occasion calling for effective measures to overcome the energy crisis.

Mr. Zafar Muzaffar Advisor to Minister Petroleum, Ms. Naheed Memon, Chairperson Sindh Board of Investment, Engr. Mehfooz A. Qazi, Director Alternative Energy, Energy Department also spoke on the occasion.■

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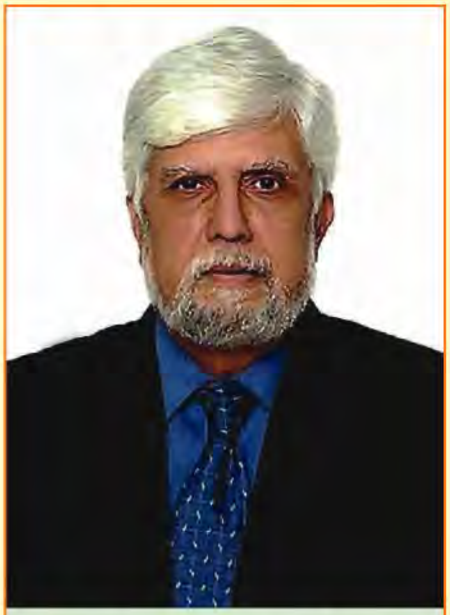
Exclusive Interview

Govt's inconsistent policies creating hurdles in foreign investment - Ilyas Fazil

Oil Marketing Companies barely meet their expenses with meager margins, says CEO, OCAC

By M Naeem Qureshi



"We have a mix of local and foreign investments in the Oil Sector of Pakistan. There are 100% Pakistan-ownership Companies as well as Multinationals. Any investor expects consistency of policy from the Government. When policy shifts take place after announcing incentives (upon which investments are based, planned and executed), it sends a very wrong signal to the investor, complains CEO of Oil Companies Advisory Council (OCAC), M Ilyas Fazil. In an interview with Energy Update he continues to say that...............

Energy Update: Please provide us your profile in detail including your educational background, professional and experience and achievement?

Dr.M. Ilyas Fazil: I am a Chemical Engineer by profession, with a PhD in Petrochemical Engineering. I possess over 36 years of experience, with over 25 years with Attock Refinery Limited (ARL) from where I retired in November 2008 as Deputy General Manager. I have also served as Member Oil (OGRA) in 2009-10 and as Director Projects with TransAsia Refinery limited (TRL), Karachi. Presently, I am Chief Executive Officer, Oil Companies Advisory Council (OCAC). I am a Registered Professional Engineer, Pakistan Engineering Council, Member Pakistan Institute of Chemical Engineers and Member of American Institute of Chemical Engineers.

EU: What is the role of your organization in development in oil industry?

MIF: Oil Companies Advisory Council (OCAC) is an organization dating back to the 1960s, when it was formed to be the official spokesman for the Downstream Oil Industry, namely Refining, Marketing and Distribution

1. OCAC is an Independent body representing the Downstream Oil Sector with the Advisory role primarily for the Industry. We also coordinate advice and information-sharing with the Government (specifically the Ministry of Petroleum & Natural Resources or MPNR) as well as the Oil and Gas Regulatory Authority (OGRA) on matters related to our Sector.
2. The Downstream Oil Industry ensures uninterrupted supply of petroleum product to keep the wheels of industry and power generation turning, and thereby plays a very significant role in Pakistan's economic development
3. Facts about the Downstream Oil Sector:

3.1 Annual Sales of over Rs.1 Trillion
3.2 Direct employment of over 100,000 people
3.3 Indirect employment (transport sector) of another 24,000 people
3.4 Capital investment exceeding Pak Rs.50 Billion
3.5 Annual Generation of Tax over Rs.500 Billion
3.6 A World class IT Infrastructure
3.7 Skill sets ranging from Technical, IT, Finance, Sales, Marketing & HR

4. Our current Members are 19 in number (5 Refineries, 13 Oil Marketing Companies or OMCs and 1 Pipeline Company);
5. OCAC's main functions are as follows (with our focus areas highlighted):

5.1 To effectively and efficiently plan all Petroleum imports into, and outgoing Petroleum exports from, Pakistan through the two ports Keamari and Port Qasim, i.e. Effective Petroleum Products Supply Logistics Management
5.2 To establish short/long-term supply balances for various oil products and advise the Government and Member companies in this regard , and to develop plans/suggestions to help the Government to streamline the oil and gas sector
5.3 To pro-actively plan any Infrastructure upgrades or de-bottlenecking needed as per the medium/long-term petroleum product availability projections, so as to ensure smooth supply of petroleum product to the market and the power sector, i.e. Plan to overcome any Port constraints
5.4 To represent the downstream oil industry at various forums in matters of common interest to their operations in Pakistan, i.e. Follow-up with the Ministries of Petroleum and Finance, and Ports & Shipping, as well as OGRA, to ensure the continued viability of the downstream oil sector
5.5 To comment on and convey collective views of various members on matters concerning the Oil Industry's well-being such as proposed legislation related to taxation and other fiscal measures

5.6 To collect, prepare and circulate various trade statistics and other relevant information to the member companies as well as to the Government. OCAC's Pakistan Oil Report has become the flagship reference document used by all agencies for understanding and planning downstream oil sector upgrades/de-bottlenecking

EU: Please share the challenges faced for the development in Oil industry?

MIF: Ports and Infrastructure Constraints: the demand for imported petroleum product is growing exponentially (especially Mogas due to the CNG availability challenges). There is an urgent need to plan for and upgrade our infrastructure (Ports, Storages, Pipelines) to cater for the increasing demand for POL. OCAC is working on this and we hope to share our findings with MPNR in a couple of months. Our objective is to develop a Road Map for augmenting the Oil network, with short-term, medium-term and Long-term action items clearly identified for implementation. Poor Margins: The OMC Margins barely help the Marketing Companies to meet their day-to-day operational financial needs. The Industry needs to develop its infrastructure (more storages, better services) for which these margins are not adequate. We are in contact with MPNR who is viewing this matter favorably and in a supportive manner. The Refineries, similarly, are subjected to the vagaries of the price movements in the international market which over the past year have declined considerably leading to poor gross refining margins for them. In spite of these financial challenges, the OMCs and Refineries continue to upgrade their facilities to provide better product and better service to the Pakistani consumer. Inconsistent Government Policies: We have a mix of local and foreign investments in the Oil Sector of Pakistan. There are 100% Pakistan-ownership Companies as well as Multinationals.

Any investor expects consistency of policy from the Government.

When policy shifts take place after announcing incentives (upon which investments are based, planned and executed), it sends a very wrong signal to the investor.

A classic example is the Refinery Up gradations. As per the directives of the Government, all Refineries went for targeting Euro II Diesel with Sulfur Content less than 500 Parts per Million (or 0.05%). These Projects were conceived on the basis of incentives (reduced duty and zero sales tax on the import of equipment for these Projects as well as incentive in price to whichever Refinery completes the project and starts to offer Euro II Diesel to the market). Both these incentives have been subsequently withdrawn (in Finance Bill 2014 and recently, respectively) leaving the Refineries, who conceived these projects and their economic viability on the basis of said incentives, left facing considerable financial losses. All the refineries combined have spent over a Billion USD collectively to implement these projects which (being environmental in nature) do not attract any value addition except through the incentives stated, which is also true globally.

Despite these setbacks PARCO commissioned their HSD Desulphurization Unit 3 years ago and ARL is about to commission theirs. It is highly unfair to withdraw the incentives which formed the basis for the projects and have caused considerable financial hardship to the Refineries. We are in dialog with MPNR on this matter.

Another example is the Pakistan Oil (Refining, Blending, Transportation, Storage and Marketing) Rules 2016 recently notified by OGRA. These not only contravene the OGRA Ordinance 2002 but also seek exorbitant fees from the OMCs and Refineries, also in violation of the OGRA Ordinance 2002.

The Industry has challenged this extremely unfair step by the Regulator, which too is being viewed as totally investor-Unfriendly!

EU: Your views about the energy crisis in the country and its solution?

MIF: Consistency in policy, more investment, de-bottlenecking of problem areas will all go hand-in-hand while trying to tackle the energy crisis. Whilst this is the primary domain of the Ministry of Water and Power, don't forget that the Downstream Oil Sector fills the gap in fuel availability for power generation and our role is well-appreciated and will continue in solutions to the energy crisis as well.

EU: What is your edge in oil industry?

MIF: The Downstream Oil sector (Refining, Marketing and Distribution) ensures the availability of refined petroleum product to the country as a whole, and keeps the wheels of industry turning. With a World class IT infrastructure and skill sets ranging from Technical, IT, Finance, Sales, Marketing & HR, our sector can rightfully claim to be the most organized sector in the Country.

EU: What is your suggestion to develop oil industry in Pakistan?

MIF: Policy Consistency, a more meaningful role of the Regulator is the key. Deregulation of the Downstream Oil sector must be the ultimate goal.

EU: Please tell us about your organization CSR projects?

MIF: The industry's CSR initiatives are multiple in nature with all our member companies are following those to the fullest.

EU: Tell us about health, safety and environment measures in your Organization.

MIF: We have helped develop the HSE Standards that OGRA has placed on their website and we continue not only to follow them but also to improve upon them.

Mutual Aid Emergency Response Plan, Defensive Driving Training Course for tank lorry drivers and Minimum HSE Tank Lorry Safety Checklist are some of our major HSE measures.

We also have regular training sessions on HSE as well as cleaner production within individual member companies as well as at the OCAC Forum as part of our Knowledge-sharing initiatives.■

By Mustafa Tahir

Severe power crisis prevails
None of the govt kept to its commitment
Chairman Alcom International Mirza Nadir Hossain

Mirza Nadir Hossain have many years of experience in International Trading and founded Alcom International for taking part in International Tenders floated by various Oil & Gas companies for purchase of Casing, Tubing, Line Pipe to his credit. He has many projects in Pakistan among them is the Quetta Natural Gas Pipe Line Project for which he was presented with Certificate of Merit by then President of Pakistan.

He was elected Council Member of Asia Pacific Countertrade Association, Singapore and was speaker in Singapore, China, Djakarta, Kuala Lumpur on countertrade and offset. He had the opportunity of meeting on one to one basis with then Prime Minister of South Korea as well had a chance of meeting President Suharto of Indonesia during the APCA conference. Mirza Nadir has completed his university education from Karachi beside the above there are many achievements and awards received both in Pakistan and abroad.

To a question he said that Alcom International is more engaged in oil and gas sector business as well trading in petroleum products and steel. Yes, Alcom did one power generation plant also on turnkey basis in close collaboration of German company. Alcom International sold many gas turbines to different sugar mills in Pakistan.

Regarding government policies he said that "I can only share my views that in the past each government had been following policies and claiming that power generation will be at lower level but never kept their promises and today we are still facing big power shortage.

There is no real development-taking place in energy sector or asking the supplier to put up such plants in Pakistan to produce all such good products, which are used in Power Energy Sector.

My views are as same as anyone else "Stop promising big but do practical work" as we had enough of such empty promises by each government and we cant afford any more.

I am not an experienced person for energy and power sector industry but can only tell that who are at the helm of power and decision making please do not fool around anymore and work with honesty.

Regarding power shortage in the country he says that "My suggestion is to develop energy and power industries in Pakistan is that there should be an condition imposed that those companies who are winning tenders for power plants and for supply of related equipment should at least invest 10% of the contract value in developing energy and transferring technology so that a time will come when we will be able to save lot of foreign exchange. If those goods are produced locally and this can be done without any problem. It is just the government which need to play a role".

About health, safety and environment measures in his company, he said that "We are a small company but we do adheres to the safety measures as well about health and environment which is important for our workforce working in this company"■

10 coal-based power plants to add 800 MW

Coal is one of the hottest topics now a day's among energy professionals. Energy professionals are disvcussing on various topics on coal, some believe coal is the suitable option and other think it's not. The world's need for electricity seems to increase demand by more than 70% till 2040, and there is a concerted effort to reduce the environmental consequences of power generation by developing better and efficient power generation technologies. Coal being a major stake holder in world's energy mix will be the backbone by 2040. If we talk about India, coal is the backbone of the Indian power sector, producing about 70% of the energy demand. Now sharing the views about Pakistan's energy mix, coal is around 1-5%. Pakistan seems to be on the right track now by planning and commissioning of coal based power plants. Power plants at Thar and Sahiwal will be success stories and will be helpful in future decision making. According to PBIT's list around ten coal based power plants are in pipeline which will contribute around 8000 MW of electricity in national grid. As we know most of small industries are doing R & D on coal, few have already installed boilers, installed their own coal testing labs and some are planning to have their own power generation facility on coal. Now sharing views about coal as a dirty fuel due to environmental concerns, the reality is now coal-fired power generation is totally safe. The point is if use of coal was that bad, then why 40% of world's energy comes from coal. Coal can be utilized in better way to overcome the environmental issues. The better technologies are HELE (High efficiency low emission) e.g, critical, super critical and ultra super critical technologies are available now. Fuel staging, air staging and FGD systems are also used in majority of power plants to reduce SOx& NOx. Electrostatic preceptor is now integral part of every plant for particulate matter capturing. Even coal ash handling and utilization is not a problem. Coal can be blended with biomass to reduce emissions as well. Coal washing can be done to reduce pollutants from coal. Total coal resources in Pakistan are 185 billion tons and if we use only 25% of our total coal resource, we can generate 50,000 MW electricity for more than one hundred years.

When we talk about the quality of our coal that can be managed by installing washing plants. Thar the biggest coal field of Pakistan can be utilized directly because sulfur ranges from 1-1.2 % which is good for power generation. Coal can provide us cheap electricity for our economic growth. This is a good sign that now people are organizing conferences and seminars for awareness regarding power generation. Please don't consider coal a dirty fuel, it is black but can light up our future. Thinking of no load-shedding without use of coal is not possible. More seminars and conferences should take place so all the energy professionals could be united on one platform.■

By Mahmood Hasan Khan

Enormous waste of water

PAKISTAN is one of the most water-stressed countries; agriculture uses nearly 70pc of all water; rapid urbanisation and growth of industries are competing with agriculture in the demand for water.

About 80pc of the crop area is irrigated by canals and wells and only 15pc of the water used for crops is from rains. An estimated 35-40pc of the water for irrigation is wasted from the canal head to the farm and flooding of fields at the farm level adds to this loss.

The supply of irrigation water to farms is unfairly distributed in favour of the large landholders and those with lands at the top-end of the watercourse; rent-seeking and subsidies in various forms contribute to inefficient water use at the farm level; water storage capacity - only 30 days compared with 120 days in India - has not expanded in the last at least 25 years.

The water disputes between provinces and with India are based essentially on deep mistrust; and climate change is making water supply more unreliable with frequent episodes of severe flood and droughts.

These assertions are based on reasonably reliable evidence about the state of water and agriculture in Pakistan. Water is not scarce; it is used inefficiently: output per unit of water is only one-third of what California farmers get. There are reasons for this, and all of them point to poor policies and bad management of water at all levels. In addition, at the farm level, poor farm practices and crop combinations are reflected in wasted water and low yield levels.

The surface water delivered to farms, through canals, distributaries and watercourses, does not take into account the demand for water: every farm is entitled to a certain quota of water regulated by a warabandi system, taking into account the type of crop and its area.

The water rate (abiana) is set to cover the cost of maintaining the irrigation infrastructure. Until recently the provincial irrigation departments were responsible for the supply of water and collecting the abiana from users. Given the inefficiencies-at least 30 per cent of the water was lost on the way-and the pervasive rent-seeking by the irrigation officials, a decentralised system of management, involving water users in making decisions from the canal-head to the watercourse level, was introduced gradually in the last decade.

The performance of the area water boards and water users associations have reportedly not been as good as was expected. When measured by the amount of collected water revenue, maintenance of the watercourses and fairness in the distribution of water along watercourses. However, it seems that the experience of the new system in Punjab has been better than in Sindh.

More importantly, this so-called decentralised irrigation system has not put enough pressure on farmers to save water by shifting from flooding the fields to drip irrigation and to crops that demand less water. Why have the governments not persuaded the provincial irrigation and drainage authorities to move to a water pricing regime that takes into account the demand side as well? That will allow the maintenance of infrastructure at the desired level and encourage farmers to save water. It may even develop a market for water exchange between farmers.

The supply of groundwater by private tube wells has been a boon to farmers in many areas of Punjab but not in Sindh. But it has come at a heavy cost to the society: it has depleted the aquifer, in some areas quite severely; it has cost billions of rupees to meet the demand for subsidised fuel (diesel and electricity); it has contributed to inequalities between farmers and regions.

The economic return to the tube well owner has far exceeded the return to society. We don't know how much if any impact these tube wells have had in reducing the incidence of waterlogging and salinity-the twin menace has decommissioned over 2m hectares of farm land.

One of the critical problems of water supply is the shortage of storage capacity. The increased silting of the existing storage dams along with no new capacity built in the last two to three decades pose a serious challenge to mitigate the effects of the increasingly unreliable flow of water due to climate change. Public policy on this issue has been a victim of internal divisions due to distrust between the provinces.

The periodic disputes on actual water flows and about the provincial shares in the Indus water system are good indicators. The dispute between India and Pakistan about diversion of water of the Indus distributaries is likewise based on deep-seated distrust. Why have the parties to these disputes not found ways to resolve them? Are they waiting for divine intervention or a catastrophic shock?

Public policy for saving water and getting more out of each unit of water has failed in another important area as well: promoting new water-saving irrigation methods and efficient crop practices at the farm level.

Why can't the government redirect its subsidy and small loan policy to promote new technologies such as drip irrigation? Similarly, the agriculture research and extension programmes have made little if any progress in persuading farmers to adopt profitable practices of zero-tillage, precision land levelling, and intercropping with genetically modified high-yielding crops that are salt-tolerant and drought-resistant.

A vigorous and efficient public support system should be in place along with the right signals on prices. All of this would also require governments to focus on millions of small landowners and cultivators.

Agriculture is again in the headlines for all the bad reasons. I see the government is promising things that have not worked before.■ Courtesy: Daily Dawn

By Mike Woods

Good news for energy investors in Pakistan

Renewable electricity costs could fall more than half by 2025

The cost of electricity from solar and wind energy sources could be reduced by up to 59 percent by 2025, according to a report by the International Renewable Energy Agency on Wednesday. The findings are a sign that renewables are entering a new phase of their development.

The International Renewable Energy Agency (Irena) says that if the right policies and regulations are in place, the cost of electricity from various renewable sources will continue its downward trend in the period between 2015 and 2025.

It estimates average global costs could decrease 59 percent for solar photovoltaic (PV) sources, 43 percent for concentrated solar power, and 35 percent for offshore and 26 percent for onshore wind sources.

The group notes that how much a certain country or region would benefit depends on available technology and how it is implemented, and that some countries have already made the most of their particular profile.

"For solar PV, Germany has led the way in not only supporting the deployment but also very efficient cost structures," says the report's lead author Michael Taylor, senior analyst for renewable cost outlook and status with Irena. "For onshore wind, the massive deployment in China means they have lowered costs more than in other parts of the world except India, who also benefit from low labour and commodity prices.

"So there are many cost differentials," he continues. "But in many cases there are opportunity to lower those cost differentials by a wider application of best practices."

In terms of what those best practices are, Irena recommends that governments to implement favourable regulations and policies, arguing there are some points that apply across the board.

Solar PV in Germany, says Taylor, has the advantage of "significant competition, a lot of customer understanding and very simple permitting and installation processes", while in the United States, "federal and state incentives and rules and regulations" can make it "more difficult to achieve lower cost structures, so looking through the red tape can unlock many cost reduction opportunities".

Irena is the second organisation to come to similar conclusions about projected costs this week.

The renewable costs are falling sharply even as fossil fuel prices remain low, and that investment into renewables is more than three times higher than it is for fossil fuels.

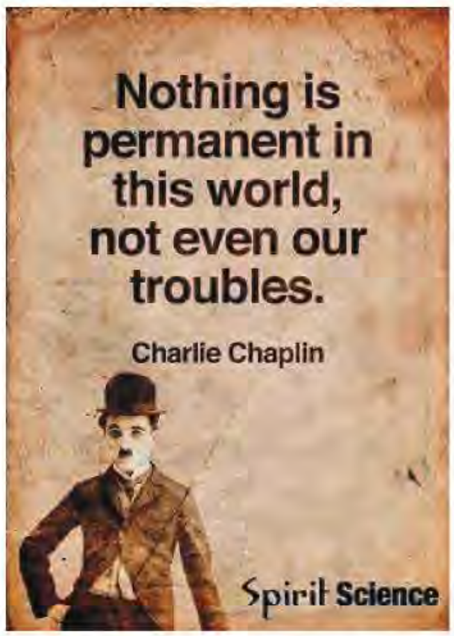
"The particular example that really kicked things off was the European move into renewables, the German move in particular, creating demand that Chinese supply side responded to," says Seb Henbest, author of the BNEF report.

"A combination of policy-led demand and industrial-policy-led supply led supply development, and the oversupply that resulted from that has really been the driver of these costs."

Both reports acknowledge that even if renewables are growing in their market share, things have to move much faster if the world is to reach the less-than-2-degree rise in global temperatures agreed at the UN climate conference in Paris last year.

Irena says its projections of lowering costs make a compelling case for speeding up the transition to switch from fossil fuels to renewables, while campaigners draw out the conclusion that governments and public officials have to keep up pressure on carbon-emitting industries.

"Renewables are big enough to take over, and if we want them to take over, the polluting energies must close," says Raphael Claustre, director the French Energy Transition Network.■



By SYED ZAHIR SALAHUDDIN

Hassles in solar energy investment

THE falling solar energy installation cost is making it competitive to other sources of energy. In the first week of May, a solar developer company bid for Dubai Electricity for as little as 2.99 cents a kilowatt per hour to develop 800MW of solar power projects. This price is almost 50pc less than quoted in 2015.

If successful, the electricity generated from solar panels will be cheaper than that of the coal plant commissioned in Dubai last October.

In Pakistan, electricity demand is rapidly increasing at 8-10pc per annum. Solar energy is greatly unutilised in Pakistan, though the country has an abundant source of sunlight. With more than 3,500 hours of sunshine a year, the total solar energy per unit area in Pakistan is nearly three times higher than Germany, which has an installed capacity of 40,000MW.

With such a wealth of solar resource, Pakistan's government has recently dedicated land to establish a 1000MW solar park. However, foreign response to this investment opportunity has not yet been forthcoming, in spite of being offered the highest tariff (14-15 cent / KWh till 2015) in the region with tax incentives, and the government's guarantee to purchase electricity. The question here is why are investors not willing to invest? While Pakistan's credit rating has improved and its risk spread has reduced from 1011 basis points in 2013 to 461 basis points in 2015; it still has a higher financing cost compared to other places like Dubai. Cost of financing in Dubai is minimal with no land lease charges, which substantially reduces the overall project development cost. On the contrary, the tariff offered in Pakistan offsets both financing and project development costs. An investor who is interested in setting up a solar power plant has to deal with multiple regulatory bodies. The investors have to work with provincial governments as well as the Alternate Energy Development Board (AEDB) to carry out a grid interconnection study and seek approval from the National Transmission and Dispatch Company (NTDC) or the distribution company. They need to carry out environmental studies, develop feasibility reports, apply for tariff and finalise the power purchase agreement with the buyer. This entire process is cumbersome and time-consuming. With so many time-consuming stages a project turns unattractive by the time the approvals are obtained; or the project may never even be approved. To avoid such delays and to facilitate investments in renewable energy,

investor-friendly policies need to be implemented. To save time and cost, the whole process can be structured to become a one-window operation.

To expedite things, one-window operation is needed to hold a bidding round for different sizes of power plants and offer different sites with solar data to investors. The entire specifications particular to a block should be provided before the bidding process. Investors could then make a bid based on the unit rate of electricity. Matters like dealing with NTDC, power purchaser and other stakeholders, the acquisition of land and security issues, should be dealt by the government. Multiple bidding rounds would ensure healthy competition and offer the lowest tariff for that area. This methodology would reduce time and ensure transparency in getting the best deal.

It is estimated that one in three Pakistani households do not have access to electricity. To address this power deficiency, solar power is believed to be the best off-grid generation solution, primarily for rural areas.

Setting up transmission grids over thousands of kilometres in remote areas is difficult, time consuming and costly. In order to address the energy crisis the government should invite solar developers to set up a model solar village. Solar energy in these areas can also be used in the form of solar geysers for heating purposes. Other utilities include solar water pumps to operate tube-wells and solar street lights.

The global energy landscape is changing and Pakistan is lucky to be blessed with ample sunlight. Hydrocarbon makes two-thirds of Pakistan's energy mix in comparison to less than 1pc of renewable energy (excluding hydel). It is indeed important for a country with over 200m of population to have more renewable energy.■

courtesy: Daily Dawn

Initiative to Boost Corporate Sourcing of Renewables

Governments and private sector corporations will collaborate to scale up renewable energy in support of the Paris Agreement under a campaign launched today at the seventh Clean Energy Ministerial (CEM) meeting in San Francisco. The Corporate Sourcing of Renewables Campaign will build partnerships to increase the number of companies committed to sourcing renewable energy for their operations.

"The private sector accounts for roughly 50 per cent of the world's electricity consumption and so must play a key role in the ongoing global energy transition," said Adnan Z. Amin, Director-General of the International Renewable Energy Agency (IRENA). "Switching this demand to renewables will decrease emissions, generate jobs, and deliver a host of other environmental, social, and economic benefits across the globe. IRENA looks forward to collaborating with initiative partners to reach this aim." IRENA joins the Renewable Energy Buyers Alliance (REBA), RE100, World Business Council for Sustainable Development (WBCSD) and the World Resources Institute (WRI) as initiative partners. At the government level, Germany and Denmark will lead the campaign in collaboration with China, the European Union, Mexico, the United Kingdom, and the United States. Together with the 23 CEM member governments and the European Union, campaign partners will develop and deploy enabling policies and resources to help businesses source more renewable energy.■

World Environment Day celebrated

SEPA lacks field offices in districts, moot told

Shahbaz Islam, Naeem Qureshi, Ali Dehavi, Waqar Hussain Phulpoto Qandeel, Engr. Nadeem Ashraf addressing at WED 2016

Audience of a programme held to mark World Environment Day have been informed that Sindh's own environmental watchdog lacks field offices in districts hampering its ability to monitor and prevent instances of spreading pollution and other causes of environmental damage.

Sui Southern Gas Company (SSGC) and National Forum for Environment and Health (NFEH) came together the other day to mark World Environment Day being celebrated every year on 05 June. This year's theme of global environment day focuses upon fight against illegal trade in wildlife.

Waqar Hussain Phulpoto, director (Technical) at Sindh Environmental Protection Agency (SEPA), said that SEPA on one side lacked field offices in districts while on the other hand the watchdog didn't have more than a dozen senior officials despite that the province had facing dozens of environmental issues. He said that neither environmental tribunal in the province had been discharging its obligations effectively owing to which people causing damage to environment and spread of pollution were not made to face the law of the land and be fined for their unscrupulous actions.

However, he said that apart from shortcomings of the SEPA, Sindh had taken lead among other provinces in adopting its own law and framing under this law its own set of rules and regulations for protection of environment.

Ali Dehlavi, a project manager at World Wide Fund for Nature-Pakistan, said that apart from highlighting and discussing risk areas, various success stories regarding prevention of environmental pollution and reversing the trend of damage to environment, should also be promoted and shared among concerned public.

Mr. Dehlavi, said that one such success story pertained to WWF's project titled "Building capacity on climate change adaptation in coastal areas of Pakistan". He said that under the project, the small-scale acquaculture i.e. mud crab fattening ponds were established for fishermen of Kharo Chann and Keti Bandar in coastal areas of Sindh.

A group photograph of students with team NFEH & SSGC.

Dr Zubair Mirza, a senior orthopedic surgeon, said that tree plantation campaigns alone could not reverse the trend of damage to physical environment as sources of pollution spreading should also be detected and stopped from further doing damage to environment by polluting vital resources in any society especially for human consumption..

He said that environmental degradation not only caused to spread respiratory illnesses in the society but someone living in an area having pollution-free environment would have 45 per cent lesser chances of heart attack for the second time for a person who already had suffered any heart trouble.

Naeem Qureshi, NFEH President, said that his forum had led and participated a number of tree plantation drives in the city along with a number of concerned civil society and corporate organizations as under such campaigns, some 3,28,000 tree saplings had been planted in the city over sometime. He said that tree plantation campaigns had been conducted without funding, financial support, or grant of the government.

He said the NFEH had planned to launch another round of similar tree plantation drive in Karachi with advent of upcoming monsoon season for which cooperation would be sought from a number of concerned organizations.

Shahbaz Islam and Amir Mumtaz, senior officials of SSGC, also spoke on the occasion to shed light on measures and steps adopted by his state-run organization to prevent the spread of environmental degradation in the country. Also on the occasion, students of Dawoodi Bohra Community's and Civial Aviation Authority's schools presented tableaus and skits to highlight that Plant Earth could not bear any more damage to its environment causing mass scale human sufferings.■

PPL funds construction of Centre of Excellence for Deaf

Pakistan Petroleum Limited (PPL) donated Rs. 3.24 million towards construction of the Centre of Excellence for Deaf (CED) being established by Pakistan Association of the Deaf (PAD) in Korangi Industrial Area, Karachi. MD & CEO PPL Syed Wamiq Bokhari presented the cheque to Co-president, PAD Irfan Mumtaz in the presence of officials from both organizations at PPL's head office.

Speaking on the occasion, Bokhari reiterated PPL's commitment to improve the quality of life for the underserved population through supporting sustainable development initiatives. "As a national flagship company, it is our responsibility to help build the nation through not only our business operations but also social contributions." added Bokhari.

With an earmarked annual budget of 1.5 percent pre-tax profit for Corporate Social Responsibility initiatives and actual spending exceeding 5 percent during the current financial year, PPL has been declared the largest corporate giver in terms of volume of donations for 11 consecutive years by Pakistan Centre for Philanthropy.

PAD, a member of the World Federation of the Deaf, is a leading non-profit organization founded in 1987 to provide education and vocational training to hearing challenged individuals. Currently, PAD caters to over 2000 members through its nationwide networks. Being a pioneer in developing primary education curriculum in sign language, PAD has played a pivotal role in enriching national sign language through research and development and publishing 19 books on various subject areas.

CED aims to provide free-of-cost quality education to the hearing impaired through deaf teaching staff, as a first, with required infrastructure and latest technology to ensure an enabling learning environment.■

Four Hub schools get new lease of life by SSGC

Four government primary and middle schools located in Hub City in Balochistan that were recently renovated under SSGC's Corporate Social Responsibility (CSR) initiatives, were inaugurated jointly by Prince Ahmed Ali, MPA of Bela-1 and Khalid Rahman, MD, SSGC at the Hub City today. The ceremony was held at the Government Boys Middle School in Jam Yousuf Colony. The schools were renovated on special directives of Jamal Kamal Khan, Minister of State for Petroleum and Natural Resources.

The schools - Government Boys Middle School, Jam Yousuf Colony, Government Boys Primary School, Haji Shaikh Amin Goth, Government Girls High School, Akram Colony and Government Girls Primary School, Jam Yousuf Colony - were renovated after a joint effort by SSGC's Corporate Communications and Civil Works Departments, at an approximate cost of Rs. 11 million. The principals of the respective schools were conferred with appreciation certificates for the support that they had rendered to the SSGC teams during the renovation process.

In his address to the citizens of Hub, school children and faculty members, Prince Ahmed Ali, MPA thanked the senior management of SSGC and its Corporate Communications and Civil Works team for collaborating competently with the education departments and municipal corporations of Hub and Lasbela in order to ensure quality renovation. In his speech, MD, SSGC reiterated SSGC's commitment towards renovating those schools that are in dire need of help but due to paucity of funds are not able to do so on their own. He said that the Company's CSR policy also aims at providing scholarships to meritorious and deserving students of its franchise areas of Sindh and Balochistan. Also present at the inauguration ceremony were SSGC's Amir Mumtaz Khan, ASGM (General Services), Shahbaz Islam, AGM (Corporate Communications), Asghar Sehto, DGM (Civil Works), Salman A. Siddiqui, DGM (Corporate Communications) and Muhammad Ali Gohar, CM (Media Relations/CSR).■

Young Pakistanis present unemployment solutions at Telenor Youth Forum

A two-day forum organized by Telenor Group to explore, discuss and develop solutions to some of the most daunting challenges facing Asia's youth recently concluded in Bangkok, Thailand, with a Pakistani delegate presenting the winning solution to address youth employment.

As part of its commitment to empowering a generation of digital natives, Telenor Pakistan and Telenor Group brought the global Telenor Youth Forum to Asia for the first time, inviting the leaders of tomorrow to develop actionable solutions that address key issues for youth in the region.■

Amir Khan plans boxing bouts in Pakistan to support Tharis

EU Report

The international boxing star Amir Khan has planned boxing matches showcasing seven international boxers including his brother Haroon, Harry King Khan in Pakistan. The HBL Superstar Boxing Event is an effort of Amir Khan Trust to raise funds to provide clean drinking water for the citizens of Thar. Along with that the Amir Khan Trust will also support the boxing culture and encourage international events in Pakistan.

Hashoo Group, a strong supporter of art, culture, literature, education, sports, and other entertaining activities, has also taken up the initiative to promote this superstar boxing event. The Hashoo Group, which has under its umbrella, the Pearl Continentals, Hotel One, and Marriott hotels in Pakistan, is facilitating the hospitality requirements for the event. The VP operations of the group Mr. Haseeb A. Gardezi said on the occasion, "Hashoo Group always takes a keen interest in the promotion of developmental and welfare activities in Pakistan, considering the significance and noble aim of this event, the group actively and magnanimously participated, helping raise money for the Amir Khan Trust and also promote boxing in the country." The main Fight Night will be held at the Pearl Continental hotel Karachi, where seven international boxers Tasif Khan, Gallagher Dayle, Jody Meikle, Stuart Maddox, Francis Peter Douglas Croes, Haroon Khan and Phil Townley will participate. Speaking about the initiative Mr. Naveed Asghar, Chief Marketing Officer HBL said," HBL has always supported and promoted sports in Pakistan. It is not only an international event in the country but a milestone in the revival of boxing in Pakistan. He further added, we are determined to continue supporting such events in future which are not only playing a vital role in raising funds for the deprived but providing a sense of motivation for the youth to pursue their dreams." He specially thanked the Pearl Continental Karachi for its outright support to make these events successful.

The visit of the international boxers for charity event is also supported by the British & Irish Boxing Authority (BIBA) from the United Kingdom and the Republic of Ireland. The coaches and referees of BIBA will also be a part of this event. To promote the initiative Amir Khan visited Dolmen Mall Clifton on 31st of May and interacted with his fans, followed by a press conference and a public work out at Frere Hall on 1st June.

The main fight night is scheduled for 2nd June at the Pearl Continental Hotel Karachi. The grand event will start with a red carpet followed by Amir Khan's welcome note and matches including Middle Weight Bout, Bantam Weight Bout and Cruiser Weight Bout. The event also includes auctions of Amir Khan's souvenirs whose earning will go for charity. Tables of main fight night are being sold for PKR 150,000 each. All the earnings of the main fight night event will go to Amir Khan Trust which will utilize the funds in building water wells in Thar.

While addressing the media at the press conference Khan Said," Our youth posses' immense potential but they lack opportunities and guidance in the field of sports. The idea is to bring international boxing to Pakistan and to support world class entrainment and exposure of boxing in the country. The Amir Khan foundation has been working globally to eradicate poverty and facilitate in providing basic necessities of life to the underprivileged. He further added, Thar has been victimized with a number of sad incidents including poverty and lack of clean drinking water which has resulted in massive death toll. With this initiative we have played our role in bringing a positive change to the society and the tremendous response by our partners and donors has further elevated the cause".

Mr. Doda Bhuttoa President of Pakistan Boxing federation also supported the initiative with his presence, whereas, Sindh Rangers provided the overall security and safe commutation facility to Amir Khan and his team during their visit.

National Foods, one of the leading multi-category food companies in Pakistan is the official gourmet food partner for this prestigious event. Mr. Abrar Hassan, Chief Executive Officer National Foods has always encouraged initiatives that bring Pakistan in a progressive image.

Mr. Sohail Hamid Khan, CEO of J. Fragrances actively supported the event and wished Amir Khan best of luck for his efforts of promoting boxing and building water wells in Pakistan. He expressed that such events serve both national and international interests.

Pearl Continental Karachi & Hashoo Group are the official hospitality partners. The Hashoo group is providing the platform for the boxing matches and accommodation to the international sportsmen in an effort to contribute towards society through this noble cause.■

Overwhlemimg response at 14th International Exhibition for the Energy Sector

Many solutions to the power crisis offered at the event

Foreign exhibitors have offered many solutions for the energy problems in Pakistan at the 14th Pakistan Oil, Gas and Energy Exhibition 2016 at Expo Centre, Lahore. Many trade visitors have shown their interest to acquire ready solution for alternate energy system mostly solar panels for commercial, industrial as well as domestic consumers.

The exhibitors from other countries were of the opinion that they are having good business at the POGEE-Pakistan-2016. Victor Kostenko, manager sale of a Russian company, global insulator group stated," We are participating in Pakistan for the first time and we are having a good response from the exhibition,".

"It's always pleasant to start in a new environment with potential", he further added.

"POGEE-2016 is a great venture and a platform for all the exhibitors showcasing, related services and technology providers as well as for the end users", remarked Manager engineering Mubashir Saeed of Solutions Engineering (Pvt) Ltd, a local exhibitor.

On 2nd day of the exhibition, a large number of business professionals, diplomats, foreign and commercial attaches and delegates, government officials, visitors and industry leaders including visitors from cities like Faisalabad, Sialkot, Gujranwala, Rawalpindi Islamabad, Peshawar, Hyderabad, Ghotki, Muzzafargarh, Shakohpura, Multan, Lahore and Karachi have visited the exhibition and witnessed the technologies & product at display

In addition, POGEE-2016 has featured a highly focused Conference program that was aimed to bring in South Asia's Energy Industry into the limelight. POGEE Conference offers an excellent platform for exchange of views & information to the highly targeted audience from Oil, Gas and Energy Industry.

12th International Conference held on 21st May 2016 at Lahore Expo Centre based on the theme "Designing a Sustainable Energy Mix". It was consisted of two exclusive sessions on," energy sector reform : Prospect & Challenges and on "Coal & Indigenous Renewable Resources".

Eminent speakers have participated from both local and international organizations & associations, like, Sergi Transformer Protector, France, Schneider Electric, UAE, Oil and Gas Regulatory Authority (OGRA), Pakistan Council of Renewable Energy Technologies (PCRET) , Khyber Pakhtunkhwa Oil & Gas Company Ltd, Centre for Coal Technology, Punjab University, Energy Research Center, Comsats institute of information technology and National Institute of Science & Technology, NUST.

Opening ceremony of POGEE 2016 was graced by Mr. Sher Ali Khan – Provincial Minister for Mines & Minerals, Government of Punjab, and also joined by Ms. Iffat Farooq – Additional Secretary Energy, Government of Punjab, Mr. Amjad Ali Awan – Chief Executive Officer, Alternative Energy Development Board (AEDB) – Ministry of Water & Power GOP, Mr. Shah Jahan Mirza – Managing Director, Private Power & Infrastructure Board (PPIB) – Ministry of Water & Power GOP. The Conference was opened by Mr. Shahid Khaqan Abbasi - Minister of Petroleum and Natural Resources, Government of Pakistan.

Over 340 exhibitors from 35 countries including USA, UK, China, Germany, etc. have participated. The 15th International Exhibition & Conference for the Energy Industry would be held on 16 – 18 May, 2017 at Karachi Expo Centre. ■

By Salman Siddiqui

NEPRA gives nod to power import at 9.41 cents per unit

The National Electric Power Regulatory Authority (Nepra) has allowed the import of 1,300 megawatts of electricity from Central Asian states under the Casa-1,000 power project at a tariff of 9.41 cents per kilowatt-hour (kWh) for 15 years, according to a notification.

Pakistan is expected to start importing electricity from 2019 as the estimated time for laying power transmission lines from the exporting countries to Pakistan is 40 months.

The lines will be laid over 1,200 kilometres and electricity will be imported from the beginning of May to the end of September every year, which will ease the electricity deficit in summer when the demand is at its peak.

"The project cost excluding the interest during construction (IDC) is estimated at $873 million, based on the current market conditions, which may change over time in response to the market volatility," said Nepra.

The World Bank and the Islamic Development Bank are lenders for the project.

"The commentator suggested that some subsidy or grant must be demanded from the project promoters and donor agencies so that the cost of supplies to Pakistan becomes more attractive and competitive," it said.

"An upper limit of tariff may be built in the PPA (power purchase agreement), as it appears that escalation uncertainties may result in an increase in tariff beyond Rs10 per kWh which will not be desirable at all," it added.

"The tariff comprises energy charges at 5.15 cents/kWh, transmission charges at 2.91 cents/KWh, Afghanistan transit fee at 1.25 cents/kWh and Tajikistan wheeling charges at 0.10 cent/kWh."

The sellers (Tajikistan and Kyrgyzstan) committed to providing 1,000 megawatts of electricity to Pakistan. It can even buy 1,300MW if Afghanistan abandons its share of electricity.

"The exporting countries have conveyed that they shall be able to deliver more than 4,000 GWh of energy in a normal year and 4,434 GWh in a wet year," said the notification.

"The reference tariff has been calculated on the basis of annual energy available for transmission ie 4,317 GWh."

Apprehensions

The notification also expressed apprehensions concerning the project's viability, terming it highly questionable, both in terms of profitability and risk profile.

"In order to improve its viability, its capacity and scope may be expanded by increasing the transmission capacity to 3,300 megawatts, by adding thermal sources such as gas-fired NGCC at Turkmenistan (possibly replacing Tapi) and adding a thermal power plant (coal-fired) in Afghanistan," it said.

"The major portion of transmission line will be laid in Afghanistan, whereas a small portion of 100km will be in Pakistan. The Pakistani side mainly consists of tribal area or settled troubled areas."

"Afghanistan is probably not interested in the project which makes the project very risky and may result in lack of interest in securing the transmission line. The reason for lack of Afghan interest also indicates bad economics and risk profile of the project."

Agha Steel wins Consumer Choice Award 2016

Karachi- Agha Steel Industries, leading Steel manufacturers of deformed bars, today announced that they have received the Consumer Choice Award for its "1st Electric Arc Furnace, EBAR G500+. The award was presented at the 11th Consumer Choice Award 2016 Ceremony organized by Consumer Association of Pakistan. The award ceremony recognizes and honors the contribution of key players of quality goods manufacturers in Pakistan.

Agha Steel industries committed to play its vital role for the empowerment of upcoming steel industry in Pakistan by creating values and defining quality for all stakeholders, the exclusive "E-Bar G500 plus" product which contains ultra High tensile strength through utilizing the latest technology of Electric Arc Furnace. The most trusted rebar with well controlled chemical composition provides ultimate strength & bendability and provides up to 15% saving in comparison to other rebars has won the confidence of consumers, which has been evident through the consumer choice award.

Agha Steel industries continuously innovates and leads the industry by producing quality steel products such as the exclusive Ebar-G500+and Earthquake Resistance Rebar ASTM-A706, which have significantly contributed to improve the infrastructural development of our beloved country. "It is an honor to provide our Nation with the gift of high quality building rebars that ensure a safe structure and at the same time promise our clients innovative savings," said Mr. Hussain Agha, Executive Director-Agha Steel Industries.

Agha Steel industries feel the responsibility to provide best of the quality products for all stake holders to guarantee the trust which has been developed and recognized through the award.■

Restricted: Cabinet body bars WAPDA from selling KAPCO stake

The Cabinet Committee on Privatization has turned down request of the Water and Power Development Authority (Wapda) that it should be allowed to sell shares in Kot Addu Power Company (Kapco) in a phased manner in line with its development plan and without any role of the Privatization Commission. The commission told the cabinet committee, in a meeting held last month, that the financial adviser had completed due diligence process and submitted its report.

It said Wapda had strongly urged that instead of selling its shares in Kapco through the Privatization Commission, it should be allowed to undertake the process on its own gradually and according to its development needs.

Wapda holds all shares of the government of Pakistan in Kapco amounting to 40.25% of the total outstanding shares.

Kapco, established in 1996, is situated in Muzaffargarh district of Punjab and produces 1,600 megawatts of electricity. It is also listed on the domestic stock exchange. Kapco reported a drop of 13% in its net profit to Rs6.2 billion in nine months ended March 31, 2016 due to a decline in sales with the overhauling of turbines. It had earned Rs7.12 billion in the same period last year.

The decline in earnings was mainly because of higher operation and maintenance expenditure and 43% lower other income including lower penal mark-up income due to improved recoveries.

The Privatization Commission recalled that in a meeting on July 6, 2015, held under the chairmanship of Finance Minister Ishaq Dar, it was decided to push ahead with the sale of Wapda shares in Kapco in line with the approval given by the Cabinet Committee on Privatization in October 2013.

Accordingly, the commission appointed a financial adviser and held a transaction kickoff meeting with the adviser in October 2015, which was also attended by the Wapda chairman.

A financial advisory services agreement between the commission and the adviser offers a fee of $1.71 million that will be paid after completion of various transaction stages. It caps out-of-pocket expenses at $0.15 million and $0.17 million has already been paid to the adviser on completion of mobilisation process. The success fee depends on the sale proceeds.

The PC board in its meeting on May 6, 2016 deliberated on the issue and recommended that the matter should be placed before the cabinet committee for final decision.

Later, the cabinet body dismissed the demand of Wapda and asked the Privatization Commission to proceed with the divestment of government shares in Kapco.■

One Line Humors...

- Saving is the best thing. Especially when your parents have done it for you.
- Wise men talk because they have something to say; fools talk because they have to say something.

Enjoy White House sir, We will take care of the rest!

Trump's first day at the Oval Office. First briefing by the CIA, Pentagon, FBI. Trump: We must destroy ISIS immediately. CIA: We cannot do that, sir. We created them along with Turkey, Saudi, Qatar and others. Trump: The Democrats created them. CIA: We created ISIS, sir. You need them or else you would lose funding from the natural gas lobby. Trump: Stop funding Pakistan. Let India deal with them. CIA: We can't do that. It is Modi in India and not Manmohan. Trump: So what? CIA: Modi will cut Balochistan out of Pak. Trump: I don't care. CIA: India will have peace in Kashmir. They will stop buying our weapons. They will become a superpower. We have to fund Pakistan to keep India busy in Kashmir. Trump: But you have to destroy the Taliban. CIA: Sir, we can't do that. We created the Taliban to keep Russia in check during the 80s. Now they are keeping Pakistan busy and away from their nukes. Trump: We have to destroy terror sponsoring regimes in the Middle East. Let us start with the Saudis.

Pentagon: Sir, we can't do that. We created those regimes because we wanted their oil. We can't have democracy there, otherwise their people will get that oil - and we cannot let their people own it. Trump: Then, let us invade Iran. Pentagon: We cannot do that either, sir. Trump: Why not?

CIA: We are talking to them, sir. Trump: What? Why? CIA: We want our stealth drone back. If we attack them, Russia will obliterate us as they did to our buddy ISIS in Syria. Besides we need Iran to keep Israel in check. Trump: Then let us invade Iraq again. CIA: Sir, our friends (ISIS) are already occupying 1/3rd of Iraq. Trump: Why not the whole of Iraq? CIA: We need the Shi'ite gov't of Iraq to keep ISIS in check.

Trump: I am banning Muslims from entering US. FBI: We can't do that. Trump: Why not? FBI: Then our own population will become fearless. Trump: I am deporting all illegal immigrants to south of the border. Border Patrol: You can't do that, sir. Trump: Why not? Border Patrol: If they're gone, who will build the wall? Trump: I am banning H1Bs. USCIS: You cannot do that. Trump: Why? Chief of Staff: If you do so we'll have to outsource White House operations to Bangalore. Which is in India. Trump: What the hell should I do??? CIA: Enjoy the White House, sir! We will take care of the rest!!!

By Zamir Akram

NSG membership to India to block Pakistan's way in future

Pakistan's relations with USA depends on Vienna meeting

The Nuclear Suppliers Group (NSG), an informal cartel of 48 countries that regulates nuclear commerce for civilian uses and prevents nuclear weapons proliferation met in Vienna on 9 and 10 June to consider a request for membership by India. To stake its claim for equal and non-discriminatory treatment, Pakistan has also applied for membership.

What is ironic is that the extra-ordinary NSG session was convened at the behest of the US to consider India's membership, the very country whose nuclear test in 1974 led to the creation of the NSG in order to prevent what India had done - the clandestine diversion of nuclear fuel from civilian uses to nuclear weapons production. If India is admitted, not only would it be a self-inflicted wound for the NSG, but would also undermine the existing nuclear non-proliferation regime and strategic security in South Asia by unleashing a new round of a nuclear arms race between India and Pakistan.

The latest reports from Vienna suggest that the US and a few other countries have expressed support for Indian membership, mostly as a result of American pressure and the lure of commercial gain. But another group of countries, led by China, is resisting this pressure on the basis of principles - that before any decision is taken about India's membership, the NSG needs to agree on equitable and non-discriminatory criteria for membership of those countries that are nuclear weapon states, but are not signatories of the Non-Proliferation Treaty (NPT) and/or members of one of the existing nuclear weapon free zones in the world - requirements for NSG membership. They are also arguing that if any exception to the rules is to be made, then it should apply equally to both India and Pakistan. Since all NSG decisions are made by consensus, even one member of the group can block a decision.

The implications of granting exclusive membership to India are already very clear, especially in South Asia. After the US pushed through an India specific waiver for nuclear cooperation by the NSG in 2008, a decision which Pakistan regrettably at the time did not contest due to American pressure, has enabled India to expand its nuclear arsenal. As was then expected by Pakistan, India has been able to use the imported nuclear fuel to operate its civilian nuclear reactors while being free to use its indigenous nuclear stocks for increased fissile material production. Moreover, since India has not fully separated its civilian and military nuclear reactors, which it had committed to do to gain the waiver, it has been diverting this fissile material from civilian to military use. This diversion, pointed out repeatedly by Pakistan, has now been confirmed by independent sources such as the Belfer Center of Harvard University and the US think-tank Arms Control Today. Even US Senator Ed Markey has raised such concerns in a recent Senate hearing.

The waiver for India has been supplemented by the Indo-US strategic partnership agreement involving transfer of sensitive, state of the art military technologies to India, which has significantly contributed to its massive conventional and strategic military buildup. India, the largest arms importer in the world for the last 3 years according to SIPRI reports, is also now the largest buyer of US weaponry. In addition, India has developed its strategic arsenal by acquiring a triad of nuclear capable delivery systems of air, land and sea based short, medium and long range missiles. It has raised the nuclear profile in South Asia by pursuing Submarine Launched Ballistic Missiles (SLBMs) and developing a Ballistic Missile Defence (BMD) system. This rising conventional and strategic asymmetry has made the prospect of India pursuing its aggressive doctrine of "Cold Start", which envisages limited conventional war under nuclear overhang, a realistic possibility.

With the international non-proliferation regime, India has continued to flout even its limited commitments to earn the 2008 waiver. It has not fully separated its civilian and military nuclear reactors; refused even limited transparency regarding use of imported civilian nuclear fuel and refused to sign the Comprehensive (nuclear) Test Ban Treaty (CTBT) nor stopped production of fissile material.

In such circumstances, Pakistan has been compelled to purse a policy of full-spectrum deterrence by enhancing its range of strategic and tactical delivery systems. This has met with international concern. However, instead of recognizing the legitimate threat to Pakistan's security posed by Indian conventional and strategic acquisitions, which the US has helped promote, the Obama Administration has asked Pakistan to commit to a freeze in the quantity and range of its nuclear and missile programmes without pushing for a commensurate regional framework for nuclear and missile cutoffs which would include India.

Against this backdrop, Indian membership of NSG would actually accelerate an already dangerous and intense strategic arms race in South Asia. Exclusive Indian membership would also ensure future Indian ability to block Pakistan from becoming a member of the NSG via the consensus rule. Equally important, NSG membership would grant legitimacy to India as a "responsible" nuclear weapon state while consigning Pakistan to being a virtual "rogue" nuclear power.

A strong view in Pakistan assumes a much larger American objective behind its vigorous support for India at the NSG, while opposing Pakistan. This view flows from the China-containment framework and cautions that continued discrimination may impact an already fragile bilateral relationship.

The discussions in the Vienna NSG meeting and its regular session in Seoul later this month are likely to have crucial and far-reaching effects on strategic stability in South Asia. Hanging in the balance now is not just the future of security and stability in South Asia, but perhaps the future of Pakistan-US relations. ■

ADB to invest in CPEC, Gwadar city projects

The Asian Development Bank (ADB) has expressed keen interest in investing in the China-Pakistan Economic Corridor (CPEC) and in the Gwadar city to complement efforts made by both the countries, but it has not yet received a formal request from the federal government.

"The CPEC, Special Economic Zones and other initiatives have huge financial needs and the ADB can complement Pakistan and China's efforts," said ADB Vice President Wencai Zhang while speaking to media at the conclusion of his five-day visit to Pakistan on Monday.

Gwadar port to be operational by 2017: Chinese official

The ADB has provided Pakistan loans amounting to over $27 billion over a period of 50 years and the purpose of the VP's visit was to find new areas of cooperation and to get first-hand information about economic cooperation.

"I visited Gwadar for the first time and was so impressed by the quality and potential of the Gwadar port, located at such an important place," said Zhang while sharing his feelings.

"The port needs a lot of investment in coming years. Authorities have named a few projects for transport, city development, water supply and road and rail to link Gwadar with other cities for which they seek the ADB support," he added.

He said the authorities would first have to talk to the central government for the ADB support and that the bank had so far received no formal request from the government.

However, he added the bank - one of the two largest lenders to the country - would "certainly complement what China and Pakistan are doing along the economic corridor". "The ADB will not duplicate what the two countries have already agreed to," he maintained.

Present on the occasion, ADB Country Director Werner Liepach said the bank was actively looking at how to leverage the potential the CPEC offered. "If you only built the road; it's only for transit, but the CPEC opportunity has to be realised," he said.

Pakistan, China ink agreements worth $4.2b

"We are in talks with the government to find ways to develop the economic corridor."

The ADB vice president said he had also discussed a plan to invest in the Pakistan Railways on a medium to long-term basis. "The railway minister mentioned three main lines but we have not yet picked any line for investment."

He said the bank was keen to support the railways but first wanted to see a clear roadmap for sector's reform, one that showed that the sector would be economically and financially viable in the years to come.

"Pakistan has achieved a lot of macroeconomic and financial stability, but the challenge of how to achieve higher economic growth remains," he said, adding in order to take the current 4-5% growth rate to 7%, Pakistan needed more investment as the investment-to-GDP ratio was still very low.

"Export diversification remains another challenge the country needs to address," he added.

The ADB distanced itself from the on-going GDP growth fudging allegations levelled by the parliamentarians and independent economists.

"The 4.7% growth estimate for 2015-16 was in line with the projections made by the international financial institutions," the country director stated.

Zhang said the ADB had invested a lot in the energy sector to support reforms and remove bottlenecks, and it would continue with its heavy investment in the sector.

He said the lender was "overall satisfied with the progress in the energy sector and the government is broadly on track". The two-year deadline to end load-shedding is realistic but depended on a lot of factors.

The ADB and Pakistan also signed an agreement for a $100 million loan to build the remaining 64km section of the motorway (M-4) connecting Shorkot and Khanewal in Punjab.■

One Line Humors...

- Regular naps prevent old age, especially if you take them while driving.
- Having one child makes you a parent; having two you are a referee.
- Marriage is a relationship in which one person is always right and the other is the husband!
- I believe we should all pay our tax with a smile. I tried - but they wanted cash.
- A child's greatest period of growth is the month after you've purchased new school uniforms.
- Don't feel bad. A lot of people have no talent.
- Don't marry the person you want to live with, marry the one you cannot live without, but whatever you do, you'll regret it later.
- You can't buy love, but you pay heavily for it.
- Bad officials are elected by good citizens who do not vote.
- Laziness is nothing more than the habit of resting before you get tired.
- 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.
- It doesn't matter how often a married man changes his job, he still ends up with the same boss.
- Real friends are the ones who survive transitions between address books.

By Zafar Bhutta

SSGC asked to utilise idle capacity of LNG terminal

The federal government is pressing Sui Southern Gas Company (SSGC) to enter into an agreement with Elengy Terminal Pakistan Limited (ETPL) to utilise the remaining capacity for handling imports of liquefied natural gas (LNG), an official said.

At present, the terminal operated by ETPL at Port Qasim has the capacity to re-gasify 600 million cubic feet of LNG per day (mmcfd). It is processing 400 mmcfd according to an agreement with the government and could utilise the remaining volume for the private sector.

Second LNG terminal: Court asks SSGC to invite bids again

On behalf of the government, state marketing company Pakistan State Oil (PSO) is importing 300 mmcfd from Qatar and 100 mmcfd from Gunvor.

"ETPL has an unutilised capacity of 200 mmcfd since the start of operation in March 2015, which has put an extra burden on gas consumers," an official said, adding the levellised tariff of the company was 66 cents per million British thermal units (mmbtu) but it could go down to 45 cents if the entire 600mmcfd capacity was utilised.

So, the consumers are paying around 20 cents per mmbtu in additional charges.

According to the official who is aware of the developments,

the government has now decided to put to use the unutilised capacity and SSGC is under pressure to cooperate in this regard. The decision was taken in a high-level meeting on May 17, 2016.

However, SSGC, which is a state-owned company, could not consume this capacity without inviting bids from interested parties.

After the commencement of LNG terminal operation, ETPL faced a controversy, leading to a probe by the National Accountability Bureau into the LNG services deal between SSGC and the terminal operator.

Now, ETPL and SSGC could get mired in another scandal if they inked any agreement for consuming the remaining capacity of 200 mmcfd.

The Oil and Gas Regulatory Authority (Ogra) had allowed 66 cents per mmbtu as terminal charges according to a decision of the federal cabinet. In this regard, the Ministry of Petroleum and associated companies entered into an agreement with ETPL for over 20 years.

As a result, ETPL billed government enterprises an effective tariff of $1.45 per unit in the beginning because of lower volumes starting with just 100 mmcfd in the initial months.

Pakistan's second LNG terminal contract to be awarded this month

The ministry and ETPL were of the view that average levellised tariff would be 66 cents per unit and not a flat rate of 66 cents. The ECC in its last meeting decided that terminal charges of $1.45 per unit for initial flows should be taken from the LNG consumers.

"This is what the government has done to pump money into ETPL, rather than allowing private sector like textile and fertiliser industries to import LNG to fully utilise the terminal capacity," the official said, adding that now the petroleum ministry was pressing SSGC to ink a deal with ETPL for consuming its remaining capacity.

Gas utilities - Sui Northern Gas Pipelines and SSGC - had also created hurdles in the way of utilising full capacity of the LNG terminal as they had earlier reported that they had the capacity to transport 300 mmcfd of LNG through their pipeline network. Now, 400 mmcfd is being transmitted through the pipeline system.

"The real issue is that gas utilities are receiving 17.5% guaranteed rate of return and want to continue to enjoy the monopoly on gas supply," the official said, adding this was the reason they were not ready to allow the private sector to import LNG.■

Cellphone Use Linked to Cancer in US Government Study

Whether cellphones are linked to cancer or not has been the subject of intense debate. There hasn't been any major proof that there's a link between the two - until now. A major study conducted by the US Government has proven there's link between cellphones & cancer in mice. This study was a multiyear, peer-reviewed study conducted by the National Toxicology Program. The NTP was tasked by the U.S Government in 1978 to test and identify the agents that are potentially harmful for humans. It's a $25 million study which is one of the most comprehensive experiments about cellphones effects on human health.

The study explored the effects from the most common type of wireless technologies, GSM and CDMA. Two common frequencies, 900 megahertz for rats and 1900 megahertz for mice were employed. More than 25oo rats were exposed to the frequencies every 10 minutes followed by a 10-minute break for 18 hours. That makes nine hours a day of exposure. the results for mice are not released yet. National Institutes of Health said: It is important to note that previous human trials, observational data collected in earlier, large-scale population-based studies have found limited evidence of an increased risk for developing cancer from cellphone use. Findings of the Report: The study found "low incidences" of two types of tumors in male rats. These rats were exposed to similar radio frequencies that are emitted by cellphones. The tumors were Gliomas, which are manifested in the glial cells of the brain, and Schwannomas of the heart.

Partial findings of the study were as follows: Given the widespread global usage of mobile communications among users of all ages, even a very small increase in the incidence of disease resulting from exposure to (radio-frequency radiation) could have broad implications for public health. The complete study results would be released by the fall of 2017.

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MGH Solar Total Green Energy Solution is a green home improvement contractor and ENERGY STAR Partner saving energy for existing homes, new homes, additions, and renovations in the Greater Boston Area.

We are a RESNET approved third party HERS Rater, able to qualify your renovation, addition, or new home for the "stretch energy code" in over 140 Massachusetts towns including Cambridge, Newton, Lexington and more. At the same time, as an independent home energy rater, we can certify your new home or addition as ENERGY STAR Qualified. For non stretch code towns, we can also help you take on the more stringent IECC 2012 standards that went into effect July 1, 2014!

Our company is based on the belief that our customers' needs are of the utmost importance. Our entire team is committed to meeting those needs. As a result, a high percentage of our business is from repeat customers and referrals.

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We are proud to provide rating services to qualify new homes and additions of at least 500 square feet for the ENERGY STAR® label. ENERGY STAR qualified new homes are more energy efficient than homes built to the minimum code requirements. Even in states with more rigorous energy codes, the U.S. EPA ensures that ENERGY STAR remains the symbol for truly energy-efficient performance. These homes are good for businesses, consumers, and the environment.

Benefits of owning an ENERGY STAR qualified new home include:

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More efficient and properly sized heating and cooling systems use less energy, which reduces utility bills. These systems also turn on and off less frequently, removing more humidity and providing better comfort.■

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Performance Par Excellence

MAL Pakistan Limited is committed to being the country's premier group of petroleum and petrochemical companies. As the exclusive marketer of Mobil, Esso and ExxonMobil lubricants in Pakistan the company has the unique privilege of managing key accounts in the energy and automotive segments under the strategic global alliance relationship program of ExxonMobil in the country. MAL Pakistan also has the unique privilege of managing key accounts in the energy and automotive segments under the strategic global alliance relationship program of ExxonMobil in Pakistan.

An Aerial view of MAL Pakistan warehouse facility at National Industrial Park , Korangi Industrial Area, an impressive mega structure with over 17000 sq. ft. of warehouse space. MAL Pakistan is one of the first companies to start operations at N.I.P , Karachi.

The company was established in Pakistan as a joint venture between AWT (Army Welfare Trust) and ExxonMobil in September 1997 with its world-renowned range of lubricants for automotive and industrial use. The head-office is in Karachi and its state-of-the-art Lube Oil Blending Plant. As a testament to its commitment toward tapping onto the opportunity in the growing market of Pakistan and further developing operations, MAL Pakistan recently started Warehouse operations at its new facility located in National Industrial Park in Korangi Industrial Area, Karachi. This is a significant investment aimed at modernizing the infrastructure to take on the growth challenges of the next decade and reflects the interest and commitment of MAL Pakistan Ltd. to incrementally grow its presence in the oil & energy segment.

It is not without reason the joint venture that was started in 1997 has now grown manifold to a company with impressive nationwide presence and a vast product offer. The company is consistently pursuing business expansion opportunities under guidance of ExxonMobil Lubricants.

MAL's product offering is primarily divided into two main segments: Automotive and Industrial Lubricants. The automotive range includes passenger vehicle oils, commercial vehicle oils, transmission oils, brake fluids and greases. Apart from this, Mobil is a well-established name in high performance synthetic oils which are being used in a majority of premium class and luxury vehicles across the country. For industrial applications, MAL Pakistan has a broad spectrum of products including gas engine oils, heavy duty diesel engine oils, turbine oils, compressor oils, industrial gear oils and hydraulic oils. Mobil industrial lubricants are being used in almost every industrial application around the world and are endorsed by major equipment manufacturers globally tapping into all the major industrial segments including Power Generation, Chemicals and Oil & Gas exploration, Textiles, Manufacturing, Construction, Marine and Aviation along with other sectors. The extensive sales network throughout Pakistan ensures efficient and uninterrupted supply to a wide range of automotive and industrial users.

Today's economic environment especially in manufacturing industry in Pakistan is passing through a critical phase, In this challenging market place consumers are increasingly vigilant and demanding better quality, more competitive prices and shorter lead times. Maintaining a cost efficient manufacturing operation is becoming critical and challenging given the rising energy cost and supply situation. It's all about 'increased productivity and lower maintenance costs - this is where MAL Pakistan and Mobil lubricants have made the strongest contribution - explicitly helping customers to optimize costs by offering customized services that deliver lower operating costs, increase equipment reliability, extend machine life and offer potential energy savings.

Our Industrial product portfolio covers a wide range including gas engine oils, heavy duty diesel engine oils; turbine oils compressor oils, industrial gear oils and hydraulic oils. Mobil industrial lubricants are being used in almost every industrial application around the world and are endorsed by major equipment manufacturers globally. Segments where our lubricants are market leaders include: Power Generation, Chemicals, and Oil & Gas exploration, Textiles, Manufacturing, Construction, Marine and Aviation along with other sectors.

CEO, MAL Pakistan Ltd. Mr Khawar Jamal receiving Best Management Award from Lt. Gen. Khalid Rabbani (Retd) along with Operation, Automotive, Finance & Industrial Department Heads.

Mobil Automotive Lubricants are recognized for their advanced technology in lubricants and services, and are synonymous with Motorsport where performance matters most. Our flagship, Mobil1 in the highest selling synthetic motor oil brand globally in the synthetics category. It is the oil of choice of more than 55 car manufacturers, such as Porsche, Mercedes-Benz, Honda and General Motors. As The World's Leading Synthetic Engine Oil, it features a Proprietary Multi-Layer Anti-Wear Technology that provides performance beyond conventional engine oils. The technology allows Mobil 1 to exceed the toughest standards of Japanese, European and U.S. car builders and provides exceptional protection against engine wear, under normal or even the most extreme conditions.

MAL Pakistan owes its sustained success to its employees, their talent, their hard work and ExxonMobil's vision of shared growth. The company has been proud to stand by its core principles - a corporate culture that fosters creativity, stimulates self-motivation and encourages employee development whilst adhering to the highest standards of business conduct - a business philosophy committed to strong compliance management that eagerly anticipates challenges and embraces growth opportunities.■

GE and Engro Sign Digital Industrial Alliance to Accelerate the Transformation of Industries

GE (NYSE: GE) and Engro Corporation Limited yesterday initiated a strategic alliance at GE's Crotonville Global Leadership Institute that will make Engro a key digital industrial partner for GE in Pakistan and the region.

Engro is one of Pakistan's leading conglomerates with investments in agriculture, fertilizers, foods, energy, chemical storage and petrochemicals. Already a major GE customer, Engro will accelerate its transformation into a digital industrial powerhouse by selling GE solutions and becoming a system integrator of GE Power's digital solutions to the power generation industry. Engro and GE will also jointly develop new software applications on GE's Predix* platform for the Industrial Internet to address industries not currently served by GE in which Engro has deep domain expertise.

"GE and Engro remain committed to bringing transformational solutions to Pakistan and across the region," stated Azeez Mohammed, President & CEO for GE's Power Services business in the Middle East & Africa. "We are proud to strengthen our collaboration with Engro under this important agreement through which we will provide advanced digital industrial solutions that will enhance asset life cycles and reliability across multiple industries."

The initial focus of the alliance will be on providing GE's Digital Power Plant solutions to electricity generation companies in Pakistan. Engro in collaboration with GE will together acquire the latest cloud technologies that will help enable Pakistan's power generation sector to leapfrog more mature technologies and become part of a global digital power transformation that is expected to create $1.3 trillion in value between now and 2025.

GE's Digital Power Plant solutions transform sensor data gathered from industrial machines and processes into actionable intelligence. This intelligence can be used to monitor equipment health, reduce downtime, improve reliability and ultimately to provide customers with a holistic view of the impact of operational decisions across entire plants and power generation fleets.

As part of the new agreement, Engro's application development and professional services organization, Inbox Business Technologies, will develop new applications on GE's Predix platform for industries in which Engro has deep domain expertise, including petrochemicals, fertilizers and food processing. GE will provide tools and training to accelerate the development of these Predix-based applications.

Jahangir Piracha, CEO Engro Powergen Qadirpur Limited said, "Engro remains resolute in its commitment to develop the local energy sector by introducing technological platforms that can enhance our domain expertise. Together with GE, Engro aims to implement and provide these customized digital solutions to a broad base of industrial partners in Pakistan which will help develop a more digitally competitive industry whilst simultaneously enhancing operational performance across the board."

"GE has been a committed partner in Pakistan's growth story for more than 50 years," said Sarim sheikh, President & CEO for GE Pakistan & Central Asia. "The solutions that will be introduced into the country and others that will be developed in Pakistan through this agreement with Engro will result in further development of the software innovation ecosystem in the country."■

PPL discovers gas in Kotri Block, Sindh

Pakistan Petroleum Limited operator of Kotri Block with 100 percent working interest has announced a gas discovery over its first exploration well Kotri X-1 located in District Hyderabad, Sindh.

Kotri X-1 was spud on February10, 2016 and reached the final depth of 3,892 meters on April 23, 2016. Based on the gas shows encountered during drilling and wireline logs evaluation, a Cased Hole Drill Stem Test was carried out in Lower Goru Massive Sands.

The well flowed good quality gas at an average rate of 3.4 MMscfd at Flowing Wellhead Pressure of 608 psi.

Preliminary analyses of the test data suggests that it may be a tight gas discovery, however, further evaluation is required to determine the nature and commerciality of the discovery based on the geological, geophysical and engineering data collected during drilling and testing of the well.■

Nandipur plant: Nepra being pressurized to increase cost

National Electric Power Regulatory Authority (Nepra) is reportedly being pressurized to increase the cost of the most expensive 425MW Nandipur Power plant by Rs 23 billion through an increase in tariff by Rs 4 per unit, well informed sources told.

The regulator, which is dominated by political appointees at the highest level, invariably faces pressure.

According to the available information, Ministry of Water and Power's Genco-V has pleaded in its review petition that the Authority should approve an additional cost of the project and allow increase in tariff by Rs 4 per unit.

The regulator had turned down the review petition of Genco-V regarding an increase in the project cost on January 29, 2016 and allowed a cost of Rs 42 billion against the demand of Rs 65 billion which implies that Rs 23 billion was not passed on to the consumers.

The Ministry argues that the cost stood at Rs58 billion and in a review petition filed with Nepra for approval, the government put the cost even higher at Rs65 billion including the cost of laying liquefied natural gas transmission lines.

It sought approval for an increase of Rs4 per unit in the power generation tariff to Rs15.63 per unit.

In April 2015, the regulator had approved a cost of Rs42 billion for the Nandipur power plant and set the power tariff at Rs11.63 per unit.

Earlier Nepra had approved the cost of engineering, procurement and construction at $109 million instead of $382 million and asked the government to adjust the higher cost in equity for the project.■

Bank Alfalah partners with Millat Tractors to offer innovative vendor financing solution

In continuation of its efforts to support SME sector in Pakistan, Bank Alfalah has entered into a partnership with the country's largest tractor manufacturer Millat Tractors to launch vendor financing with end-to-end banking solutions specially outfitted for the SME.

The MoU was signed by Atif Bajwa, CEO Bank Alfalah and Sikander Mustafa Khan, Chairaman, Millat Tractors Limited (MTL) in the presence of Mian Muhammad Saleem, Director MTL, Irfan Aqueel, CEO MTL, and Sohail A Nisar, CFO MTL, at the Millat Tractors Limited Head Office, Lahore. The agreement initiates partnership for Value Chain Financing, initially targeting the vendors but will transcend to targeting dealers of Millat Tractors Limited (MTL) in its second phase, while creating a 360 degrees payment solution for Millat and its related SME businesses.

Commenting on the development, CEO Bank Alfalah Mr. Atif Bajwa said, "We are glad to have partnered with the country's largest tractor manufacter Millat Tractors and are very confident that our packaged banking solutions will significantly help them meet the exceeding demands of their ever-growing customer base and business."

Chairman Millat Tractors Mr. Sikander Mustafa Khan said, "Millat Tractors is set to benefit from Bank Alfalah's innovative banking products to streamline its financial transactions. It will not only infuse efficiency and productivity to our business, but also help our dealers and vendors a great deal."

This partnership further consolidates Bank Alfalah's commitment to the SME sector in Pakistan, providing collateral-free lending on the forte of the anchor, a process uncommon to the conventional banking of Pakistan as yet, hence uplifting the status of the SMEs towards a more formalized sector of economics.

In order to provide the financial services charted in the MoU, Bank Alfalah will bring together all of its departments including Branchless Banking, Corporate Credit Cards etc. to coalesce their services to provide a bundle solution to Millat Tractors and its associated businesses, helping them meet and streamline all their financial requirements.■

Dr. Baig visited grieved family of Late Amjad Sabri

Dr. Mirza Ikhtiar Baig offered condolence to the grieved family of Shaheed Amjad Sabri on his return from Umrah. He met mother, children and other family members and called the tragic incident a great loss to the nation. He informed that Amjad Sabri represented Pakistan last year at the International Sufi Music Festival in Fez, Morocco and due to his excellent performance and popularity the city government of Fez announced to dedicate a street in the name of Great Qawwal Amjad Sabri.

While talking to Dr. Baig mother of Late Amjad Sabri expressed her concerns about the security for her and the children. Dr. Baig spoke to Additional IG Karachi Mushtaq Mehar who assured to provide required security immediately to the family. Dr. Baig informed media Amjad Sabri was not only the pride of Pakistan but also the pride of Muslim■

Man: Is there any way for long life? Dr: Get married.
Man: Will it help?
Dr: No, but then the thought of long life will never come!

Solar plane lands in Spain after three-day Atlantic crossing

An airplane powered solely by the sun landed safely in Seville in Spain early on Thursday after an almost three-day flight across the Atlantic from New York in one of the longest legs of the first ever fuel-less flight around the world. The single-seat Solar Impulse 2 touched down shortly after 7.30 a.m. local time in Seville after leaving John F. Kennedy International Airport at about 2.30 a.m. EDT on June 20. The flight of just over 71 hours was the 15th leg of the round-the-world journey by the plane piloted in turns by Swiss aviators Bertrand Piccard and Andre Borschberg.

"Oh-la-la, absolutely perfect," Piccard said after landing, thanking his engineering crew for their efforts.

With a cruising speed of around 70 kilometers an hour (43 miles per hour), similar to an average car, the plane has more than 17,0000 solar cells built in to wings with a span bigger than that of a Boeing 747.

AMAZING GALLERY

London church opens doors for Muslims, hosts grand Iftar

History was made when a centuries-old church in London not only opened its doors for Muslims to break their fast at the church but also organised a prayer session and Iftari for hundreds of Muslims and the church leaders fasted alongside Muslims to promote interfaith harmony.

St. James's Church, Piccadilly, joined hands with the City Circle to invite more than 400 Muslims as well as followers of other faiths for a grand interfaith Iftar dinner and invited London's new Mayor Sadiq Khan as the guest speaker. Mayor of London Sadiq Khan, who has been fasting and famously broke his fast on stage during the European Union referendum national debate on the BBC, said that it's the duty of Muslims to reach out to non-Muslims and explain the real positive nature of Islam to dispel the wrong perceptions about

Disney works its magic on new Shanghai theme park

The Magic Kingdom comes to the Middle Kingdom this week when Disney opens its first theme park in mainland China, betting the growing middle class will spend big on leisure despite a slowing economy.

The $5.5 billion resort, which opens Thursday, features the world´s biggest Disney castle, its blue-topped spires rising above land once occupied by farms and small factories on the outskirts of commercial hub Shanghai.

Disney is seeking to attract crowds with a boat ride based on the "Pirates of the Caribbean", a show from the mega-hit "Frozen" and a "Star Wars" attraction populated by characters from the science-fiction saga among the draws featuring the company´s beloved movies.

The project broke ground in April 2011, with Disney chairman and chief executive Bob Iger telling reporters it would be a "significant milestone" in the company´s history.

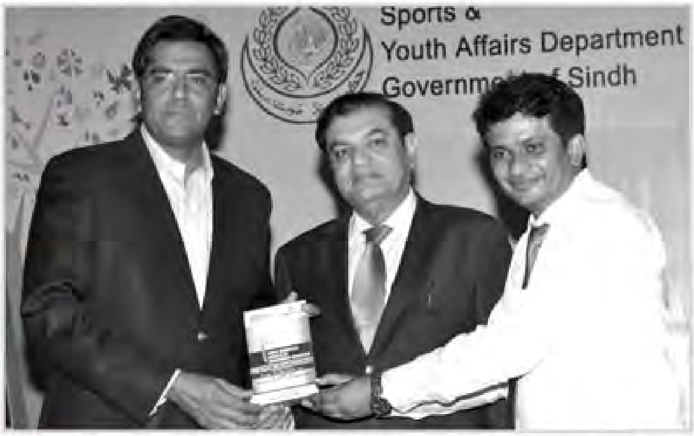
But the opening comes as China´s economic growth has dropped to its weakest level in a quarter of a century, a disappointing end to decades of double-digit growth spurred by government infrastructure spending.

Researchers again detect gravitational waves from black hole merger

Scientists have observed gravitational waves produced by the collision of two black holes for the second time in three months, researchers announced. Albert Einstein predicted the existence of gravitational waves in his theory of relativity a century ago, and scientists have been able to detect the waves with an instrument known as the Laser Interferometer Gravitational-Wave Observatory, or LIGO. Black holes form in the final stage of most massive stars´ evolution. The space bodies are so dense that neither light nor matter can escape them. Sometimes the holes couple, orbiting in a "dance" around each other as they lose energy in the form of gravitational waves, ultimately merging into a single black hole. Those gravitational waves – "ripples in the fabric of space time" – allow scientists to detect when the black holes merge. On December 26, 2015, waves first signaled a collision that occurred about 1.4 billion light-years from Earth, meaning the gravitational waves crossed space for 1.4 billion years before the LIGO instruments could pick them up.

Alamgir Welfare Trust International organized a Iftaar dinner in honour of Government & Non-Government, Businessman, Media and Leading personalities of the city. Commissioner Karachi Ejaz Ahmed Khan, Mirza Ishtiaq Baig, Mirza Ikhtair Baig, Jahangir Khanji, Peerzada Qasim Raza, Cmdr. Najeeb Baloch and others seen in the picture

International Director Lion Ratnaswamy Murugan, Past International Director Lion Malik Khuda Baksh, MCC Lion Syed Kamran Ali and PCC Lion Syed Zafar Iqbal addressing on 27th Annual Multiple District Convention of Lions Clubs International held recently



Picture shows Asif Hyder Shah, Commissioner Karachi receiving shield from Rizwan Jaffer, Founder Chairman, Youth Parliament at 'Youth Awareness Seminar on Environment Education in connection with World Environment Day' organized by Youth Parliament and Youth Affair Department, Government of Sindh, recently.

Jinnah Institute Press Release Entrepreneurship engine for growth Government needs focused policy for start-ups.

Group Picture shows Asif Hyder Shah, Commissioner Karachi, Rizwan Jaffer, Founder Chairman, Youth Parliament, Mian Zahid Hussain, Dr. Kehkashan, Dr. Mohammad Ali Sheikh, Dr. Mohammad Waseh and others at 'Youth Awareness Seminar on Environment Education in connection with World Environment Day'

In anticipation of heat wave that is expected to hit Karachi in near future, SSGC joined hands with Alamgir Welfare Trust for setting up 'Heat Stroke Relief Camps' at 15 locations of the mega TOWN.

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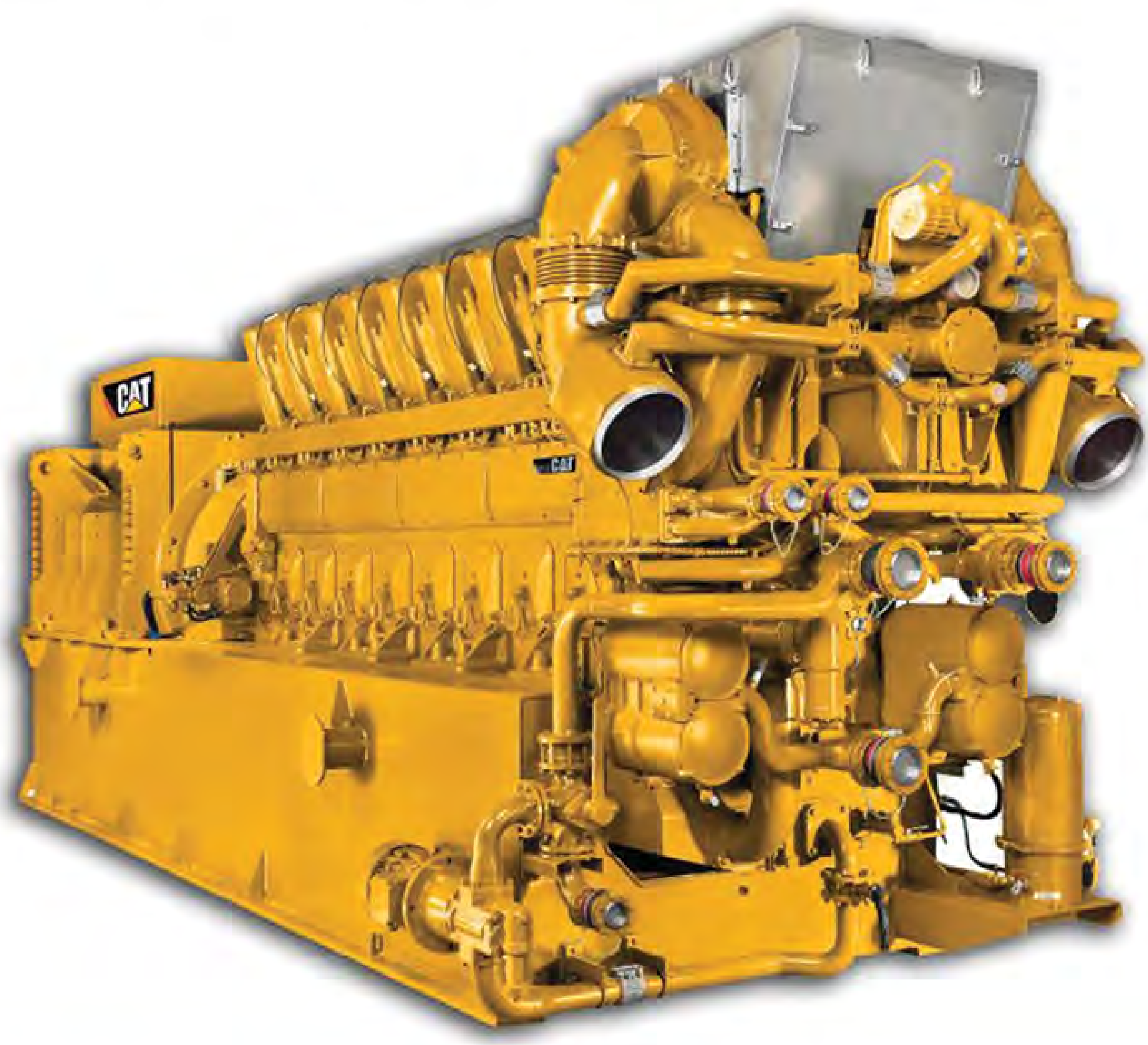

Smarter Energy Solutions

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CG Series Gas Gensets

Mode	Rating (kW)	Electrical Efficiency (%)
CG 132	400 ~ 800	42.4
CG 170	1185 ~ 1997	42.7
CG 260	3333 ~ 4300	43.5

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