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ENERGY UPDATE

Exclusive Interviews

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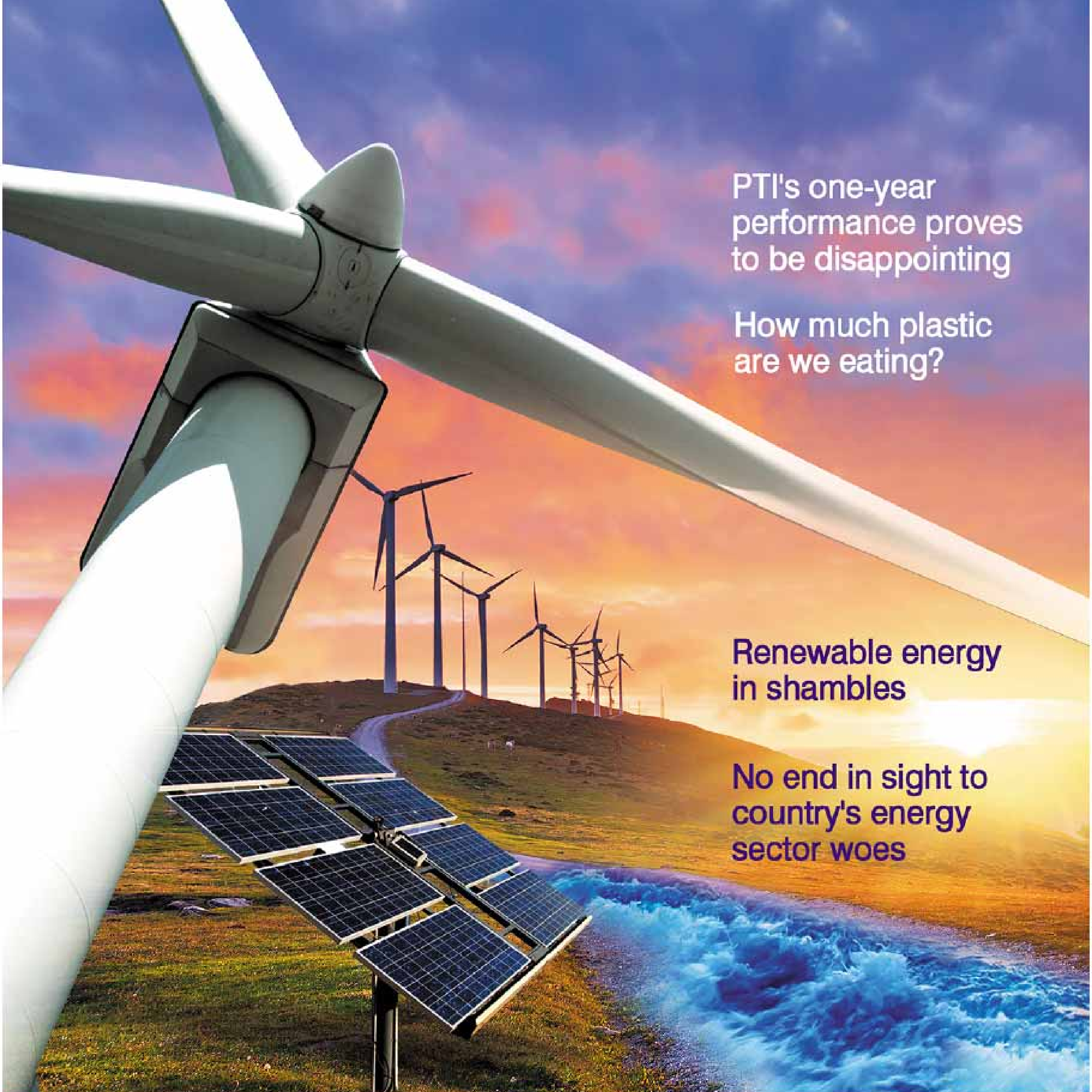

PTI's one-year performance proves to be disappointing

How much plastic are we eating?

Renewable energy in shambles

No end in sight to country's energy sector woes

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From the editor's desk...

Our dying economy

The PTI government is trying to present a gloomy picture of the dying economy and especially the energy sector of the country, the Asian Development Bank has issued an evaluation of its support to Pakistan's energy sector. The report is an indictment of Pakistan's failure to push through reforms in the power sector, which taken independently could cause serious problems for the country's credibility to seek more support to overall its power sector. While there can be other ways out of the power crisis, the successive governments in the last three decades relied on the policy of empowering the private sector on the one hand and preparing for privatising all components of power sector on ther other hand in order to reform the power sector. For some analysts, ironically, the failure was built into the strategy itself. However, for the ADB, which has been a key financier of the kind of power sector reforms that the government has declared its intention to pursue, the failure lies in incomplete and timid reform. The ADB apparently think that only shock therapy could work for Pakistan's power sector. The merits and demerits of that argument aside, a serious question to ask is: if the state has decided to go down this path, why has it not shied away from undertaking the changes fully?

The answer has never been satisfactorily provided to the public as crippling load-shedding, a mammoth circular debt and spiralling electricity prices have become our fate in the last three decades. The situation worsened in the last decade as the issue of circular debt has consumed the power sector. Perhaps there is something the government can say in response to the ADB report. It should not only be foreign donors that make an assessment of how Pakistan has performed; Pakistan should also undertake periodic assessments of the value of external structural reform programmes. Any strategy to tackle issues of generation, transmission, debt and theft in the power sector will need to come from within. The trouble is that Pakistan has not attempted to develop a home-grown power sector reform strategy that the state itself is committed to. However, some of the questions asked by the ADB are important to keep in mind. Will increasing generation capacity not increase circular debt as well? Will the government not need to keep financing the debt through the Power Holding Company if structural reforms are not undertaken?

With the current circular debt now equal to three percent of the GDP, there is no denying that the power sector's troubles are crippling the entire economy. The ADB is understandably angry at a number of ADB programmes being cancelled unilaterally by the Pakistan government, but the government has a right to decide what the value of such programmes is for Pakistan. The bigger issue is that there is no domestic power-sector reform framework to compare international support with. This has meant that Pakistan has piled up external debt in the name of power-sector reform that is not part of any holistic strategy. Short-term planning is a serious issue, one which has aggravated the problems in the power sector.

Fake promotions and twisting of the figures will not help the present government to protect the fast declining economy, as it has to take concrete steps and adopt strong measures to put our trade back on track otherwise PTI should leave the corridors of power on account of not being capable of doing anything positive.

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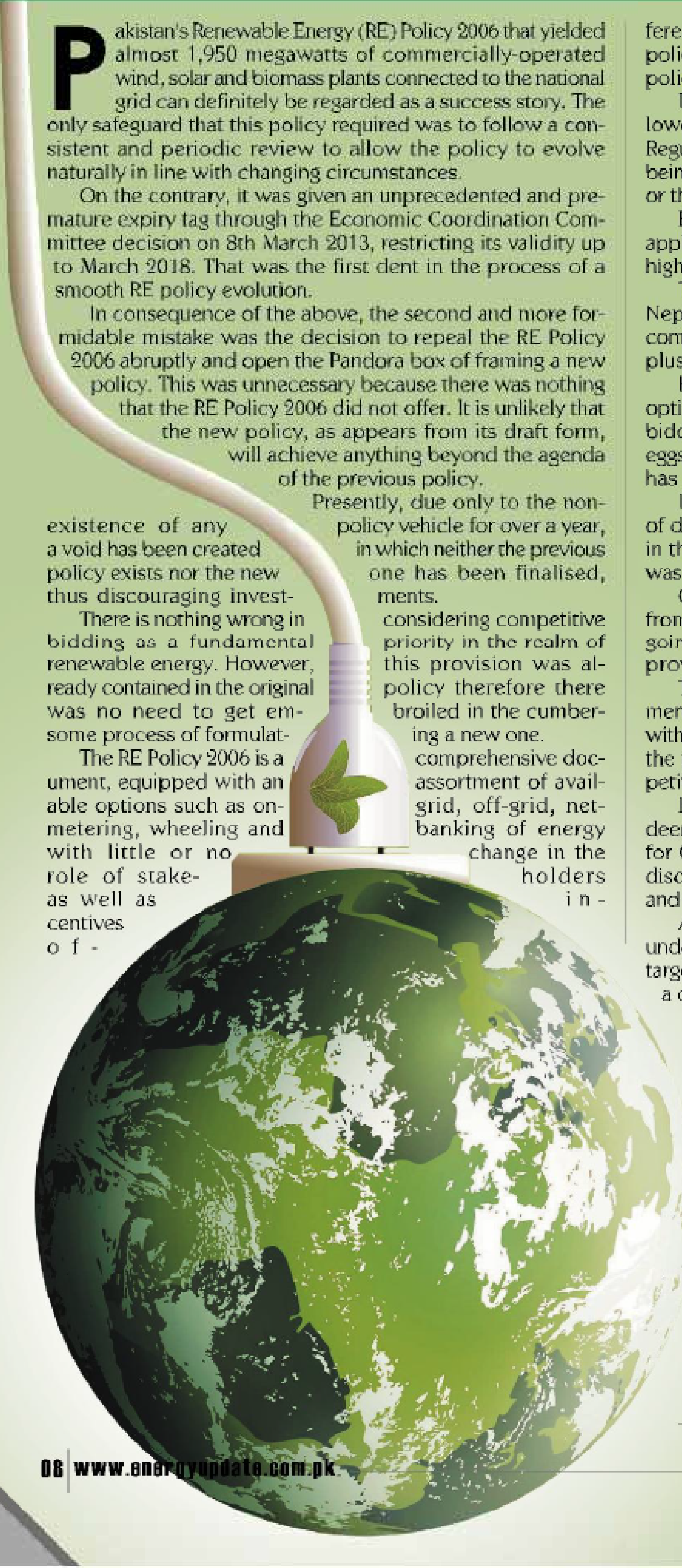
By Amjad Ali Awan

Renewable energy in a shambles



Pakistan's Renewable Energy (RE) Policy 2006 that yielded almost 1,950 megawatts of commercially-operated wind, solar and biomass plants connected to the national grid can definitely be regarded as a success story. The only safeguard that this policy required was to follow a consistent and periodic review to allow the policy to evolve naturally in line with changing circumstances.

On the contrary, it was given an unprecedented and premature expiry tag through the Economic Coordination Committee decision on 8th March 2013, restricting its validity up to March 2018. That was the first dent in the process of a smooth RE policy evolution.

In consequence of the above, the second and more formidable mistake was the decision to repeal the RE Policy 2006 abruptly and open the Pandora box of framing a new policy. This was unnecessary because there was nothing that the RE Policy 2006 did not offer. It is unlikely that the new policy, as appears from its draft form, will achieve anything beyond the agenda of the previous policy.

Presently, due only to the non-existence of any policy vehicle for over a year, a void has been created in which neither the previous policy exists nor the new one has been finalised, thus discouraging investments.

There is nothing wrong in considering competitive bidding as a fundamental priority in the realm of renewable energy. However, this provision was already contained in the original policy therefore there was no need to get embroiled in the cumbersome process of formulating a new one.

The RE Policy 2006 is a comprehensive document, equipped with an assortment of available options such as on-grid, off-grid, net-metering, wheeling and banking of energy with little or no change in the role of stakeholders as well as incentives offered to investors. Thus, in the face of the consensus-based policy paraphernalia already in place, the question for a new policy does not arise.

Despite renewable energy projects currently having the lowest tariffs as determined by the National Electric Power Regulatory Authority (Nepra), the RE projects are consistently being sacrificed under the pretext of either competitive bidding or the new RE Policy.

But why is the same exclusivity of competitive bidding not applied to thermal projects with considerably higher tariff and higher risks?

The RE Policy 200f, formulated in consonance with the Nepra Act, incorporates three modes of awarding tariffs: i) competitive bidding (solicited proposals), ii) negotiation (cost plus tariff for unsolicited proposals and iii) up-front tariffs.

However, in the draft of the new policy, all tariff award options are blocked for general investors except competitive bidding. This is a potentially risky strategy since it puts all the eggs in one basket. Furthermore, despite its benefits, this model has never reached fruition in the country's energy history.

In a country like Pakistan, which has already been a hotbed of debates between the federal and provincial governments in the realm of energy, the consensus-based RE policy 2006 was nothing less than a blessing.

On the other hand, the new policy still has to get approved from the Council of Common Interests (CCI), and that is not going to be a piece of cake, especially since the role of the provincial governments has been eroded in the draft.

The draft also introduces an oddity in the form of a government-to-government (G2G) arrangement, whereby dealings with foreign governments are supposed to be executed through the preferential cost-plus mode instead of undergoing competitive bidding.

If modes of tariff award other than competitive bidding are deemed inappropriate, then why are such models available for G2G arrangements under the new draft RE policy? This discrimination will ultimately result in the loss of credibility and fractured confidence of market players.

As things stand, many critical queries are being shoved under the rug. For example, the 30 per cent share of RE being targeted in the draft policy is unlikely to be achieved without a convincing road map.

There is a lack of clarity on how the target will be divided amongst various RE technologies as well as how the proportionate share of provinces will be determined, especially since each province has a distinct resource advantage.

It is yet to be ascertained whether future energy demand will be estimated based on historic numbers or anticipated economic growth. Moreover, the time it takes to finalise the competitive bidding arrangements, and the scheme and broad parameters of bidding in the wind and solar sectors have not been decided upon as well.

Lastly, no firm date of connecting the first unit of RE to the national grid under the new policy has been given. With a lack of tangible answers, the fate of renewable energy sources is in shambles.■

Courtesy: Daily Dawn

Renewable energy a must to end fossil fuel dominance

By Naila Saleh

Pakistan is a country blessed with enormous renewable energy resources. Nevertheless, against its abundant potential the continuous reliance on large base-load power plants and the existing remarkably low share of renewables in the energy mix ? four per cent of installed capacity and two per cent of power generation? is often intriguing for observers.

While there are several challenges to continued development of renewable energy projects, perhaps the most limiting factors remain the technical ability to absorb the intermittent and stochastic weather-determined output of renewable energy sources such as wind and solar. To apprehend the full spectrum of variable renewable energy (VRE) integration, it is very important to understand the nature of its intermittent output which is fundamentally different from controllable production units. The output of a solar electric system resembles a bell-shaped curve with peak output centered at mid-day and the spread depending on the day hours. On the same lines, wind output keep fluctuating with wind conditions. In the jargon, these resources are 'non-dispatchable' i.e. producing energy only when the sun is shining or the wind is blowing. Resultantly, they present multitude of technical challenges to grid operators making its accommodation difficult in the existing grids ? initially designed to comply with less or non-variable energy sources.

Corresponding to the intermittent nature of variable supply sources, power system flexibility? 'the extent to which a power system can modify electricity production or consumption in response to variability, expected or otherwise'? remains the key driver of VRE. Grid operators do not control these sources rather accommodate it ? which requires some agility. Varying at all-time scales, prior information on VRE production becomes necessary. 'Forecasting' is emerging as an indispensable source of information for mitigating the stated uncertainties surrounding VRE supplies. The technology though has always played an important role in the past for reading electric loads, its introduction in VRE however is recent. Many advanced forecast projects such as cloud-based computing mathematical models and high-resolution weather forecasts are currently being piloted for improved visibility of supplies over a time-frame of seconds to minutes, hours, days and seasons. Despite these technologies, VRE output cannot be predicted with perfect accuracy excess reserves. For adjustment of these fluctuating loads, grid operators have to keep excess reserve running together with rapid response in terms of start-up time, ramp up -ramp down of output and minimum generation level of the plants for following the net load.

In terms of integrating higher shares of VRE, the power sector of Pakistan currently has several limitations. The country lacks renewable energy forecasting techniques. The existing monitoring and dispatch system i.e. Supervisory Control & Data Acquisition (SCADA) is not even fully functional? resulting in insufficient monitoring of even existing generation facilities.

Limited reserve capacity and inflexible operation of conventional plants are few other barriers. Further, the more integrated a grid is, the more likely it is that the sun is shining or the wind is blowing somewhere within the geographical boundaries. With a very isolated grid standing and cross-border integration only with Iran, the country could also not gain the benefits of this cost-efficient balancing effect. Though many plans were set afoot for transmission interconnections with neighboring countries including China, Central Asia and India yet so far CASA 1000 is the only actively pursued project between Afghanistan, the Kyrgyz Republic, Pakistan and Tajikistan. Finally, the transmission network in Pakistan is hugely inefficient, marred not only by high losses but also severe capacity constraints. High losses apart, investment in transmission has failed to keep pace with generation hence barely absorbing the growth in the latter and resulting in frequent overloading and tripping of grids. These constraints collectively have handicapped Pakistan's renewable energy trajectory.

The bottom-line is: building flexibility in the system. We can upscale as much VRE as we want, conditional upon overcoming these grid-integration solutions. Improved planning and coordination with regard to several parameters such as VRE forecasting, back-up reserves, operational flexibility, cross-border integration, digitalization of grid? will unlock the pathway to energy transition and herald the end of fossil fuel dominance. ■

The author is a Research Officer at the Institute of Policy Studies, Islamabad.

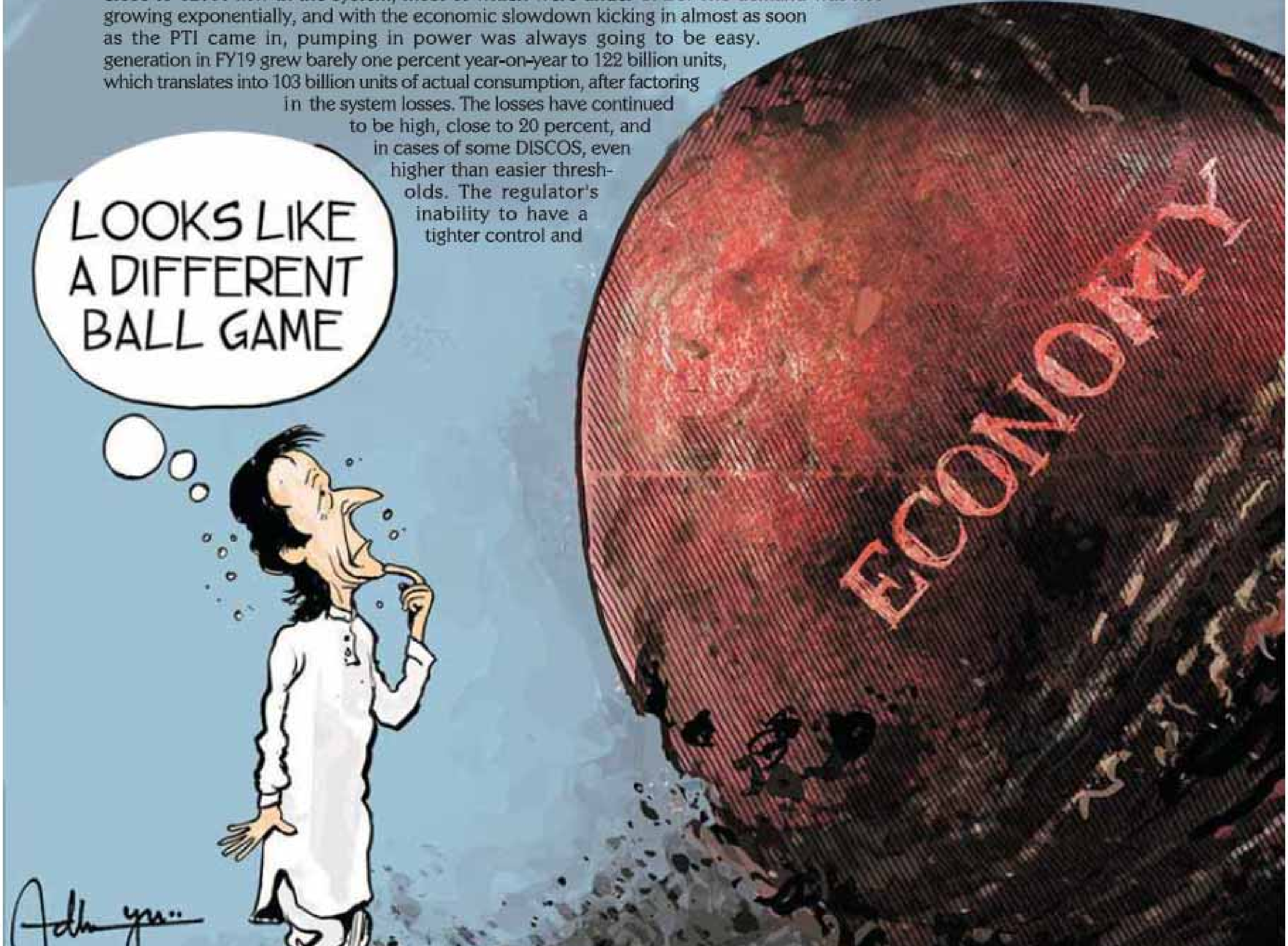
Analysis By Ismat Sabir

PTI's one-year performance proves to be disappointing

IMF reform in energy sector means price increase only

PTI's one year in power was the most disappointing period the nation ever had and as we look at the energy sector, Imran Khan government's performance can be considered as nil rather negative. Based on its poorest governance, it seems that the nest two to three years, if it could sustained, could be disastrous in each and every sector particularly energy, the most important sector.

The ability to generate power was not a problem when the government took office. The previous government had added close to 12000 MW in the system, most of which were under CPEC. The demand was not growing exponentially, and with the economic slowdown kicking in almost as soon as the PTI came in, pumping in power was always going to be easy. generation in FY19 grew barely one percent year-on-year to 122 billion units, which translates into 103 billion units of actual consumption, after factoring in the system losses. The losses have continued to be high, close to 20 percent, and in cases of some DISCOS, even higher than easier thresholds. The regulator's inability to have a tighter control and



instead allowing far more than threshold losses as part of final tariffs, has been a massive problem and there was no progress on this front.

If the previous government can claim any credit on the power front, it was the ability to add more capacity in the system aimed at improved fuel mix. Nonetheless, the improvement did come in FY19 as the share of furnace oil based generation was reduced to single digits, while that of imported LNG and coal based generation reached new highs.

The PTI government should have passed the benefit of a much improved generation mix to the consumers. But in fact the tariffs kept on increasing as Pakistan entered yet another IMF program. The tariff increase was made a structural benchmark, in order to reduce the cost differential and put a lid on the ballooning circular debt, which had crossed Rs1 trillion.

The rise of unfunded subsidy has been a major problem, and the issue exacerbated with the government's relief scheme for industrial users in general and export industries in particular. That takes out another 25 percent of total power consumption out of the tariff hike; instead this requires room for more subsidies, which have not been allocated. in case of delayed payments, another round of circular debt may well be in the offing.

And we have not even talked out the biggest issue yet, and that is the elephant in the room, the capacity payments. Not that the government is looking to recover the difference between price and cost but there is little debate on the elephant in the room, that is the capacity payment component. The amount of upwards adjustment that may be required for FY19 determinations for respective discos, could be too hot to handle. The IMF is not the worry as far as the power prices are concerned, capacity payments are.

The capacity payments in FY16 were Rs280 billion or Rs3.4 per unit sold. This increased to Rs644 billion or Rs6.2 per unit in FY18, constituting almost 60 percent of the power purchase price. Much of it has to do with CPEC related power projects, as lopsided take-or-pay contracts were always going to cause trouble.

The dependable generation capacity in FY19 went up by almost 20 percent year-on-year to 31000 MW. The demand did not grow. The RLNG plants are fully available, among many others from the CPEC projects. No demand growth and higher generation availability with contracts based on take-or-pay, it is estimated that the capacity payments component for FY19 would be to the tune of Rs900 billion. The currency devaluation has also played its role.

Now with almost Rs9 per unit as capacity payment, it is obvious that the benefit of lower fuel price and improved generation mix was never going to materialize. And there is more to come in lieu of tariff adjustments.

The latest IMF program, like any other IMF program, is overly focused on price as the key to reforms. Yes, price is an integral part of the power sector reforms but it is surely not the only one. It did not work back then, it will not work now. The government is due to announce the revised tariffs for FY19 by September end, as per the IMF's structural benchmark. And the budgeted subsidy may not be enough to cater for the increase.

The governance reform, the focus on transmission, privatization of DISCOs and commercially opening up the market are all key component of the reform, which have sadly taken a backseat, as price becomes the focus. The first year was a missed opportunity; the second could be a disaster, if they don't look beyond pricing as means of reforms.■

PSO's earnings slip 2.29% to Rs15.1 billion

Pakistan State Oil's (PSO) consolidated profit slightly dropped 2.29% to Rs15.11 billion in the year ended June 30, 2019 as a robust income from other sources, compared to the core business, strongly protected the earnings from a steep fall. Other income increased 126% to Rs16.92 billion in financial year 2018-19 compared to Rs7.49 billion in the previous year, according to a notice sent to the Pakistan Stock Exchange (PSX) on Wednesday.

PSO posted such a high consolidated profit for the first time after raising its stake in Pakistan Refinery Limited (PRL). "The company booked a hefty other income in FY19 which we believe was a one-off adjustment related to PRL," said Sherman Research analyst Aftab Awan in post-result comments. He added that PSO's volumetric sales recorded a significant drop. Furnace oil and high-speed diesel sales contracted 68% and 24% respectively. Motor spirit's (petrol) volumetric sales remained flat during the year.

Taurus Research analyst Mustafa Mustansir said other income of PSO was boosted in line with a surge in interest income on bank deposits as well as a result of sales of petroleum products at comparatively higher margins.

"PSO built inventories of petroleum products through imports when oil prices were low in the world market, but as international oil prices surged, it allowed PSO to sell the products at comparatively higher margins in the domestic market," he stated. The numbers suggested that the growth in sales, which PSO reported to the PSX, came only in rupee terms instead of volumetric terms. The profit or loss account showed that sales surged 11.5% to Rs1.18 trillion in the year under review compared to Rs1.06 trillion in the previous year. Earnings per share came in at Rs36.55 in FY19 compared to Rs39.52 in the previous year.

The state-owned firm booked a consolidated profit of Rs15.46 billion last year. The PSO board of management recommended a final cash dividend of Rs5 per share and one bonus share in proportion of every five shares. The company has already paid interim dividend of Rs5 per share.

The new entitlement will be paid to the shareholders whose names appear in the register of members on October 18, 2019.

PSO's share price inched down Rs0.26, or 0.17%, to Rs155.67 with trading in 6.96 million shares at the PSX. The profit or loss account showed the cost of products sold surged 12.5% to Rs1.15 trillion in FY19 compared to Rs1.02 trillion last year.■

Tariffs on renewable energy projects to be re-determined

The government has decided to re-determine tariffs of all those renewable energy projects which had been granted tariffs more than a year, aimed at making their tariffs as per market environment, well-informed sources told Business Recorder.

This responsibility has been assigned to the National Electric Power Regulatory Authority (Nepra) which is already under the radar of the National Accountability Bureau (NAB) for awarding "higher tariffs" to almost all power projects of the past.

There were several projects which opted for litigation against the government decision for review of tariffs. Sindh government had also accused the federal government of step-motherly treatment with renewable energy projects especially wind projects being established in Gharo and Jhimpir.

Minister for Energy Sindh, Imtiaz Shaikh has recently repeated his accusations at a National Electric Power Regulatory Authority (Nepra) public hearing meant for licence of provincial transmission company.

Giving details, sources said that the Power Division through a summary for Cabinet Committee on Energy (CCoE) on February 22, 2019, along with other proposals requested approval of amendments in decisions of the committee taken on December 17, 2017 and February 2018 which are as follows: "all projects that have been issued LoIs and have been granted determination of tariff by Nepra and issued a generation licence would be allowed to proceed ahead towards the achievement of their requisite milestone as per Renewable Energy (RE) Policy 2006. However, if the tariff determination has been done since more than one year or if the tariff validity period has lapsed, Nepra would be requested for review of it to make it consistent with the current market environment conditions and consumer interest. Such review shall include appropriate time extension to reach financial closing."

However, the decision was communicated sans the words "if the determination in done since more than a year".

On February 22, 2018, the CCoE had decided that all projects which have been granted letters of support (LoS) by the Alternate Energy Development Board (AEDB) shall be permitted to proceed towards the achievement of their requisite milestones as per the Renewable Energy Policy 2006. However in those cases where more than a year has elapsed since tariff determination by the Nepra, the rates would have to be reviewed by the regulator as per policy.

Power Division maintains that such an omission leads to changing the whole policy with serious financial implications. Accordingly rejoinder was sent to Cabinet Division, which, however, advised the Power Division to furnish a fresh summary to the Cabinet Division for presentation to the CCoE.

Power Division requested the CCoE for rectification and approval of the original proposal along with the sentence "if the tariff determination has been done since more than one year".

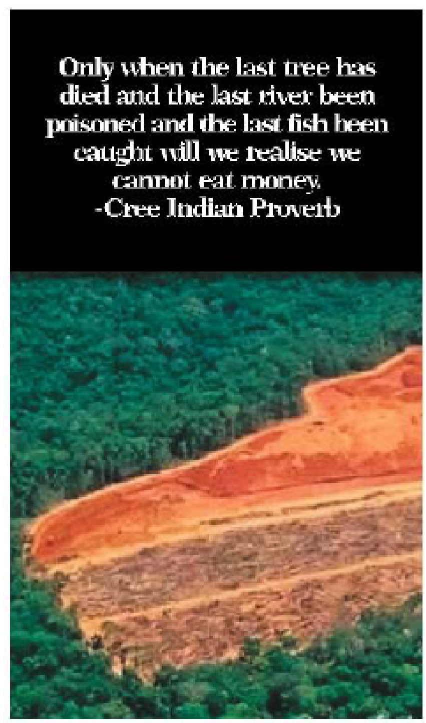
During the ensuring discussion, the Chairman CCoE directed that there should be no financial liability to the government.

The committee accorded approval of the revised summary submitted by the Power Division.

During FY18, 280 MW of wind power has been added to the NTDC's system, for a total wind-based power of about 1,078 MW in the system. The energy generated by wind based power plants during FY18 has been noted at 2,140 GWh - increase of 293 GWh over the previous year. The additions of wind power capacity include 30 MW Tapal Wind Energy, 50 MW Artistic Wind Power, 50 MW Hawa Energy, 50 MW Jhampir Power, 50 MW Three Gorges Second Wind Farm and 50 MW Three Gorges Third Wind Farm.

During FY18, two solar energy projects have been added to NTDC's network. The total energy through solar has been recorded at 669 GWh for an increase of 34 GWh over the energy generated through solar during FY17. The two new projects are 12 MW AJ Power and 18 MW Harappa Solar.

During FY18, there is an increase of about 20 MW in the installed generation capacity of baggasse based power plants for a total of about 301 MW in the NTDC's system. The new addition is 20 MW Thal Industries Corporation. The energy generated by baggasse based power plants during FY18 has been noted at 1,060 GWh. During FY18, a baggasse/coal fired project namely Fatima Energy Limited generated 21 GWh.■

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Exclusive Interview

Oil Mafia: The main culprit behind energy crisis

- Mobin Saulat, MD Inter State Gas Systems (Pvt.) Limited

By Naeem Qureshi

Oil Mafia feels threatened as earlier more electricity was being generated from oil and now their share in energy production is being reduced. Secondly, since all these international agreements in energy sector are new to Pakistan so it finds extremely difficult to get a right expertise so we have to rely on international consultants for taking help from them which obviously is expensive. What we do now, we are trying to associate our teams with them for expertise and technology transfer. There is capacity issue which lacks experienced teams." says Managing Director, Inter State Gas Systems Ltd and Member of PM's Task Force on Gas in an exclusive interview with Energy Update. Following are the excerpts from the interview.

EU: Please provide us your profile in details including educational background, professional experience and achievement

Mobin Saulat: I am masters degree in Strategic Business Management from UK, fellow member of FCMA of the Chartered Institute of Management Accountants (UK) and Certified Director (UK). I have over 20 year of experience in both commercial and professional environment in Pakistan as well as abroad.

Prior to becoming the Managing Director, I served the company as Head of Finance and Commercial. Under his headship, the Inter State Gas Systems Pvt. Ltd (ISGS) witnessed impressive growth becoming the first Pakistani company in the energy sector to develop transnational gas import projects for the country. These projects included the gas sales and purchase agreement with Turkmenistan, TAPI Gas Pipeline, North South Gas Pipeline (Russia), Gwadar-Nawabshah LNG terminal and Pipeline Project (CNPC-China), Offsore Gas Pipeline (Gazprom-Russia), South Nort Gas Pipeline (PowerChina-China) and Strategic Underground Gas Shortages. I was given additional responsibility to head Pakistan LNG Terminals Ltd (PLTL) and Pakistan LNG Ltd (PLL) to ensure their operational readiness. I am amongst the few public sector officers who have worked extensively in the entire LNG sector supply chain and also the member of Energy Task Force recently constituted by Prime Minister Imran Khan.

Earlier, I have served the Islamabad Electric Supply Company (IESCO) as the Finance Director/Company Secretary, Group Head Finance Army Welfare Trust and Chief Financial Controller of the prestigious White Oil Pipeline project and Shashi Steel Mill Ltd also served as the first Chairman Board of Directors of TAPI (Pvt.) Ltd and director board of SSGC, PLL and PLTL. I was remained at Senior Managerial positions in large conglomerates in Saudi Arabia, United Arab Emirate and UK.

EU: Would you like to brief us about purpose of ISGS and projects all over the country.

Mobin Saluait: ISGS was setup

and is a subsidiary of Government Holdings Private Limited and is mandated to import gas and develop large diameter national and transnational transmission pipelines. ISGS is also at the forefront in providing viable solutions to Pakistan's energy sector through integrated approach by harnessing energy resources from within and outside the country in a manner that supports lasting development.

The projects, currently under execution, are of immense importance not only in terms of reliable, affordable, efficient and clean energy supplies to the country but it will also provide an avenue for regional connectivity and outreach. We have launched strategic concepts towards adding secured energy supplies to the nation's energy mix. Turkmenistan-Afghanistan-Pakistan-India (TAPI) Gas Pipeline, Iran-Pakistan (IP) Gas Pipeline, North South Gas Pipeline, South North Gas Pipeline, Offshore Gas Pipeline and Underground Gas Storages are some projects of ISGS.

EU: Please brief us about potential of LNG in Pakistan

Mobin Saulat: Pakistan is a gas centric so we need uninterrupted supply of gas. Since our indigenous source of gas had been depleting so we have either to import it or exploit new indigenous reserves. Now import of gas either through gas pipelines or through LNG. Both Turkmenistan and Iran projects have geopolitical issues like security in Afghanistan and sanctions on Iran. So the short term solution with the problem is import of LNG and this is what Pakistan right now is engaged in importing LNG to make sure mitigating the shortage of gas. The long term solution is the TAPI and IP gas projects and till the time these projects are executed, LNG is an absolutely necessity for Pakistan and we have no choice but to keep on importing LNG at competitive price. We must try to explore the reliable and competitive sources of LNG so we able to make sure that gas reach to the consumers. Gas in any case is cheaper than oil and it can help saving millions of dollars. We are bringing not only cheap source but also clean fuel.

EU: What are your suggestions to develop energy sector in Pakistan?

Mobin Saulat: Pakistan energy sector requires all basic avenue including production from the hydel, nuclear, renewable, wind, solar and coal, all these because depending entirely on one commodity like natural gas makes you vulnerable because in end of the day, if it is not available, it would not present a balance picture. If you have a mix of all these sources including hydel, nuclear, coal, gas etc then you will be able to have balance in energy mix. The world is now being gradually switched towards Renewable energy and Pakistan has also tremendous opportunities, blessed with solar and wind availability as well as biomass. At present, the share of renewable in energy mix is only five per cent. Being a member of Task force of Energy, we are tasked by the government to enhance this share from existing five per cent to 30 per cent by 2030. Although, the world is going away from coal but percentage of energy production from coal in Pakistan is very low. If we increase it to five per cent, it will not be harmful for environment. There are two power plants developed by Engro having 1200 MW capacity. Out of total 25,000 MW power generation, the volume of coal is only 1200 MW which is very insignificant. I think it is good and positive contribution and we should encourage it and trying to make a part of national grid. It is irony that we are sitting on largest coal reserves and you are not able to use it for electricity generation. There are areas nearer to the facility of Thar where it is difficult to lay expensive pipeline network and infrastructure which is coming all from South or North of Pakistan. It is good if we have power producing set up, catering the requirement of the area nearby, you will save lot of money and it will be limited to that area. Even limited contribution from dirty fuel will help the cause.

EU: What is your edge in the market?

Mobin Saulat: As a company, we are one of the most experience entity in Pakistan who at one time as a think tank, as a project developer, who has the expertise of finalizing these international gas import projects as well as developing the large infrastructure. So we have the expertise of negotiating international agreements, we are dealing with the one of the giant in the oil and gas sector of the world mainly gas from TAPI, IP etc. We know how to deal in international agreement, contract negotiator, understand the energy demand and supply that gives us edge to rest of the companies. We have a small set up, we have very low over heads as compare to other gas companies. We are operating with less than 50 executives, all professionals consisting of engineers, finance, commercial, legal and procurement experts. Our cost to the national exchequer is very low as compared to other companies.

EU: Kindly brief us about health, safety, environmental and corporate social responsibility measures of your company.

Mobin Saulat: At present, we are in the projects development phase, the commodity which we are trying to bring to the country is basically a clean fuel also called a green fuel so it automatically brings in the environment protection and cleaner commodity of the country. All our projects are subjects to clearness from the environmental protection agency of the Pakistan. As all these are international projects so it is mandatory for us to get no objection certificates from these authorities. At the same time, in all our development projects, we set out a huge budget for the rehabilitation of the people of the region of the areas where these projects pass through it. These projects included development of roads infrastructure, hospitals, schools and providing employment to the locals. These all are mandatory requirement once these projects are commissioned.

EU:. What are the challenges of LNG sector?

Mobin Saulat: Whenever there is change and new thing coming into the scenario, there will be always a resistance. Oil Mafia who feel a threat as earlier more electricity was being generated from oil and now their share in energy production is being reduced. Secondly, since all these international agreements in energy sector are new to Pakistan so it finds extremely difficult to get a right expertise so we have to rely on international consultants for taking help from them which obviously is expensive.

What we do now, we are trying to associate our teams with them for expertise and technology transfer. There is capacity issue which lacks experience teams.

Most recent phenomenon is the development of projects in Pubic sector as these projects are continuously being threaten by very strict bureaucratic, regulatory and investigation authorities like NAB and media. These are emerging challenges which need only hurting public but also private sector. ■

All business indicators are negative, economy is about to collapse

Top businessmen explode before Gen Bajwa

By Sajid Aziz

Sheer failure of the PTI's governance and disappointed with the dismal performance by Prime Minister, Imran Khan, the heads of Pakistan's leading business houses have resorted to approach Chief of Army Staff (COAS) General Qamar Javed Bajwa to convey their serious concerns about Pakistan's economy that is leading towards a possible collapse and the government's tepid response to the debilitating situation facing the drivers of the country's economy.

Their main gripe was that the government does not go beyond verbal assurances and that its words do not match its action.

"This is too much and the business community has to approach the Chief of Army Staff, Gen Bajwa to intervene and rescue the dying economy as no one in the present government is willing to address the issues of business community and the dwindling exports", said the Business Tycoon, Aqeel Karim Dhedhi.

The Army Chief has finally decided to meet the business leaders following their repeated requests to listen to their woes, Aqeel Kaim said. It was apprised by the business leaders to the army chief that all business indicators are negative and not a single sector is in satisfactory state due to pathetic attitude by the top slots in the government.

Sources with the knowledge of what was discussed in the meeting claimed that the Army Chief heard the grievances expressed by 16 to 20-strong delegation and assured them of his help, adding that he will try to do something for the resolution of their problems at the earliest. The COAS also floated an idea that an internal committee be formed comprising military officers to work on the delegates' complaints so that they could be resolved as soon as possible. The businessmen met the COAS at a dinner reception that continued late at night.

General Bajwa advised the business leaders to cooperate with the government and do not side with anti-government forces. Addressing the leading businessmen of the country, the Army Chief said that we all love Pakistan, and the country needs them the most. He hailed the services rendered by the

business community for Pakistan, adding that with their (business community) efforts the country will move forward in the comity of the nations. He also consoled them, saying that he feels their pain.

The delegates did not keep their anger and frustration at the government's attitude towards economy from General Bajwa and conveyed to him that their business united are getting closed one by one, and if remedial measures were not taken then all their business would be shut leaving countless labourers unemployed. They said that labourers'bread and butter is also linked with their businesses. They said that it their businesses were a result of years of hard work after creation of Pakistan and they have been managing through thick and thin in different eras.

The business tycoons requested the Army Chief to do something for God sake as it was a matter of pain that they are not seeing light at the end of the tunnel. They said that if nothing was done on emergent basis the situation will deteriorate further multiplying the problems.

It is to be mentioned here that in the last meeting with traders in Karachi few months ago, the Army Chief had assured the trade leaders that he would talk with the government for resolution of their problems. The COAS had asked them to contact him if they face any problem in future.

The business community expressed its concerns about stagflation where the GDP growth is touching the lowest ebb while inflation is persistently rising and its resulting into halting economic activities.

At this point of time the FBR is squeezing the businesses to maximise its revenues. They also complained about increasing cost of doing business was making hard for them to make their business venture economically viable.

Among those who were present in the meeting included former President FPCCI Zubair Tufail, Arif Habib, Mian Mansha, Hussain Dawood, Ali Mohammad Tabba, Ali Jameel, Javed Chinoy, Zubair Motiwala, Ijaz Gohar, Aqeel Karim Dhedi, Siraj Qasim Teli, Saqib Shirazi and some other textile tycoons. The sources said that the business tycoons might also meet with Prime Minister Imran Khan. The businessmen criticised NAB activities against them and further stated that the element of fear among the public sector increased manifold so no public sector employee was ready to resolve their genuine problems.

No official word was available but sources who held discussions with top business tycoons prior to the meeting said that the business activities were standing at standstill situation causing serious concerns for the business community. The business tycoons were perturbed mainly because of increasing policy rate and exchange rate that resulting into creating uncertainties and barring them to take decision on making investments related decisions.

The foreign direct investment (FDI) is showing stagnant results. There are many sectors of large scale manufacturing where the growth is on decline from last several months. The textile sector is not performing as desired because of increased tax burden after withdrawal of zero rating. They further apprised the COAS that the GDP growth is going down but the revenues are increasing which is never heard of in any economy. They said 90 percent increase in revenues came from the existing taxpayers that has increased the cost of doing business.

The corruption rate has increased instead of declining. They feared that after losing the export market they are likely to lose the domestic market to imports if the energy and power rates are not brought down.

They said instead of eradicating corruption and losses in power and energy sectors the burden has been passed on to businesses. Now they await a response from the quarters concerned.

The businessmen registered their concern over unusual activity of the FBR officials – making calls and paying unplanned visits. Many businessmen also narrated the fact that is was becoming difficult for them to get money from the financial institution concerned for either running their existing business or expanding their respective facilities. They stated the institution was refusing to facilitate them on the pretext of low dollar reserves in the country.

The half cooked documentation drive is creating more uncertainty as the CNIC condition is being deferred by the FBR realising broken value chain in many sectors. Textile sector particularly the spinners are sitting on huge unsold stocks as small weavers are not lifting yarn because of CNIC condition.■

How much plastic are we eating?

■ By Ahmad Younas

It won't be wrong to say that we live in a plastic world. Wherever we go, we'll encounter at least one thing made of plastic. As the pace of our lives quicken over time, we find plastic products more and more useful. Plastic shopping bags allow us to shop on the way, even if we hadn't planned to, and disposable containers allow us to eat on the move.

"Up until the '70s, we would have to take a metal or china container or utensil to buy yogurt and nihari from the vendor because plastic bags did not exist," reminisces Gohar Ishtiaq, a housewife discussing the good old pre-plastic days. "Groceries would be bought in a cloth bag or woven baskets made of date or coconut palm leaves. Flour was sold in a cloth bag while butchers sold meat wrapped in newspapers."

With the increase in the use of plastic products globally, its repercussions are also increasing - as at least one third of all plastic products end up polluting the environment. And we produce plastic in substantial amounts. The production rate of plastic is growing exponentially at a rate of four percent per annum and, if things continue this way, there may come a time when the amount of plastic in our environment may exceed that of the flora and fauna.

The story of plastic pollution is not a new one. Since plastic is a non-biodegradable material (that is, it can not be decomposed easily), it tends to remain in the environment and act as a pollutant. As tons of plastic gets dumped into the environment, the aquatic and terrestrial ecosystems continue to be devastated. According to a World Wide Fund (WWF) report, around 450 million gallons of untreated industrial waste, including paper, plastic, glass and metal, from industries in cities enters the Arabian Sea every day. Not only does it pollute water and reduce its quality, as a result of associated chemicals, but it also proves to be a direct threat to aquatic life.

Plastic pollution is adversely affecting marine turtles, sea birds and other diverse marine life. Many of the creatures we love, such as whales, dolphins, birds and turtles, die because of plastic pollution. One such example is that of marine turtles, which feed on jellyfish; they may mistake plastic shopping bags as their natural prey and attempt to eat them. When that happens, the bags get stuck in their pharynx and suffocate them, resulting in a slow and painful death.

According to the WWF, by 2025 there will be one metric ton of plastic in the seas for every three tons of fish and, by 2050, there will be more plastic than fish. In terrestrial ecosystems, the soil quality is greatly compromised, while animals can get entangled in plastic bags and suffocate just as in water.

Another aspect of plastic pollution is our food; yes the stuff we eat may contain plastic. New research combining the results of more than 50 studies globally has found that, on average, we could be ingesting about five grammes of plastic every week - equivalent to the weight of a credit card - through the air we breathe, the food we eat and, especially, the water we drink. The report "No Plastic in Nature: Assessing Plastic Ingestion from Nature to People", based on a study commissioned by the WWF, suggests that people are consuming about 2,000 tiny pieces of plastic every week. That's approximately 21 grammes a month, just over 250 grammes a year.

The biggest source of ingestion of plastic is water, which comes as no surprise as most of the plastic ever manufactured finds its way to a water body. The degree of contamination fluctuates from area to area, depending on the degree of plastic pollution. For instance, in India, it was found that, on average, there were four microplastic fibres per 500 ml of water that was tested, and 82.4 per cent of the water samples tested were contaminated. The same can be predicted about Pakistan

Consumption is mainly through seafood as plastic waste dumped in our oceans is consumed by marine animals, and, in turn, enters our food chain. Minor quantities of microplastics (small particles of plastic that pollute the environment) also enter the body through the air we breathe, as some plastic residue is also present in our surrounding air. It is more so indoors as compared to outdoors due to limited airflow. But this quantity is small as compared to other sources.

Although the exact health effects of plastic contamination are still under study, some suspected effects include respiratory disorders, toxicity of cells and early death in animals that ingest large amounts of plastic. Not only does plastic pose a threat by itself but it may also contain chemical substances absorbed by its surface, which may have harmful effects of their own, including the potential to cause cancer. Moreover, as there are multiple types of plastics and there isn't much awareness about their types in Pakistan, most people don't know whether or not a particular type of plastic is microwave-friendly or not. They tend to heat edible items in plastic containers not suitable for the purpose, which causes some of the material to melt off and be added to the food. This can also lead to cancer.

Since 2000, the world has produced as much plastic as all the preceding years combined, a third of which is leaked into nature. The production of virgin plastic (plastic resin that has been newly produced using natural gas or crude oil in order to create brand new plastic products) has increased 200-fold since 1950 and has grown at a rate of four percent per year since 2000. It is predicted that current production could increase by 40 percent by 2030.

The plastic industry is one of the leading industries in Pakistan. Considering the economic situation of the country, it is extremely hard to restrain it. Biodegradable and recyclable or reusable plastic bags are hard to find as people are not inclined to use them because of a lack of public awareness.

Approximately as many as 55 billion plastic shopping bags are used each year in Pakistan. The current environmental laws of the country, on pollution and pollutants, are inadequate to deal with the issue. Unchecked, this problem will escalate even further and environmental deterioration will worsen.

"The Environment Protection Department (EPD) wants to ban plastic bags but in phases," says Naseemur Rehman, the department's director. "In the first phase, we plan to increase the thickness of the bag to 45 microns, though 45 micron is just a proposal and can be further enhanced. To decide this and other details, a committee is being constituted."

He further explains that polythene bags are problematic for the environment. Light-weight plastic bags are responsible for causing more than 60 percent blockage of sewerage system. It also affects our soil, crops and nature. "The Oxo-biodegradable shopping bag is not recommended because of the presence of metals such as chromium used for its degradation," adds Rehman, "The committee will further consider other options. It is expected that plastic bags will be banned in future and a phased strategy will be finalised soon and will be presented before the high court. Further, people are being encouraged to use cloth bags instead of using plastic or paper bags."

Nazifa Butt, manager Environmental Assessment, WWF-Pakistan, believes that there is lack of awareness among the masses about the safe use of plastic which aggravates the problem. "According to international standards, the type of plastic must be mentioned on each product," she says.

"Usually there are seven types of plastics that not only tell the quality but also provide guidance regarding its recycling. Our work involves engaging the youth and general public, in nationwide advocacy campaigns on social media, beach clean-up drives and seminars on plastic pollution. Training fishermen for rescuing entangled marine species has been an ongoing intervention."■

18 airlines told not to use plastic cutlery on flights to Pakistan

The Aviation Division has directed 18 international airlines to stop use of plastic cutlery in flights to Pakistan. The airlines are also directed to ensure that the cutlery is packed in paper rather than in plastic or polythene bags.

"We have given directives to airlines that they cannot use plastic cutlery in the flights as we want to stop the use of plastic. Moreover, it is observed that the cutlery is packed in plastic sacks so we have also directed them to ensure that the cutlery should be wrapped in paper rather than in polythene," Khokhar said. Aslam appreciated the step and said such messages can also be advertised on electronic boards placed near airports.

"I was travelling to a country [he said without mentioning the name of the country] and at the time of entry I was told that there would be a $200 fine for the use of plastic bags," he said. Khokhar said that a written directive was sent to the airlines a few months back and after that reminders were also sent to them to ensure implementation.

"Only China Southern Airlines has asked from us that under which law should it stop the use of plastic cutlery and we have given them a reply. Other airlines have not asked about it which means they have no objection to it. We hope that the decision of the Aviation Division would be implemented shortly," he said.

"We are also concerned about climate change and that is why we have planted over 50,000 saplings around airports," he said. A new regulation under the Environmental Protection Act 1997, proposing a ban on polythene bags in the federal capital, was introduced in June this year and Aug 14 was the cut-off date.

The regulation is called "Pak-EPA Ban on (Manufacturing, Import, Sale, Purchase, Storage and Usage) Polythene Bags Regulations, 2019" and extended to the Islamabad Capital Territory. Later, other provinces also started following the federal capital and are in the process of banning the use of plastic.■

KPK using concept of wheeling to energize its industries

KPK has established their own full-fledged Energy Departments after passage of the 18th Amendment.

Sindh established its own transmission and dispatch company as it recently also applied to National Electric Power Regulatory Authority for what, it says, would be the country's first provincial grid company to facilitate transmission of electricity from renewable energy projects in the Gharo-Jhimpir wind corridor. Sindh also achieved two other milestones in the arena of energy i.e. setting up 100 MWs Nooriabad power plant and later successful commissioning of the project to extract for the first time vast coal reserves in Thar for production of electricity under a joint venture with Engro. Similarly, Punjab government undertook a number of energy initiatives to utilize both conventional and alternative resources of energy of the province to produce cheap and reliable electricity for its consumers.

The Khyber Pakhtunkhwa government also succeeded in successfully unfolding the plan to establish scores of mini-micro hydro power stations to tap the potential of run-of-the-river energy in its snow-capped scenic hilly areas. It also conceived plans to construct power projects to utilize massive hydro resource of the province. In this regard, the public-private partnership regime is commonly being used by the provincial governments to pursue such projects in the energy sector.

The industrial sector will constantly need more electricity as industrialization gets flourished as the country establishes special economic zones and gets foreign assistance to establish new industries. Industries always need cheaper, reliable, and uninterrupted electric supply enabling them to play their due role in the economic growth of the country. In this regard, the industries should not be subjected to curtailment of power supply no matter how much serious energy crisis in the country becomes causing frequent and massive load shed instances in rest of the residential and commercial areas of the country. With this background the KPK government for the first time in the country embarked upon the initiative to utilize the concept of wheeling while utilizing the existing distribution network in the KPK for providing cheap and reliable electricity to one of the main industrial estates in the province.

In this regard, the KPK government in October 2019 signed a memorandum of understanding (MoU) with local industrialists to supply 18MW of electricity through the Pehur Hydel Power Plant on wheeling ÿ

The electricity generated will be supplied from powerhouses directly to industries in Gadoon Amazai Industrial Estate (GAIE) through the transmission system of Peshawar Electric Supply Company (Pesco).

Speaking on the occasion, Adviser to the KPK's Chief Minister on Energy and Power Himayatullah Khan said that the rate per unit for supply of electricity to industries is decided through open auction as Rs7.50 against the existing rate of Rs20 per unit.

"This is a win-win situation for both, industries and the KPK government, because the electricity generated through these powerhouses is supplied to the national grid at the rate of Rs4 per unit and now the government will make an additional earning of Rs2 per unit," he said.

He added that the industries will save Rs13.5 per unit, while Pesco will earn Rs1.50 per unit for using the transmission system.

Meanwhile, KPK Chief Minister Mahmood Khan said that this decision will promote industrialization in the province, which has badly been hit by the decade-long wave of terrorism.

The government is also trying to complete the Chasma Lift canal project in its tenure and supply 40MW of electricity under the same condition in order to promote agriculture in the southern region of the province, he added.

"The government is focused on promotion of commerce and trade in the region for creation of employment and prosperity in the country," he stated.

CPEC energy projects to generate 11,000 MW power by 2026

Khyber Pakhtunkhwa Board of Investment's, Chief Executive Hassan Dawood Bhat said that electricity generation through China Pakistan Economic Corridor (CPEC) projects would reach to 11,000 megawatts by the year 2026. "This will help cater to the increasing energy needs of the future," he said while talking to media, adding that CPEC was leading the country towards new heights of progress and prosperity.

He said that Pakistan was fast becoming a business-friendly country as evident from the World Bank's recent report, which included Pakistan among the top 20 business reformers of 2019. He attributed this progress to the CPEC, under which the government has accorded top priority to the industrial sector. He said that Pakistan has opened its doors for international investors and has been facilitating businesses and investment in the country. "It has been clarified in the joint working group (JWG) meeting of the Ministry of Planning, Development and Reform that Rashakai Special Economic Zone would be built under the Belt and Road Initiative," he added.

No end in sight to country's energy sector woes

Ministers' clueless on how to fix the problems

By Zig Ziglar

The joint press briefing last month by Special Assistant to Prime Minister (SAPM) for Petroleum, with Minister of Energy and SAPM on Information, on his side, has come as a big disappointment. It is amply evident the government has no clue on how to fix the energy sector's woes, which are gradually drifting not just this sector but also the nation's economy towards ruin.

The present government, which has been in power for over a year now, is yet to articulate formally its vision and plan for resolving the major issues that are currently ailing the energy sector and setting this critical support sector of the economy on a firm and viable footing.

All we heard during the above press briefing was a bunch of piecemeal, disjointed, issue-specific, and perhaps business-lobbyist-driven initiatives, which can hardly be considered coming from a well thought out, carefully crafted, and cohesive strategic vision or plan of the government for the energy sector.

Motivational writer and speaker, Zig Ziglar, had once observed, "You are born to win, but to be a winner, you must plan to win, prepare to win, and expect to win."

It appears that our leaders in the government strongly believe that they are born to win and there is also no dearth of expectations on their part for winning, but they have completely missed the fact that, to be winners, they also needed a proper plan and rigorous preparation.

If the government thinks that such piecemeal and disjointed initiatives will automatically fall in place, like the pieces of a jigsaw puzzle, into a viable strategic plan, it should think again as this is not going to happen. Energy planning and policy-making are too serious an undertaking to have been left to a task force drawn from representatives from a few ministries and other public sector entities, and even that as a part-time job for them in addition to their day-to-day routine duties.

It is a complex, multi-faceted, and highly specialised discipline, and requires a team of highly capable and experienced professionals who have a good grasp of the diachronic nature of global energy markets, continuously evolving technological trends, complexities of the global energy resources distribution and geopolitical dynamics around these issues.

The PTI, as a political party, may be new to the government, but it certainly isn't new to the political arena, as it has been vying for power almost for the past two decades. It came to power last year riding on the crest of a vote bank that was

feeling disillusioned by the overwhelmingly corrupt past regimes, and wanted to try something fresh.

It promised to the nation that, if elected to power, it will root out corruption, inefficiencies, and malpractices from every sector and will set new examples of good governance and merit-based administration and management in the country. The nation desperately wanted such a change and was quickly hooked on to the PTI's slogans of change. The honeymoon seems to be coming to an end, however, as high hopes are beginning to wane.

PTI should have done its homework before going into the last elections and should have visions and plans ready for the major sectors of the economy including the energy sector. Hindsight makes it evident that it did nothing of that sort and came to power hoping to bring change on mere slogans.

Once assuming power, the government should have deployed competent and upright professionals quickly to head the major energy sector entities to plug the bleeding, stop the massive corruption and get down to preparing strategic and action plans to reform these organisations using the services of a team of capable and experienced hands.

One year has passed, and it is hard to believe that the country has become so barren that the government has not been able to find a few competent and honest professionals to head the energy sector entities as most of these are still being run on ad hoc basis, either on acting charge basis or through the staff of the Ministry in Islamabad.

On the plan and policy front, the government seems to have faltered too. Instead of assigning these tasks to a carefully selected professional team, it decided to follow the beaten track, that is, by forming task force consisting of bureaucrats drawn from various ministries and representatives from some other energy sector entities. It was a specialised job and, therefore, should have been left for the specialists to handle.

Members of the task force may be well-meaning, dedicated, and sincere in their efforts, but they just don't have the requisite expertise and skills that energy sector planning and policy-making warrants. They seem to have been "captured" by the influential business lobbies, and whoever can win the audience with the top leader or the one next to him, is coming back triumphantly with an initiative or order in his favour.

The Prime Minister has allowed himself to be surrounded by a large group of special advisors and assistants who seemed to have suddenly mushroomed from nowhere, without having any local roots or experience, and even any political stake. They are not only blocking the PM's vision but also misleading him by telling him that all is going well when, in fact, it isn't. Our Prime Minister, as a human being and leader, enjoys a great deal of trust and goodwill among the masses of this country who have pinned too much hope with him that he will bring some positive relief in their plight and pull the country out of the present cesspool into which the previous regimes have left the nation. This is the main reason that despite being put to unprecedented hardship in the past year, they still haven't lost all hope in him and are still willing to give him more time. But frustration seems to be setting in already.

He must break himself free from this coterie of special assistants and advisors who are currently blocking his view to see things clearly and accurately.

He must consult a wider group of energy sector professionals to take objective stock of the situation and take bold and correct decisions that are desperately required to overcome the continuously worsening situation in the energy sector.

Everything is not going well in this sector as some around him would like him to believe. The crisis is deepening further with every passing day. But, "the trouble with most of us is," in the words of Norman Vincent Peale, "that we would rather be ruined by praise than saved by criticism."■

Pakistan to build five additional LNG terminals

Five consortia have been picked by the PTI-led government in Islamabad to build five additional LNG import terminals. These include Shell and Exxon supermajors, as well as Mitsubishi Corp, Energas, Trafigura, and Gunvor.

The move is part of Islamabad efforts to boost natural gas imports to deal with shortages in supply, and at the same time make efforts for local production.

The environmental friendly clean energy resources seem to be there in Pakistan, according to estimates.

These terminals for LNG import will meanwhile fill the demand-supply gap and later could be used also for export, an energy expert says.

Reuters reports that the terminals could be operational in two to three years, quoting the country's oil and power minister, Omar Ayub Khan.

Pakistan is presently heavily dependent on imported fuel. Though there is some local fuel production with changes

in the energy mix basket, in financial year 2017/18, demand exceeded supply. In gas it exceeded by about 3 billion cu ft daily. Imports of gas and LNG are already on the rise but not fast enough to ensure demand-supply equilibrium.

The consortia must submit their detailed plans for the terminals for government approval by November 5, although Reuters quoted PM Khan as saying this approval had already been granted.

Pakistan currently has LNG import capacity of 1.2 billion cu ft per day in two terminals, with plans to add a third with a capacity of 600 billion cu ft daily in 2020. One billion cu ft of natural gas equals about 21,000 tons of LNG.

Last week, the Inter State Gas Systems (Private) Limited (ISGS) and the National Iranian Gas Company (NIGC) signed a revised agreement for the much-delayed Iran-Pakistan (IP) gas pipeline project.

Pakistan can build the IP pipeline till the year 2024 for buying 750 million cubic feet of natural gas per day (MMCFD) from Iran.

Besides imports, the country wants to open up its gas deposits to foreign energy companies, and earlier this year a senior government official told Reuters, "I expect in the second half of this year we will be auctioning at least 10, if not 20 blocks for exploration."

Pakistan has conventional gas reserves of 20 trillion cu ft and shale gas reserves exceed 100 trillion cu ft. So far, the authorities have delineated more than 30 gas blocks, all onshore.■

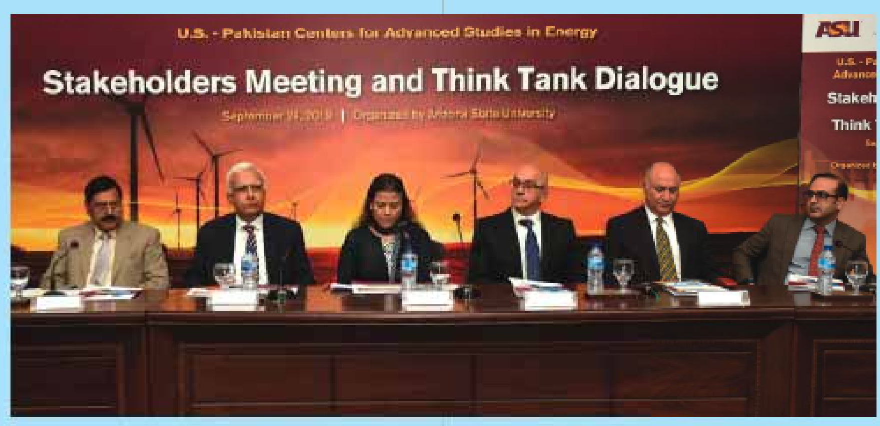
Event Report

US-Pakistan join hands for opening doors to public and private investors

The US-Pakistan Centers for Advanced Studies in Energy (USPCAS-E) organised "6th National Stakeholders Meeting on Energy" at the main campus of National University of Sciences &Technology (NUST). The consultative meeting was attended by over 80 participants, including senior officials from the Government of Pakistan, Higher Education Commission (HEC), United States Agency for International Development (USAID), and industry and academic partners.

Led by Arizona State University (ASU), the meeting provided a forum to share achievements on applied energy research conducted by the faculty at USPCAS-E. Under the Think Tank Dialogue, the session also provided a platform to discuss strategies for energy institutions both public and private, and universities to enhance cooperation and help address Pakistan's energy needs.

Speaking at the occasion, Dr Asif Raza, Pro-Rector Academics NUST, remarked that USPCAS-E had achieved all its key targets in the five years as a USAID-funded project. He reiterated his commitment that USPCAS-E would continue not only to provide energy solutions for Pakistan but also create a pool of highly educated scientists and energy experts.



The one-day meeting featured over 20 research posters that showcased cutting-edge energy research conducted by USPCAS E faculty and their students at both University of Engineering & Technology Peshawar (UET) and NUST. The key stakeholders provided technical feedback on the research projects having the potential to be commercialised.

The USPCAS-E program – under the umbrella of HEC and in partnership with ASU, UET Peshawar and NUST – has produced over 300 graduates, completed 48 research projects and awarded 555 scholarships to deserving scholars. In addition, 217 students and faculty have completed an exchange program in the United States. ■

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By Naeem Qureshi

Govt should not be buying and selling electricity in 70 per cent built-up areas

- Mujtaba Haider Khan, CEO, Reon Energy Pakistan

The government should no more be doing buying and selling electricity in 70 per cent built-up areas of the country as instead private sector should do this job. The government's focus should be 30 per cent areas of the country still without electricity", says Mujtaba Khan, Chief Executive Officer of Reon Energy, Pakistan. In an exclusive interview with Energy Update (EU) he continues to say that Reon Energy has been extensively working to promote the usage of renewable electricity in the country especially solar energy. Following are the important excerpts of his interview for our readers.

Energy Update: What are your present engagements in the renewable energy sector of Pakistan?

Mujtaba Haider Khan: We are an end-to-end service provider for solar and hybrid power plants. We are currently executing power projects of 50 MWs generation capacity. By the end of this quarter we will have installed power projects of total 100 MWs generation capacity. The biggest energy project we have undertaken so far is of 12.5 MWs capacity we have done for the Fauji Cement. Then we have started a project on the Bhit Gas Field being operated by the Italian energy company ENI. It's a 10 MWs power project. It will be the first solar power project of Pakistan, which will use the technology of tracking the movement of sun. This will be first such captive power project, which is being installed at one of the biggest upstream gas production sites of the world. It will be synchronized with the gas turbines present there as it will provide cheap electricity to the gas field. It will help freeing up natural gas being produced there, which will be sent to the transmission system. It is the largest solar project of ENI. They have been very keenly looking towards its development. If such an energy project is undertaken by all the major gas fields of the country then volume of gas, which will be spared resultantly, will be equivalent to discovering an entirely new gas field in Pakistan. So this project carries so much significance as all our gas fields are getting depleted.

EU: Tell us about your other significant projects?

Mr. Khan: We have undertaken a 5 MW solar power project in Thar. For this we have signed a power purchase agreement with Sindh Engro Coal Mining Company for selling them clean electricity for 15 years. We have replaced diesel power generation with 5 MW solar power for using it for their water pumping facility being used for de-watering beneath the coal mining area in Thar. It will help save them Rs 80 million to 100 million annually as the same will be passed on to the consumer as the coal-based electricity being produced in Thar is being fed to the national grid. It is the first formal legal power purchase agreement being signed in in the country in the arena of solar electricity. We have been trying to develop the related energy market in Pakistan on basis of this agreement.

EU: What is your future planning?

Mr. Khan: Our main focus will be the private sector of the country. In this regard, the telecommunication sector is the biggest consumer of electricity. There are around 35,000 telecommunication towers in the country, which all need electricity. We want that these telecom towers should switch to using solar power and batteries for their energy needs. This sector will show exponential growth. Five years have passed since we have established this company as we have learnt a lot all during this time. We have emerged as the market developer in the solar energy as this is not an easy task. There is so much you could do in terms of supply chain and asset management in this field. We are by grace of God a profitable company as we have shown growth in triple digit in last four years.

EU: To what extent solar energy equipment and technology is being indigenously produced in the country?

Mr. Khan: The trend of local manufacturing in this sector is gradually flourishing. A lot of patriotic clients do prefer that we should procure equipment from local vendors for their solar projects. Up till now 60 per cent of the equipment for the solar project is being imported as this mainly includes panels and invertors. Rest of almost all the 40 per cent equipment is locally manufactured. The indigenisation is bound to increase the way this industry gets developed. Electronics and software related to these projects are mostly being locally produced. The indigenous production of panels will start with the expansion of this industry as there will be

increase in demand of such equipment. The industry's own people will start such local manufacturing as some of them have already started making efforts to this effect.

EU: What are the main obstacles hampering the growth of renewable energy sector in the country?

Mr. Khan: We have been lagging behind much in this field as China and India among our neighbors have been emerging fast in this sector. You know better that there has been complete lack of policy in this sector. A near stalemate-like situation has been persisting in this field during last six years. The government did say a lot of good things but as such there has been no major development in this regard. Then the issue of electricity tariff also does exist. There has been uncertainty on the regulatory front also. Moreover, economic conditions also remained uncertain during this time period. This has emerged as the main factor in this regard. Then as we are an energy-deficient country so our main focus was that we need to build base-load power generation first as the development of renewable energy resources will come afterwards. No major development took in the renewable energy sector during all this period as in the meanwhile the cost of solar and wind-based power generation has also came down.

EU: What are the main challenges being faced by our conventional energy sector?

Mr. Khan: The government should mainly focus such 30 per cent areas of the country, which are still without electricity. For rest of the built-up areas where the network of electricity already exists, the privatization of electricity should takes place. The distribution companies working there or even the transmission companies providing connectivity to such places should be privatized. At present these companies in the public sector have been pursuing a near-impossible task that is to provide connectivity to the grid even to the smallest power plant that exists anywhere in the country. The private sector's participation should be allowed in the area.

The private sector should be brought in to carry out such transmission-related tasks. The government should end buying and selling of electricity in 70 per cent built-up areas of the country. The private sector should come forward as it should do these tasks on a market -based model. The CPPA (Central Power Purchasing Agency) has done a lot of homework in this regard as it had also hired consultants for the purpose. The model conceived by the CPPA should be accelerated for adoption.■

PASSWORD PROBLEMS :

WINDOWS: Please enter your new password.
USER: cabbage
WINDOWS: Sorry, the password must be more than 8 characters. USER: boiled cabbage
WINDOWS: Sorry, the password must contain 1 numerical character.
USER: 1 boiled cabbage
WINDOWS: Sorry, the password cannot have blank spaces.
USER: 50bloodyboiledcabbages
WINDOWS: Sorry, the password must contain at least one uppercase character.
USER: 50BLOODYboiledcabbages
WINDOWS: Sorry, the password cannot use more than one uppercase character consecutively.
USER: 50BloodyBoiledCabbagesYouStupidIdiotGiveMeAccessNow!
WINDOWS: Sorry, the password cannot contain punctuation.
USER : IWillHuntYouDown50BloodyBoiledCabbagesYouStupidIdiotGiveMeAccessNow
WINDOWS: Sorry, that password is already in use.??????
(This joke won an award for the Best Joke in a competition held in Britain)

Pakistan's clean energy potential under favourable policy regime

The Energy Update once more has proved its worth and mettle: that it is well capable of gathering at one place all the relevant stakeholders in order to thoroughly discuss any aspect or issue, which relates to the present energy scenario of the country.

Barrister Murtaza Wahab and Pasand Khan Buledi, Secretary Energy, Balochistan, sharing their views.

It is the fourth consecutive year that it has been organizing the International Wind Energy Summit and every time the event by all means becomes a success story.

The timing of 4th International Wind Energy Summit-2019 could no more be appropriate as it was held when the draft of new national renewable energy policy is being finalized by the relevant authorities of the federal government. So by default this event served as a makeshift think tank, which is aimed at holding a massive brainstorming activity to provide the much-needed experts' input to the new renewable policy being formalized by the government.

Held on 30th August, 2019 at a hotel in Karachi, the 4th International Wind Energy Summit-2019 had the participation by all the relevant quarters associated with the arena of alternative power generation in the country be it the project sponsors, prospective investors, government, regulator, renewable energy experts, funding agencies and several state-run agencies of the energy sector.

By virtue of their presence at the day-long event, it eventually turned out to be a massive brainstorming session where exchange of ideas took place at a rapid pace with one aim in mind among all the speakers of the summit i.e. how to turn around the scene of renewable generation in Pakistan to the maximum advantage of end user of electricity in the country so to provide him or her reliable, cheap, uninterrupted power supply that is generated with no or minimal effect on the environment in our surroundings.

One of the salient outcomes of the

Brig Tarique Quadir Lakhair, GM Engro Energy, with Chairman of the Organizing Committee M. Naeem Qureshi and Director of Marketing Energy, Update, Engr. Nadeem Ashraf during inaugural ceremony.

Engr. Mehfooz Kazi, Director Solar Projects Sindh; Zafar Sobhani, Ex-CEO HUBCO, and Salis Usman, GM NTDC, at the session.

day was the effective narrative built, by the chief spokesperson for the Sindh Government, around the theme of the summit. According to him, the Council of Common Interests (CCI) is the most appropriate constitutional forum where the contentious issues between the provinces and the federation, which hampered the growth of renewable energy sector, should be referred to for their amicable resolution for the sake of greater clean power generation in the country.

Sindh Law and Environment Adviser Barrister Murtaza Wahab, who also acts as the spokesperson for Sindh government, gave statement to this effect while speaking as the chief guest at the summit.

Barrister Wahab said on the occasion that the Constitution of the country clearly mandated the CCI to take up the issues concerning energy and electricity sectors as the federal government could not unilaterally take a decision on these subjects.

He said that contentious issues concerning the renewable energy projects like transmission, distribution of electricity produced by them, and their tariff determination should be resolved at the forum of CCI with consensus between the provinces and the centre.

He said that due constitutional course should be adopted for resolving the problems between the provinces and the centre as this method would only ensure resolution of all the issues no matter how much thorny they are.

He said that public-private partnership mode of development would be utilized by the Sindh government to facilitate the renewable energy projects in the province as earlier it had successfully commissioned the Thar coal and energy project under the same mode.

He said that Sindh government was fully committed to the cause of development and expansion of renewable energy sector as one of the innovations it had adopted in this regard was setting up of Sindh Transmission & Dispatch Company as it was the first such provincial company in the power sector of the country.

The provincial adviser said that both private sector and government by combining their resources could overcome all the related issues to ensure maximum generation of clean electricity in the country.

Earlier in his keynote address on the occasion, Balochistan Energy Secretary Passand Khan Buledi said that serious reservations of Balochistan government over the draft of new renewable energy policy of the country were yet to be addressed by the federal government.

He said that provincial government's reservations over the draft policy existed to the extent that if the policy document was implemented in its present shape then it will not be much helpful in harnessing massive potential of the province to generate clean electricity on basis of wind and solar power.

Uzair Naseem, CEO Harappa Solar; Farhan Lodhi, CEO Hawa Energy, and Mujtaba Haider Khan, CEO Reon Energy, during panel discussion.

"Balochistan hasn't produce a single megawatt of clean electricity as the situation will not be much changed if the new renewable energy policy of the country is implemented in the present status without resolving the genuine grievances of the province regarding the policy document," said Balochistan Energy secretary.

"You can call it any policy but you cannot call it a national policy if you simply cut out half of Pakistan from it," said Mr. Buledi while complaining about Balochistan getting no special consideration in the draft of new renewable energy policy despite having Pakistan's best wind corridor and sites for solar energy projects.

Speakers, panelists and members of the organizing committee of 4th Int'l Wind Energy Summit 2019 with Chief Guest Barrister Murtaza Wahab.

Participants paying tribute during the Kashmir Hour observed in the country.

He said that exploitation of natural resources of Balochistan in the past had not been much helpful in uplifting the socio-economic status of the local population as the situation would remain the same in the arena of renewable energy too if the province didn't get the due recognition and place in the new renewable energy policy of the country.

The Balochistan Energy secretary said that when the initial draft of the new renewable energy policy was distributed among

Glimpses of panel discussion

the provinces, Balochistan chief minister and he had written letters to the federal authorities concerned to apprise them of the reservations of the province about the draft policy. These reservations remained unresolved when the revised draft of the policy was later shared with the provinces, he said.

"The provinces are supposed to implement such a policy as in case provinces are not taken on board while finalizing its draft then the (federal) government should not complain to anyone if the policy is not duly implemented," he said.

He said the road-map contained in the draft renewable energy policy for generation and evacuation of alternative electricity had not taken into account the potential of solar and wind power of Balochistan. "We say that if renewable energy policy envisages 20 per cent of electricity generation in the country on basis of renewable power by the year 2025 while increasing the same ratio to 30 per cent by the year 2030 then each of the provinces should exactly know how much clean energy it has to produce to meet this goal under the new policy," he said.

He said that new renewable energy policy should give due protection to the LoIs earlier issued by the provinces for wind and solar power projects so that they could be implemented in accordance with the previous policy regime

Giving example of the renewable energy potential of Balochistan, the provincial secretary said that up to 170,000 MWs of solar power could be produced if only one per cent of the total land mass of Balochistan was put to use for the purpose.

Brig Tariq Qadir Lakhair of Engro Energy said that Balochistan at present presented the best prospects available in the country to do investment in the renewable energy sector.

He said that law-enforcement agencies and army in Balochistan had been providing utmost security to people visiting the province with the intention to do wind and solar energy projects.

Mayura Botejue, consultant on renewable energy projects, in his presentation said that regulatory impediments were one of the main reasons as that was why wind and solar power in Pakistan didn't account for more than five per cent of the total electricity produced in the country.

He said that the government should clearly state its goals regarding expansion of the capacity of the country to produce renewable energy.

He said that hybridization of existing wind power plants was one of the methods to increase production of clean electricity along with the use of improved battery storage technology to harness the potential of solar power.

Naeem Qureshi, chairman of the organizing committee of the summit, said that wind energy conference was held every year in order to gather under one roof all the relevant stakeholders related to the alternative energy sector so that they could together meaningfully discuss issues concerning clean electricity production in the country.■

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Universal Circuit Breaker

Renewable energy share in Pakistan is very dismal - Omar Malik

Energy Update: Your profile detail including your educational background, professional and experience and achievement?

Omar Malik: I have over 18 years of management experience in energy consulting, new business origination, financing, contract negotiation, execution and management of renewable and conventional energy projects. Bachelors in Finance from Georgetown University (US), and MBA from INSEAD in France. I have a role in Shams Power is to set up and grow the portfolio of distributed generation solar assets.

EU: What is the role of your organization in development of the Renewable Energy industry in Pakistan?

Omar Malik: Shams Power is Pakistan's leading solar energy company, offering solar power on a Build Operate Own and Transfer (BOOT) model and holds a NEPRA issued Distributed Generation License for all its PPA sites. Shams Power has successfully implemented this model and has a portfolio of over 10MW+. Our customers include Metro Cash & Carry, AkzoNobel, Packages Mall, Nishat Emporium Mall, Packages Mall and Packages Group, Maxim, Seasons Canola, Menu Chickenu, Shalamar Hospital, and LUMS to name a few.

Shams Power finances and installs solar plants for its clients under a Power Purchase Agreement (PPA) typically comprising of 15 to 25 years. We perform end-to-end roles starting from site design, project financing, equipment procurement, construction, supervision, site commissioning, and ultimately operations & maintenance of the solar power plant. During this whole process, the customer bears no capital or operational cost, and gets discounted electricity. Hassle free and guaranteed savings from day 1, making this an excellent opportunity to convert their operations to green and clean energy.

EU: What challenges you can share for the development of the industry?

Omar Malik: The renewable energy

industry is very nascent in Pakistan and as per industry estimates the contribution of renewables in the energy mix is less than 4%. The major reasons behind such a low penetration number are: Access to Finance: Banks are reluctant to finance this sector because of their inherent risk-averse behavior; they do not accept solar equipment as collateral. Large private equity investors are not interested in this space because of small size of distributed sites (300KW - 2000KW) each. Foreign debt and equity is tricky to take on-board because of Rupee devaluation. Regulatory Challenges: Pakistan is regulated energy market, the challenges and lengthy processes and slow approvals involved with regulators such as NEPRA and AEDB hampers scalability of players in this industry.

Supply Chain Challenges: There is limited to no presence of quality international suppliers in Pakistan, most of the companies selling in Pakistan are wither working through resellers or third party distributors, which affects the availability of reliable equipment and after-sales services.

EU: What is your edge in the Renewable Energy industry?

Omar Malik: Shams Power is a trusted brand in Pakistan and this trust has developed because of our focus on quality and customer service. We take the customer in to confidence from day 1 and stand behind our commitments for the entire duration of the Agreement. Our customers see us as their growth partners and we have been successful in building our relationships with our customers by providing efficient, clean and reliable energy.

EU: Brief us about ongoing and future projects of your company?

Omar Malik: We have been working on several exciting projects all over Pakistan, and are currently deploying solar at Packages Mall, Maxim International, different stores of Metro Cash & Carry all over Paksitan, to name a few. Additionally, Shams Power has over 40MW in various stages of project closure and negotiations, with clients in the cement, paper, oil & gas, pharma, and chemical sectors.

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

Omar Malik: Pakistan is a huge market for renewable energy, especially solar, because of the solar irradiation levels that country receives. However, there are some inherent challenges as discussed earlier, but if we can align the policy makers, regulators, and private banks and create incentives for private developers through concessional financing, recourse to specific projects, ease of regulations and better policies, we can see a sea of solar panels in our country delivering clean, efficient and reliable energy to various sectors of the economy.

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

Omar Malik: Shams Power offers excellent and safe working conditions to its staff. This is ensured by the fact that provision of such conditions will be an integral part of the HR and CSR policy of the company. Safe and healthy conditions are also ensured by the fact that the company is in compliance with OHSAS and has also received ISO certification. ■

Time to recast the electricity business in Pakistan

By Dr. Shahid Rahim

Some new and disruptive business forces are rendering the traditional electricity business operating model obsolete and it may not serve well to accomplish our government's strategic goals in the power sector. It is imperative that this business in the country be reworked along a more dynamic, flexible, and innovative lines to embrace the emerging new realities in the market. The risks of not acting timely could be serious as well as expensive, and also very difficult to correct later.

Four major developments in the world's electricity marketplace have altered the electricity business fundamentally, and are raising serious questions about the continued viability of the traditional way of doing this business.

First, the recent technological strides and cost reductions in the renewable electricity generating technologies, particularly photovoltaic (PV) panels and wind turbine generators (WTGs), have brought the electricity generation costs from these systems to a competitive level with those from conventional power generation technologies.

According to International Renewable Energy Agency (IRENA), in the power sector alone, 94 GW of new photovoltaic (PV) capacity was added during 2018 bringing the total worldwide installed PV capacity to 480 GW. Similarly, 49 GW of new wind capacity was added during 2018 bringing it to a total of 564 GW.

Cost of electricity production from solar PV systems has fallen by 80 percent and that from wind systems by 25 percent since 2010. IRENA estimates that, for projects due to be commissioned in 2020, 77 percent of the onshore wind and 83 percent of the utility-scale solar PV project capacity will have electricity prices lower than the cheapest fossil fuel-fired power generation options for new generation.

ergy Outlook 2018 from the research firm Bloomberg New Energy Finance (BNEF), some 11.5 trillion dollars will be invested worldwide in renewables between 2018 and 2050, largely on solar and wind systems. BNEF estimates that two-thirds of this investment will go to the power sector alone, raising the contribution of these systems to 40 percent of the total electricity generation in the world by 2040.

Second, similar developments in the electricity storage technologies have made it possible for residential and other small consumers to opt for photovoltaic systems for meeting their electricity demands, either bypassing the local electric utility's system entirely or using it only as a backup to cover times when power from their own facilities is unavailable or uneconomic.

Prices of smaller battery packs (used mainly for electric vehicles, EVs, and stand-alone applications) have fallen from US$ 1,000 in 2010 to below US$ 200 per kWh last year. The costs for utility-scale storage batteries have also followed a similar trend. A number of R&D efforts are currently underway around the world aiming to reduce the costs and enhance the capability of electricity storage technologies even further.

According to BNEF's Energy Storage Outlook 2019, energy storage installations worldwide are expected to grow exponentially from 9 GW in 2018 to over 1,000 GW by 2040, a 122-fold growth requiring US$ 662 billion of investment. This will be made possible by sharp declines in the cost of battery storage systems which already have seen an 85 percent reduction in the past decade.

Third, the rapid inroads being made by electric vehicles (EVs), and in particular plug-in hybrid electric vehicles (PHEVs), in the transport sector, especially in developed countries, are significantly impacting electricity demand. It is only a matter of time when these electrically-driven vehicles start penetrating the developing countries' markets, including Pakistan.

In the past 5 years or so, EVs have made spectacular inroads in the transport sectors of many developed countries and even some developing countries, notably China and India. By December 2018, EVs' total stock in the world stood around 5 million from what was just below 0.5 million in 2013, a growth of 58 percent annually.

Global EV sales crossed two millions last year, a rise of 67 percent from 2017, with China alone seeing over one million electric car sales. In terms of EVs' share in total car sales in 2018, Norway topped at 49 percent, followed by Iceland (19 percent), Sweden (8.2 percent), Netherland (6.5 percent), Finland (4.7 percent), and China (4.2 percent). The global ratio between EVs and PHEVs that was 56:44 in 2012 rose to 69:31 in 2018.

Outlook 2018 from BNEF predicts that EVs will represent 55 percent of the world's new light-duty vehicles sales in 2040, some 41 million cars. International Energy Agency (IEA), under its Electric Vehicle 30@30 Initiative assumptions, estimates total light-duty electric cars stock to exceed 220 million by 2030. The stock of 2- and 3-wheelers and commercial EVs will be extra.

Customers can now use smart sensors and control equipment to manage their own demand to minimize their electricity bills as well as offering some this demand response capability back to their electric utility to cut their own electricity bills, and in some cases, even to earn extra money.

Intelligent and smart-grid technologies are also enabling the utilities to monitor their systems in real time to avoid malfunctions, operate these systems much closer to their physical limits, and derive the most value from their existing assets. Smart-grid technologies are also enabling utilities to respond more efficiently and effectively to deal with systems disturbances and deliver service to their customers more reliably, with better quality, and in innovative ways.

Collectively, the above trends are being termed "disruptive" by industry analysts because these are challenging the fundamental principles of the traditional electric utility business. Some have been quick to even predict that these forces may be drifting the traditional electric utilities into a "death spiral". This is because, to recover their capital investments in supply facilities, electric utilities need to raise rates; what they are finding to their dismay is that it actually leads to shrinking of their revenues as more and more customers start seeking alternative to the electricity grid.

The traditional electric utility business operating model in which power flows predominantly in one direction (from public- or privately-owned power generating plants to the end-users via the grid) and revenues flow in the opposite direction (from end-users to the power company) with electricity prices fixed and controlled by a regulator is not proving effective any more in dealing with the new challenges of the emerging electricity market.

In the changed environment, power can and will flow in either direction, sometimes within localized loops, as some of the consumers may now be able to meet part or all of their electricity demand by generation at their own premises, either avoiding the utility's grid altogether or using it only for back-up, and not infrequently, providing the utility their excess power and generating facilities to contribute to grid security and reliability. Like the power, revenues can and will also flow in either direction.

There is a compelling need, therefore, to transform the existing electric utility business in the country along more imaginative and innovative lines to deal with the technical and economic challenges posed by these new developments and to derive the true value that these hold for society.

In the absence of a favorable environment and a facilitative business operating model, these newer technologies and distributed systems will be merely "connected" with the utility grid, and not optimally "integrated", thus raising numerous technical and financial challenges for grid operators and utility managers. Consumers will lose too because many of the benefits that their newer technologies and schemes hold for the utility may not be fully realized and compensated in the existing operating model. The society on the whole will thus suffer.

In order to deal with the above challenges and to derive the most value that these new developments can provide, the existing electric utility business in the country will need to be recast along the following lines.

First of all, the government will need to provide an enabling legal and policy framework to encourage the promotion and deployment of distributed energy generation, storage technologies, and demand management schemes in the local electricity system. This framework should empower power sector entities to devise and introduce innovative pricing and compensation schemes to induce consumers and other investors to install such distributed technologies in the system. It should also enable proper accounting, allocation, and recovery of the various costs from the participating consumers and other investors while allowing them a fair compensation for the benefits their facilities contribute to the power grid.

The new policy framework should also encourage deployment of storage technologies in the country as these can enhance renewable energy technologies' value while easing their intermittency and variability constraints. Similarly, besides being a source of new electric demand, battery packs in EVs can also support the power grid in more economical ways than the traditional solutions.

Second, the electricity business in the country will need to be reorganized along more open and flexible lines to treat these new distributed supply and demand options not as competitors or threat to the utility business but instead as partners and complements to the utility's own efforts to serve the economy and society with reliable and economic electric power. The utility managers should not just encourage, but actually seek out aggressively, potential contributions from customers and investors on such options and technologies.

Third, the various entities that have the mandate to serve the electricity demand in the country will need to develop appropriate tools and data and information bases and make these freely accessible to potential customers and investors for using these to assess the scope and technical and economic viability of these options and schemes in meeting customers' own demand for electricity as well as their contribution to the local utility's system. This should also include any technical assistance or support customers and investors might need for making such assessments.

As the electricity grid will act as the enabling platform and conduit for integration and operation of diverse and distributed technologies, the fourth and perhaps the most critical pillar in the above reform effort must focus on modernizing the exiting transmission and distribution networks in the country to transform these into a smart and intelligent electricity grid that can facilitate the successful integration of such technologies and schemes.

The modernized grid will have to be capable of bringing together a range of energy technologies and processes, both electric and non-electric, and various market actors, producers, operators, and end-users, with the aim to optimize resource utilization and operational performance, minimize economic and environmental costs, and maximize system security, reliability, and resilience.

Pakistan's energy sector decision-makers simply cannot afford to sit passively in the face of these new trends and let these disrupt the existing electricity business, as the political and financial costs of their inaction to the nation would be huge and serious. They should instead embrace these new trends as a challenge and use them as a good opportunity to transform the currently ailing power sector into a vibrant and self-sustaining business.■

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Cheaper electricity in winter - how and why?

By Syed Akhtar Ali

Energy costs and tariffs have been increasing and may further go up. There is a need to explore ways and means for reducing these, wherever a reasonable opportunity exists.

There is some scope in increasing various kinds of efficiencies and reducing various kinds of leakages and losses. Electricity cost and tariff can be brought down by increasing capacity utilisation and thus being able to offer a reduced seasonal tariff.

The electricity cost and tariff are projected to increase further due to two major reasons - rupee depreciation from Rs105 (the exchange rate to which most of the power projects are pegged) to Rs150, the rate assumed by the Central Power Purchasing Agency-Guarantee (CPPA-G) in doing its projections.

There is also an increase in the London Interbank Offered Rate (Libor). The current Libor, as assumed by the CPPA-G, is 3.64% as opposed to 0.5% at which most of the independent power producers' (IPPs) tariffs have been based.

This means that at Libor plus 4.5%, the interest rate and thus debt servicing cost of the IPPs will increase from 5% to 8.14%.

Energy projects are at varying stages of their debt cycle. To give the reader an example, the current generation tariff for a wind power project is Rs28 per kilowatt-hour (kWh) as opposed to Rs4 per unit for new wind power projects.

The average power purchase price (PPP) for 2019-20 has been projected at Rs12.10 per kWh as opposed to below Rs10 per kWh earlier.

Once expensive nuclear power comes in, the increase will be even more. Thanks to the depreciated power plants and cheaper local gas, the increase may still be controllable.

When we examine the latest cost and energy forecast data for 2019-20 released by the CPPA-G recently, some interesting phenomenon is readily discernable. Although such figures were available earlier also, the monthly cost data this time invites much attention.

Electricity demand (megawatts) and consumption (gigawatt-hours) in winter are much lesser than in summer, reducing capacity utilisation and increasing capacity charges (CPP) and thus the total generation cost (PPP).

For example, the January cost is Rs14.47 per kWh while July cost is Rs9.94. In January, demand is only 16,762MW and in July, the demand is

25,030MW.

There is a temptation to wish and think that if consumption in winter is somehow increased, the electricity cost can come down. We have tried to do this exercise.

If we increase energy utilisation by 21.88%, the total energy cost (PPP) comes down 12.46%. If energy consumption is further increased, the potential for cost reduction further rises.

However, the reverse may not be true, ie, if the price is reduced, demand may not go up in consonance with the cost formulae. It will depend on the consumer propensity to save and many other factors such as market structure, consumer habits, labour conditions, work habits, technology, etc.

Secondly, the winter generation capacity may not be as much as dictated by the market. An obvious factor is the lower hydel generation.

The idea is worth exploring. Prima facie, there appears to be a potential for the application of this possibility. The industry may shift to higher production levels in winter due to lower energy tariff or winter industries may acquire more competitiveness.

Domestic consumers may shift to electrical heating (resistance or inverter ACs) instead of using liquefied petroleum gas (LPG) or natural gas. The gas tariff is increasing?

Competitive energy market

In advanced countries, there is a retail competition regime whereby many suppliers compete to sell electricity or even gas to consumers. At the wholesale level also, there is a share market-type energy exchange where prices are offered and accepted on the basis of supply and demand and thus considerable variations occur in wholesale prices.

However, at the retail level, the consumer tariff (especially the residential one) is kept relatively stable based on the average.

There are dozens of tariff plans that are being offered by energy suppliers in the retail competition regime. However, one can divide those into two types - a fixed tariff for one or two years and variable tariff, which may change monthly.

So, there will be nothing abnormal in having a seasonal tariff that changes twice or four times a year.

In Pakistan, there is already a provision of variable tariff wherein fuel price adjustments are made monthly. Accordingly, the fixed price adjustment can also be made monthly or quarterly.

The government also plans to have a competitive energy market wherein investment and pricing decisions are made by market forces and controversies in IPP prices and investments are done away with. This will reduce the role and liabilities of the government and is also expected to promote efficiency and reduce energy prices.

Easier said than done; existing contracts are a major impediment in the way of bringing new competition rules. There is always a possibility of anti-competitive behaviour.

Simply speaking, there are possibilities of price collusion and investment manipulation as is alleged in the case of sugar and cement. Still, it is said that a bad market may be better than a bad government.

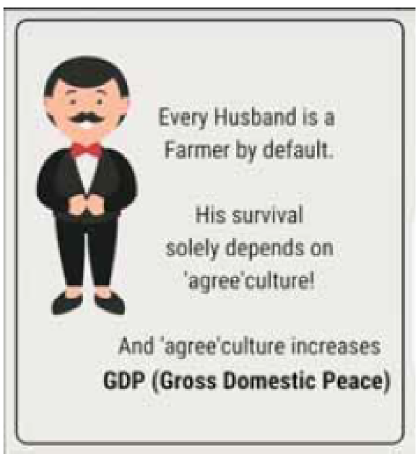
The opportunities for reducing the energy cost and tariff in the short run are limited as the die is cast by the IPP contracts, usually and most expensive. Most damage to the electricity price regime has been done by the so-called upfront tariff.

In the medium to long term, there may be some possibilities - retiring the expensive IPP contracts and introducing cheaper renewable energy sources at reasonable contract terms and preferably through competitive bidding.

With the improvement in general economic conditions and the current account deficit, the exchange rate may assume a reasonable level conducive to the reduction in energy cost and tariff.

Concluding, the National Electric Power Regulatory Authority (Nepra)/CPPA-G may like to examine this opportunity and undertake simulations to come to an optimised and reduced tariff in winter, which will maximise capacity utilisation.■

The writer is a former member energy of the Planning Commission



German Unity Day celebrated

German Unity Day was celebrated at the German Consulate in a simple but impressive manner. As it always happens on Oct 3, a host of local and foreign dignitaries, not to mention members of the print and electronic media, are invited to commemorate the historic day when West and East Germany were unified (1990). A couple of short speeches are delivered followed by the cutting of a cake.

The evening began with national anthems of Germany and Pakistan, and the European anthem, after which German Consul-General in Karachi Eugen Wollfarth delivered first of the two speeches. He said 30 years ago we saw the Berlin Wall fall.

The people had made a difference. Germans were joined by other Germans. It was a peaceful, courageous step taken by the people. He also thanked the countries who supported the reunification.

Mr Wollfarth said he has been living in Karachi for the past one year and found it to be a vibrant city. He has been serving in Sindh and gets to travel to Balochistan regularly.

The people of Sindh and Balochistan need relations in the framework of [German] partners. One of the areas that he is working on is the economy of the region and the purpose is to have better possibilities in the future.■

IEEEP Fair provides unique opportunities - KCCI chief

Agha Shahab Ahmed Khan, President Karachi Chamber (KCCI), has said the 10th IEEEP Fair presents a unique opportunity to electronics and electrical and renewable energy exhibitors and consultants to share their views, cultivate understanding of the latest developments and technological expertise in the engineering industry and also explore various innovative and affordable solutions to engineering-related challenges.

While addressing at the 10th IEEEP Fair 2019, at Expo Centre Karachi, President KCCI appreciated Institute of Electrical and Electronics Engineers of Pakistan (IEEEP) Karachi and Badar Expo Solutions for organizing such an event that benefits an entire industry. The Chairman of IEEEP Karachi Centre Engr Irfan Ahmed in his welcome address said that the three-day exhibition will provide a great platform for established businesses and small startups to connect and establish professional partnerships and future collaborations. The fair will also bring together the industry and the academia through its conferences.■

OGDCL posts 50% growth in 2019, earns Rs118,386 million

For the June quarter, the company reported earnings of PKR 33,074 MN or PKR 7.69/share, higher by 16% Q/Q/ & 51% Y/Y. Alongside the earnings, the company announced cash dividend of PKR 2.50/share for final quarter. Revenues clocked in at Rs69,434 million for the quarter, higher by 7% Q/Q & 20% Y/Y.

Going forward, by the Grace of Almighty Allah, OGDCL has recently made three (3) hydrocarbon discoveries during the first Quarter FY20; as a result of aggressive exploration strategy adopted by the Company. It has opened new avenues and would add to the hydrocarbon reserves base of the OGDCL, joint venture partners and of the country.

Accumulative Production Increase remained 22.33MMSCFD & 836 BPD and 2P Recoverable Reserves Increase: 41.94BCF & 1.56MMSTB Oil & Condensate. The three discoveries are: Discovery #1 on 23 July 2019: Togh Well #1 (Kohat E.L), District Kohat, KPK Province. OGDCL as Operator 50%, Mari Petroleum Company Limited (MPCL) 33.33% & Saif Energy Limited (SEL) 16.67%.

+ 240 BPD Condensate & 12.7 MMSCFD Gas,

Choke size 32/64" at Well Head Flowing Pressure 2478 Psi from Lumshiwal formation.

+ 2P recoverable reserves: Condensate=0.46 MMSTB, Gas=32.15 BCF, Discovery #2 on 23rd Aug 2019: Chanda Well # 05 (Chanda D&PL), District Kohat, KPK Province. OGDCL as Operator (72%), Government Holdings, Private Limited (GHPL) 17.5% & Zaver Petroleum Corporation, Private Limited (ZPCL) 10.5% + 76 BPD Crude Oil & 0.512 MMSCFD Gas

Choke size 32/64" at Well head flowing pressure 89-149 Psi from Wargal formation.

Note: This is the first Hydrocarbon discovery in Wargal formation in KPK province with up-side potential for higher Production Volumes & Reserves. + 2P recoverable reserves: Crude Oil=1.04 MMSTB, Gas=8.73 BCF and Discovery #3 on 1st Sep 2019: Pandi Well # 01 (Bitrism Block), District Sanghar, Sindh Province.

In addition to the above discoveries, for the first time, OGDCL has pioneered installation of Electrical Submersible Pump (ESP) system at well Pasakhi-05, with tremendous success resulting in increase of oil production from 150 BOPD to 500 BOPD. With more than 3-fold production increase from existing one well by using ESP Technology, detailed technical study is being carried out for 4 additional candidate wells for ESP Technology with great up-side potential for Oil production increase. Since inception of forming the new board of directors in April this year, with three veteran Petroleum Engineers, Financial & Corporate Sector Experts, and seasoned government representatives are working tirelessly in unison with the OGDCL management with a single motto 'increase Oil & Gas Production' to reduce dependency on foreign imports, by drilling more wells at faster pace. ■

15 ambulances to be distributed across the country - key health intervention by OGDCL CSR

Inauguration ceremony of 15 state of the art Basic Life Support Ambulances at OGDCL Head Office Islamabad was held on 1st October, 2019.

An impressive ceremony was arranged at the OGDCL House Islamabad and MD/ CEO OGDCL Dr. Naseem Ahmad was the chief guest. Executive Directors and GMs of the company also participated in the ceremony.

MD/ CEO informed the audience that the project cost for this intervention is PKR.95.40 Million and that these ambulances will be given to the DHQ's & THQ'S in the underdeveloped areas of Federal Capital, Punjab, Sindh, KP & Balochistan. MD/ CEO stated that priority has been given to the operational districts of OGDCL under this Mega Health Initiative with the hope to improve health service provision to the deserving population of Pakistan.■

OGDCL discovers oil and gas at Chanda well

The Joint Venture of Chanda D&PL comprising Oil & Gas Development Company Limited (OGDCL) as operator with 72% shares, Government Holdings (Private) Limited (GHPL) with 17.5% and Zaver Petroleum Corporation (Private) Limited (ZPCL) with 10.5% shares have discovered crude oil and gas from its development well #05, which is located in District Kohat, Khyber Pakhtunkhwa Province. This is the first discovery of crude oil and gas from "Wargal Formation" in Chanda Oil Field.

The structure of Chanda Well # 05 was drilled and tested using OGDCL's in house expertise. The well was drilled down to the depth of 5440 meters. The well has been tested 76 barrels Per Day (BPD) Crude oil and 0.512 Million Standard Cube Feet Per Day (MMSCFD) of gas through choke size 32/64" at well head flowing pressure 89-149 Pounds per Square Inch (PSI) from Wargal Formation (Exploratory Target).■

U.S. Envoy commends Engro Elengy's world's fastest 250 ship-to-ship transfers

U.S. Ambassador Paul W. Jones, Chargé d'Affaires a.i., was welcomed by Engro Corporation President Ghias Khan when he visited Engro Elengy Terminal Limited, accompanied by the U.S. Consul General and Chairman Port Qasim Authority, on Monday, September 16.

There, Ambassador Jones came aboard the country's first Floating Storage and Regasification Unit (FSRU), brought to Pakistan in 2015 as part of Engro Elengy Terminal - a collaboration between Engro and American company Excelerate Energy, and investment partners World Bank Group and Royal Vopak of the Netherlands.

Excelerate Energy is an American company headquartered in the state of Texas and stands strong as Engro's trusted partner in the Liquified Natural Gas (LNG) terminal. Since 2003, they have built up a global track record of accomplishments and innovation, and are the recognized leader in floating LNG regasification solutions. Excelerate Energy is the only floating LNG provider offering services across the entire midstream LNG chain. This terminal is a testament to Engro being a partner of choice for global companies that are best-in-class. Engro has always endeavored to bring the best of the world to Pakistan because developing markets require FDI in infrastructure and projects to remain on a path of progress.

Ambassador Jones was pleased, and remarked, "It is very nice to see the great contribution being made by Engro and Excelerate Energy through LNG to uplift Pakistan by supplying cleaner and cheaper fuel to ensure homes and industries get the gas they need for day-to-day use and to fulfill industrial requirements. I commend both companies on this incredible milestone of the world's fastest 250 ship-to-ship transfers of LNG. Engro and US company Excelerate, together, have proven to be a robust US-Pakistan partnership."

President of Engro, Ghias Khan, on the occasion, remarked, "We are happy to have Ambassador Jones visiting us today. Our American partner, Excelerate Energy, has played a pivotal role, which has made these milestones possible. Further, Royal Vopak, which is a 25-year old joint venture partner with Engro in another business, has extended their relationship to the LNG terminal. We consider the LNG projects in the country to be of great importance, with two terminals in the country and several more in the pipeline - the impact on Pakistan's energy requirements is very positive while it has reduced Pakistan's gas deficit by 50%."

Located adjacent to the Engro Vopak terminal on the mainland side of the channel into Port Qasim, the Engro Elengy Terminal was a fast-track LNG import solution built to alleviate the energy shortage facing the country. The terminal was built in a world record time of 330 days and has emerged as the largest gas source in Pakistan with capacity to inject up to 690 mmscfd RLNG into the system, leaving behind Qadirpur and Sui Gas fields. With round-the-clock supply of natural gas at a utilization rate of approximately 98%, the terminal has now handled over 250 LNG cargo ships and is fulfilling 13% of Pakistan's gas requirements.

Since LNG was introduced in the country, Pakistan has imported over 19 million tons of LNG and saved about $5 Billion because LNG replaced the import of more expensive furnace oil. Pakistan has reduced its gas deficit, revived the CNG sector so people no longer face long queues at CNG stations to fill gas in their cars, revived the fertilizer sector where Pakistan went from importing 1,000,000 MT of Urea to being an Exporter of Urea, and revived more than 500 industrial units because gas availability to industry is now uninterrupted. In fact, with LNG, Pakistan's households no longer face winter gas load-shedding as there is now swapping between LNG and domestic gas with no price increase.

Aside from saving the country massive amounts of money, LNG is also considered the cleanest hydrocarbon in the world, and approximately 15-25% more efficient than alternate fuels. Now that Pakistan has ready infrastructure and multiple LNG projects in place, it has become a major buyer of imported gas in South Asia's booming LNG market.■

Byco reports Rs2.29bn loss

Byco Petroleum Pakistan Limited announced results for financial year 2019, posting (consolidated) loss after tax at Rs2.29 billion and loss per share at Re0.43 against profit after tax of Rs4.30bn and EPS at Re0.81.

The company said in a statement that the last fiscal year was a tough period for Pakistan's oil sector in which the company faced a multitude of challenges.

Interloop declares dividend

Interloop Limited (ILP) posted profit-after-tax at Rs5.06 billion and earnings per share at Rs6.49 for the year ended June 30, up from PAT at Rs3.73bn and EPS at Rs4.88 the earlier year.

Along with the results, the board of directors at the company recommended final cash dividend at Rs1.75 per share. This was in addition to the first cash interim dividend already distributed at Rs1.25 per share.■

Irony of life:

The Lawyer hopes You get into trouble,
The Doctor hopes You get sick,
The Landlord hopes You don't buy a House,
The Dentist hopes Your Teeth Decay,
The Mechanic hopes Your Cars Breakdown,
Only a Thief wishes You "Prosperity in life"
And Also Wishes "You have a Sound Sleep

Deal signed with ExxonMobil for supply of LNG to transport sector

By Khaleeq Kiani

ExxonMobil, the world's largest publicly traded oil and gas firm, on Wednesday signed an agreement with Universal Gas Distribution Company (UGDC) to supply liquefied natural gas (LNG) to the country's transport sector.

"After the agreement, the first shipment of LNG is expected by the next month which will change the entire gas landscape in Pakistan," said a statement issued by Petroleum Division of the Ministry of Energy.

The agreement was signed in Houston, Texas by Vice President of ExxonMobil Richard Rayfield and Chief Executive of UGDC Ghiyas Abdullah Paracha and witnessed by Special Assistant to the Prime Minister on Petroleum Nadeem Babar. A large entourage of the government is currently in the United States to attend an annual LNG conference.

Mr Paracha said the agreement initially covered four cargoes in the first year that would gradually increase overtime depending on revival of the CNG sector. He said the first cargo was being arranged for end-October for which legal framework was already in place and the prime minister had strongly focused on the Ease of Doing Business to revive investor confidence.

He said the agreement would enable the CNG sale at least 30 per cent cheaper than petrol price. "Based on this price differential, we are hopeful that two million fresh vehicles would convert to CNG in two years," he said, adding this would result in an import bill saving of about $1bn a year.

The Petroleum Division said the agreement would "for the first time result in the import of private LNG to the country" and "the first shipment of LNG expected by the next month will change the entire gas landscape in Pakistan".

Special Assistant to Prime Minister on Petroleum Nadeem Babar, Chairman LNG Market Development Alex Volkov, President Market Development ExxonMobil, Irtiza Sayyed, Country Manager Pakistan ExxonMobil Shahrukh Mirza, senior officials of the petroleum ministry and UGDC were also present on the occasion.

Speaking at the event, Babar said that this was a historic moment as ExxonMobil had decided to invest in Pakistan after a gap of 20 years. He said the businesses would be provided enabling environment according to the vision of Prime Minister Imran Khan.

He said the deal was an honour for Pakistan and the government will promote ease of doing business to facilitate investment in all the sectors including the energy sector.

He said the government wanted to put itself out of the gas import and this deal was the first step in that direction. Investment by ExxonMobil will also propel other energy companies to invest in Pakistan which will bring down the price of gas to help masses and the environment, he added.

Alex Volkov and Irtiza Sayyed said their company had decided to invest in Pakistan after two decades with a vision to provide economical and environmentally friendly gas to consumers on a regular basis. "We will support UGDC so that it can overcome the shortage of gas in Pakistan," Volkov was quoted as saying.

Ghiyas Paracha said the government had changed third party rules to allow the private sector to import gas that would help the CNG sector to buy surplus gas from terminals and also buy the fuel from five upcoming terminals which will revive the CNG sector.■

Courtesy: Daily Dawn

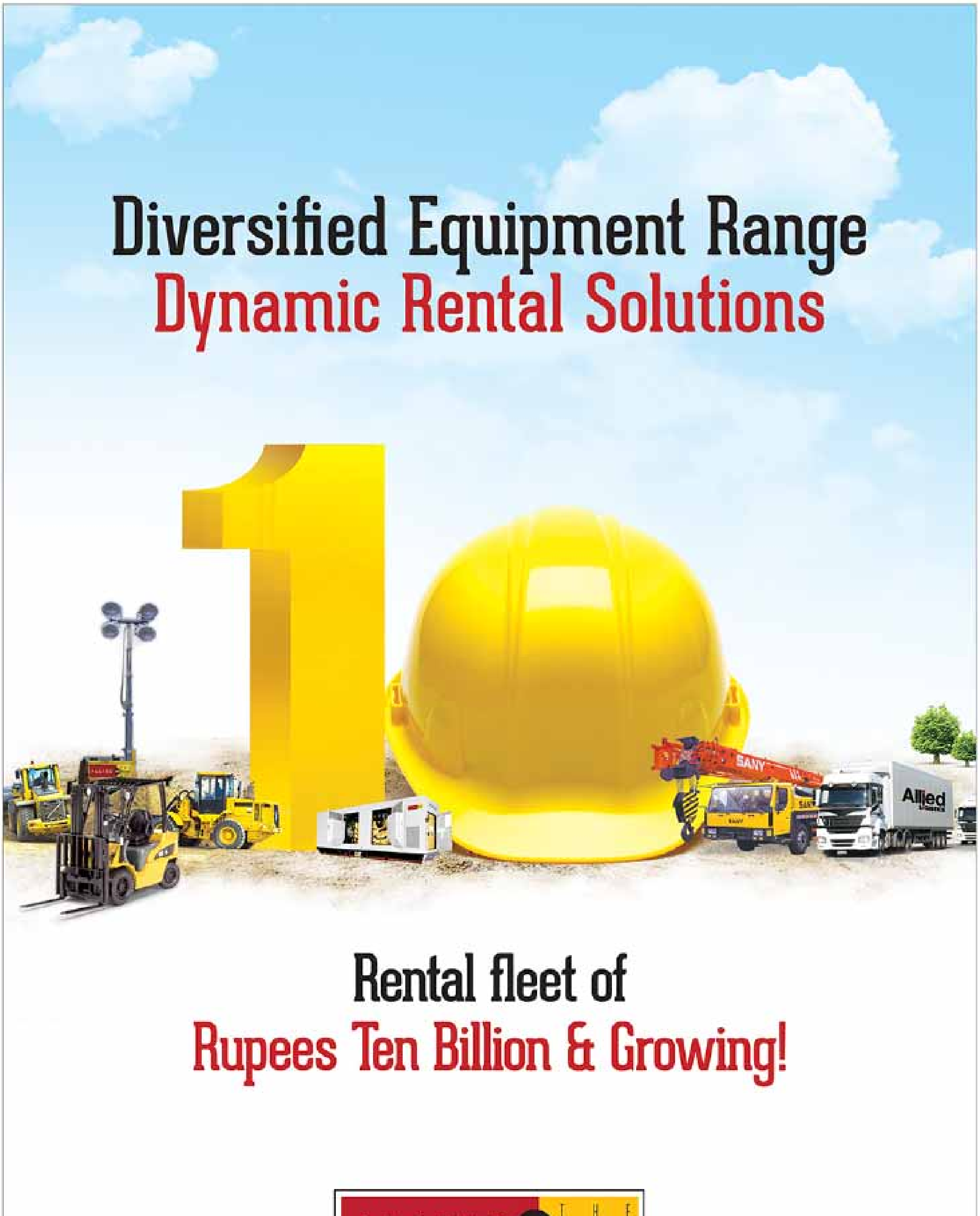
OGDCL discovers gas condensate at TOGH

The joint venture of Kohat E.L Comprising of Oil & Gas Development Company Limited (OGDCL) as Operator (50%), Mari Petroleum Company Limited (MPCL) (33.33%) & Saif Energy Limited (SEL) (16.67%) has discovered Gas & Condensate from its exploratory efforts at Well Togh # 01, which is located in district Kohat, Khyber Pakhtunkhwa Province.

Togh Well # 01 was drilled and tested using OGDCL's in house expertise in consultation with Kohat Joint Venture partners MPCL and SEL. The well was drilled down to the depth of 3200 meters.

Another zone in Hangu formation has been tested as 4.1 Million Standard Cubic Feet Per Day (MMSCFD) of gas and 50 barrels per day (BPD) of condensate through 32/64" choke at wellhead flowing pressure of 760-823 Pounds per square inch (Psi).

The discovery of Togh Well # 01 is the result of aggressive exploration strategy adopted by the Kohat Joint Venture. It has opened a new avenue and would add to the hydrocarbon reserves base of the OGDCL, Joint Venture Partners and of the Country. ■



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Thar identified as the Vulture Safe Zone in Pakistan

While a massive decline in vulture population have been witnessed across Pakistan over the years, Tharparkar has been identified as a major sanctuary for these scavenging birds, as revealed in a pre-monsoon survey undertaken by IUCN (International Union for Conservation of Nature).

IUCN in collaboration with Sindh Wildlife Department, the Zoological Survey of Pakistan, and Baanhn Beli with the financial support of Sindh Engro Coal Mining Company (SECMC) carried out the survey, as part of an ongoing vulture conservation project

The survey's geographic scope however covered the entire Sindh province. Tharparkar, however, was the only place in Sindh where significant numbers of vultures were spotted whereas Khirthar National Park has been identified as one of the new potential sites for vulture population. Based on the survey and literature review, it can be assumed that Garano wetland, created some 50 kilometres away from Thar coal mines site, is emerged as the most populated habitat of vultures in Pakistan.

Vultures are specialized scavengers that have adapted in unique ways to consume dead animals. With this trait they provide significant ecosystem services, that include keeping the environment clean and reducing disease transmission risks.

The pre-monsoon reconnaissance survey was carried out by a diverse team of six including IUCN experts, independent consultants, ornithologist, veterinarian, and field ecologists.

The survey reported spotting of over 450 White-backed, Long-billed, Red-headed, and Egyptian vultures in Tharparkar and a much smaller number in the Kirthar Range. In Tharparkar, Gorano wetland at Thar coal mines site was found to have the potential for attracting bird populations since there a significant number of 425 vultures of White-backed, Red-headed, and Egyptian species spotted during this survey.

The survey recommends creation of vulture safe zones in areas where there are existing vulture populations in Sindh. This includes Tharparkar, Khirthar National Park, and the Gorakh hill areas.

It also recommends alternative drugs for livestock which are not toxic for vultures, through a strict enforcement of ban by drug regulatory authority on NSAIDS harmful for vultures. NSAIDs available for human use should also be clearly labelled with caution "NOT FOR LIVESTOCK USE".

Naveed Soomro, Project Coordinator at IUCN said that most studies in the past on vultures in Sindh have concentrated on Nagarparkar alone; one of the last remaining strongholds of vulture populations or have conducted surveys in the breeding season only with limited scope. Syed Abul Fazal Rizvi, Chief Executive Officer (CEO) of SECMC said that nature conversation is integral part of our policy while working in Thar, the most natural ecological zone of the region.

"We are specially focusing to conserve vultures in Thar and for the purpose, IUCN and engaging Pakistan's top bird specialist have been a great support for the cause," he said. Dr. Z.B Mirza, a renowned bird specialist in Pakistan said that the ICUN report includes observations on the state of the habitats, particularly of the pasturelands and of the lopped fodder trees.

"Unfortunately, the veterinary drugs that are toxic to vultures were found in use all over Sindh with no awareness on its deleterious effects amongst its users, while it is encouraging that Nagarparkar and Islamkot sub-divisions of Tharparkar are the only areas in Sindh where the use of Meloxicam (NSAID alternative drug, safe for vultures) is seen during the survey. There were also signs of significant habitat degradation. The outcomes of this survey highlight the need for strict implementation of vulture safe zones and awareness campaigns," Dr. Mirza noted.

"Pakistan is fortunate to host 8 of the 9 vulture species found in Asia. Unfortunately, vulture populations of all species have been plummeting since the 1990's and there have been no major signs of recovery. The biggest threat to vultures in Pakistan has been identified as the use of veterinary non-steroid anti-inflammatory drugs (NSAID) such as Diclofenac, on livestock that transfers to vultures in higher volumes when they consume those livestock carcasses," added Mr. Mahmood Akhtar Cheema, Country Representative, IUCN Pakistan.

Diclofenac was banned for use on domestic livestock in Pakistan in 2006. Research in this area has also highlighted the growing threat of habitat degradation, tree lopping, and scarcity in food availability due to changing dead livestock disposal practices.■

Political thinking

Once a corrupt CM and his deputy went to inspect a school and a prison. School was in poor state with no furniture, diplated building etc. Principal requested 5 lakhs to help to improve conditions. Next they visited prison, there too condition was pathetic but jailer demanded fifty lakhs to improve condition of cells. Both came back and CM wrote a cheque for fifty lakhs for the Jail. Perplexed on CM's decision, his deputy asked for an explanation why prison and not the school!

CM explained " Dude, you and me are not going to go to school in future but, we both will go to Jail. Therefore, facilities in prison must be improved"

One has to marvel at politician's logic and thinking!

Saudi Arabia agrees to finance Pakistan's Jagran Hydropower Project

Pakistan has succeeded in convincing Saudi Arabia to provide a loan of 131.125 million Saudi riyal for the construction of Jagran-IV Hydropower Project.

In this regard, the Economic Affairs Division (EAD) has written a letter to the Federal Board of Revenue to exempt imports for this project from customs duty.

The letter, signed by EAD Secretary Shaukat Ali, stated that a draft of the loan agreement had been prepared between Pakistan and Saudi Development Fund for the construction of Jagran-IV Hydropower Project and it would be signed by the relevant authorities of the two countries.

The letter stated that in light of the PCD Handling 9903, Chapter 99 of the First Schedule of the Customs Act 1969, the project was excluded from customs duty.

Pakistan likely to extend business links with Riyadh

In the letter, the FBR had been requested to send its input on the project to the EAD so that the draft of the agreement for the loan could be finalised.

The EAD authorities told The Express Tribune that Saudi Arabia had expressed eagerness to finance five projects of the water sector with an overall investment of $1.27 billion and a formal memorandum of understanding (MoU) between the two countries was signed during the prime minister's recent visit to Saudi Arabia.

Of the total funding, 375 million riyals was for Diamer-Bhasha Dam, 300 million riyals for Mohmand Dam, 247.5 million riyals for Shounter Hydropower Project, 153.7 million riyals for Jamshoro Power Plant and 131.125 million riyals for Jagran-IV Hydropower Project.

Sources said the agreements had been prepared in the light of the MoU.

The final draft would be presented before the federal cabinet for approval after which it would be inked by the relevant Pakistani and Saudi Development Fund authorities.■

LNG imports avert repeat of energy crisis

The import of liquefied natural gas (LNG) has saved Pakistan from a massive energy crisis, which the country faced a few years ago, said a key government official.

"If we take LNG out of the system, a similar situation (energy crisis) faced in 2009 will emerge," Petroleum Division Secretary Mian Asad Hayauddin told the Senate Standing Committee on Petroleum on Wednesday.

He warned that massive load-shedding would start again if LNG imports were stopped.

In 2009, when the Pakistan Peoples Party (PPP)-led government was in power, the country faced its worst energy crisis, which eventually resulted in election loss for the PPP in 2013 and brought Pakistan Muslim League-Nawaz (PML-N) to power.

The PML-N government started importing LNG for the first time in Pakistan in order to cope with the widening energy shortages. However, former prime minister Shahid Khaqan Abbasi is now in the custody of National Accountability Bureau (NAB) in the LNG case.

The petroleum secretary told the parliamentary body that LNG was imported in line with the demand placed by the power producers.

Officials of the Petroleum Division pointed out that gas production in the country stood at 4 billion cubic feet per day (bcfd) against total demand for 6 bcfd. The country was importing 1.2 bcfd of LNG to meet domestic requirement.

Senator Nauman Wazir denounced the government for importing LNG without proper planning. He alleged that domestic gas production was reduced to make way for additional LNG imports, which led to the packing of pipeline network of Sui Northern Gas Pipelines Limited (SNGPL).

He was of the view that LNG imports were more than the actual demand for the commodity in the country. Wazir also raised the issue of appointment of executive directors in Oil and Gas Development Company (OGDC), saying that the directors were not qualified but were drawing millions of rupees in salaries.

The committee sought details of the executive directors and their perks and privileges.

Wazir also said OGDC was being run on an ad hoc system and its permanent chief executive officer had not been appointed in the past five years. The current OGDC board of directors picked the candidates which were selected by the previous board one year ago.

The issue of regularising some of the employees appointed under the Aghaz-e-Huqooq-e-Balochistan programme also came up for discussion.

These employees were hired on contract and were not being regularised. OGDC managing director informed the committee that 85 employees had been hired before the introduction of the Balochistan package.

Senator Wazir demanded that Khyber-Pakhtunkhwa Oil and Gas Development Company should be given 25% share in the oil and gas reserves. However, the petroleum secretary countered that provinces could not get a share in such a way.■

Courtesy: The Express Tribune

SILENT WIFE

If your wife has an unusual quiet temperament it is a matter of worry.
Only top quality guns are fitted with silencers.
~ Anonymous Philosopher

KE gets $50 million loan to improve power infrastructure

K-Electric has signed a $50 million loan agreement with Standard Chartered Bank to upgrade its power infrastructure in order to reduce line losses, the company said.

The financing will be used to install theft-resistant aerial bundled cable (ABC) as well as smart grid solutions. KE Chief Executive Officer Moonis Alvi, Head of Treasury Rizwan Pesnani, Standard Chartered CEO Shazad Dada and GuarantCo CEO Lasitha Perera signed the financing documents.

The dual currency 5.5-year corporate term loan will be split equally into two tranches denominated in rupee and dollar to improve the reliability of KE's network to benefit power consumers. GuarantCo is the guarantor to the transaction with a partial guarantee to support the loan facility.■

500MW solar power plant to be set up in Balochistan

Power Division Minister Umar Ayub Khan has said that a 500-megawatt solar power plant would be set up in Balochistan with the cooperation of Saudi Arabia, adding that 26,000MW electricity would be distributed in the system from next year.

Addressing a ceremony in the National Electric Power Regularity Authority, minister stated that Pakistan spends an exorbitant amount to generate 60pc of the total energy while the cost of energy production could be lowered through the use of alternative sources.

He said that the ministry was taking appropriate measures to readdress the customers' complaints despite the fact that it was the duty of power distribution companies.

The minister said Afghanistan was a vital player in the region, as Pakistan wanted power and gas from the Central Asian countries, which would pass through Afghanistan.■

Alsons / Tastuno signed collaboration agreement

Alsons has signed a Technical Collaboration agreements with Tatsuno Corporation of Japan to combine their resources for Research and Development of automation solutions.

Mr. Fawad Ahmed Chaudhry, Federal Minister for Science and Technology has attended the ceremony as Chief Guest.

Both parties with to combine their resources to accomplish the following: a. Research and Development for automation solutions, b. Modernize the processes of Software Development c. Automate the retail fuel solutions for downstream industry segments d. Higher end integrated control and automation solutions for process industries e. Planning, analysis, design, development & implementation, testing and maintenance of embedded solutions for underdeveloped countries.

The objective behind this initiative is to indigenize the mechanization system by technology transfer from Japan, getting the benefit of its superior industrial knowledge and application for closer research collaboration among the two countries. This JV will bring an access to greater resources, including specialized staff, technology and finance. The indigenize system will lead to greater opportunities to export and gain foreign exchange for Pakistan.

Alsons Group of industries, started in 1953. is a major player in the manufacturing and precision engineering sectors of Pakistan and with the continuous acquisition of technologies, machinery and best practices is now involved in the designing and production of parts and components for the local defense, automotive and lighting sectors being exported to the European Union.

Tatsuno Corporation of Japan is one of the world's largest manufacturers of fuel and hydrogen dispensers.

The above companies have previously signed a Joint Venture in 2006 to provide aftersales services to downstream industry segments.

To formalize the next chapter of their partnership Mr. Hiromichi Tatsuno. President of Tatsuno Corporation and Mr. Abdul Rehman Altana, Chairman of Alsons Group, have signed a Technical Collaboration Agreement today at Serena Hotel.■

One energy solution, many benefits

The 800-kilovolt (kV), gas-insulated switchgear technology packs a punch, offering high reliability and superior performance in one compact solution

Reliable supply of electrical energy is crucial for modernization especially for a country like Pakistan with more than 205 million people and a relatively high population growth rate of 2.1 percent. However, since 2007, the South Asian nation is facing a serious power demand shortfall of up to 8,000 megawatt (MW), an equivalent of 8 million households, and experiencing frequent outages in both urban and rural areas.

This is primarily due to the country's increased dependence on furnace oil and a lack of diversification in its electricity generation mix. According to State of Industry report, it is estimated that 65 percent of the country's electricity is generated through thermal resources such as coal, gas and oil, while 32 percent comes from hydropower.

To address a bulk of this shortage, the government is formulating a result-oriented strategy for the future. Under its Energy Vision 2035, Pakistan aims to diversify its energy mix and bring about higher efficiency in power production, to reduce its carbon footprint.

This is no easy task. In large developing nations, power sources are often located in remote areas several hundreds or thousands of kilometers away from major urban areas. The transmission of power over such long distances can lead to significant power losses. One way to increase efficiency with minimum transmission losses is to increase system voltage up to 800 kV or higher. Here, the use of gas-insulated switchgear (GIS) technology is extremely advantageous. It is a compact metal encapsulated switchgear that uses pressurized insulating gas and enables safe operations in confined spaces while significantly reducing equipment footprint.

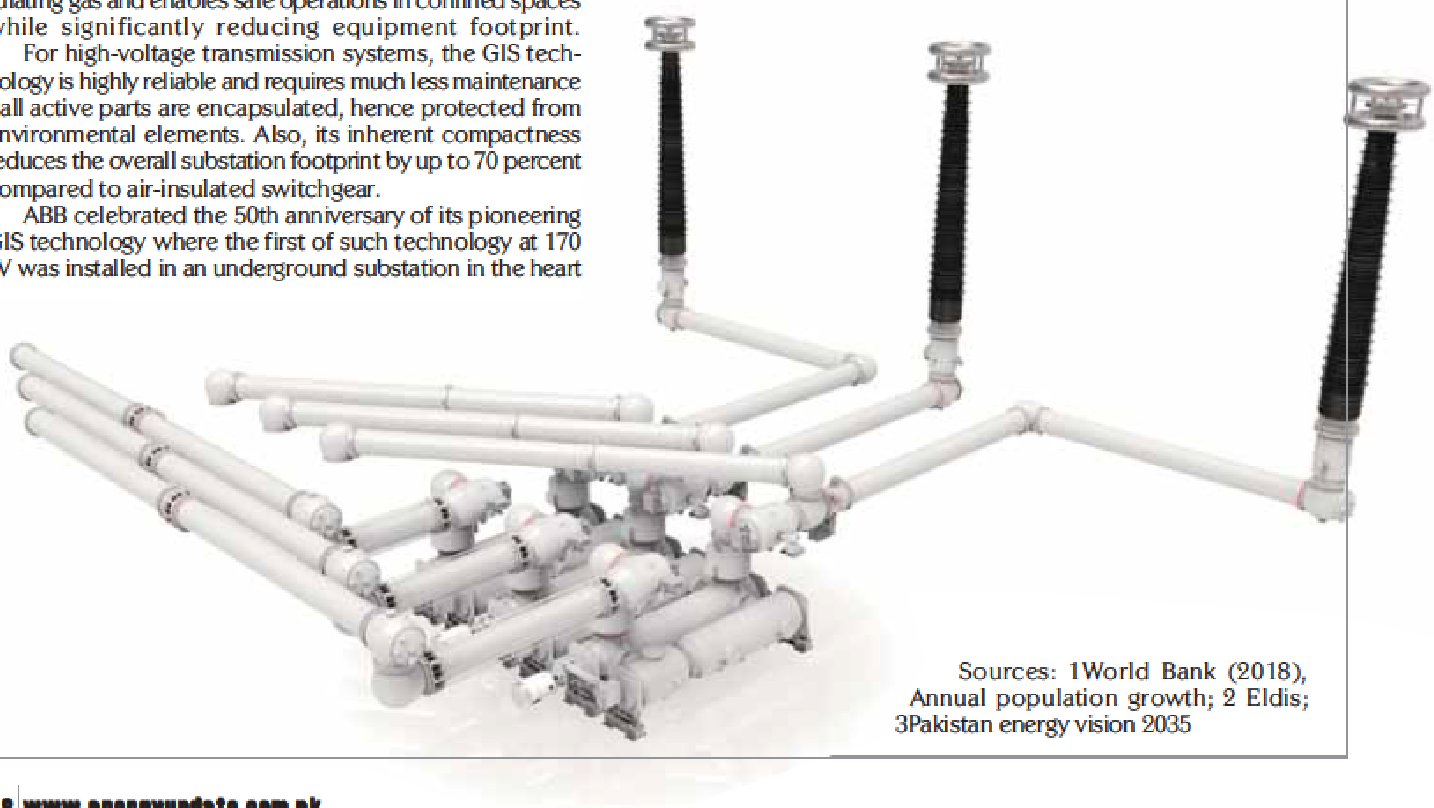
For high-voltage transmission systems, the GIS technology is highly reliable and requires much less maintenance - all active parts are encapsulated, hence protected from environmental elements. Also, its inherent compactness reduces the overall substation footprint by up to 70 percent compared to air-insulated switchgear.

ABB celebrated the 50th anniversary of its pioneering GIS technology where the first of such technology at 170 kV was installed in an underground substation in the heart of Zurich, Switzerland in 1968. Eight years later, it installed the first 500 kV GIS in Canada. The company proved its technology leadership even at the ultra-high-voltage level in 1986 with the installation of the first 800 kV GIS in South Africa. This substation has been in operation for more than three decades without any failures or unplanned interruptions.

Since then, voltage levels have gone up to 1,200 kilovolts (kV) to secure greater power transmission with minimal losses. 1.2 million volts is the highest alternating current (AC) level in the world - like a giant switch capable of switching on and of the average annual consumption of a country like Switzerland and facilitating transmission of power across 2,000 kilometers.

What's more, ABB is continuously working with customers to help increase their power efficiencies. Earlier this year, it conducted a technology workshop for over 250 participants including dignitaries like ambassadors of Switzerland and Sweden. Delegates included representatives from key power companies in Pakistan like National Transmission & Dispatch Company WAPDA, K-Electric, DISCOs, NESPAK, DAR Engineering, DESCON, Nishat Group, among many others.

As a market leader in the high-voltage GIS technology, ABB offers ratings and applications from 72.5 kV to 1,200 kV and has a global installed base of more than 35,000 bays. The company's latest offering includes eco-efficient and digital capabilities.■



Sources: 1World Bank (2018), Annual population growth; 2 Eldis; 3Pakistan energy vision 2035

State Bank has planted 73,417 trees so far under tree plantation campaign

State Bank of Pakistan through its subsidiary, Banking Services Corporation (BSC) has participated in the government's initiative of tree plantation campaign by planting 73,417 trees so far across the country.

In a recent monsoon tree plantation drive, SBP & BSC across Pakistan and Muzaffarabad (AJK) celebrated 18th August 2019 as the "Plant for Pakistan Day" and planted a total number of 6,472 trees on 18th and 19th August 2019. Dr. Reza Baqir, Governor, State Bank personally participated in the drive by planting a tree on 14th August 2019 in Karachi while commemorating the auspicious occasion of the Independence Day of Pakistan.

State Bank of Pakistan being the country's premier financial regulatory institution is alive to its corporate social responsibility and has been actively participating in making the country clean and green. So far through its field offices in Karachi, Hyderabad, Sukkur, Quetta, Sialkot, Bahawalpur, Multan, Lahore, Faisalabad, Gujranwala, Islamabad, Rawalpindi, Peshawar, D.I. Khan and Muzaffar, AJK, SBP-BSC has planted 73,417 trees under government initiative of tree plantation across the country. ■

Amer Tufail takes over as MD of SNGPL

The Board of Directors of the Sui Northern Gas Pipeline Limited (SNGPL) has assigned the charge of managing director to Amer Tufail following the retirement of Mahmood Zia. The notification of giving additional charge of MD to Amer Tufail, deputy managing director of the SNGPL, was issued on Thursday as per the BoD decision. Mahmood Ahmad Zia had been appointed as SNGPL MD earlier this year. He worked for the past 31 years in distribution, construction, operations and maintenance of gas pipeline departments of the company. ■

Khalid Wasim Khokhar, elected Chairman of Pakistan Ship's Agents Association

Pakistan Ship's Agents Association (PSAA) was formed in 1976 and is the largest and oldest Trade Association representing Shipping Lines/Agents whose 60 members handle all types of cargo i.e. containerized cargo, liquid cargo and dry bulk cargo at Pakistani seaports.

PSAA's main objective is to resolve problems faced by its members and to make a positive contribution to the long term progress of the Ports and Shipping industry in Pakistan. PSAA enjoys a high reputation at all official levels including Ministry of Maritime Affairs (MOMA), Karachi Port Trust (KPT), Port Qasim Authority (PQA), Gwadar Port Authority (GPA), Customs, FPCCI, etc. Its members are represented on several high profile committees formed by the Federal Government from time to time at MOMA, KPT, PQA, GPA, KDLB, Planning Commission, etc. ■

Energy News

IRENA urges global leaders to build Climate Response

Public and private sector leaders are being urged to double annual investments in renewable energy to keep the world well below 2°C of warming, says a new report by the International Renewable Energy Agency (IRENA) published ahead of the UN Climate Action Summit in New York. With just 11 years left for action to limit the effects of climate change, annual investments of USD 4.3 trillion in the energy sector until 2030 is the world's most practical and readily available climate solution.

Annual renewable energy investments for the next decade need to double from around USD 330 billion to nearly USD 750 billion per year until 2030.

hENA that highlights how cumulative global energy investments must pivot overwhelmingly towards low-carbon technologies including renewables. More than USD 18.6 trillion of planned fossil-fuel investments by 2050 need redirected to hold the line called for by the Paris Agreement and reaffirmed by the recent special report of the Intergovernmental Panel on Climate Change (IPCC).

Despite the urgency, current investment patterns show a stark mismatch with the pathway necessary to ensure a climate-safe future. Together, renewable energy and energy efficiency, along with deeper electrification, can deliver 90 per cent of the energy-related emission cuts needed under the Paris Agreement. "It's possible to limit climate change and meet the world's growing energy demand by rapidly accelerating the speed at which we deploy renewable energy," said IRENA's Director-General Francesco La Camera. "Only an energy transformation driven by renewables will allow us to meet the goals of the UN 2030 Agenda and Paris Agreement. Renewables are the only ready and available instrument we have to hold the 1.5°C line over the next 11 years."

"In meeting climate goals, we can also boost economic growth and deliver on sustainable development with renewables," continued Mr. La Camera. "But there is an urgent need to rethink long-term energy investment decisions to ensure they lead us to the sustainable future we need. Doubling investments in renewables offers us a tremendous opportunity to improve health, create jobs, deliver economic opportunity and tackle climate change. No other solution is as plausible."

In support of the UN Secretary General's call for decisive climate action, IRENA has launched a campaign that underpins renewable energy as a practical climate action solution. In co-operation with the United Nations Development Programme (UNDP), the Agency's "Lead the change. It's possible with renewables" campaign aims to inform about the potential of renewable energy technologies and in turn encourage concrete climate action■

United Arab Emirates (UAE) to invest $5 billion in an oil refinery project in Pakistan

UAE is to launch very soon one of the biggest investments in a refinery project in Hub. It is going to be a $5 billion investment between Mubadala Petroleum Company of Abu Dhabi, Pak Arab Refinery Limited (Parco) and OMV [OMV Pakistan Exploration Gesellschaft]."

According to Arab News, Al-Zaabi said the project was a result of "extensive discussions" between Mubadala Petroleum, Pakistan's petroleum ministry as well as Parco and OMV.

"This project will show the strength of UAE-Pakistan relations and how the UAE is focusing on investment in and future of Pakistan," he was quoted as saying, adding that the two nations were moving forward on new projects and investment.

The UAE ambassador said that the two governments were "finalising the minute details of this refinery project".

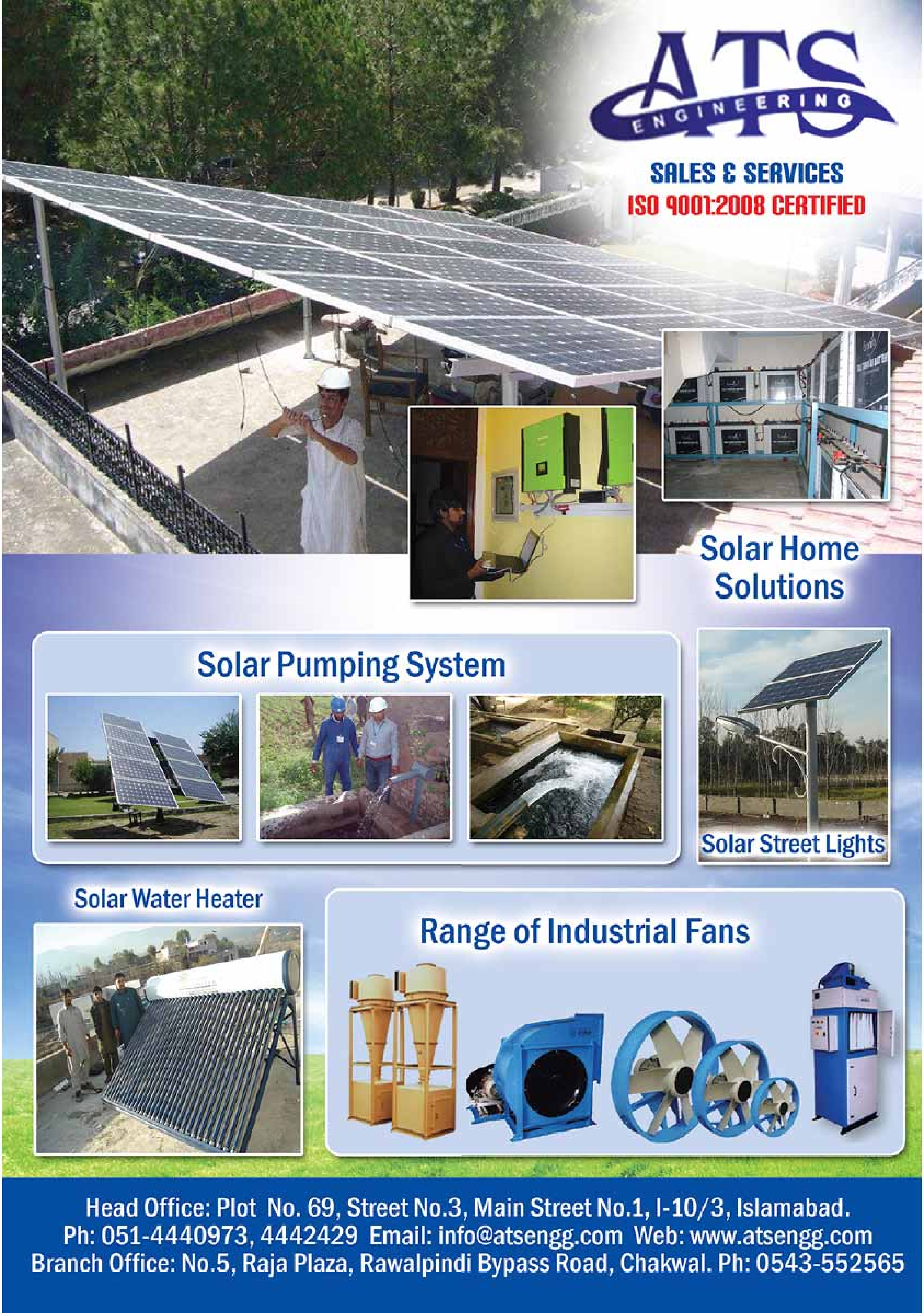
"Many meetings have taken place regarding this project," he added, sharing that a UAE delegation, headed by the chief executive officer of Mubadala Petroleum, had met with the Board of Investment (BoI) chairman and the petroleum minister during a visit to Pakistan a few months ago.

"They have discussed this project in detail. We are going to launch it very soon," Al-Zaabi said.■

UN-OHRLLS and IRENA agree to support renewable energy

The United Nations Office of the High Representative for the Least Developed Countries, Landlocked Developing Countries and Small Island Developing States (UN-OHRLLS) and the International Renewable Energy Agency (IRENA) have underscored their commitment to strengthen cooperation aimed at advancing renewable energy in the Least Developed Countries (LDCs), Landlocked Developing Countries (LLDCs) and Small Island Developing States (SIDS).■

Why should companies recruit people over 50 for senior and responnsible positions? Because they are more productive than those below 50!
A massive study in America found that the most productive age in a man's life is 60 - 70.
From 70 - 80 is the 2nd most productive age.
The 3rd most productive age is 50-60.
The average age of a Nobel Prize winner is 64. The average age of a CEO in a Fortune 500 company is 65. The average age of the pastors of the 100 biggest churches in America is 71.
The average age of Pope's is 76.
This tells us somehow God has designed that the best years of your life are 60 - 80! It is when you do your best work.
A study published in NEJM found that at 60 you reach your peak of potential and continue up to 80!
So, if you are between 60 - 70, or 70-80, you have the best and second best years of your life with you!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AWAN TRADING CO (PVT.) LTD.

[Our Delivery Promise]

Awan Trading Co. is Pakistan based Coal trading entity which was incorporated in the year 2002. The company started its operation as an importing company and for the last two years it has also started supplying domestic coal (Pakistan coal). So far the company has imported and supplied 5 million tons of coal, from South Africa and Indonesia, to the cement factories.

This opportunity of supplying coal to cement factories was created due to their (Cement factories) shift from furnace oil to coal as the main energy fuel. Since then the company has been sincerely committed in its mission of supplying coal to factories as a source of energy. What you sell is important! So we source our Coal from best suppliers around the world. Developing longterm relationships has been the hallmark of our company. Our promise that "we deliver, no matter what the situation" has earned us, the confidence of our buyers.

The success of our trading can be gauged from the fact that we are now importing 21 vessels (1 million ton) of coal in a year which as resulted in 30% market-share for Awan Trading Co and hopefully the share will increase in the coming years.

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Awan Trading Co (Pvt.) Ltd.

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HUBCO

Rahnuma

ALWAYS PREPARED TO SERVE OUR CITIZENS

On September, 24 2019, an earthquake with a magnitude 5.8 on rector scale hit the Mirpur, Azad Jammu & Kashmir region badly affecting the rural areas of Mirpur and villages along the Upper Jhelum Canal. The Laraib Energy NBE site which is also located in the same vicinity declared temporary closure of its operations.