MONTHLY

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ENERGY UPDATE

INTERVIEWS OF
BUSINESS LEADERS

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FLOODS DEVASTATION

GOVT ASKED TO BEGIN
GAS REFORMS

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Karachi-74200, Pakistan, P.O Box 677
UAN: +92 21 111 000 520
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Regional Office
Lahore
House No. 20-A, Block G, Gulberg III, Lahore, Pakistan
UAN: +92 42 111 000 520
Tel: +92 42 3588 3360-61

Liaison Offices
Islamabad
Tel: +92 51 2802 167
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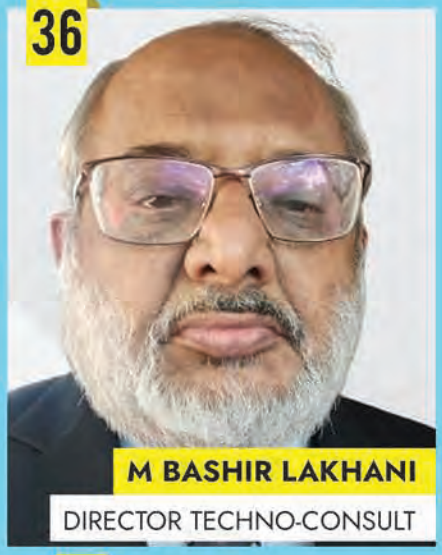

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SCAN ME

FROM THE EDITOR'S DESK...

Economy improving but inflation remains

Pakistan's fragile economy seems to be improving after the appointment of Ishaq Dar as Finance Minister who has reduced prices of petroleum products soon after his arrival. The per liter price of petrol has been reduced by Rs12.63, high speed diesel by 12.13, kerosene oil by Rs10.19, and light diesel oil by Rs10.78. That is a good omen while more cuts in oil prices are also likely as oil prices in the international market have come down. Furthermore, Rupee has also declined significantly and Mr Dar has stated that it will be brought to Rs200 a dollar in a short span of time. The declining trend in the value of the dollar and petroleum products will significantly help boost the economy.

But the rising prices of essential commodities and transport fares are still high and are haunting people, ruining their social and business life. The cost of doing business has also gone very high. It seems that there is no rule of law as every businessman, including shopkeeper and vender, are raising the prices of goods at their will. Hence, Mr Dar also needs to intervene and help contain uncontrolled price hikes so that people could take a sigh of relief.

The Sensitive Price Index (SPI) for the week ended on 06 October 2022 recorded an increase of 0.29%. Increase was observed in the prices of food items as: tomatoes (27.40%), onions (10.22%), bananas (2.24%) and powdered milk (1.18%). During the week, out of 51 items, prices of 17 items increased, 14 items decreased and 20 items remained stable. The year on year trend depicts an increase of 29.44%.

The inflation in the country has soared manifolds during the last four years while the salaries have risen with a very low ratio as compared to the price hike, which is a great injustices to the masses. Pakistan's economy has never been ideal. But its plight in the last PTI rule and current coalition government has been the worst.

Along with raising its economy, the government also needs to boost people's economy by reducing prices of essential items and transport fares in view of oil prices decline. The skyrocketing inflation has hit almost every sector of life, including the business community, and there is no chance of its ouster in the near future. The profiteering of essential commodities and life-saving medicines are also on the rise as there is no writ of the price-controlling bodies and deputy commissioners in all districts of the country, which is the matter of great concern. It seems that the government has no responsibility in this regard.

The government needs to control the high inflation by ensuring a contractionary monetary policy which is a common method to contain inflation. This policy aims to reduce the supply of money within an economy by lowering the prices of bonds and rising interest rates. Thus, consumption falls, prices fall and inflation slows down. The inflation could also be further reduced by decreasing imports and raising exports to a sufficient level.

ENERGY UPDATE

Managing Editor
M. Naeem Qureshi
info@energyupdate.com.pk
energyupdate@gmail.com

Editor
Sajid Aziz
saziz75@gmail.com

Director Admin & Accounts
Ruqiya Naeem
ruqiya.nfeh@gmail.com

Chief Marketing Officer
Engr. Nadeem Ashraf
marketing@energyupdate.com.pk
nadeem.event@gmail.com

Marketing Consultant
Khalid Iqbal
hikhalid@live.com

Marketing and Promotions Manager
Mustafa Tahir
mustafa_mt92@hotmail.com

Head of corporate Affairs and Sustainability
Halima Khan
mccm.energyupdate@gmail.com

Art Director
Rizwan Ahmad
rizwanahmed55@gmail.com

Advisors
Zafar Sobani
Kalim. A. Saddiqui
Sohail Butt
Anwar Shahid Khan
Raziuddin Razi
Engr. Irfan Ahmed

Circulation & Subscription
Zahid Ali
Alizahid210@gmail.com
Shakeel Qureshi

Overseas Correspondents
Arif Afzal - USA
Kazim Wasti - Canada

Legal Advisors
M. Nadeem Sheikh Adocate

Monthly Energy Update
#309, Al-Sehat Centre, Hotel Regent Plaza,
Shahrah-e-Faisal, Karachi-Pakistan.
Tel: 021-3565 3676, 3521 3853, 35674570
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Web: www.energyupdate.com.pk

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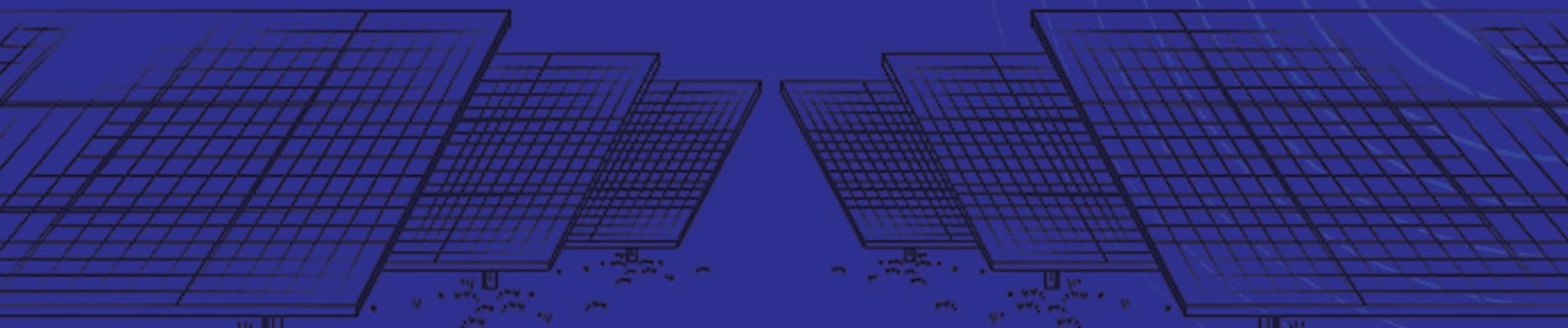

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Govt asked to begin gas reforms

World Bank-backed plan envisages smaller gas firms instead of SNGPL and SSGCL; Pakistan's unrestricted gas demand is currently more than six billion cubic feet per day; setting up of transmission firm urged

Khaleeq Kiani

ISLAMABAD: The Oil and Gas Regulatory Authority (Ogra) has asked the government to immediately create a National Gas Transmission Company (NGTC) classified as a "strategic asset" to begin with gas sector reforms and open up the gas market for competition and facilitate bridging a massive demand-supply gap currently facing the country.

According to Ogra estimates, Pakistan's unrestricted gas demand is currently more than six billion cubic feet per day (bcfd), compared to 3bcfd of total supplies, including imported LNG, leaving a growing shortfall of more than 3bcfd.

In a presentation, Ogra's member gas Muhammad Arif has pointed out a series of gas market challenges, including resistance from gas utilities to reforms for fear of losing market share; limited domestic gas reserves and production, no gas storage facilities; and limited LNG handling facilities both in terms of terminals and pipelines. Some other issues also included the country's perceived investment risk, overall economic conditions, and zero private sector participation in midstream and downstream.

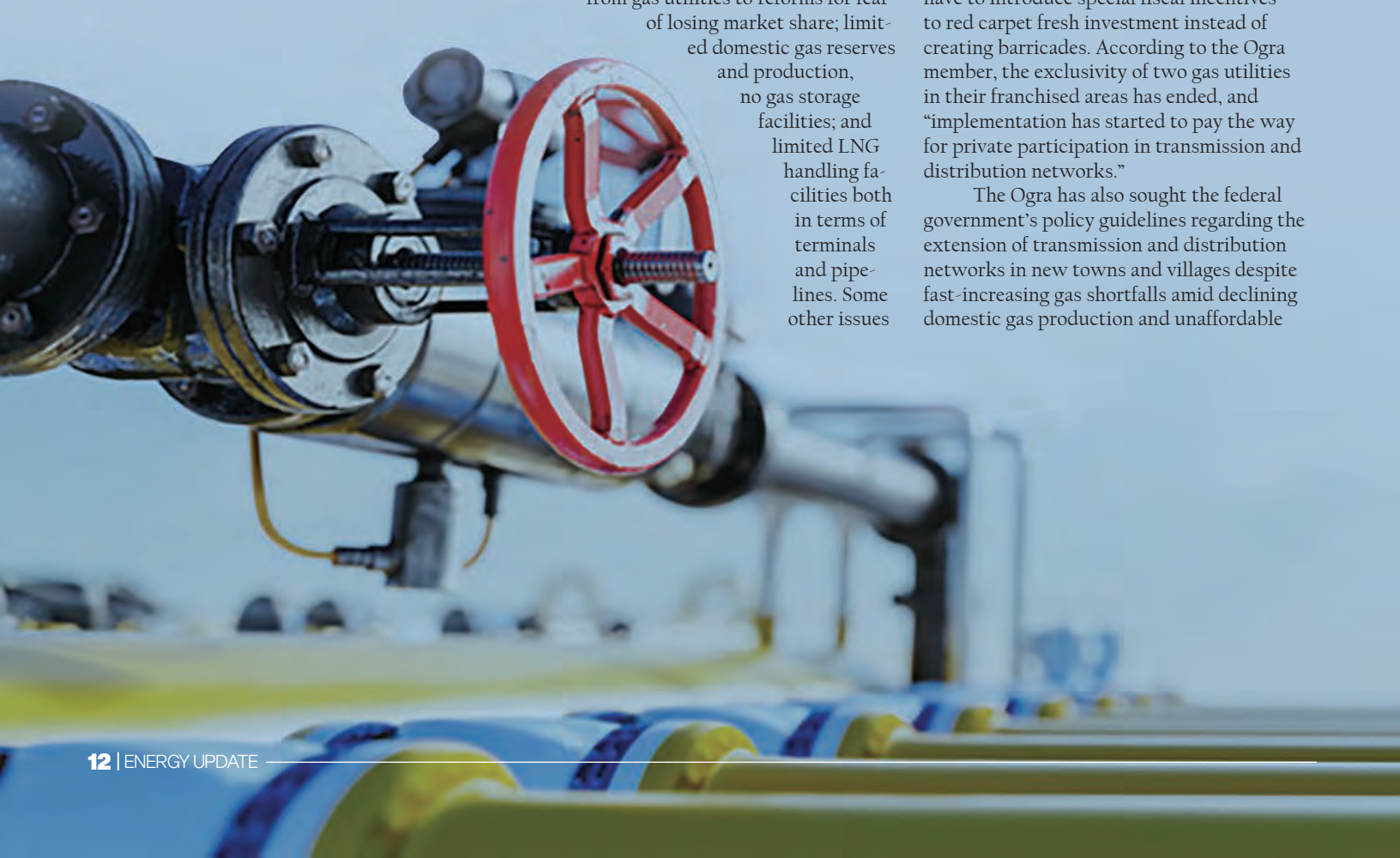
The Ogra member has highlighted that optimum capacity utilisation of infrastructure was an important element of gas sector reforms and a third party access (TPA) regime was already in place for the gas pipeline network, but "Sui companies' fear of losing customers is a bottleneck."

World Bank-backed plan envisages smaller gas firms instead of SNGPL, SSGCL

Given the limited availability of gas, the government has been advised to revisit gas supply priorities and formulate a policy for the allocation of gas upstream to create an enabling environment for multiple players.

On its part, the Ogra is in the process of finalising TPA for LNG terminal and storage facilities for which the government would have to introduce special fiscal incentives to red carpet fresh investment instead of creating barricades. According to the Ogra member, the exclusivity of two gas utilities in their franchised areas has ended, and "implementation has started to pay the way for private participation in transmission and distribution networks."

The Ogra has also sought the federal government's policy guidelines regarding the extension of transmission and distribution networks in new towns and villages despite fast-increasing gas shortfalls amid declining domestic gas production and unaffordable



international prices.

The World Bank (WB) backed gas-sector reforms that envisage the dismantling of two gas utilities — Sui Northern Gas Pipeline Ltd (SNGPL) and Sui Southern Gas Company Ltd (SSGCL) — into at least five public-sector companies, besides facilitating many other private operators and supplying domestic supplies to consumers within a gas-producing province, were taken in hand by the PML-N government but have been stalled since 2017 due to political reasons and lack of consultations with provinces.

The reforms sought to dismantle the SNGP and SSGCL in a manner that separated their transmission and distribution businesses. There would then be at least five fresh licences that include a transmission operator and four distribution companies, each having provincial boundaries as their sales areas to supply only domestic gas to residential consumers with the approval of the Council of Common Interests (CCI) after provinces reach consensus.

The transmission network will provide open access to distribution companies and any other private operators arising out of increasing LNG imports. There are already a couple of distribution licensees. The transmission company will not take title to gas. It will only transport gas and get paid for a transportation charge to be set by the regulator for transporting local gas to be sold by the provincial distribution companies and imported LNG by private operators to their dedicated consumers.

The gas companies would have a sort of postage stamp tariff, i.e., based on gas transported and revenue requirements. This will enable a buyer to enter into a contract with a supplier using the transmission system of NGTC for a wheeling charge. Larger consumers would be free to choose their preferred supplier, and the mechanism would foster competition and transparency in cost allocations among LNG importers.

The new model devised by consultants under the WB assistance suggests that customers anywhere on the network should get gas with the security of supply and improved viability and sustainability of the sector while remaining within the constitutional provisions concerning the supply of domestic gas resources.

PPL discovers hydrocarbons in District Sanghar, Sindh

Pakistan Petroleum Limited (PPL) recently made a gas and condensate discovery from its operated exploratory well Shahpur Chakar North X-1 in Gambat South Block District Sanghar, Sindh. Shahpur Chakar North X-1 was drilled to 3,560 meters to test the hydrocarbon potential of Massive Sand of Lower Goru Formation. Initial testing flowed 15.2 MMscfd gas along with 321 bbl/d condensate at a flowing wellhead pressure of 3,061 psig on 32/64 inches choke. Gambat South is a joint venture between PPL as operator with 65% working interest (WI) along with Government Holdings (Private) Limited and Asia Resources Oil Limited with 25% and 10% WI, respectively.

MPCL holds corporate briefing session

Mari Petroleum Company Limited (MPCL) held a corporate briefing session at its Head Office in Islamabad on Friday, in partnership with K Trade Securities (formerly known as KASB Securities). A large number of market analysts, members of the brokerage houses, shareholders, and employees attended the session in person as well as virtually on MS Teams. Faheem Haider, managing director MPCL, and Nabeel Rasheed, CFO MPCL, briefed the participants about the company's business operations during the FY 2021-22 including major achievements, ongoing exploration, production and development projects, financial performance and future plans.

A NEW POWER PLAN

CHINESE EAGER TO FINANCE, SUPPLY NUCLEAR PLANTS

Syed Akhtar Ali

The new Indicative Generation Capacity Expansion Plan (IGCEP) mentions nuclear energy. The nuclear option is limited to the addition of one plant of 1,000-1,300MW, which appears to be feasible. The Chinese are eager to both finance and supply nuclear plants as there are no major buyers available at the moment.

Nuclear energy enthusiasts argue that since nuclear has a high capacity factor of 85 per cent and negligible fuel cost, its high capital expenditure (Capex) enables it to compete with hydro. These days, nuclear is carrying us through as imported coal power plants are barely producing more than 50 per cent of the total capacity due to high imported coal prices. But there are several safety issues, especially in our society where nuclear regulation is not independent and things are not in the public domain.

There are 'siting' risks as well, which relate to the impact nuclear power generation has on the surrounding environment, especially on water supplies which needs to be properly evaluated. This is a major reason for scepticism among a lot of knowledgeable people. If those who are in favour of nuclear power want to expand, they will have to be more open about major safety issues.

There are three imported coal power plants, and one is being planned to be installed in Gwadar. Except for this project, no additional coal power plant is planned in the future. Our heavy reliance on imported fuel has already taught us enough lessons. Thar coal has emerged as a cheap and reliable source. Its life cycle cost is only 8.5 US cents. Its current tariff, after accounting for inflation, is less than Rs12 per unit as compared to twice this figure of imported coal plants.

Thar coal cost is projected to come down as production volume goes up. There are proposals to convert, wholly or partly, the existing imported coal plants to Thar coal. These projects will take Thar coal power to 4,590MW as opposed to the total 4,680MW of imported coal power capacity – a level which will be achieved by 2031. However, under the Thar coal scenario, with the addition of two 1,320MW plants, a total of 7,230MW of Thar coal power capacity will be achieved.

The capacity of the existing RLNG power plants is 9,789MW which will be reduced to 8,710MW by the retirement of a number of steam power plants. More important is the case of four state-owned RLNG combined cycle power plants (Trimmu, Haveli, Bhikki and Balloki) with a combined capacity of 4,400MW. These power plants are under privatization. The IGCEP does not project any utilization of these power plants, unsure of its fate in terms of ownership. There were programmes earlier for the assured 30 per cent utilization and higher probabilistic utilization. K-Electric (KE) will add RNG power plants with an additional capacity of 1,320MW. Many people wonder why arrangements couldn't have been made with KE to utilize these power plants either through physical transfer or electricity transmission. From where will KE bring RLNG?

The Kot Addu Power Company (Kapco) is requesting for the extension of its RLNG combined cycle power plants. Kapco should have the thermal efficiency of 50 per cent as its turbines are of lower vintage as opposed to 60-62 per cent of RLNG-based combined cycle

newer power plants like Trimmu, Haveli, Bhikki and Balloki. The future of these new state-owned LNG-based power plants is uncertain; the IGCEP has shown nil to 10 per cent production of these plants.

Out of the 7,339MW retiring capacity, 3,156MW will be based on residual fuel oil (RFO), forming 43 per cent. RFO plants will soon be retiring. The most significant one will be the Hub Power Company Power (Hubco) – around 1,292MW retiring in 2027. Kapco power plants, which are RLNG-combined cycle power plants, with a combined capacity of 1,600MW will also be retiring; Kapco-3 is retiring in 2023 and Kapco 1 and 2 are to retire in 2026. Kapco management has been lobbying for the extension of the power purchase agreements (PPAs) of these power plants, arguing that these plants are in good working condition and can work for another 10 years.

Hubco has also tried extension by converting to coal, which did not prove to be feasible, especially in the current scenario of high imported coal prices. The Uch power plant has a capacity of 586 MW and is running on local low-BTU gas; it will retire in 2031. The 620MW Guddu 5-10 power plant which runs on pipeline gas will retire in 2023. Reportedly, there are safety and maintenance issues with this plant. If gas is available, the Uch-1 power plant may deserve a longer life, if feasible.

The general rule should be that all steam power plants running on RFO, RLNG and pipeline gas must go – this is because RFO and RLNG have become too expensive and pipeline gas has a high opportunity cost despite low prices. If oil and RLNG prices go down, maybe there will still be a chance for these power plants to remain useful.

The generation plan has to be accompanied by a transmission plan; both are mutually interdependent. While it was earlier announced that a transmission plan will soon be released, it has not been done. Transmission can add significantly to the generation cost and may influence project selection and generation of the last-cost generation plan. It is hoped that planners will expand their scope of work and expertise in this respect. The National Transmission & Despatch Company (NTDC) is a transmission company. ■

NEWS ITEM

AG donates Rs10m for flood relief

To alleviate the tragic impact of recent floods across Pakistan, Associated Group (AG) through its companies, including Pakistan GasPort Limited, PGPCL, has donated Rs10 million to 'Army Relief Fund for Flood Affectees'. The donation will be spent on relief work and supply of relief goods for the community members, adversely hit by the floods.

Furthermore, BW LNG through a JV Partnership with MITSUI & CO. LTD., the provider of Floating Storage Regasification Unit at PGPC Terminal in Port Qasim, has jointly donated $50,000 to Red Crescent and separately, a sum of $50,000 to INTBAU Pakistan who are working to rebuild homes in the flood-affected parts of the country.

The staff members of AG and its companies have additionally donated a day salary each, totaling around Rs1 million to Al-Khidmat Foundation.

A meeting was organized by Pakistan Solar Association to discuss on going crisis and its solution. M. Zakir Ali Senior Vice President PSA presided over the meeting.

AT Pakistan Solar Association Meeting a Group Photo was Taken with Saleem Diwan CEO Diwan International, Amer Raza CEO Greeves, M. Naeem Qureshi Managing Editor Energy Update, Mustafa Tahir Marketing and Promotions Manager & others are seen in the picture.

A group photo was taken at dinner organized by Pakistan Business Forum. Imran Abbasi MD SSGC, Naeem Qureshi ME Energy Update, Salman Siddiqui CC SSGC, Turab Shah & others are present.

Recent rains and floods devastation

Climate change's worst shock comes in Pakistan

10 million children in need of immediate support; 33 million people affected, 1.7 million homes destroyed, and over 1600 people killed so far

Mansoor

Recent rains and floods in Pakistan, which are major proofs of Climate Change implication, has heavily devasted the country, particularly its Sindh and Balochistan provinces. Extreme rainfall in the country has increased 50-75% and some climate models suggest this increase could be entirely due to human-caused climate change.

The Pakistan Meteorological Department said that national rainfall was 243 percent above average. In the province of Balochistan, it was +590 percent and in Sindh +726%. So far, the rains and floods have affected over 33 million people, destroyed 1.7 million homes, and killed over 1600 people.

Climate change is caused by an increase of carbon dioxide and other greenhouse gases in earth's atmosphere mostly from fossil fuel emissions. In Pakistan, the environmental degradation and climate change are adversely affecting the economy, livelihood of the poor and sustainable development. On the one hand, growing population, unplanned urban expansion and dependence on natural resources puts immense pressure on environment that triggered climate change. Moreover, lack of public awareness regarding environmental issues and mismanagement of water and solid waste has aggravated the situation. Consequently, Pakistan continues to suffer from a plethora of natural and human induced hazards that threaten the lives and livelihood of its citizens.

According to World Meteorological Orgainzation, to quantify the effect of climate change on the heavy rainfall, the World Weather Attribution scientists analysed weather data and computer simulations to compare the climate as it is today, after about 1.2°C of global warming since the late 1800s, with the climate of the past, following peer-reviewed methods. The researchers focused on two aspects of the event: the 60-day period of heaviest rainfall over the Indus river basin between June and September, and the 5-day period of heaviest rainfall in Sindh and Balochistan.

Fahad Saeed, Researcher at the Center for Climate Change and Sustainable Development, Islamabad, Pakistan, said: "Fingerprints of climate change in exacerbating the heatwave earlier this year, and now the flooding, provide conclusive evidence of Pakistan's vulnerability to such extremes."

The scientists found that modern climate models are not fully able to simulate monsoon rainfall in the Indus river basin, as the region is located at the western edge of the monsoon and its rainfall pattern is extremely variable from year to year. Consequently, they could not quantify the influence of climate change as accurately as has been possible in other studies of extreme weather events, such as heatwaves and heavy rainfall in areas with less

variability and more reliable models. For the 5-day total rainfall, some models suggest that climate change increased the 5-day total rainfall in Sindh and Balochistan by up to 50%. This is in-line with recent IPCC assessments projecting more intense rains in the region and with historical weather records which show that these heavy rainfall episodes have increased 75% in the region in the last few decades. There were large uncertainties in climate modelling of maximum 60-day rainfall in the Indus basin, meaning the scientists were not able to estimate the influence of climate change on this aspect of the rainfall.

Friederike Otto, Senior Lecturer in Climate Science at the Grantham Institute - Climate Change and the Environment, Imperial College London, said: " What we saw in Pakistan is exactly what climate projections have been predicting for years. It's also in line with historical records showing that heavy rainfall has dramatically increased in the region since humans started emitting large amounts of greenhouse gases into the atmosphere. And our own analysis also shows clearly that further warming will make these heavy rainfall episodes even more intense."

According to rapid attribution analysis by an international team of leading climate scientists as part of the World Weather Attribution group. Extreme rainfall in the region has increased 50-75% and some climate models suggest this increase could be entirely due to human-caused climate change, although there are considerable uncertainties in the results.

According to UNICEF, torrential monsoon rains triggered the most severe flooding in Pakistan's recent history, washing away villages and leaving almost 10 million children in need of immediate, lifesaving support. in need of assistance and at increased risk of waterborne diseases, drowning and malnutrition.

As floodwaters recede, the sheer scale of damage is being revealed. Hundreds of thousands of homes have been damaged or destroyed, while many public health facilities, water systems and schools have been destroyed or damaged. Young children are living out in the open with their families, with no drinking water, no food, and no livelihood, exposed to a wide range of new flood-related risks and hazards, including from damaged buildings and drowning in floodwaters.

To cope with the challenge of climate change matters should be addressed on both mitigations and remedies front. Forests should be raised across the country besides raising use of solar energy to a greater level. The wind and sea waves could also be used for producing clean and safe energy. However, this requires huge investment from government and private sector. The urban forestry should be introduced in all cities of the country. ■

Chairman WAPDA visits Tarbela Dam, T-5 Hydropower Project

T-5 Project scheduled to start power generation in 2025, chairman briefed

Chairman WAPDA Lt Gen Sajjad Ghani (Retd) has said that Tarbela Dam has been phenomenally contributing towards economic and social development in Pakistan since its completion in 1974.

Under-construction Tarbela 5th Extension Hydropower Project (T-5) will increase its hydel generation. He expressed these views during his visit to Tarbela Dam. He had a detailed round of Ghazi Barrage downstream of Tarbela Dam, intake, penstock and power house sites of T-5 Project, Tarbela Hydel Power Station and Tarbela 4th Extension Hydel Power Station.

Earlier, GM Tarbela Dam/PD T-5 Project briefed the Chairman about effective operation and benefits of Tarbela Dam. He was also briefed about the progress on the under-construction T-5 Project, which is scheduled for generation in 2025. GM (Power) Tarbela held a presentation about the matters related to the operation and maintenance of the 3478 MW-Tarbela Hydel Power Station and the 1410 MW-Tarbela 4th Extension Hydel Power Station.

Tarbela Dam has been a vital project for irrigated agriculture and economy of the country, because it provides water for agriculture, mitigates floods and generates a sizeable quantum of low-cost and environment friendly hydel electricity to the National Grid. As many as 64 million acre feet of water are released annually from Tarbela Dam to meet irrigation needs of the country. ■

Solar panel policy bound to fail: Stakeholders

Stakeholders from the private sector have expressed concerns over the government's new policy on solar panels and said it was bound to fail. Speaking at the closing session of the workshop on the policy, entrepreneurs and industrialists said the government's policies were promoting the import of solar panels as opposed to local manufacturing. The workshop was organised by the Engineering Development Board (EDB) and the Ministry of Industries and Production (MoIP). They said that the government has allowed duty free import of solar panels whereas 17 per cent sales tax has been imposed on components and raw material. Tesla Solar CEO Mohamnad Amir said due to heavy taxes, buying parts and raw material from China has become costlier whereas the same vendors in China could sell finished products at cheaper rates. The stakeholders belonging to the private sector have asked Federal Minister for Industries and Production Makhdoom Syed Murtaza Mahmood to devise the policy for ten years and ensure that no major changes are made to it during that time. ■

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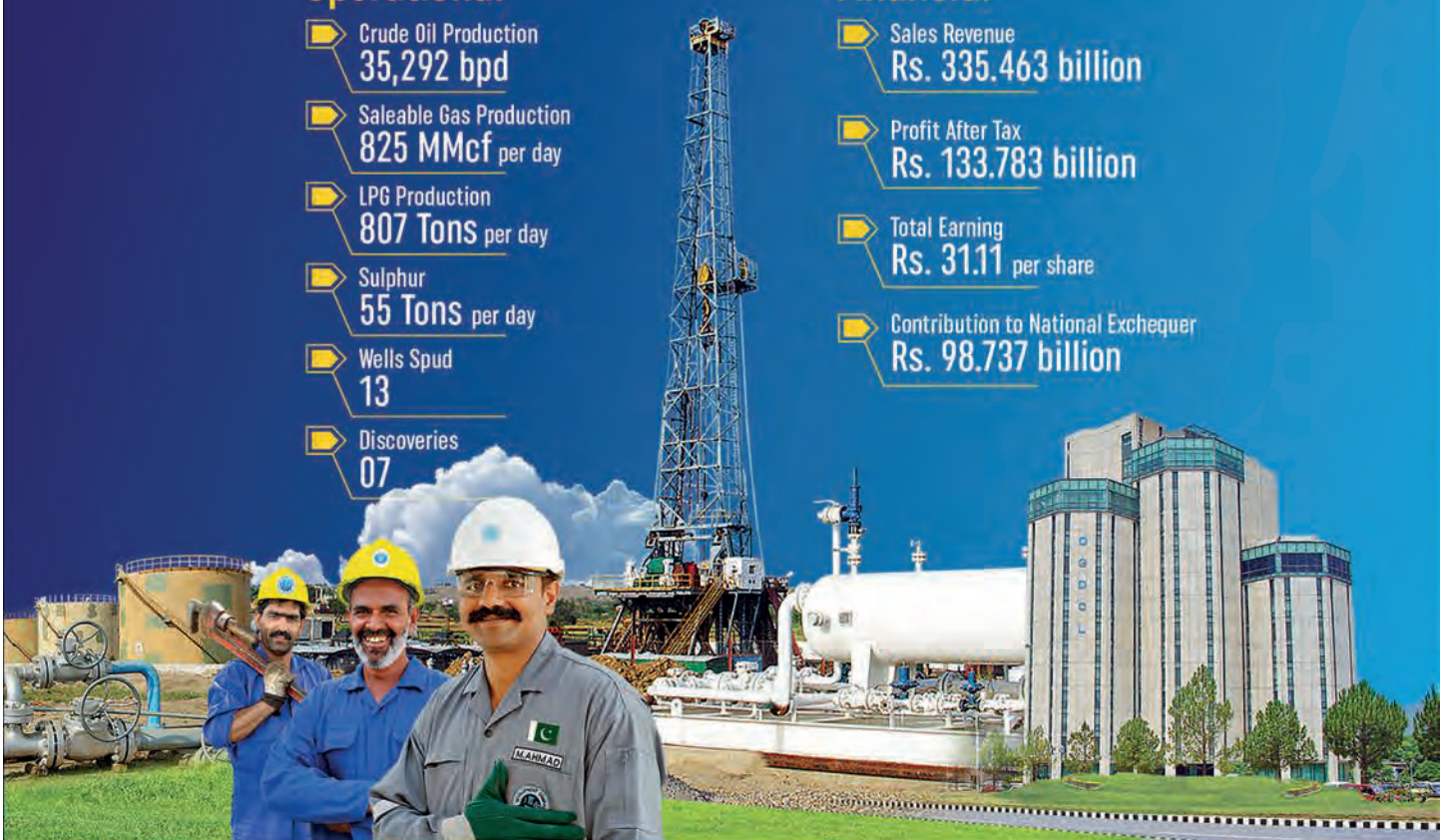

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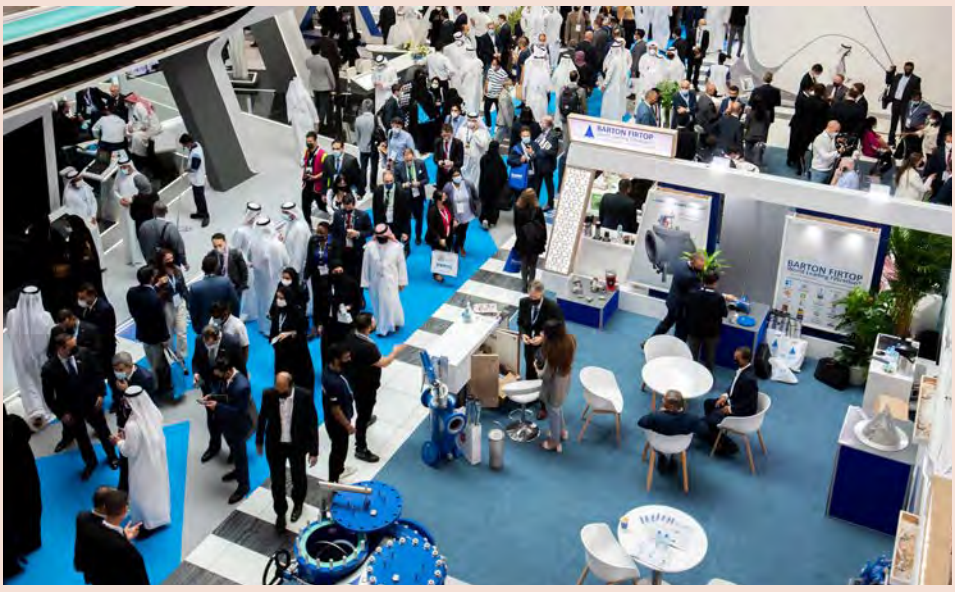
Hosted by the Abu Dhabi National Oil Company (ADNOC), ADIPEC is the world's most influential event for the energy industry. ADIPEC 2022 will gather policy makers, energy CEOs and energy professionals from across the globe to spearhead discussions focused on key global energy trends, policy formation, and geopolitical factors.

The event will accelerate the energy transition, unlock real value in a decarbonised future, showcase ground-breaking technologies and explore actionable strategies and solutions to the challenges and opportunities created by complex global energy market dynamics.

Taking place a week before COP27, ADIPEC 2022 is the global forum for leaders to reinforce strategies and commitments that will drive the industry towards reducing emissions and meeting net-zero goals.

Alongside the exhibition and conferences, ADIPEC 2022 will also host four specialised industry zones that will enable the global energy industry to strengthen existing business partnerships and form new models of cross-sector collaboration to unlock and maximise value across businesses and drive future growth.



The dedicated Digitalisation Exhibition at ADIPEC 2022 will continue to be a global showcase of the technological solutions that can help the energy industry unlock untapped value and opportunities as digitalisation becomes more deeply integrated into all aspects of operations.

The ADIPEC Smart Manufacturing Zone will continue to provide a unique platform for the manufacturing industry to gain insights into the energy transition and identify the challenges and opportunities for manufacturing in the drive for a net-zero carbon economy.

Red Line BRT to operate on Biogas

Wasif Ijlal,
CEO TransKarachi

Karachi Bus Rapid Transit Red Line Project is a mega-scale transportation project launched by Govt. of Sindh; Total time required to complete project is three years

M. Naeem Qureshi

The Red Line Bus Rapid Transit service in Karachi will be operated without any government subsidy owing to its unique fuel component which means it will not cause any extra burden on the taxpayers in the country.

This was stated by Wasif Ijlal, CEO of TransKarachi, in an exclusive interview with Energy Update. Following are the important excerpts from his interview to let our readers know about the distinguishing features of the forthcoming mass transit system in Karachi.

Energy Update: Tell us about the BRT Red Line project being built in Karachi.

Wasif Ijlal: It is a transformational and first-of-its-kind project in Pakistan with athird generation Bus Rapid Transit (BRT) system. This Govt. of Sindh Project includes facade to facade development, Biohybrid buses, third generation BRT system and a zero-subsidy model. The third-generation BRT or direct service model, will expand the system's reach, lessen passenger transfers, and incur travel time savings. Presently, the only third-generation BRT in the country is Peshawar BRT. The first-generation BRT has only a point-to-point operation without any feeder route. .. It is also the gold standard BRT as earlier the only gold standard mass transit system in the country is Peshawar metro service. The development will take place on both sides of the Red Line corridor along with its construction. This development includes the construction of cycling and jogging tracks and tree plantations on both sides of the corridor.

EU: What strategy is being used to conserve the tree cover along the Red Line corridor?

Mr Ijlal: Majority of trees being removed for the construction of the BRT Red Line corridor are not beneficial for the environment. Five saplings are being planted after the removal of one tree for the BRT corridor construction. Around 6,031 trees are present along the Red Line corridor.

For every 1 tree being cut in the existing right of way, 5 trees are being

planted. Based on the funding received, a detailed tree plantation plan is already in place and being implemented The newly planted trees include the likes of Lignum Tree, Gul Mohar, Coconut Palm, Khajoor and Peepal among others. These trees are extremely beneficial to the environment and would also provide shade to the cycling and pedestrian tracks along the BRT corridor.

EU: What are the other important benefits of the Red Line corridor construction in Karachi?
Mr Ijlal: The uplift of historical buildings will also take place near the Numaish intersection. Whatever necessary development is required will take place along the portion of the corridor in front of the main universities in Karachi. A major component of the Red Line construction relates to the improvement of the environment and a complete overhaul of the drainage system of the area, especially University Road, which witnessed urban flooding after the recent monsoon rains. A system will also be installed to retain the rainwater for its use later for watering the plants.

EU: What fuel will be used to run the Red Line buses?
Mr Ijlal: The BRT Red Line buses will run on biogas. Earlier, many feasibilities were conducted to determine the cost of operating the buses if electric power, petrol, diesel, or CNG as fuel is used to run the bus service. The biogas for the Red Line service will be produced using cow manure. It is going to become the only fuel source through which the system will get positive cash outflow for a mass transit system in Pakistan.. This is going to be the first mass transit project, which will run with little to no subsidy. Red Line bus service will cause no extra burden on the taxpayers. Moreover, the Red Line buses will also emit near zero emissions. In fact, it is going to be a carbon-negative project as it will consume the cow manure of the Cattle Colony in Karachi that is now being disposed of into the sea via river.

EU: How the local communities will be benefited from the Red Line construction?
Mr Ijlal: A major of the project also relates to community uplift. All people who are being displaced for building the Red Line corridor have been paid compensation. Then these people are also being given skill training. We have engaged an NGO, Hands, for this purpose. The displaced persons have been given the opportunity to learn soft skills and vocational trainings as part of livelihood restoration plan. The construction on Lot one of the project started in May this year and before this, persons displaced from the area were given compensation.

EU: What are the other unique features of this project?
Mr Ijlal: This is the first mass transit project in Pakistan, which is funded by Green Climate Fund. All the 250 Red Line carriers will be bio-hybrid buses as they will be run both on biogas and electric power. These carriers will be Euro six-compliant buses.

EU: In how many years, the Red Line project will be completed?
Mr Ijlal: Total time required to complete the Red Line project is three years from the start of the construction. Two years are required to complete civil works for constructing the corridor. It will be nearly a 27-kilometre-long corridor from Malir Halt to Numaish where a staging facility will also be built.

A main operation and command centre will also be constructed at the site for the BRT service in Karachi. The TransKarachi is mandated to run the Karachi Breeze system covering all the BRT service being built in the city. The Redline is going to employ up to 3,000 people in Karachi. We are going to invite tenders for purchasing the Red Line buses next year as testing and commissioning of the buses will take time. The construction of the biogas plant will take one-and-half years and will be undertaken concurrently.

EU: Who is providing funding to build the Red Line project?
Mr Ijlal: Up to 85 per cent of the funding of the project comes from the international lending agencies with the Asian Development Bank, other lenders include the Asian Infrastructure Investment Bank (AIIB), the French Agency for Development (AFD), and the Green Climate Fund (GCF). The Sindh government is going to pay the rest 15 per cent as part of the funding that will be utilised for payment of taxes, compensation payment to the displaced persons, and relocation of the utility services.

EU: Are there other public transport projects in the world run on biogas?
Mr Ijlal: The biogas to be generated for this project will produce methane which is natural gas. Compressed natural gas is used in many places in the developed world like Britain, Finland, and Norway for operating passenger buses. The CNG is the preferred fuel for operating public transport services in many countries. ■

PLL fails to attract LNG bids

Khalid Mustafa

In a huge dent to future LNG supply, Pakistan LNG Limited (PLL) has received no response from the LNG suppliers against the revised two-part tender seeking 72 cargoes under 6-year term agreements as LNG is no more available even for term contracts in the international market.

The evaluation report of the results of the two-part tender seeking term contracts uploaded on Monday (October 03, 2022) on PLL's official website, mentions that no LNG supplier turned up for participating in the bidding process. Under the two-part tender, PLL had sought under part 1, bids for two years from January 2023 to December 2024 seeking 24 LNG cargos but no LNG supplier came up with any bid. The same happened with part 2 of the tender for which PLL sought bids from January 2025 to December 2028 for 48 LNG cargos.

"This is a huge setback for the government as the Pakistan LNG Limited has already failed to procure spot cargos for a long time and the people this time will have to face a massive gas deficit close to over 1-1.5 bcfd," a senior official close to Secretary petroleum told The News.

Apart from the acquisition of term and spot contracts, the government also failed not only to use the under-utilized capacity of 300-400 mmcfd of LNG Terminal-2 but has also not succeeded to use the additional capacity of the same LNG terminal under TPA rules. Had the private sector been allowed to use the excess and under-utilized capacity, the country would have more 400-500 mmcfd LNG in its system and there would have been no gas crisis in the coming winter season "Right now at LNG terminal-2, PLL is unable to fully utilize its own purchase capacity of 600 mmcfd as it has failed to procure 3-4 spot cargos a month. However, it is utilizing 200-300 mmcfd capacity.

The officials said, is that the country's LNG sector has become unsustainable. Pakistan State Oil (PSO) is facing a circular debt of Rs327 billion in the LNG sector alone in the wake of the inability of Sui Northern to pay the dues of Rs327 billion. "PSO is feeling the heat as it is finding it difficult to open and retire LCs on time for smooth imports of LNG. More adverse is the case of Pakistan LNG Limited which is also a victim of circular debt of close to Rs100 billion and is unable to open LC for the import of costly LNG cargoes. And on top of that, the current management of PLL has failed to create its clout in the international market despite so many foreign visits by MD Masood Nabi for attending LNG seminars and workshops.

On top of this, the official explained the five-year term contract with GUNVOR expired in July 2022 but the PLL management did not initiate any term agreement with any LNG supplier before the contract with GUNVOR expired. ■

Courtesy The News

PGP Consortium Limited

Changing Lives, Shaping Futures

Pakistan GasPort Limited and its affiliate PGPC, a company of Associated Group, since Dec 24, 2017 have delivered 641 billion cubic feet of regasified LNG to the country's network bringing critical energy to power our industries and households. PGPC is aiming to bring additional LNG of 100 mmscfd, beyond what is contracted with the Government of Pakistan, at its existing terminal to secure cost-effective LNG cargoes through the private-sector for securing Pakistan's energy future.

www.ag.com.pk/gasport

Soaring energy prices threatening electric cars' future

With the burgeoning fuel prices, electric cars were taken as a perfect alternative, but soaring electricity pirce is reversing the fortunes of the EV makers. If the trend continues, electric vehicles could be more expensive to drive as compared to petrol fuel cars.

A UK-based insurance firm dubbed "RAC" has disclosed that EV owners who use public charging points are paying the same as they pay for fuel per mile. Charging at home is cheaper but domestic bills have also observed a jump in the face of rising energy costs. Since the electricity cost is directly linked to gas, the situation worsened after Russia turned off the gas supplies to Germany.

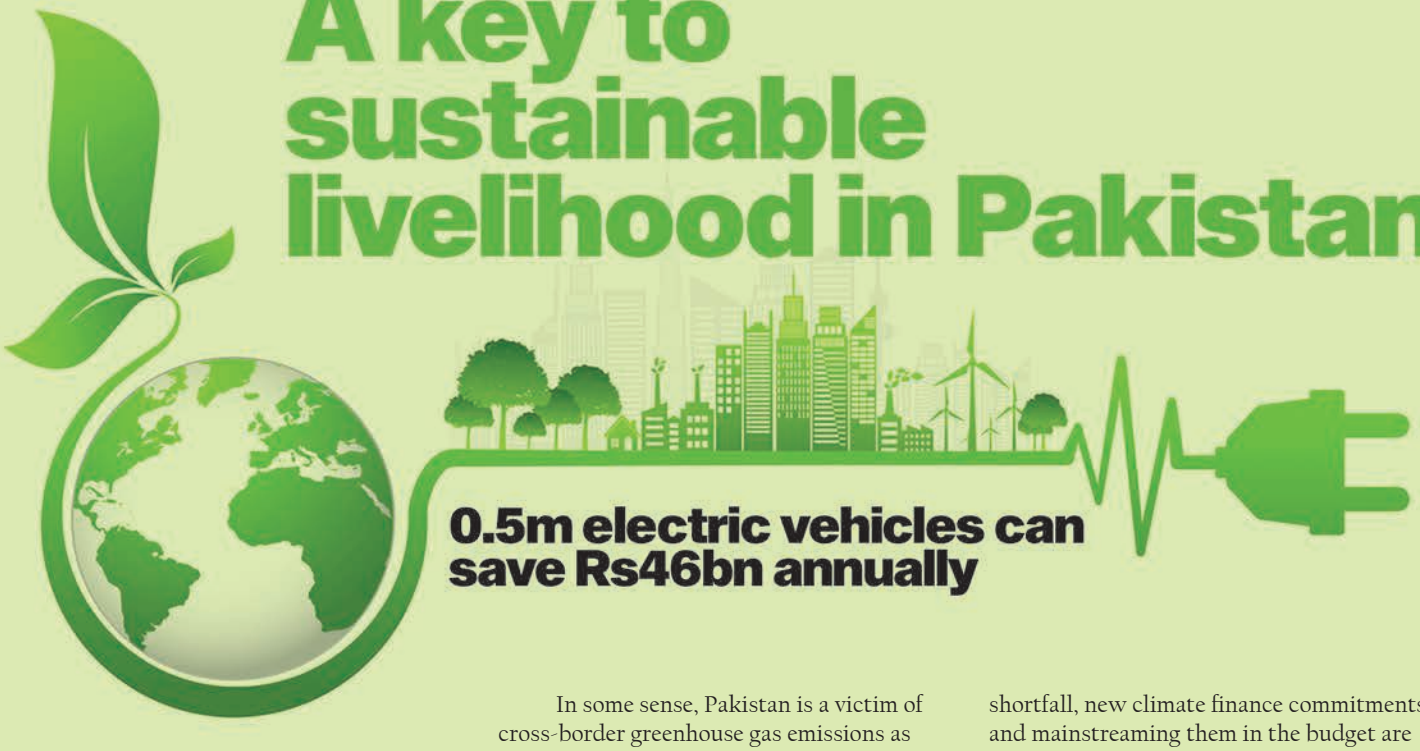
As per research, since May, the cost to charge an electric car on a pay-as-you-go basis has seen a hike of 42% to an average of 63.29p per kWh. Meaning drivers using public networks to charge vehicles pay around 18 pence per mile for electricity – 1 penny less per mile for a fuel-powered car. At the same time, charging an average-sized vehicle at home costs around 9 pence per mile. RAC spokesman Simon Williams further informed: "Charging away from home remains less expensive than refueling a gasoline or diesel vehicle for those who have already made the switch to an electric vehicle or are considering doing so. However, the gap is narrowing as a result of the enormous increases in the cost of electricity."

Furthermore, drivers using fast and ultra-fast chargers are more prone to the situation. Automobile economists have called it an immediate threat to the future of electric vehicles. A massive up in electricity prices may collapse the whole electric mobility.

Households are encouraged to 'go green' due to record-low prices for rooftop photovoltaic (PV) systems and declining battery costs. However, consumers must factor in multiple variables.

When solar panels are added, about 20% less energy is imported and with batteries, this is reduced by around 83%. When electric vehicles are added, consumed energy rises significantly but imported energy can be reduced by around 89% of total consumption.

A key to sustainable livelihood in Pakistan



0.5m electric vehicles can save Rs46bn annually

Pakistan is amidst an unprecedented humanitarian crisis caused by the recent floods. The numbers related to the impact of this catastrophe are staggering as a third of the country is submerged under water that has led to 33 million people being displaced, a seventh of the population has lost its homes, and over 1,000 lives have been lost.

Early estimates suggest that the overall loss could be as high as $20 billion. These costs include damage to the crops, houses, livestock and infrastructure. The actual loss could be higher as more data comes in through the ongoing rescue and rehabilitation efforts. In 2010, Pakistan experienced flooding of a similar enormity.

In some sense, Pakistan is a victim of cross-border greenhouse gas emissions as its losses are disproportionate to its contribution toward climate change. Although it contributes less than 1 per cent of global carbon emissions, it remains among the countries most vulnerable to climate change. It is ranked 152nd among 181 countries based on its vulnerability to climate change and readiness to improve its resilience.

An estimated 0.5m electric vehicles can save up to 0.68bn litres (Rs46bn) annually, but large-scale investments are needed to provide technologically viable and economically-competitive alternatives

Adverse impacts of climate change will strain the country's water resources and affect approximately 5m lives and their livelihoods. At the national level, the annual loss to Pakistan's GDP could be as high as $3.8bn.

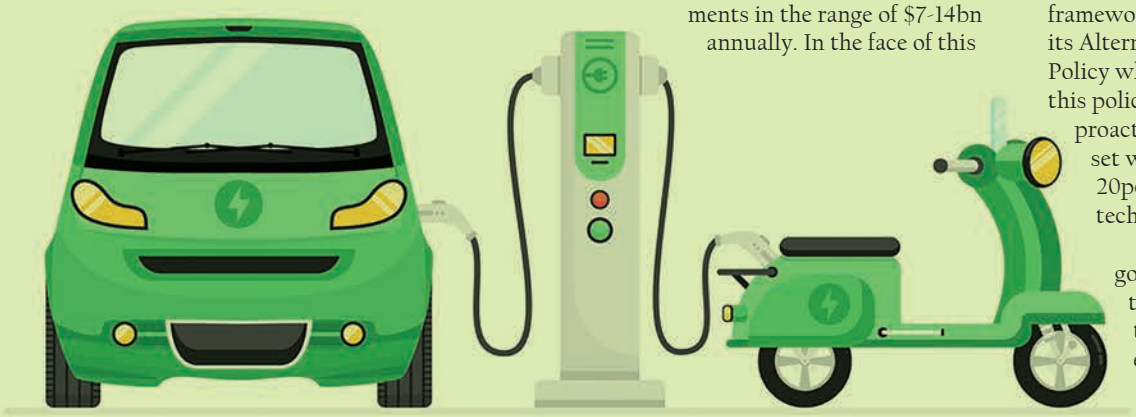
Pakistan has not received its due share of official assistance despite it being a vulnerable frontline state with climate mitigation and adaptation requirements in the range of $7-14bn annually. In the face of this shortfall, new climate finance commitments and mainstreaming them in the budget are extremely important.

The energy crisis is a structural economic problem that various governments have been unable to solve with long-term sustainable policies. The tendency has been to plug inefficiencies with short-term policies such as subsidies and sovereign guarantees to power producers. Reliance on fossil fuels compounds the adverse effects of climate change — a problem that is faced by not only Pakistan but plagues the entire global community.

Successive governments have shown desire and commitment toward energy diversification and efficient resource allocation. Pakistan is a signatory to various treaties and international frameworks relating to climate change, such as the Conference of Parties held under the United Nations Climate Change Conferences and the UN's Sustainable Development Goals.

To pursue the goals set under these frameworks, Pakistan's biggest initiative is its Alternative and Renewable Energy (ARE) Policy which was introduced in 2019. Under this policy, renewable energy projects will be proactively implemented. A target has been set whereby Pakistan intends to have 20pc of its generation capacity as ARE technologies by 2025 and 30pc by 2030.

Complementing this target is the goal of increasing the share of hydel to 30pc, which would be a big shift towards making power generation environmentally and fiscally friendly.



Strengthening and opening up financing avenues for these initiatives is as important as developing these frameworks. "Green financing" augments the financial flows from the banking, micro-credit, insurance and investment from the public, private and not-for-profit sectors.

As such, the global green financing market is growing at an aggressive pace due to the immense potential of green projects. It is expected that the global green investment market will touch $1 trillion in the first part of this decade, signalling a pivotal milestone for climate finance.

The success of Pakistan's first green bond issued by the Water & Power Development Authority and the State Bank of Pakistan's refinance scheme that financed over 700 projects shows that climate finance has promise. Pakistan will have to aggressively pursue all local and international avenues to achieve its goal of a green economy.

It would be amiss to mention clean energy sources without energy efficiency, a process through which more efficient and advanced technologies are deployed to reduce carbon emissions and contribute positively to climate change.

According to the National Energy Efficiency and Conservation Authority, over $4bn in investment opportunities exist in energy efficiency improvements in the industrial sector. There is room for efficiencies across a whole host of industrial segments ranging from textile, steel and foundry to sugar and ceramics.

The textile segment, accounting for approximately 28pc of the overall electricity consumption by industries, offers considerable efficiency gains. The transport sector, the biggest consumer of petroleum, also offers considerable gains.

An estimated 0.5m electric vehicles can save up to 0.68bn litres annually or Rs46bn (as of 2019). While the government has given tax breaks for electric vehicles in the current budget, this is an encouraging step that can be a segue to import substitution and development of the local industry, as in the case of Jolta Electric, Pakistan's first electric bike manufacturer.

Green energy offers an opportunity within a challenge, but Pakistan will have to move beyond broad frameworks to long-term commitments and their realisation. To make deeper cuts in emissions, large-scale investments and innovations are needed to provide technologically-viable and economically-competitive alternatives to fossil-fuel-intensive technologies in sectors like industry, transport and power.

An economy based on clean energy can reduce Pakistan's dependence on fossil fuel imports and make it less vulnerable to exogenous shocks. This will also curb the huge economic losses in terms of natural disasters, depletion of natural resources and endangerment of livelihoods. ■

Courtesy Dawn

WASTE TO ENERGY

SSWMB, Engro sign MoU on waste-to-energy plant

EU Report

The Sindh Solid Waste Management Board (SSWMB) and Engro Energy Limited have signed a memorandum of understanding (MoU) for preparation of a feasibility study for a solid waste power plant.

Those who witnessed the MoU signing ceremony included Sindh Local Government Minister Syed Nasir Hussain Shah, Energy Minister Imtiaz Shaikh, Karachi Metropolitan Corporation Administrator Barrister Murtaza Wahab, SSWMB Managing Director Zubair Ahmed Channa, Engro Energy CEO Yusuf Siddiqui and Engro Energy Head of Business Development Usman Hassan.

Shah said on the occasion that Pakistan Peoples Party (PPP) Chairman Bilawal Bhutto Zardari had a vision for the city's cleanliness and development, and the MoU being signed was a step in order to achieve that vision. "We appreciate the initiative of the Sindh Solid Waste Management Board and Engro Energy for joining the efforts of the Sindh Government to find a sustainable solution to waste," he said.

Meanwhile, the energy minister said that work on refuse-derived fuel (RDF) had started last year. "We have also signed agreements to generate electricity from waste. These are part of the initiatives toward making the city clean and green. We are also working on other such projects to ensure better use of waste by recycling," he explained. The SSWMB managing director said modern technology was being used to provide sanitation facilities to the citizens. He added that the agreement was an effort under which waste would be recycled and made useful.

Nepra approves reduction of Rs4.89 per unit in FCA for KE consumers

EU Report

The National Electric Power Regulatory Authority (Nepra) approved a reduction of Rs4.89 per unit for K-Electric (KE) consumers on account of fuel cost adjustment (FCA) for electricity consumed in August. Meanwhile, the power regulator raised the price by Rs0.19 per unit for the consumers of ex-Wapda Distribution Companies (Discos), also on account of FCA for the month of August. Changes in both rates will be reflected in the bills for October. In its notification for adjustment in electricity rates of KE, Nepra said the negative FCA would be applicable to all consumer categories except lifeline consumers, domestic consumers using up to 300 units, agriculture consumers and electric vehicle charging stations.

Ongoing political power of oil

Saad Masood

Since the discovery of oil in the second half of the 19th century in the US, the political power of oil has been on ample display. It has been the most critical dimension in shaping international, domestic and social life. Subsequent detection of oil reserves in Russia, Latin America and the Middle East meant that the US had commodity rivals in oil across the globe.

A quick sift through history provides us with concrete examples of the political power of oil. 1973 – the Yom Kippur War and a host of other Arab-Israeli conflicts led Arab oil-producing nations to proclaim an oil embargo on countries supportive of Israel. Within 6 months the price of oil had increased by 300 per cent, crippling industries and factories all over the world! In the aftermath of this crisis, fossil fuels and nuclear power opened up as alternatives to oil. 1979 – the Iranian revolution reduced the world's oil supply by only 4% but the price of oil more than doubled because of panic buying of Brent Crude.

Since the oil shocks of the 1970s, developing nations have been at pains to work on substitutes for petroleum that can mitigate the political power of oil, particularly that of OPEC+. Green energy, sustainable power generation, alternative fuels, and better standards in automobiles & industry are all endeavours in the same direction. But does this mean that the political power of oil is ending? Waning, yes. Ending, no. Consider.

The incumbent culture at global oil companies and institutions such as International Energy Agency is to maintain shareholder wealth and market confidence.

It is agreed that the world economy in general and the energy sector, in particular, are undergoing a transition from hydrocarbons to alternative sources of electricity and renewables. If previous similar transitions are any guide, this is a long-drawn affair and requires commercially viable and better replacements. The energy transition from wood to coal to oil around the beginning of the 20th century suggests that the biggest reason for settling on oil as the preferred choice of energy supply for so long was the higher energy density of its chemical makeup.

The geopolitical implications of switching away from oil to other substitutes are huge. Countries will not go towards a complete shift without having a full backup ecosystem in place or at least in the pipeline. Consider what the British had to do when they moved away from coal and towards oil! Following the lead of other administrations, the British government also moved the warships of the Royal Navy from burning coal to burn oil in 1914.

On one hand, the politics of oil has indeed changed in recent years – Saudi Arabia may not be the swing producer in the global market, climate change has taken centre stage, the delineation between producer and consumer is diminishing and oil is not as scarce a commodity as it once used to be. On the other hand, it is equally true that the political power of oil is still ongoing albeit changing and evolving. A time may come when this power diminishes and finally ends, but that era is not on our doorstep yet and the policy-making brigade would do well to keep that in mind! ■

The writer is Director Programmes for an international ICT organization based in the UK and writes on corporate strategy, socio-economic and geopolitical issues.

SNGPL signs LPG distribution agreement with SLL

As part of its measures to facilitate gas consumers during the winters, Sui Northern Gas Pipelines Limited (SNGPL) has entered into LPG distribution agreement with Sui Southern LPG Limited (SLL). The agreement in this regard was signed today (Friday) at the Sui Southern Gas Head Office in Karachi. MD SSL Amir Mahmood and SGM (ES) SNGPL Imran Yousaf signed the agreement.

MD SNGPL Ali J. Hamdani and MD SSGC Imran Maniar witnessed the ceremony. Syed Jawad Naseem, SGM (BD) SNGPL, Jalees Ghalib, CFO SLL and Ali Khan, DGM (Treasury) SLL were also present on the occasion.

SNGPL has embarked on introducing LPG as alternate fuel in line with Government of Pakistan's direction and MD SNGPL Ali J. Hamdani's vision of diversifying the Company's business and to ensure supply of gas to consumers. This is of paramount importance at this time owing to scarcity of energy and astronomical prices of gas in the world. This milestone has been achieved under the visionary leadership of MD SNGPL Ali J. Hamdani in a record period of time.

SNGPL has entered into LPG business initially as distributor of Sui Southern LPG Limited (SLL).

SNGPL will be initially distributing 100,000 LPG cylinders in the cities of Islamabad, Rawalpindi, Lahore, Peshawar, Multan, Faisalabad and Gujranwala, starting first week of November.

SNGPL will adhere to the highest quality and safety standards and will provide guaranteed quantity at controlled price thereby discouraging the black marketing.

Sui Northern Gas will be ensuring maximum customer satisfaction. Customers will be able to order the cylinders using the Company's mobile app, website, dedicated phone numbers, WhatsApp number and official Social Media accounts. Cylinder will be delivered at the customers' doorstep promptly. Details will be revealed in campaign which will shortly be launched.

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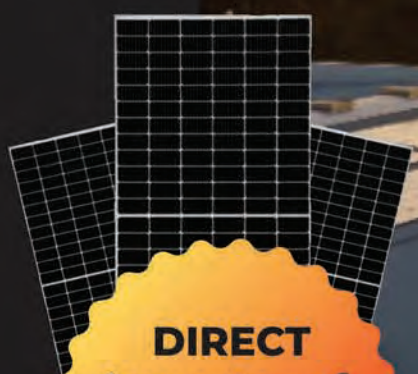

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Electricity cost beyond paying capacity

Solar energy scope is high for very long time

Khalil-ur-Rehman
CEO Royal Solar Energy (P) Ltd

Mustafa Tahir

Energy Update: Tell us about yourself and how did you enter in the business of solar energy systems?
Khalil-ur-Rehman: I belong to a business family and have been carrying out different businesses since early age. I was always looking out for new avenues and about 10 years ago, keeping in view the high costs of the electricity, I felt the importance and need of renewable energy systems. Out of all the renewable systems available, the solar energy has the easiest reach for the common man. Therefore, after making a detailed analysis of the market, I ventured in this business.

To begin with, I made a humble start and purchased the equipment from local sources. With the grace of Allah Almighty, we have grown to a reasonable size now and are importing the solar panels directly from the top tier companies in the world. Many major companies engaged in this business in Pakistan are our customers. Besides trading, we are also carrying out EPC projects through a professional technical team.

EU: What are your current projects in the renewable energy sector of Pakistan?
Khalil-ur-Rehman: As mentioned above, we are already carrying out implementation of solar systems. We are an AEDB-licensed company and had focused initially on larger projects only. However, we have felt that quality solutions at economical rates fort the domestic and smaller consumers are hard to find in the market. As such, we decided to fill this gap and have now started implementation of the smaller systems also.

EU: What are your future plans?
Khalil-ur-Rehman: While we are already in both the fields of the business i.e. trading and EPC, we have felt the need of expanding our business beyond the borders of Pakistan. There is a huge market of the system all over the globe and we have firm plans to use our experience to take our business in other countries by competing through quality at competitive rates.

EU: What is your opinion about the growth and progress of Pakistani solar market?
Khalil-ur-Rehman: My outright and clear response to your question is that the prospects of solar energy solutions in the country are very bright and the market is progressive.

Actually, there are two aspects of this question. First of all, the cost of electricity has gone too high and is beyond the paying capacity of common man. For the commercial and industrial setups, the cost is even more un-bearable. As such, the solar energy system provides the cheapest alternate solution to the rising cost of energy. In addition to being economical, it is also the quickest solution to implement to meet the increased demand of electricity in the country.

EU: Are there any issues related to quality of solar energy products in Pakistan?
Khalil-ur-Rehman: The issues of quality and genuineness are always there in any field of business. Solar energy products are not an excep-

tion. It therefore becomes very important for the users to be vigilant about the source of the product that they are buying. Proper certifications and confirmation should be ensured, which can be provided only by the genuine importers.

EU: Are you facing any hurdles in carrying out the business of solar systems in Pakistan?

Khalil-ur-Rehman: Yes. The hurdles are many. First of all, import of fresh stock has become extremely difficult. New LCs or contracts have not been signed for almost last two months. Even the goods already imported are not being released from the port easily, thus incurring heavy financial cost as well as reputational cost. Secondly, the volatility of dollar price has made the market highly unstable and has become difficult to plan one's business on long-term basis. In addition to above, the inconsistent policies of the government regarding application of different taxes also hurts our business badly.

EU: Do you feel that there is still room for expansion in the solar market in Pakistan in view of the future increase in the power generation capacity of the country in conventional modes?

Khalil-ur-Rehman: Let me tell you that the solar energy system is a big relief for the country, even if the government increases its installed capacity of electricity production. Let me explain.

At present, the total power generation of the government is falling short of the total requirement. The difference becomes acute during the summer season when the demand grows. The power plants using costlier fuel are not working up to their capacity. To add to it, the line losses are huge due to the outdated transmission system. Therefore, the period of load shedding is getting longer and longer during the peak consumption days. The demand of electricity is increasing approximately at the rate of 5% per year.

To cope with the situation, the government is planning and executing new projects (hydel) for production of cheaper electricity. However, the dilemma is that on one side, the fix cost of bi hydel projects is enormous and on the other side, it takes at least 10 years to complete a big hydel project. So, it becomes difficult to cope with the current shortage of supply of electricity.

The solar energy system is the only solution which is easy and quick to implement, cheaper in terms of fixed investment and provides free electricity. It can be installed and is being installed in dispersed manner, mostly without using any ground space. It is easy to reach anywhere and everywhere, and in many cases, it is not even dependent on the transmission lines.

As such, the scope of solar energy system is huge and will remain useful for a very long time. ■

PSO SUCCESS

PSO wins arbitration case against Gunvor over LNG payments

State-run Pakistan State Oil (PSO) has won an arbitration case against international energy trader Gunvor Group Ltd. regarding excess payments for natural gas shipments, Bloomberg reported.

The London Court of International Arbitration sided with the Pakistani company, which had reduced payments to Gunvor due to overcharged shipments, people with knowledge of the matter said. PSO was awarded $14.6 million, as well as other costs, on October 8 for the case initiated by Gunvor in 2020.

Gunvor declined to comment, while Pakistan State Oil didn't immediately respond to a request for comment.

The South Asian nation is grappling with blackouts amid a global energy crunch, with contracted LNG suppliers -- such as Gunvor -- often canceling promised shipments.

It is worth mentioning that PSO had signed a short term LNG contract with Gunvor for the supply of 100 mmcfd for a period of five years. Later, the Pakistan LNG Limited (PLL) also floated tenders for short term and long term contracts for supply of 100 mmcfd supply each, which were also bagged by Gunvor.

Similarly, the PLL also floated a tender for a long term supply contract which was won by an Italian firm, Ente Nazionale Idrocarburi (ENI), which had quoted the lowest price of 13.37 per cent of Brent to win a contract with PSO.

The PSO continued making excess payments to Gunvor on account of port charges for four and a half years; however, the PLL management later pointed out that Gunvor was receiving excess payments.

A legal opinion was sought from an international firm that had assisted Pakistani firms in finalising LNG supplies agreement with Gunvor.

Upon availability of the final port charges, the PLL, on November 9, 2018, notified Gunvor regarding the miscalculations applied by Gunvor in provisional invoices. The PLL followed up on the issue on August 10, 2020, to resolve this matter again.

PSO deducted the excess payment and subsequently, Gunvor filed a case against the PSO in an international court.

Pakistan's large hydropower generation projects at risk

Tanveer Malik

Pakistan's long-term goal to meet 46 percent of its electricity needs from hydropower by 2030 was at risk on account of delays, fiscal constraints and extreme weather events, a report said.

While the Indicative Generation Capacity Expansion Plan (IGCEP 2021) indicates that almost 14GW of both large and small hydropower capacity would likely come online by 2030, a report of the Institute for Energy Economics and Financial Analysis (IEEFA) has pointed out key concerns.

The IEEFA has identified three key risks that could delay the realisation of this capacity by 2030. First includes the cost and schedule overruns that are a normal occurrence for large dams, and lead to a huge economic burden on the national exchequer, higher costs of debt financing and non-provision of project benefits.

The second risk are the delays in pipeline realisation that can likely lead to a supply-demand mismatch in the country prompting a switch back to fossil fuel-based power to bridge the gap. Pakistan and the government's hydropower development wing Water and Power Development Authority (WAPDA) were recently downgraded by all three prominent credit rating agencies ie Moody's, Fitch and S&P. As Pakistan's economic outlook is predicted to remain weak for the next few years, this hinders the governments' ability to raise capital for these projects, which could further delay project implementation cycles.

Third, the hydropower pipeline is becoming increasingly vulnerable to extreme weather events and climate change. Should there be an early onset of summers or droughts in the country, water availability in hydropower reservoirs for power generation could be severely limited. Competing water usages for irrigation and agricultural demand would precede hydropower generation leading to power outages and widespread load shedding within the country.

"Hydropower has been favoured in Pakistan's renewable energy planning as a symbol of nationalist pride and a fundamental resource for water security. However, achieving its targeted production appears increasingly unlikely, due to more frequent extreme weather events, significant cost overruns and schedule delay", author of report Haneea Isaad, Energy Finance Analyst at IEEFA stated. She said that as of September 2022, only 51 percent of planned hydropower capacity has achieved financial closure and only 39 percent has begun physical construction. "We estimate that only 15 percent of the hydropower pipeline will come online in time," she noted.

Report said that the recent floods in Pakistan have further increased economic stress and shifted the government's focus towards disaster recovery.

"Capital for large-scale hydropower projects may become even harder to come by, further jeopardising their realisation," explains Isaad.

Pakistan's total 14 gigawatts (GW) hydropower pipeline has previously been valued at $31.2 billion, but IEEFA's latest cost estimate goes up to $49-61 billion.

Of the total 14GW, 37 percent or 5.2GW would be financed through the support of multilateral development banks (MDBs), which would also require funds to be matched by the government. ■

Industries need multiple sources of power to survive

Micro grid and smart grid will be the future: Report

Imran Zafar

The availability of stable and reliable power is the basic necessity for Industries that are the backbone of economic growth. Pakistan, with the 5th largest population in the world and the availability of abundant natural and renewable resources should have developed its power network for industries much better than where it is today.

Following are the different sources of power available for any small to medium size industry in Pakistan: National Grid or Utility Gas Generator, Diesel or Heavy Fuel Oil Generator Solar, Wind Steam, and Batteries and UPS

The availability, quality, and cost of power to industries through these listed means vary round the clock. We will understand issues with each source of power, their remedy and options available for industries to improve its power reliability.

First, let's understand National Grid, industry receiving power from the National Grid on 132kV (for load demand above 5MW), 11kV (for load demand above 500kW) and 400V.

Industry needs own132kV grid for above 5MW load demand, which needs enormous investment, time, and huge space and therefore, it is not suitable for many industries to install grid, despite they need above 5MW of power. The 11kV line can be dedicated to one industry or shared by multiple industries. It is provided for load demand between 500kW to 5MW and lower power demand are served via 400V line.

There are three kinds of issues in grid power: first complete failure of power due to fault or load shedding; second, poor quality of power; third, momentary failure of power sense by sensitive electronic equipment.

All these issues are minimum at 132kV level and highest at 400V level. Industries whose process is very sensitive cannot rely on National Grid completely. Second source is gas generators, which are most reliable power and cheaper than National Grid. The precious national asset has now been exhausted as industries abandoned National Grid in post 2000 era and totally dependent on gas generators, however, this luxury is now fast vanishing.

Diesel & HFO Generators

These are expensive options compared to above two, however, fastest available option when both gas and grid options are not available, industry use these options as a backup / emergency situation.

Although capital cost of solar power is much higher than generators. However, its operation cost is almost zero and the life cycle is much more than gas or diesel generators. The issue with solar is that it is available for or a maximum of 8-10 hours, therefore, customer always require other constant power sources like gas generators and grid to have power available round the clock.

The wind is another renewable source of power, but it is not common as solar used by every industry and is more restricted to the two wind corridors of Dhabeji and Jhimpir, Sindh.

Fly Wheel UPS is an old and expensive solution that can provide backup to 10MW for 10sec while battery backup for such a high load is possible but not common. And the technology is constantly evaluating and its price is reducing with time. These backups are needed as industries running their gas / diesel generators in parallel with the grid may face a short-term jerk of power from the grid end.

As we have learned National Grid has interruption problems. Gas is infrequently available while solar only works for 10 hours. So every industry must have mix of different power sources available at its disposal.

The answer to above is possible via concept of micro-grid control that ensures that customer run parallel and switch between National Grid, solar, generator, wind, HFO, and any other source of power as and when required.

The objective is to implement it with minimum possible modification in the existing system with future expansion and customization provision. The typical micro-grid control is designed and integrated with full flexibility of different manufacturers' specifications and brands for solar inverters, generators, wind turbine inverters, etc. ■

For further details of Mirco Grid Controls, the author can be reached at imran@enercon-eng.com.sg

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Finance for climate disasters

Ali Tauqeer Sheikh

The recent floods have exhausted Pakistan's ability to meet its international climate commitments. Pakistan's policy trade-offs have become a painful paradox: the more the government spends to help the flood-affected communities, the less resources it is left with to meet its climate mitigation and adaptation obligations made under the Paris Agreement. Emergency relief through cash disbursements and humanitarian dimensions have completely drained the country of its financial resources and development budgets.

The 'repurposing' of the ongoing projects has robbed the country of many strategic-level development projects designed and negotiated over years. The floods have derailed the country where its growth target is concerned as well. Pakistan's foremost challenge is to redesign and redevelop institutions that can enhance its ability to directly access international climate finance.

Pakistan needs international finances not only for economic considerations, but also to cope with the consequences of climate risks and disasters. The growing economic costs of extreme weather events, together with sovereign debt default risks, have added to the cost of available capital.

The financial cost of climate risks has been on the rise for Pakistan. The existing heavy level of borrowing, weak economic performance and climate vulnerability, all add up to weaker sovereign ratings and higher borrowing rates. The leading rating agencies do not specifically attribute their ratings to climate risks but cover their indexing higher insurance premiums, lack of reserves, reduced economic outputs, crop failures, stranded assets, social conflicts, commodity prices, and trade disturbances. All this makes the investments needed for enhanced resilience expensive.

As a Joint UN Environment and Imperial College study pointed out in 2018, the developing countries have paid $40 billion in additional interest payments over the past 10 years on government debt and $62bn in higher interest payments across the public and private sectors. This amount was expected to more than double over the next decade.

Exact data about Pakistan is not available, but these figures have an indicative value. As Erum Sattar of Harvard University asked during the Law and Justice Conference organised by the Supreme Court of Pakistan in Islamabad two weeks ago, can capital markets, donors and other bilateral and multilateral lenders recognise the benefits of cheaper and early investments?

The financial cost of climate risks has been on the rise for Pakistan.

Paradoxically, the resilience achieved can possibly bring down the cost of borrowing. Pakistan needs to access international climate finance for investments aimed at reducing climate risks and vulnerabilities.

A very high percentage of Pakistan's present borrowing is often focused on governance and institutional reforms, instead of directly contributing towards economic productivity, accelerated economic growth, or strengthening foreign exchange earning capacity. This borrowing policy is neither desirable nor sustainable.

Pakistan needs a two-track strategy for accessing international climate finance: First, it must prioritise borrowing that helps reduce the cost of development by reducing climate vulnerabilities. Second, it must augment national and provincial capabilities to directly access climate-specific financing that often includes grants, concession-

al lending, leveraging and hybrid financing with the private sector.

A recent directory has listed more than three dozen active climate finance windows supporting projects of varying sizes that our South Asian neighbours have routinely availed. Pakistan has not accessed any of them. In fact, Pakistan has not even applied for accreditation of the largest and most famous Green Climate Fund or the Adaptation Fund, both set up by UNFCCC. Two Pakistani NGOs that secured GCF accreditation for small projects several years ago have not brought home any projects. Pakistan's access to GCF is limited only to third parties who have accreditation and now work as intermediaries. Three such organisations developed a project each and won on Pakistan's behest. Except for the Bus Rapid Transit for Karachi, the other two projects have a chequered history, plagued by inordinate delays, cancellations and even reputational damage.

Multilateral development banks have a multibillion portfolio in the country, but Pakistan has not availed their specialised, climate-related financing facilities. This includes concessional financing available through climate investment funds on energy, forestry, technology and resilience, managed by the World Bank on behalf of all MDBs. The ADB has also created at least five specialised funds on urban resilience, environmental infrastructure and climate finance. Policymakers have left it to the ADB to access these funds for us, based on its internal considerations.

In the past, several attempts by various ministries to create special cells and units aimed at accessing climate finance have failed. The present renewed interest at the federal and provincial levels is an opportunity to learn lessons first rather than rushing things. Accessing international finance is not easy and it will require serious preparations. After all, it will take decades to rehabilitate communities, reconstruct the lost infrastructure and recoup estimated economic losses.

Clearly, Pakistan needs to abandon this suicidal path whereby all our remedial measures for climate-induced disasters add further to the cost of disasters. They are reducing our climate resilience and sustainability. No measures should reduce our social and economic viability. Can the National Economic Council, the apex economic decision-making body chaired by the prime minister, take clear and firm decisions and guide the country on financing climate disasters? ■

The writer is an expert on climate change and development

Nepra's State of Industry Report
Most KE plants are outdated, need replacement

Muhammad Shafa

The National Electric Power Regulatory Authority (Nepra) has said that most of the generation plants of the K-Electric have completed their life, and are required to be replaced with efficient and least cost new capacity.

Also, Nepra observed that the KE has been unable to implement the SOPs regarding safety measures due to which some 33 fatal incidents have been occurred in its service territory in fiscal year 2022.

In its State of Industry Report 2022, the power regulator has mentioned that the Supreme Court of Pakistan, in 2020 SCMR 1,488 titled 'Naimatullah Khan Advocate and others vs Federation of Pakistan and others has, inter alia, directed that the KE shall ensure and take all steps and measures that in future no electrocution at all takes place to the residents of Karachi and in case any such incident occurs, the CEO and other officers of the KE shall be taken to task and the exceptional amount of damages shall be recovered from them.

Further, criminal cases shall also be registered against the CEO and other officers of the KE. Nepra said that delay in commissioning of Bin-Qasim Power Station-III (BQPS-III) is resulting into billions of rupee financial loss to the country.

KE was allowed to construct 900 MW RLNG based power plant BQPS-III at efficiency of 59.23% with the following timelines for commissioning of the Project: Simple Cycle Unit-I July, 2018 and Combined Cycle, July 2019, whereas the commissioning of the Unit-2 simple cycle April, 2019, and combines cycle December, 2019.

Accordingly, investment was allowed to KE through its tariff determination. Unfortunately, this plant has not yet achieved COD. Had this plant achieved the COD, it would have replaced the generation from costliest RFO based BQPS-I, Tapal Energy, Gul Ahmed and other costlier power plants in the KE system. Due to delay in COD of BQPS-III, the power sector of Pakistan and electric consumers are suffering badly. The estimated financial loss due to delayed commissioning is estimated in billions of rupees.

Although the observation in the referred case relates to KE however, the fundamental principles/standards may equally be applicable in cases of the DISCOs. Therefore, DISCOs need to be more careful and shall ensure all necessary steps to avoid fatal accidents in their respective areas.

The report said some 196 fatal accidents occurred across 11 DISCOs including KE during FY 2021-22 against 189 fatal accidents recorded during FY 2020-21.

Rupees 483.5 million fine has been imposed upon the DISCOs due to the fatal accidents and these have been directed to compensate the families (approx. 76) of the deceased on account of fatal accidents that occurred due to their negligence and non-compliance to the relevant standards, which was required to be adopted by the DISCOs.

The State of Industry Report further said that generation fleet of K-Electric (self-owned, IPPs and CPPs) comprise of costlier thermal power generation plants. As like 900 MW BQPS-III power plant was supposed to commission during FY 2018-19, and was likely to replace the BQPS-I, which still could not achieve commercial operations till FY 2021-22.

The KE, instead of operating its expensive plants, could have procured electricity from the underutilized power plants of the CPPA-G system, which would have improved their utilization, but, this could not be ensured due to various reasons most important of which was that both CPPA-G and the KE could not agree and finalize the agreement to this effect. ■

Courtesy Business Recorder

Northern Pakistan most favourable for run-of-river hydropower

M Bashir Lakhani
Techno-Consult Director

M. Naeem Qureshi

We should go for the option of hydroelectricity generation wherever this mode of renewable energy production is feasible in the country as there is an abundance of such potential sites for setting up small run-of-the-river power plants in the hilly northern parts of Pakistan.

This was stated by Muhammad Bashir Lakhani, Director of Water Division at Techno-Consult International, in an exclusive interview with Energy Update in which he talked about the potential of Pakistan to build new water reservoirs and hydropower generation plants.

Following are the important excerpts of his interview for our readers:

Energy Update: Tell us about your association with the bulk water supply projects for Karachi.
Muhammad Bashir Lakhani: I designed the last bulk water supply project commissioned for Karachi i.e. K-III scheme. It was completed timely within the given budget. Now we are once more involved in designing and planning the K-IV Greater Karachi Water Supply Scheme after the federal government invited fresh bids for the project. The K-IV project is being built to supply 260 MGD additional water to Karachi.

This is going to be the next major addition to the bulk water supply to Karachi after the completion of the K-III project that brought 100 MGD water. Not a single drop of water can be stolen from the K-IV system as it is a high-pressure system. We are planning to complete the K-IV project by March, or April 2024, but it is mandatory that we keep getting finances for the same without any interruption. Recently, the Wapda Chairman promised to ensure timely releases of funding for the project.

EU: For what reason we haven't built big hydroelectricity projects in Pakistan for the past many years?
Mr Lakhani: The per megawatt capital cost of hydropower is much higher. A lot of infrastructures are involved in building hydropower projects. The site of every hydropower plant determines the nature of the structure and dam required to build the project. This factor also determines the cost of every hydropower project. Hydropower generation is low on our priority list because of the higher cost of this energy option. Instead, we went for options like the IPPs because of the lesser initial cost involved in setting up a thermal power plant. We concentrated on setting up thermal power plants but they proved to be much more expensive in the long term.

The initial capital cost of hydropower projects is much higher but later on, recurring operational cost is much lower. Once we had to deal with the issue of circular debt then we realized that we should

go for the options of renewable energy and hydropower instead of setting up more thermal power plants. Earlier, hydropower, wind, and solar energy were very low on the priority list of decision-makers.

EU: What is your valuable viewpoint about the proposed Kalabagh Dam?

Mr Lakhani: I belong to Sindh and also live in this province. I completed a study on this issue. Based upon the findings of this study, I have come to the conclusion that Sindh would become the primary beneficiary of the Kalabagh Dam construction as far as the issues of availability of water and controlling the floods are concerned. No doubt, the latest floods in Sindh were not completely caused by the Indus River. But we couldn't drain out floodwaters from the calamity-hit areas of Sindh due to medium to high floods on the Indus River. Drainage of floodwaters from Manchar Lake couldn't be ensured due to the same reason.

There is no place available to drain out the floodwaters. Had the Kalabagh Dam been available now, we would have used it for stopping the floodwaters as resultantly, the water level would start receding in the Indus River. This option would prove to be an effective way to control flooding in Sindh. The same is true for the floods in Sindh in the years 2010 and 2011. But I'm of the opinion that if the natives of Sindh oppose the construction of Kalabagh Dam, then we should go for other feasible options like Akhori and Bhasha dams.

EU: What should be our way forward for solving the national energy crisis?

Mr Lakhani: We have the installed power generation capacity of around 45,000 MWs but we are not able to fully utilize it as it is mostly based on the much costlier option of thermal electricity. We should go for the option of hydropower generation wherever this mode of renewable energy production is feasible in the country. One such recent good example in this regard is the construction of 900 MWs Suki Kinari hydropower project on the Kunhar River. It is going to be a run-of-the-river hydroelectricity plant without the need to build any water storage.

This is the right and most feasible option for building new power plants in the country under the public-private partnership (PPP) mode of development. The PPP mode of development should be utilized for building new wind, solar, and hydroelectricity plants in the country. The PPP mode of development is the best option as the government under this regime is no more required to spare money to meet the initial construction cost of the project. The per unit cost of electricity to be generated by such renewable energy plants would be around 12 to 13 paisa whereas, electricity produced by thermal power plants is much more expensive.

The geography of the northern parts of Pakistan is most favourable to construct many such run-of-the-river hydroelectricity plants. We should go for the option of small hydropower generation units at such potential sites in the northern areas. The turbine sets for running these plants should be indigenously produced in Pakistan. These hydropower units require the construction of limited civil structures. We should give incentives to the private sector for setting up small hydropower plants. We should also make sure that hydroelectricity, solar, and wind power should be higher on our priority list. ■

Call for energy efficiency

Sara Danial

Pakistan faces the worst repercussions of the climate crisis despite its small carbon footprint. The country is geographically connected to the roof of the world with the highest mountain ranges, and their glacier melt is giving way to devastating floods in the monsoon. The recent disasters are a wake-up call and require immediate action by the government.

All stakeholders need to create an outreach programme, and we at an individual level can start with energy conservation. Amidst the pressing need to address the climate crisis by cutting greenhouse gas emissions and reducing carbon footprint, energy efficiency makes sense. Energy efficiency means consuming less energy to achieve the same results, and it is the best way to reduce gas emissions to achieve our climate goals. A small fraction of energy efficiency is energy conservation, which will help lower the electricity bills at both the residential and commercial levels. As a result, businesses will be more competitive and efficiently manage energy demand. All of this also means few gas emissions as few fossil fuels will be burnt for energy.

The recent government schemes like the National Energy Efficiency and Conservation (NEEC) Policy 2022, the first-ever Energy Efficiency and Conservation (EE&C) Policy in Pakistan, etc, focus strongly on electricity conservation, which requires all citizens to be more environmentally cognizant and to examine their energy use more closely. This has resulted in a mind shift for some segments of the population, but a large impact will be across the board and will require a lifestyle shift. It will compel large industrial energy users to document their usage and report on potential options to improve their energy conservation methods, and all others to proactively work towards doing more with less.

Energy conservation is central to managing Pakistan's path through the energy crisis we see today. All of us -- individuals, businesses, governments and green groups -- must recognize the benefits of less consumption and join forces to call for a sustainable economic recovery, with energy conservation and reduction in demand at the core. How will energy conservation help enterprises in cost savings to see a tangible impact on business operations? There are three areas that will allow businesses to take advantage of energy conservation efforts:

Cost: soaring electricity prices and gas shortages mean the costs of energy are constantly rising. If a consumer can reduce their energy consumption, it can help them keep their costs down.

Infrastructure: as electricity demand at peak times increases, we need to build more efficient ways to deliver it to homes and businesses. This applies to poles and wires for the electricity network, pipelines, and equipment in the gas industry, plus other equipment for industrial users. The costs for this extra infrastructure are passed on to consumers. If we can slow down growth in demand, or even reduce our energy consumption through conservation measures, we can avoid the added infrastructure costs.

Carbon footprint: most energy used in Pakistan still comes from carbon-based sources with varying degrees of associated emissions. Even though we are seeing a transition to renewables, the costs are too high, and on the other hand, it is expected that natural gas will continue to be in shortage for many years to come. If we can use electricity and all renewable energy wisely and efficiently, we can help Pakistan become more energy secure.

The starting points can be more efficient and controllable appliances and equipment, especially for heating and cooling; improved shading and thermal envelopes (improving the way a building's walls, ceiling, and floors prevent heat transfer); smart metres to measure energy use; distributed energy generation and storage, such as wind and solar; fuel switching (replacing inefficient fuels with cleaner and economical alternatives); equipment, training, and advice for better energy management.

And as much as the government might do to play its role, it does not relieve all of us of the responsibility. Let's all join hands in this endeavour. It is the duty of every citizen to play their part in energy conservation so there is more for everybody to share, today and for future generations to come. ■

The writer is a journalist based in Karachi and can be reached at: Sara.amj@hotmail.co.uk

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Why do we go to IMF

Shahid Mehmood

The resumption of the IMF package, that was badly needed to avert an external payments crisis, has reignited passions. As most countrymen wrestle with the question of whether or not the Fund is a tool of neocolonialism to keep countries like Pakistan sedated and subservient, what is lost in the debate is why we always wind up at its door. Let's take a peek.

Energy is the relevant sector to get this conversation going as it constitutes the largest portion of our import bill. Economic growth and economic mobility depend on energy, whose demand rises as economies expand (along with other factors like population growth). A large portion of Pakistan's entire energy edifice is dependent on imported fuels, given our meagre internal energy sources.

Aside from raw material, the machines and equipment underpinning our power production are also imported — from turbines at hydel power plants to equipment at LNG, coal and furnace oil plants. So, not only are we importing raw materials, we are also importing services to sustain them over the long term. All these have to be paid for in dollars.

Here, let me address a misconception, that 'indigenous' sources of power will take care of the matter. Think again. These can't be utilised without outside help. Decades after the construction of the Mangla and Tarbela dams, we still need foreign experts to solve critical issues related to them. Consider the Neelum-Jhelum run-of-the-river hydel power project, which has extracted gazillions from Pakistanis under the label of 'surcharge'. Meant to utilise an 'indigenous' source of energy, hardly a year later it is down due to a 'fault' that required the services of foreign experts because our own 'experts' could not identify it. (It meant inflicting losses in the billions on consumers due to power production from expensive, imported fuel). There has been recognition for long that Pakistan creates problems for itself that, in turn, generate a demand for dollars, which we are usually short of.

Let's move to the role of public regulations. A few of endless examples will suffice. We have this infinite fascination with horizontal sprawls, complemented by 'housing societies' in the public and private sector. Aside from cities becoming administratively difficult to govern, a result of these endless sprawls is the need for more vehicles, leading to greater demand for energy products such as oil and diesel. There has, arguably, never been an estimate of the increase in energy imports that accrued to the country due to this endless expansion. But if ever such an exercise is carried out, the results will make other import-related issues — like IPPs — look puny. These endless sprawls have resulted in millions of acres of fertile agricultural land being gobbled up over time. Given that more than 100 agricultural 'research' institutes are producing little or nothing in terms of higher land and crop productivity, complemented by a rapidly expanding population, there is little choice but to import food staples to meet our food requirements — so much for being an 'agricultural country'.

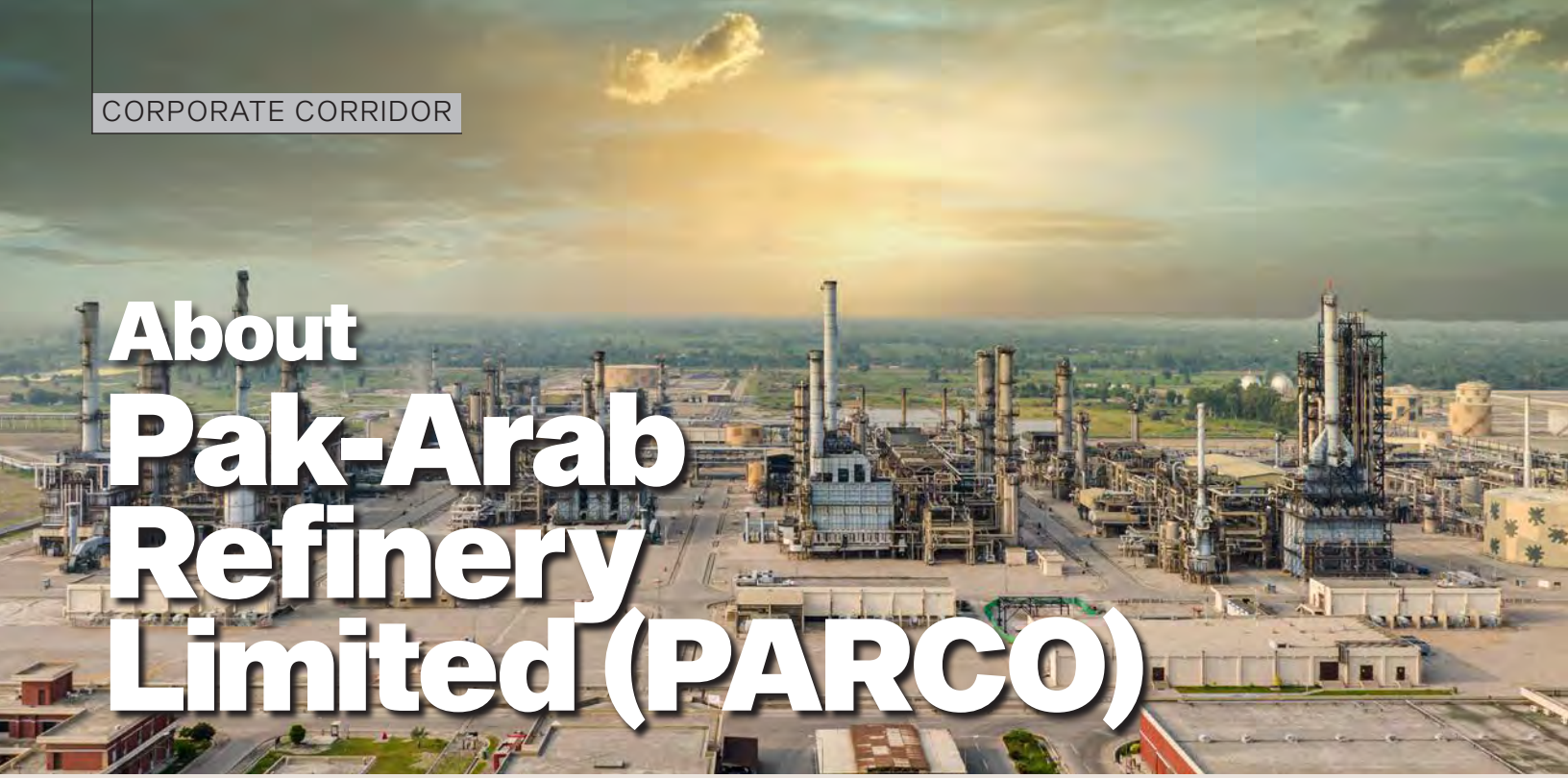
Another good example: the illogical fascination with uniform pricing. In terms of the ultimately imported energy products, it leads to waste. Pakistan's fast-depleting natural gas reserves are an apt illustration of this phenomenon. First, it was Balochistan, and now it is Sindh whose natural gas reserves are dwindling fast. There has, historically speaking, always been an incentive to consume it inefficiently because they have been under-priced, primarily due to uniform prices that are way below the market prices. Had the pricing been market-based from the start, there might not have arisen the need for importing expensive LNG or coal, which severely taxes our dollar earnings.

Moving away from big-ticket items, even the micro level does not inspire much confidence. Consider the common office chair. Some time back, they were in short supply, carrying a premium. That's because they are merely 'assembled' here from imported parts. Most other products fare little better.

To summarise, Pakistan's economic edifice is built in a manner that, unless we import, our economic activity will come to a standstill. And as GDP inches up, we end up importing more — to the extent that our dollar earnings will never be enough to pay for our imports. So whether it's the IMF or anyone else, Pakistan will sooner or later knock at their door for dollars.

The way out of our dollar cash-flow troubles lies in greater global integration and trade, promoting competition and developing our human capital base. For a change, take the government out of business and let Schumpeterian creative destruction prevail on a level playing field. ■

Courtesy Dawn



About Pak-Arab Refinery Limited (PARCO)

PAK-ARAB REFINERY LTD (PARCO) is a Joint Venture between the Government of Pakistan and the Emirate of Abu Dhabi, incorporated as a public limited company in 1974. As an integrated energy company, PARCO is the leading player in Pakistan`s petroleum industry with major operations in refining, transportation, storage and marketing.

PARCO has the most modern refinery in Pakistan having a capacity of 120,000 Barrels Per Day, over 2000 kms of cross-country oil pipeline network including its joint venture subsidiary Pak-Arab Pipeline Company Limited (PAPCO) with a strategic storage of over 1.5 million tons, and a rapidly expanding retail network of TOTAL PARCO Pakistan Limited (TPPL) – a joint venture with TOTAL of France. TPPL is the second largest Oil Marketing Company in the country. PARCO is also engaged in countrywide marketing of LPG under the brand name of Pearl Gas and high quality asphalt is being marketed as Biturox.

PARCO Pearl Gas (Pvt) Ltd (PPGL), formerly known as SHV Energy Pakistan (Pvt) Ltd is a 100% owned subsidiary of PARCO, having the largest LPG marketing and distribution network. PPGL manages sourcing, transportation, storage, filling and marketing/distribution of LPG.

PARCO's performance can be judged by the fact that it has maintained its AAA and A1+ long and short term credit rating by Pakistan Credit Rating Agency (PACRA) for twenty-three consecutive years. The company set another first in Pakistan when it obtained three simultaneous international certifications: ISO 9001:2015 (Quality Management System), ISO 14001:2015 (Environmental Management System) and ISO 45001:2018 (Health and Safety Management System). PARCO has also received the Environment Excellence Awards for the last several years and is rated among the top 10 organizations in Pakistan for outstanding achievement in Environment Management.

As a good corporate citizen, the company focuses on meeting the expectations of its internal and external stakeholders in a professional and strategic manner. PARCO not only invests in its employees, makes efforts for customer satisfaction and operates ethically, but also undertakes a wide range of projects to benefit society in areas of education, health, environment, sports, culture, community development, road safety, and response to natural calamities.

Processing and handling hydrocarbons is our business and it comes with its share of hazards. PARCO proactively identifies, minimizes and mitigates situations that have the potential to cause harm to the health and safety of its employees, customers, service providers, communities, public and the environment. The focus and diversity of technical, social and environmental projects of PARCO speak for themselves.

Nestlé, NFEH
commemorate World Cleanup Day







EU Report

Nestlé Pakistan commemorated World Cleanup Day with a beach cleaning activity at Sea View Beach, Karachi, under its global employee volunteer program Nestlé Cares, in partnership with National Forum for Environment & Health (NFEH).

Highlighting Nestlé's global vision for a waste-free future, Waqar Ahmad, Head of Corporate Affairs and Sustainability, Nestlé Pakistan said, "We are accelerating our actions to reduce the environmental impact of various kinds of packaging waste. Our vision is that none of our packaging, including plastics, ends up in landfill nor in oceans, lakes and rivers."

"Over the years, thousands of Nestlé employees worldwide have donated their time in supporting activities focused on having a positive impact on individuals and families, our communities and the planet. 'Nestlé Cares' is one of the ways we bring our purpose and values to life. Initiatives under the Nestle Cares' volunteer programs provide employees the opportunity to make an impact by engaging and assisting local communities," he added.

Speaking on the occasion, Saleem Hassan Wattoo, CEO, Clifton Cantonment Board said, "We are delighted at the way Nestlé Pakistan is playing a responsible role, we encourage corporate and private sector entities to come forward so that we can facilitate them on such initiatives."

Muhammad Naeem Qureshi, President, NFEH said, "This cleanup initiative with Nestlé is in line with our long-term ambition and commitment to stop waste seeping into the environment and avoid further accumulation of packaging waste in environmental landscape."




MORC®

MORC CONTROL LTD

INTRODUCTION

MORC Controls Ltd is a leading manufacturer of valve accessories in Canada. It is mainly engaged in the research and development of valve accessories such as valve positioners, solenoid valves. limit switches and actuators.

Our product range involves in valve positioner, solenoid valve, limit switch, air filter regulator and so on, which are widely used in petrochemical, natural gas, power, metallurgy, paper-making, foodstuff, pharmaceutical, water treatment industries. We are also capable of providing complete set of control valve and on off valve solution as we have a very close relationship with with valve manufacturer.

Smart Positioner

Electro-Pneumatic Positioner

Solenoid Valve

Air filter Regulator

Limit switch box

Pneumatic Actuator

Electric Actuator

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+92-42-111-419-687

SOLUTIONS
Engineering (Pvt) Ltd

PM inaugurates a 330MW power plant of Thar Energy Limited

Says Thar coal project to save $6bn in fuel imports

Prime Minister Shehbaz Sharif had said that amid skyrocketing fuel prices, cheaper energy production from Thar coal mines project would prove a game-changer for the development of the entire country.

Addressing the inauguration of the commercial operations of Phase-II of Sindh Engro Coal Mining Company (SECMC) during his visit to Thar Coal Mines Block-II, the prime minister said the project was high on the agenda for the government in view of the reduced cost it would provide for power generation.

Former prime minister Shahid Khaqan Abbasi, government ministers, senior officials and representatives of Chinese companies were also present at the ceremony.

The Thar coal project, PM Shehbaz said, could help the government save up to $6 billion as the expenditure on the import of energy, including petrol and liquid petroleum, had touched $24bn.

The prime minister on the occasion inaugurated a 330-megawatt (MW) power plant of Thar Energy Limited (TEL) and also inspected the construction site of SECMC Mine Phase-II in Islamkot.

PM Shehbaz said not benefitting from the country's indigenous coal reserves was a "massive mistake" and announced plans to convene a meeting of stakeholders on Thar coal mines next week to discuss formalities.

He said the federal government, in collaboration with the Sindh government, would chalk out a policy framework on the Thar coal mines project with an objective to connect it with other coal-powered power plants in the country producing 4,000MW.

He said the international cost of coal had come down from $67 to $44 and could further plummet to $30. The coal-powered plants, he said, would prove a feasible operation for electricity production at the rate of Rs10 per unit.

Meanwhile, Foreign Minister Bilawal Bhutto Zardari said that Thar once used to be known for malnutrition, and high infant and maternal mortality rates, but had now emerged as a "game changer and a model of public-private partnership of development".

CM Shah also presented samples of indigenous Thar coal to PM Shehbaz, FM Bilawal and the Chinese envoy.■

World community needs to support climate-hit affectees

Rida Tahir

Internally displaced persons (IDPs) remain among the most vulnerable people in the world. The Guiding Principles on Internal Displacement define IDPs as "persons or groups of persons who have been forced or obliged to flee or to leave their homes or places of habitual residence, in particular as a result of or in order to avoid the effects of armed conflict, situations of generalized violence, violations of human rights or natural or human-made disasters, and who have not crossed an internationally recognized border."

IDPs are often referred to as refugees. However, they do not fall within the legal definitions of a refugee. Pakistan's diverse geography and climate expose the country to a wide range of climate-induced disasters such as floods and landslides. Although Pakistan has contributed the least to the climate crisis (it is responsible for less than one per cent of the world's planet-warming gases), it is the eighth most vulnerable nation to the climate crisis, according to the Global Climate Risk Index.

According to the Internal Displacement Monitoring Centre (IDMC), 16.6 million IDPs and 94 disaster events were recorded in Pakistan from 2008 to 2021. During this period, floods triggered most of the displacements (15.4 million), followed by earthquakes (1.1 million). Other climate-induced disasters which triggered internal displacements in Pakistan included chronic droughts, extreme temperatures, and frequent occurring storms.

In 2021 alone, 70,000 internal displacements were recorded in Pakistan, all of them triggered by climate-induced disasters. The recent erratic monsoon rains of 2022 have caused catastrophic floods and affected an estimated 33 million across Pakistan. The climate change-driven disaster has claimed the lives of over 1,400 people and displaced millions, including women, children, older people, and people with disabilities.

The National Disaster Management Authority (NDMA) has revealed that flood water has washed away more than 1.7 million homes, displacing millions of people within Pakistan, who require shelter, food, healthcare and other essentials.

Additionally, it has been revealed by the UNFPA that an estimated 75,000 pregnant women are affected by the recent floods, and 40,000 are expected to deliver their babies in September 2022. Women and girls are particularly exposed to the risk of sexual and gender-based violence (SGBV) during disaster events. The UN Women has revealed that more than 70 percent of women suffer various forms of gender-based discrimination in humanitarian crises.

Many internally displaced children in Pakistan have lost access to education as their schools have been washed away. Many children would be forced to quit school and engage in child labour to earn a livelihood to help their families. Pakistan already has the world's second-highest number of out-of-school children with an estimated 22.8 million children aged 5-16 not attending

school, as per Unicef. It will be extremely challenging for Pakistan, which is still recovering from school closures due to Covid-19, to send internally displaced children back to school. Additionally, the WHO has revealed that about 900 health facilities have been damaged across Pakistan. This places IDPs at risk of aggravated disease outbreaks such as dengue fever, malaria, polio, and Covid-19.

Despite a high number of recorded IDPs in Pakistan over the years and the vulnerability faced by them, the country has no national laws or policies implemented that specifically apply to IDPs. The Land Acquisition Act 1894 is the only legal document that refers to displacement. However, it only applies to the acquisition of land for public purposes and companies.

Article 25(1) of the constitution states: All citizens are equal before law and are entitled to equal protection of law. It is also important to note that Pakistan ratified the International Covenant on Civil and Political Rights (ICCPR) in June 2010.

Article 2(2) of the ICCPR obligates Pakistan to take "the necessary steps, in accordance with its constitutional processes and with the provisions of the present Covenant, to adopt such laws or other measures as may be necessary to give effect to the rights recognized in the present Covenant." Therefore, Pakistan should enact legislation that specifically protects the rights of IDPs.

Pakistan can take inspiration from the Guiding Principles on Internal Displacement and incorporate them into its national legislation. The Guiding Principles were presented to the UN Commission on Human Rights in 1998. They identify the rights and guarantee protection to IDPs in all states of their displacement.

Recently, UN Secretary-General Antonio Guterres visited the flood-affected areas of Sindh and Balochistan and stated that "there is a very unfair situation, in relation to the level of destruction we are seeing in Sindh." He added that "it is essential for the international community to understand that Pakistan, including Sindh, needs today massive financial support to overcome this crisis," while emphasizing that this was not a matter of generosity, but justice.

The international community should support Pakistan as it responds to the unprecedented climate-induced floods. Many IDPs remain displaced for years. The international community should pledge to support Pakistan until all IDPs return home after the reconstruction of their homes and villages. ■

CLIMATE CHANGE

COP27: Looking into prevalent climate disparity among nations

Ayaz Khan

UN Secretary General Antonio Guterres' underpinning words delivered at the Glasgow Conference of Parties (COP26) were enchanting: "Young people know it [global climate change], every country sees it, small and developing states and the other vulnerable ones live it."

The last sentence underscores the overall climate discourse today. Around 197 countries participated in the COP26 and most of them 'updated' their pledges to fund the developing countries.

The imperative aspect of all climate conferences, initiated in 1994, has been the pledge made at COP15 in 2009 by the world leaders — to aid the developing countries to cope with climate change impacts. The wealthiest nations pledged to dole out aid to the poorer countries, taking it 100-billion-dollar mark from 2020 onwards.

Despite this, the developing countries have witnessed world powers drifting away from the promise, compounding the climate woes in developing countries.

Take Pakistan for instance. Despite being a meager contributor — just one per cent — to the global GHG emissions, Pakistan stands highly susceptible to climate change impacts. The recent monsoon has wreaked havoc across the country which has received 2.87% more rainfall than the average. More than 33 million people stand affected while nearly 1,500 have been killed and as many more injured.

Though Pakistan has submitted its renewed nationally determined contribution (NDC) document, showing a resolve to convert its 30% transportation into electrical as part of a policy to shift to clean energy and cutting off its 60% dependence on fossil fuel on way to adopting renewable energy resources. This Pakistan intends to achieve in 30 years. However, bridging the determined intension and the practical shift seems to be a distant reality since the country is going through serious economic hardships, compounded by extreme weather events that have inflicted a huge economic loss on the country estimated locally at $40 billion.

Now that the road to COP27 is set, there are two parts of the problem to delve into in order to ensure that vulnerable countries achieve maximum immunity against climate-related catastrophes. First, the wealthiest nations must fulfil their financing pledge made at COP15. Once the financial aid starts flowing in, the second task would be to stick to a formula of using half the funds for mitigation and half for climate adaptation. This is one of the integral and crucial aspects of financial support earmarked during COP15 in 2009.

Unfortunately, this balance has not been maintained; and 75% funds aim at mitigation plans while merely 25% for climate adaptation. Developing countries like Pakistan need to increase spending on climate adaptation given the fact that rapid shift to renewable energy remains a Herculean task and might take decades since the country stands at economic crossroads. On the other hand, climate adaptation plans might be cost-effective and can be implemented more reliably and efficiently than the former.

The COP27 must adhere to commitments made to finance developing countries. And once the developing countries have a hand on it, they have to make sure half the funds are spent on climate adaption along with ensuring that climate change education makes inroads into the education systems of the all developing countries, as bridging the climate communication gap is also crucial to achieve climate mitigation and adaptation goals. ■

Dar and Triple-C challenge

Dr Abid Qaiyum Suleri

The 'Triple-C' crisis (Covid-19, conflict, and climate change) is giving sleepless nights to finance ministers worldwide. Let me explain why:

Take Covid-19 first; the global economy shrank by around 4.3 per cent in 2020, a setback matched only by the great depression and the two world wars. In 2021, before the start of the Russia-Ukraine war, the World Bank forecasted global GDP growth for 2022 to remain slow (4.4 per cent below its pre-pandemic predictions) due to the impacts of Covid-19.

The Ukraine conflict started in February 2022. One of the casualties of this conflict is the supplies of cereals, energy, fertilizers, and other raw material; supplies from Russia became non-kosher due to Western sanctions, whereas supplies from Ukraine are inaccessible. Reduced supplies (especially energy) have increased global inflation by 2.9 per cent so far and are expected to increase global inflation by another 2 per cent next year. Petroleum importing countries like Pakistan are facing the maximum brunt of this inflation due to the high cost of imported energy. The deteriorating balance of payments is one of the reasons the Pak rupee is losing its value against the US dollar.

Energy and food inflation are the major contributors to the current price hike in Pakistan. Bringing fuel inflation down depends on petroleum prices in the international market. Low import prices provide a higher cushion to the finance minister to increase the petroleum development levy – PDL – (as per our commitment with the IMF) without further hurting consumers.

On the food prices front, he would not be able to contain wheat and wheat flour prices (wwfp) in the short-to-medium term. Wwfp would continue to increase in the coming winter, and this has nothing to do with standing flood water on cultivable lands. The latter would negatively affect wheat sowing for the next season and may result in a wheat shortage next summer (2023). The current wwfp hike has its roots in the tug of war to rule Punjab.

The Punjab Food Department, which historically used to provide subsidized wheat to the flour mills in September, started its releases in May, right after the wheat procurement drive when the private sector (including flour mills) had sufficient stock. Now with a significant part of the Sindh Food Department's wheat inundated due to floods and the Punjab Food Department's supplies running short due to earlier than planned releases, the private sector is selling its wheat at exorbitant prices resulting in wwfp hike. Crackdown on wheat hoarders in a province is beyond the federal government's mandate, where Ishaq Dar has none or minimum say.

The best bet for Mr Dar here would be to increase allocations for social safety nets, link BISP payments with the Sensitive Price Index so that quarterly stipends don't erode with inflation, and bring those earning up to Rs50,000 per month under the BISP coverage. Likewise, Mr Dar should also assess the effectiveness of utility stores and schemes like 'sasta bazaars' etc. The wastage of resources through pilferage from Utility Stores/sasta bazaars outweighs their benefits.

The second challenge for Mr Dar is to strengthen the value of the rupee against the dollar. The rupee had been under pressure mainly due to more demand for dollars than their supply, but also due to speculative buying of dollars by manipulators, panic buying by the general public, and irresponsible behavior (profit hunger) of some commercial banks and foreign exchange (forex) dealers.

Artificially strengthening the value of the rupee has major disadvantages. However, in the good old days, with sufficient reserves, the State Bank of Pakistan (SBP) could sell its dollars to commercial banks to keep their supply stable and artificially strengthen the rupee value. With less than a few weeks' forex reserves (and due to IMF watch), the SBP is no more (and will no more) able to do the same.

The last challenge Ishaq Dar faces is the mobilization of funds for flood recovery. Ideally, we should get compensated for the loss and damage caused by the devastating floods. However, ideals don't exist. The international community's response in no way matches the scale of devastation. A debt waiver is out of the question.

Ishaq Dar would have to put his team to explore two options: debt suspension (suspending the payments for the time being but paying later), and the second, which is only applicable for Paris Club lenders, is a debt (for flood recovery) swap arrangement. A debt swap is an arrangement in which the markup payment is diverted to a fund used to finance a development cause. Pakistan has availed it (albeit in tiny amounts) for Afghan refugees' rehabilitation and earthquake reconstruction.

Besides bridging the fiscal (rupee) and current account (dollars) deficits, Ishaq Dar would also have to bridge the widening trust deficit between the government and the people. There is no denying that the people of Pakistan are hurting amidst the Triple-C crisis. Ishaq Dar's job is to turn the hurt into hope, and that is what will give him sleepless nights. Let's wait and see if he can do the needful. ■

PARTNERS IN PROGRESS | DESCON

Descon
Engineering Limited

ABOUT DESCON ENGINEERING

Established in 1977 with 4 employees in Lahore (Pakistan) providing engineering services to process plants, today Descon is a multinational conglomerate operating three major business lines; namely engineering, power and chemicals, and with an employee base of approximately 20,000, representing various nationalities.

Descon Engineering is the flagship enterprise of Descon and today recognized as a major player in the region serving the oil & gas, chemicals, petrochemicals, cement, power and infrastructure sectors. It has evolved as an integrated engineering services provider to major clients in the UAE, Qatar, Saudia Arabia, Pakistan, Kuwait, Oman, Iraq and South Africa. The portfolio of services comprises Design Engineering, Procurement, Manufacturing, Construction, Industrial Services and Operations & Maintenance (O&M).

GEOGRAPHIC FOOTPRINT

Target markets

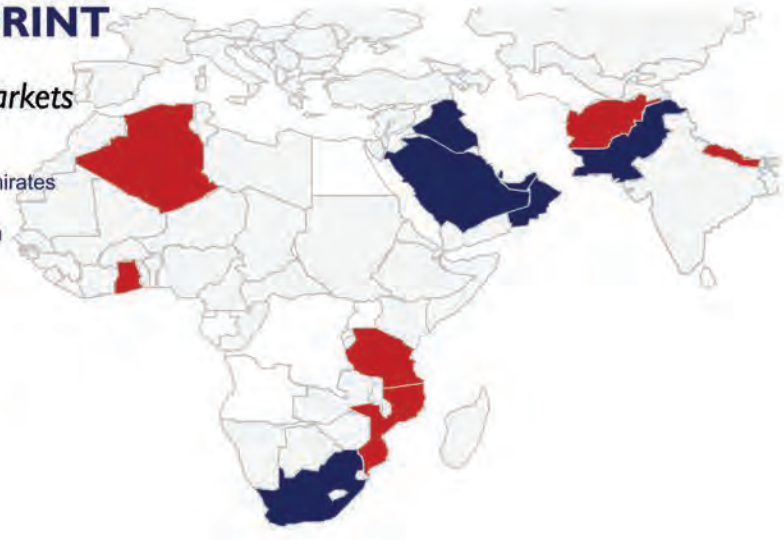
Future plans include expansion to:

- → Libya
- → Egypt
- → Uzbekistan and Central Asian States

Existing markets

Our Presence Internationally

- → United Arab Emirates
  - Abu Dhabi
  - FZE Sharjah
  - Dubai
- → Saudi Arabia
- → Pakistan
- → Kuwait
- → Qatar
- → Oman
- → South Africa
- → Iraq



INDUSTRIES SERVED / MAJOR ACCOMPLISHMENTS

OIL & GAS


Rehmat Gas Fied - PAK


Shell Pearl GTL - Qatar


IGD Habshan - UAE

POWER / RENEWABLES


1600 MW Kot Addu
CCPP Units 5 to 15 - PAK


Fauji Fertilizer, Metro, Yunus Wind Energy
& Gul Ahmed Wind Power - PAK


404MW UCH-II Power
Plant - PAK

WATER & HYDROPOWER


Mohmand Dam - PAK


Mirani Dam - PAK


18 MW Ranolia Hydro Power - PAK


Khanki Barrage - PAK


Mangla Dam Raising - PAK

CHEMICAL / PETROCHEMICAL


Raslaffan – Olefins Complex - Qatar


Borouge - UAE

FERTILIZER


Engro Fertilizers - PAK

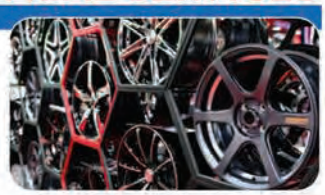

Fertil Debottlenecking - UAE


Fauji Fertilizer-2 - PAK

INDUSTRIAL SERVICES


Pakistan Aluminium Beverages Cans - PAK


Proctor & Gamble Ariel Plant - PAK


Hi-Tech Alloy Rims - PAK

CEMENT


DG Khan Cement - PAK

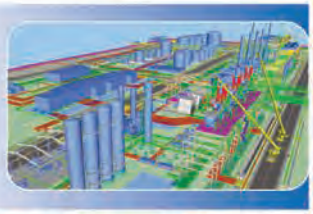

Kuwait Cement - Kuwait


Maple Leaf Cement - PAK

SERVICES PORTFOLIO

DESIGN ENGINEERING

State of the art design office with capacity of 400,000 manhours/year covering the disciplines of process, piping, civil/steel structure, equipment, electrical & instrumentation.



PLANT CONSTRUCTION

Descon is a General Contractor with capabilities to undertake civil / structure, mechanical, piping, painting & insulation, pre-commissioning and commissioning support services.

EPC

Descon provides one-window solution by combining all its in-house faculties as an integrated package of EPC services. These apply to diverse industries including:

- Power
- Oil & Gas
- Industrial

WATER & HYDROPOWER

Major infrastructure projects, as part of national development program on a large scale involving heavy civil works, logistics and material management, are executed for water-related irrigation and power generation projects.

- Dams
- Hydropower Plants
- Barrages
- Canals
- Water Treatment Plants

INDUSTRIAL SERVICES

Industrial Services Division has rich experience of executing projects in existing plants for Owners/Operators in Pakistan, Middle East & East Africa. Industrial Services portfolio includes (but not limited to):

- Shutdowns/Turnarounds
- Retrofits
- Debottlenecking
- Technical Support Services
- Manpower Services

MANUFACTURING

Manufacturing comprises workshops in Pakistan and Middle East to supply process equipment manufactured to international quality standards including aftermarket services.

Product line includes:

- Boilers
- Engineered Skids
- Pressure Vessels/Columns
- Heat Exchangers
- Wind Towers

AUTOMATION

Descon Automation & Control (DAC) delivers cost effective and high-quality solutions for automation, instrumentation, control & monitoring systems, integration and flame & gas detection systems covering:

- Distributed Control Systems (DCS)
- Process Safety (ESD Systems)
- Programmable Logic Controllers (PLC)
- SCADA Systems
- Flame & Gas Detection System
- Substation Automation & Energy Management Systems
- After-Sales Service
- Annual Maintenance Contracts

CLIENTELE

Descon Headquarters: 18 km., Ferozepur Road, Lahore - 54760, Pakistan

+92 42 3599 0034, 3580 5134 | +92 42 3581 1005, 3581 1135 | 111 337 266

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Naya Nazimabad joins hands with NFEH for launching urban forest

EU Report

Karachi Commissioner, Muhammad Iqbal Memon, has said that collective efforts were required by all the relevant stakeholders to make Karachi a clean, green, and beautiful city.

He stated this while speaking as the chief guest at the launching ceremony of the urban forest project at Naya Nazimabad in collaboration with the National Forum for Environment and Health (NFEH).

The Karachi Commissioner said that non-governmental organizations, community-based organizations, and corporate entities had an important role to play in promoting greenery in Karachi.

He welcomed the launching of an urban forest at Naya Nazimabad while stating that residential societies and urban communities should reserve ample space for tree plantation.

CEO of the Naya Nazimabad project, Abdul Samad Habib, said that a new urban forest was being developed on 10,000 Sq. Yard of area. He said that over 1,000 fruit and shade trees and flowering plants would be planted in the urban forest. He said that over 40 percent area of the Naya Nazimabad project had been reserved for parks, greenbelts, and tree plantations.

NFEH President, Muhammad Naeem Qureshi, said that it was the fourth time in the past five years that tree plantation activity was taking place at Naya Nazimabad. He said that all the housing societies were lawfully bound to reserve a minimum of 10 percent of their area for tree plantation.

Mr Qureshi said the city's civic authorities should immediately come into action to prevent brazen tree cutting at several green spots in the city. He said the unscrupulous elements involved in tree cutting should be penalized by slapping heavy fines.He greeted Naya Nazimabad's management for launching the urban forest project.

Karachi Commissioner along with NFEH President, Naya Nazimabad CEO, and other prominent guests planted a tree to formally launch the urban forest project.

The NFEH also presented an award on the occasion to Abdul Samad Habib for the best tree plantation activity in Karachi.

Others present on the occasion included Saeed Ahmed, SM Talha, Test Cricketer Fawad Alam, General Secretary of NFEH Ruqiya Naeem, Ghulam Kabria, Shakeel Qureshi, and Ali Asghar.

Recalling Ishaq Dar's economic stability era

In 2015, two years after Dar took over, inflation rate had nosedived to 2.5pc

By Farrukh Saleem

As per recent public opinion surveys 84 percent Pakistanis consider inflation the biggest problem. As per Pakistan Bureau of Statistics (PBS) the Consumer Price Index (CPI) increased by 27.3 percent on a year-on-year basis in August 2022. The rate of inflation in Pakistan is at a historical high.

In 2013, Ishaq Dar took over as Finance Minister. In 2012, a year before Ishaq Dar took over as Finance Minister, the rate of inflation stood at 9.7 percent. In 2015, two years after Ishaq Dar took over, the rate of inflation had nosedived to 2.5 percent

Per capita income

In 2013, Ishaq Dar took over as Finance Minister. In 2013, Pakistan's GDP per capita stood at $1,208 (as per The World Bank). For the following four years, GDP per capita grew every single year and hit a high of $1,631 by 2017. For the record, between 2013 and 2017, GDP per capita grew by a wholesome 35 percent.

Foreign direct investment (FDI)

In 2013, the year that Ishaq Dar took over as Finance Minister, foreign direct investment (net inflows) stood at $1.33 billion. The following year foreign direct investment went up to $1.89 billion, dropped to $1.67 in 2015 and then shot up to $2.58 billion in 2016. In 2017, Pakistan received an additional $2.5 billion.

GDP growth

In 2012, a year before Ishaq Dar took over as Finance Minister, our GDP growth stood at 3.5 percent. In 2016, three years after Ishaq Dar took over, our GDP grew by a healthy 5.5 percent. Over the 2013 to 2017 period, our GDP grew at an average of 4.7 percent. For the record, in 2020, for the first time in half a century, our GDP actually contracted by 1.3 percent.

Lending rate of interest

In 2012, a year before Ishaq Dar took over as Finance Minister, the lending rate of interest was at 13.5 percent. In 2013, the year that Ishaq Dar took over as Finance Minister, the lending rate of interest had dropped to 12 percent. In 2017, four years after Ishaq Dar took over, the lending rate of interest had dropped to a low of 8.2 percent. Low interest rates stimulate economic activity. Low interest rates stimulate industrial activity. Low interest rates mean job growth.

Current account balance

In 2013, the year Ishaq Dar took over as Finance Minister, our current account balance was at negative $4.4 billion. Good Lord, by 2017 our current account balance had worsened to a negative $16 billion. A negative current account deficit indicates that a country is importing a lot more than it is exporting. This is an indication of an unbalanced economy. This is an indication of an uncompetitive economy. This always means risk of currency depreciation. This is what forces us to the IMF.

This is 2022. What worked in 2016 may or may not work now. In 2016, SBP had reserves of $19 billion as opposed to $8.3 billion today.

Oil & Gas Development Company Limited

Largest E&P Company of Pakistan

Oil & Gas Development Company Limited (OGDCL) is the largest exploration and production Company of Pakistan, which was established in 1961 as a Public Sector Corporation and later converted to a Public Limited Company in October 1997. Through an Initial Public Offering in October 2003, the Company was listed on Pakistan Stock Exchange. Its Global Depository Shares started trading on the London Stock Exchange (LSE) in December 2006, thereby making OGDCL the first E&P Company in Pakistan to be listed on LSE. Major shareholders of the Company include Government of Pakistan (74.97%), OEET (10.05%) and General Public (14.98%).

Geographical Presence in all Provinces

OGDCL's exploration and production assets are spread across all the four provinces of Pakistan.The exploration and production portfolio comprises forty eight (48) owned and operated joint venture exploration licenses and

seventy seven (77) development and production leases. Additionally, the Company possesses working interest in nine (9) exploration blocks and thirty-four (34) development and production leases operated by other E&P companies.

Market Leader

Being the market leader in E&P sector of Pakistan, OGDCL boasts highest share in exploration acreage, seismic data acquisition, oil and gas reserves and production contribution in comparison to other E&P companies operating in the Country. As of 30 June 2022, its exploration acreage stood at 87,290 sq. km representing 41% of the Country's total area under exploration. The Company's seismic data acquisition during the year under review was 80% and 31% of total 2D and 3D seismic data acquisition in the Country respectively. Production contribution stood around 47%, 29% and 37% towards Country's total oil, natural gas and LPG production respectively. As at 30 June 2022, Company's reserves constitute 33% and 34% of national oil and natural gas reserves respectively.

Two waste-to-energy plants soon: minister

Kazim Alam

Two waste-to-energy power plants of 50 megawatts each will start production on a commercial basis by the end of 2023. In an interview, Sindh Energy Minister Imtiaz Ahmed Shaikh said the power plants, first of their kind in Pakistan, will have a total cost of $500 million.

"The provincial government has set aside about 60 acres for both plants, which will be built by American and Dutch companies at Jam Chakro," he said while referring to the out-of-city dumping site for the waste from Karachi.

The Sindh government signed memoranda of understanding and letters of intent with Dutch firm Khan Renewable Energy Ltd and US entity Green Waste Energy Ltd earlier this year. The independent power producers (IPPs) have been provided with space and waste supply assurance by the Sindh Solid Waste Management Board. The two firms will complete their

feasibility reports by the end of 2022.

"The two IPPs will then approach the National Electric Power Regulatory Authority (Nepra)," he said. The IPPs are likely to receive the upfront tariff, which is the standard rate of electricity unit determined by the regulator based on its independent calculations. ■

Solar sector's future getting bleak: Hussain

EU Report

Chairman National Business Group Pakistan and former provincial minister Mian Zahid Hussain has said the solar policy of the government is giving priority to imports over local manufacturing which is not only costing foreign exchange but also discouraging manufacturing. The future of once-promising solar sector is also getting bleak due to the discouraging policies which must be revisited at the earliest, he said in a statement. Hussain said that there was no tax on the import of complete solar panels, while domestic manufacturers of those panels had to pay 17 percent tax which was against the national interests. Talking to the business community, the veteran business leader says the government keeps making announcements of giving priority to local manufacturing over imports but in reality, it was not happening. He said: "At present, if the various parts of solar panels are imported from a trader in China, it becomes expensive due to various taxes, while importing fully manufactured solar panels is a cheaper option." ■

Thar Energy's plant becomes operational

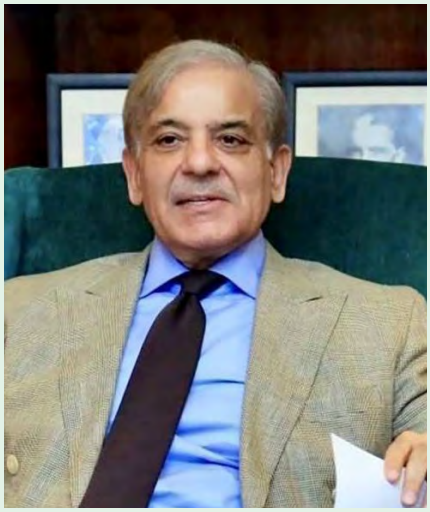
A coal-fired, mine-mouth power plant of 330 megawatts owned by Thar Energy Ltd — which is a subsidiary of the Hub Power Company Ltd (Hubco) with a 60 per cent shareholding — has been commissioned as its commercial operations date will take effect Oct 1 (today), Speaking to Dawn, AKD Securities energy analyst Taimur Afzal said the commissioning of Thar Energy Ltd plant will be followed by the commissioning of another 330MW mine-mouth, lignite-fired power plant in December by ThalNova Power Thar Ltd, a Hubco associate with 38.3pc shareholding. The second 330MW plant is 85pc complete, he added. The country's oldest and largest independent power producer (IPP), Hubco will now have collective power generation capacity of 3,251MW with power plants in Balochistan, Punjab, Azad Jammu and Kashmir and Sindh. According to Standard Capital Securities analyst Shehzad Khan, the 330MW plant of Thar Energy Ltd will produce electricity at Rs3 a unit as opposed to the Rs20 a unit cost incurred by coal-fired plants that operate on imported fuel. Besides Hubco's 60pc shareholding in Thar Energy Ltd, Fauji Fertiliser Company Ltd owns 30pc shares in the company while China Machinery Engineering Corporation controls a 10pc stake. ■

PM approves 2000MW solar power projects

Prime Minister Shehbaz Sharif has principally approved the construction of solar power projects of 2000 megawatts in the public sector to generate low-cost and environment-friendly electricity. The prime minister, who chaired a meeting to review progress on the installation of 10,000 megawatts solar projects across the country, said it would also reduce country's dependence on power projects running on costly fuels also burdening the foreign exchange reserves.

He said that under the project, the agricultural tube wells would be converted to solar power on an urgent basis. The solar power projects would also help overcome the issues related to line losses, power theft, and circular debt. The prime minister, who was given a detailed briefing on solar projects, told the meeting that the government would give sovereign-guarantee to the companies investing in the solar projects.

The meeting was told that an investors conference on solarisation was held on September 14 which was attended by local and international investor companies



including from Saudi Arabia, United Arab Emirates, China and Qatar, which also expressed interest to invest in the sector. It was told that work on the identification of suitable sites for solar power projects had been started. Such a site near Muzaffargarh has already been identified for the installation of 600MW solar power project. ■

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UPLIFT SCHEMES

ECNEC approves 13 projects with Rs598.13bn cost

The Executive Committee of National Economic Council (ECNEC) Friday accorded approval to 13 projects with estimated cost of around Rs598.13 billion. The Chashma Right Bank Canal project with estimated cost of Rs189.6 billion is among the approved projects. Federal Minister for Finance and Revenue Senator Ishaq Dar chaired the meeting, while Federal Minister for Planning, Development and Special Initiatives Ahsan Iqbal, Federal Minister for Commerce Syed Naveed Qamar, Finance Minister Khyber-Pakhtunkhwa Taimur Saleem Khan Jhagra, Finance Minister Govt of Punjab Mohammad Mohsin Leghari, Senator Nisar Ahmed Khuhro, federal secretaries and other senior officers from federal as well as provincial governments participated in the meeting.

Coal use declines to 14.3pc

Tanveer Malik

Coal contribution in power generation decreased to 14.3 percent in August 2022 from 15.4 percent in August 2021, while RLNG share decreased to 12.5 percent from 18.9 percent a year earlier due to lower imports.

In the electricity basket, RLNG was a costlier option, with data showing that its cost rose to Rs24.72/kWh in August 2022 from Rs14.91/kWh in August 2021. During the same period, local RLNG price soared 28 percent, said Muhammad Muhammad Awais, head of research at Foundation Securities. The contribution of coal in the national energy mix declined marginally compared to the same period last year. In case of RLNG, the share declined too as prices sky rocketed on disruption in the international supply chain. Pakistan has only been able to import five RLNG cargoes this August against 12 cargoes in the same month last year as spot RLNG prices more than tripled this year. Commenting on the declining trend in coal-based power generation, Awais said that it was contrary to the international practice. Even regionally, China has more than 50 percent share of coal in its power generation, while India makes more than 40 percent of its power through coal. Share of coal in Australia's power generation stands at 25 percent, he added.

P&G Pakistan collaborates with Reon Energy Limited to Inaugurate 1.86 MW solar farm at Port Qasim

P&G Pakistan and Reon Energy Limited have inaugurated a 1.86 MW solar farm located at P&G's manufacturing site at Port Qasim, 25 miles from Karachi.

This solar energy agreement is the largest for P&G Pakistan and supplies the premises with more than 2,700,000 kWh of renewable power annually. For comparison, that is enough renewable electricity to power approximately 500 residences in the vicinity.

Reon is Pakistan's leading solar and storage solutions specialist with deep domain expertise in project development, financial advisory, Engineering, Procurement, and Construction (EPC), and asset performance management.

Speaking at the ceremony, Adil Farhat, CEO, P&G Pakistan, said, "100% of P&G manufacturing facilities in Pakistan meet the zero-waste-to-landfill qualifications."

Sharing his thoughts, Mujtaba Haider Khan, CEO, Reon Energy Limited, said, "We

are honored to build on our long-standing relationship with P&G. This first-of-its-kind Power Purchase Agreement does not only guarantee supply of clean energy at predictable rates but has led to significant economic growth in the form of jobs."

K-IV project's Phase-I to complete in 2024

EU Report

Federal Minister for Water Resources Syed Khursheed Ahmed Shah on Wednesday visited the project office of Greater Karachi Bulk Water Supply scheme, commonly known as K-IV project, and reviewed the progress.

Accompanied by Wapda Chairman Lt Gen (Retd) Sajjad Ghani, the minister, while inspecting work on the project, said K-IV was an important project that would help address water shortage in Karachi. "The federal government is keen to complete this project in the shortest possible time," he said.

The Phase-I of the project is scheduled to be completed in March 2024. Therefore, prompt release of funds is essential for its timely completion.

Shanghai Electric committed to KE deal

Financial disputes impede power entity's sale

Salman Siddiqui

China's state-owned Shanghai Electric Power (SEP) has renewed its commitment to acquire K-Electric (KE) from the Middle Eastern investors, as pending financial disputes of billions of rupees on KE books delayed the execution of a sale-purchase agreement for over half a decade.

Around six years ago in October 2016, SEP agreed to acquire 66.40% shares in the Karachi-based power company for $1.77 billion.

"K-Electric has received a fresh public announcement of intention (PAI) from Shanghai Electric Power Company Limited to acquire up to 66.40% voting shares of K-Electric Limited, subject to receipt of regulatory and other approvals," KE Chief Risk Officer and Company Secretary Rizwan Pesnani said in a communication to the Pakistan Stock Exchange (PSX) on Wednesday.

"On behalf of the acquirer, we wish to reiterate that the acquirer continues to be fully committed to consummating the transaction pending receipt of regulatory and other approvals," Arif Habib Limited, the manager to the offer, said in the notification.

A source having knowledge of the business deal told The Express Tribune that "the sale-purchase agreement reached in 2016 has lapsed. The acquisition requires a fresh valuation by Chinese investors to offer a new price to existing investors."

A lot has changed between 2016 and now. Both KE's worth and dollar value have changed significantly over the past six years. "The previously offered price of $1.77 billion stands null and void. SEP would do a fresh valuation of KE and offer a new price to the existing investors."

Officials with knowledge of the business deal said the financial disputes on KE books were not letting the deal progress and to be executed. Prime Minister Shehbaz Sharif formed a task force in June 2022 and tasked former premier Shahid Khaqan Abbasi, who was heading the

task force, with resolving all the pending issues standing in the way of KE business deal within three months.

Secondly, a source said, the KE power tariff for end-consumers had become unattractive for the new investor after the National Electric Power Regulatory Authority (Nepra) cut the tariff through a change in formula.

Nepra allowed KE a tariff that helped it recover only its cost and the estimated cost of new projects. "In its decision (dated March 1, 2022), Nepra has not allowed additional investment request of Rs138 billion a," said KE. ■

Courtesy Express Tribune

Pakistan to tap Russia for fuel, energy imports in Jan 2023

EU Report

Pakistan's Ambassador to Russia Shafqat Ali Khan tapped Russian trade authorities in Moscow for the import of LNG (liquefied natural gas) and fuels at discounted rates and struck an agreement to push this envelope further early next year, top sources in the energy ministry said.

According to Interfax, a Russian news agency, Pakistan, and Russia on October 13 (Thursday) decided to explore avenues for cooperation in fuel and energy in January 2023.

"And this development substantiates that Pakistan's ambassador has engaged Russian authorities in line with the latest directives of the coalition government," the top sources in Moscow and Energy Ministry told The News.

They said the development followed the government's directives to the ambassador in Moscow to engage Russian officials for a trade deal to buy gas, oil, and finished petroleum products.

But experts say for Pakistan it is not easy to import petroleum products and LNG in the presence of US and EU sanctions as Pakistan is very much in the IMF programme and under the radar of FATF, and in these two forums, the USA has a great say.

Nevertheless, officials say Pakistan can purchase fuel from Russia below the cap price in the international market as has been suggested by US officials. But, so far, no cap price for Russian oil has been determined in the international market.

Pakistan has so far failed to get petroleum products and LNG from UAE and Azerbaijan. However, Qatar has agreed to provide one more LNG cargo in January 2023 after rescheduling one shipment from next summer season to winter —January 2023.

According to the press release, the meeting between Ambassador Khan and Russian Minister Nikolai Shulginov was held on Thursday on the sideline at the Russian Energy Week Forum in Moscow.

The handout also says that a meeting of the inter-governmental commission of Russia and Pakistan is scheduled for early 2023. The previous meeting was held in November 2021 in Yekaterinburg.

On the sidelines of the Russian Energy Week forum, Minister Shulginov discussed the prospects for cooperation in the fuel and energy complex with Ambassador Khan.

They talked about the implementation of the Pakistan Stream Pipeline Project, prospects for cooperation in the oil and gas sector, as well as preparations for holding an intergovernmental commission in early 2023.

"We maintain close cooperation with our Pakistani partners on the entire range of issues of the Russian-Pakistani intergovernmental commission on trade, economic, scientific, and technical cooperation, including energy," Shulginov said through the press service of the Ministry of Energy.

Associated Group,

founded in 1965, by Z. Z. Ahmed, has interests in the LNG and LPG industries in Pakistan

Our company Pakistan GasPort Limited operates Pakistan's first greenfield LNG (liquefied natural gas) import, regasification and storage facility at Port Qasim, near Karachi. Since its operations commenced in January, 2018, till Q3 2021, over 180 LNG vessels have been unloaded at the GasPort Terminal and over 533 billion cubic feet of gas has been injected in the national gas network. Norway-based BW Group is the supplier of the Floating Storage Regasification Unit at the Terminal, which has a storage capacity in excess of 170,000m3 and a peak regasification capacity of 750mmscfd. The brand-new FSRU was manufactured at the Samsung Heavy Industries, in Busan, South Korea.

From production and processing services to transportation to marketing and retail, AG has extensive supply-chain expertise in LPG (liquefied petroleum gas), an environment-friendly multipurpose fuel. AG has been in the LPG sector since 1989 and is an industry pioneer and leader. Its LPG companies include Jamshoro Joint Venture Limited, Lub Gas, and Mehran LPG. JJVL's operational excellence has been consistently recognized by its international peers. The company has been a finalist every year since 2006 at the Platts Global Energy Awards. JJVL is the only LPG producer in Pakistan to use patented technology for a guaranteed minimum 92 percent propane recovery rate. It is also the only producer which odorizes its product with mercaptan as a consumer safety measure. JJVL is ISO 9001, 14001 and OHSAS 18001 certified.

Lub Gas and Mehran LPG together represent the country's most extensive transportation and marketing infrastructure for clean, affordable LPG. Lub Gas operates the largest fleet of dedicated, purpose-built bowzers for the safe and efficient bulk transportation of the product.

Both companies provide product to their nationwide network of distributors from Kashmir to Karachi through their own filling plants and their network of partner plants. These plants operate under strict HSE and best practices guidelines, and personnel at these plants are professionally trained to handle LPG storage, bottling, and dispensing.

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PM aide inaugurates 102MW power project

Adviser to the Prime Minister on Kashmir Affairs and Gilgit Baltistan (GB), Qamar Zaman Kaira here inaugurated Gulpur Hydropower Project with capability of 102 megawatts (MW). Addressing an inaugural ceremony, the adviser remarked the critical step was the announcement of first ever power policy of the country which opened the doors of huge private investment in the sector. He said Pakistan offered immense opportunities of investment in developing the infrastructure including the power sector.

"When I see this beautiful hydropower project, it reminds me one of the remarkable initiative taken by first ever lady Prime Minister of any Muslim country Shaheed Mohtarma Benazir Bhutto in shape of Independent Power Plants to meet the growing energy needs of that time," he added.

"Hydropower is a lifeline for Pakistan as it not only offers the cheap and clean energy but also contribute immensely to the growth of economy through creation of job opportunities and use of local materials," he maintained. He expressed his gratitude to Koria South East Power Company (KOEN) to deliver such a beautiful project for the people of Kashmir and hoped that it would keep on investing in Pakistan. Gulpur Hydropower Plant is a run-of-the-river hydroelectric generation project

located on Poonch River, a major tributary of Jhelum River near Gulpur in Kotli District Azad Jammu and Kashmir.

The project started back in 2015 was first ever in the history of the country which is developed on declared National Park having endangered and critically endangered species. The lenders approved the project financing after accepting of Mira Power strategy to ensure net gain in the population of endangered and critically endangered species including Mahaseer Fish.

To achieve the net gain, Mira Power (a subsidiary company of KOEN devised and successfully implementing a comprehensive Biodiversity Action Plan to the satisfaction of lenders and Wildlife & Fisheries Department of Government of AJK. More than 50 per cent of the jobs at site are filled with local community. ■

OGDCL discovers new gas reserves

Oil and Gas Development Company Ltd announced on the Pakistan Stock Exchange that the TAL joint venture — in which the energy explorer has a 30 per cent working interest — has discovered gas condensate from Lockhart formation in Tolanj West-2 development well in the Kohat district of Khyber Pakhtunkhwa.

Other partners in the joint venture are MOL Pakistan Oil and Gas Company (operator), Pakistan Petroleum Ltd, Pakistan Oilfields Ltd and Government Holdings Ltd.

The Lockhart formation (exploratory target) was tested successfully at the rate of 8.3 million standard cubic feet per day (mmscfd) gas and 34 barrels per day (bpd) of condensate. The well was spudded in on April 10. "This new discovery has de-risked further exploration play in the TAL block, leading to new upside opportunities. The said discovery will also help and contribute towards improving the energy security of the country from indigenous resources and add to the hydrocarbon reserve base of the company, its joint venture partners and the country," the company said in a statement.

According to Topline Securities, oil production in Pakistan declined 3pc year-on-year to 26.8m barrels or 73,400 bpd in the last fiscal year. Pakistan's gas production in 2021-22 came down 2pc on an annual basis to 3,380mmcfd, which is largely in line with the last five-year average production decline. The research house said lower gas production was partly because of its association with lower oil production as well as slower offtake owing to the annual turnaround and maintenance.

As for gas, reserves of POL, OGDC, Mari and PPL declined 3pc, 4pc, 5pc and 10pc year-on-year, respectively.

"Our estimates for the remaining reserve life of OGDC, Mari, POL and PPL are 19 years, 18 years, 16 years and 11 years, respectively. The country's total hydrocarbon reserves have a reserve life of 15 years," he said.

Karot hydropower project put into full commercial operation

Karot Hydropower Project, the first hydropower investment project under the China-Pakistan Economic Corridor (CPEC) invested and developed by China Three Gorges Corporation (CTG), has been put into full commercial operation. The Karot HPP COD Ceremony was held at Power House Wednesday to inaugurate the commercial operation. At the ceremony, Dr. Munawar Iqbal, Acting Managing Director, Private Power and Infrastructure Board (PPIB) extended thanks on behalf of Pakistani government to CTG. "In spite of COVID-19 impact, the construction progress of the project remained satisfactory, and because of such a brilliant construction, the project has started successfully delivering much needed clean and green energy to the national grid," Dr. Munawar Iqbal said.

He added that "on behalf of the Government of Pakistan, I would like to reaffirm our commitment in implementation and accomplishment of CPEC Energy Cooperation targets and facilitation towards realization of the Belt and Road Initiative." Wu Shengliang, Chairman, China Three Gorges International Corporation (CTGI) addressed the ceremony. He said that Karot Project will provide 3.2 billion kilowatt-hours of cheap and clean electricity to the national grid every year to meet the energy demand of around five million local consumers. It will help reduce carbon dioxide emissions by 3.5 tons every year. Meanwhile nearly 5,000 job opportunities were provided to the local people by the project during the construction and 40 local students were funded to complete their undergraduate studies from CTG scholarship, Wu said, adding "Karot Project is serving as a bridge of friendship between the two countries."

PSO to set up LNG import terminal

Pakistan State Oil Company (PSO), which is the largest gas importer and fuel retailer, is going to build an import terminal for liquefied natural gas (LNG) at $500 million, Bloomberg News reported.

The import terminal will be located near Karachi and will take four years to complete, the international news agency quoted PSO CEO Syed Muhammad Taha as saying. The company has an understanding with a few large customers and has begun preliminary preparations for the project that will include Pakistan's first LNG storage facility, he said.

Pakistan has been one of the fastest-growing markets for LNG, which it mainly uses to generate electricity following a decline in local gas production over the last decade. But surging prices, spurred in part by Russia's war in Ukraine, have seen the country struggle to afford the fuel this year, resulting in frequent blackouts. CEO says company wants to venture into different areas. "As long as there's a geopolitical crisis in place, prices will remain elevated, but eventually it will come down," Mr Taha said. "As soon as the prices are conducive, we'll go ahead." PSO, which owns a network of 3,500 service stations and is the country's largest company by revenue, may look for a partner for the project, the CEO said. He didn't offer exact details on the size of the project, whether it'd be onshore or floating or when it'd become operational.

SSGC plans to start power production

EU Report

State-owned gas marketing firm Sui Southern Gas Company (SSGC) has decided to diversify its business, as the company has announced that it will start power production following a continuous drop in gas supplies from domestic fields.

Its subsidiary company will also work on projects like producing gas from coal, biogas, bio-methane and hydrogen gas. "SSGC Alternate Energy (Pvt) Limited, a fully owned subsidiary of SSGC, has been incorporated as a private limited company under the Companies Act 2017," the company said in an announcement on Saturday.

The business model of SSGC Alternate Energy will mainly revolve around alternative energy projects such as renewable or environment-friendly fuels like biogas and bio-methane, electricity generation from thermal energy, futuristic energy projects like coal-to-gas production and hydrogen production, the announcement added.

Furthermore, the company has planned to deal in waste water treatment and transportation, and other energy projects. Preliminary information suggests that the diversification of SSGC's business had been under consideration for the past six months or so with a "coal-to-gas project" in the mind.

"SSGC has taken a good decision ahead of the liberalisation of power market in the country," remarked Pak-Kuwait Investment Company Head of Research Samiullah Tariq. "Commercial launch of the Competitive Trading Bilateral Contract Market (CTBCM) will help control circular debt and eliminate transmission and distribution losses," Tariq said.

KE to undergo corporate restructuring

EU Report

K-Electric (KE) is expected to have new management over the next four to six-week, as the company goes under corporate restructuring apparently to resolve years' long pending financial disputes over receivables and payables to the power firm.

"KE is undergoing corporate restructuring and requires four to six weeks for its internal management change to be affected," reads a notification from the prime minister's office. The Sindh government has also asked the federal government to be taken on board with the development to protect the rights of power consumers living in the vicinity of the province. As per the notification, "KE shall be able to take a definitive position only after the process of corporate restructuring has concluded."

Recently, China's state-owned Shanghai Electric Power (SEP) renewed its commitment to acquire K-Electric (KE) from the Middle Eastern investors.

Pending financial disputes of billions of rupees on KE books delayed the execution of a sale-purchase agreement for over half a decade.

In June 2022, Prime Minister Shehbaz Sharif formed a task force and designating former prime minister Shahid Khaqan Abbasi as head. The PM also directed the task force to resolve all pending issues in the way of KE's business deals within three-months.

Reports suggest that the incoming Chinese investors/management, and the outgoing Middle Easter owners, have 66.40% share in KE; both are pressing the government to resolve the outstanding issues as soon as possible to finalise the sale and purchase deal that has been pending for six years.

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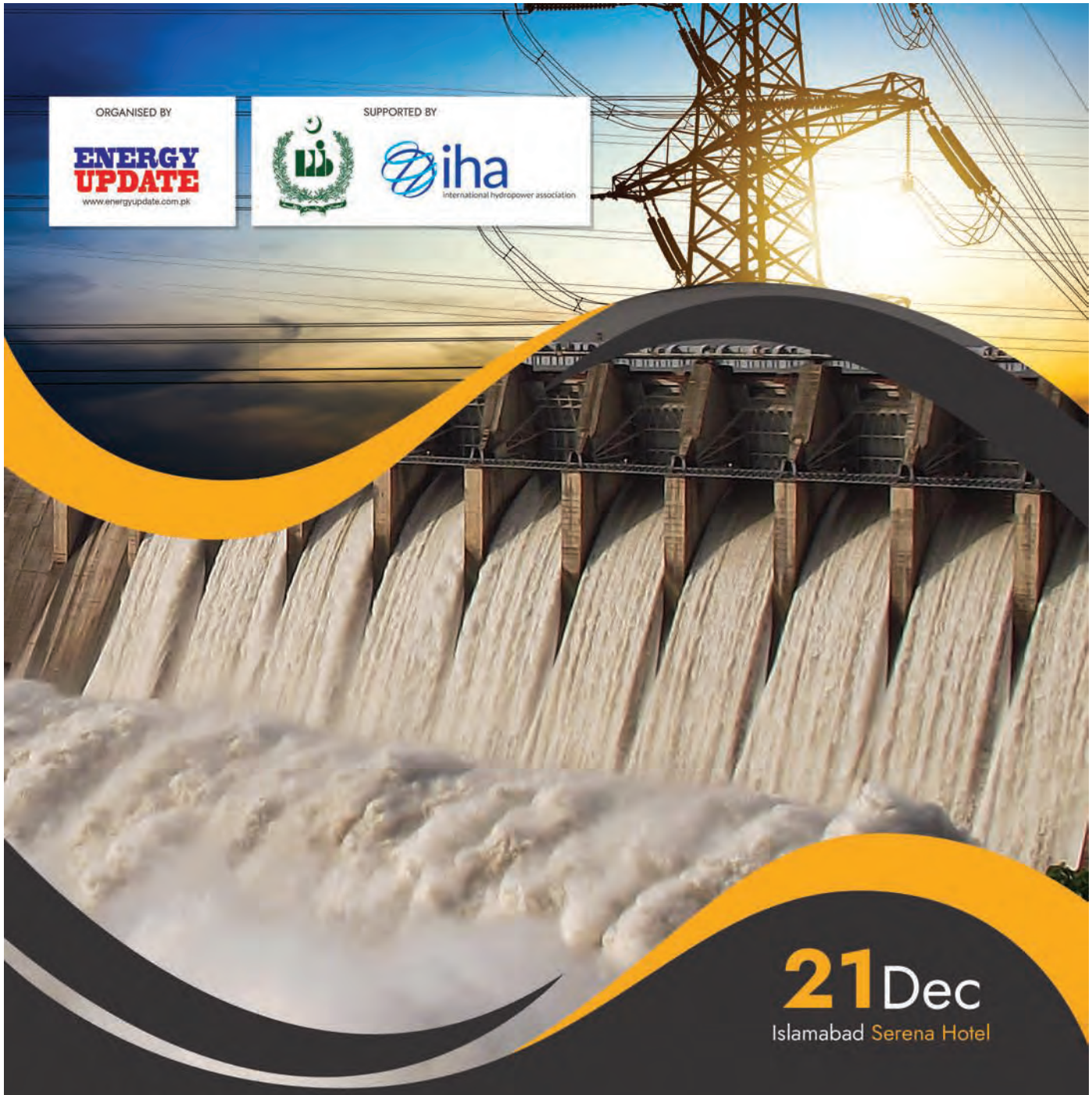

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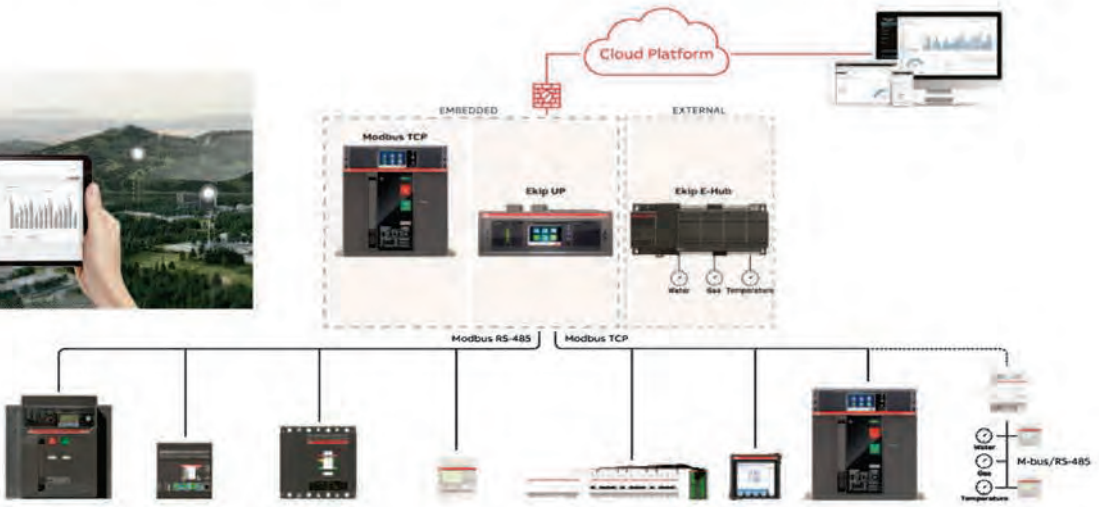

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