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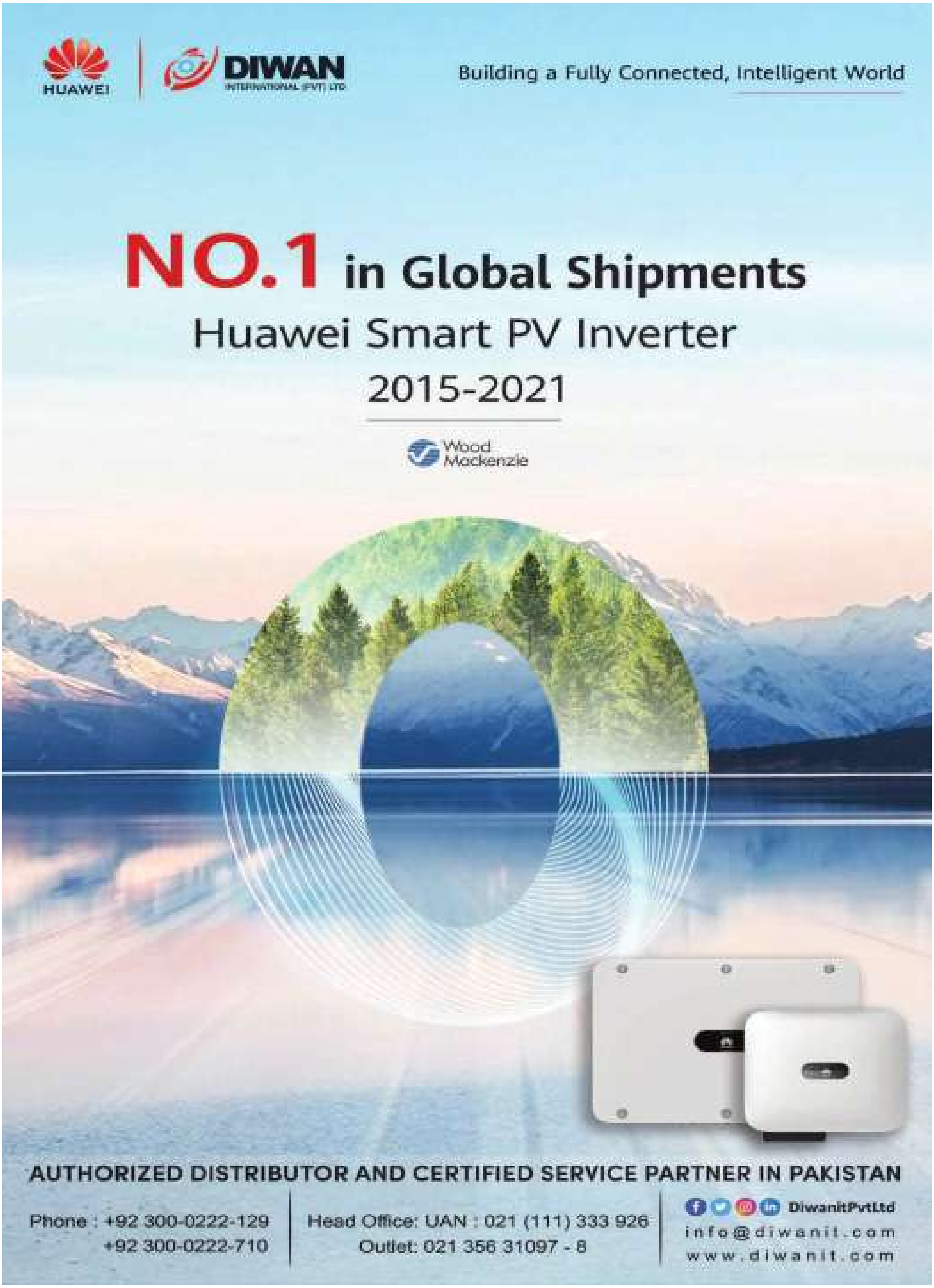
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Another price hike shock

In a shocking move to the nation which is already reeling from the skyrocketing price hike of so many commodities, Finance Minister Ishaq Dar has announced a merciless Rs35 per litre increase in the prices of petrol and diesel. The move on one hand seems to be pleasing IMF for revival of much-needed loan programme stalled since September last while on other hand, it is a well-thought bid to inflict a heavy price hike shock on the whole nation.

The prices of the petrol and diesel were raised by Rs35 per litre to Rs249.82 and Rs262.80 respectively. The price of kerosene oil was also raised to Rs189.93 per litre with an increase of Rs18 while the light speed diesel's new price set at Rs187 per litre. Such move has widely been criticized by almost all segments of society.

There is no justification to hike fuel prices to such a dangerous level as it will cause further high rise in already skyrocketing inflation. The act seems to be a bid to snatch square meal from the poor class of the country besides affecting economy of middle class people.

Furthermore, the food prices have already driven up mostly by the continuous hike in dollar rate while gold prices in the country have gone beyond the reach of the common people. As per Pakistan Bureau of Statistics' latest report issued by the end of Jan 2023, inflation measured by non-food non-energy Urban increased to 15.4% year on year basis in Jan 2023 as compared to an increase of 14.7% in the previous month and 8.2% in Jan 2022. On month on month basis, it increased by 1.4% in Jan 2023 as compared to an increase of 1.2% in previous month, and an increase of 0.8% in corresponding month of last year i.e. Jan, 2022.

The inflation measured by non-food non-energy Rural increased to 19.4% on year on year basis in Jan 2023 as compared to an increase of 19.0% in the previous month and 9.0% in Jan 2022.

Urban Consumer Price Index (UCPI) for January 2023 is increased to 2.36% over December 2022 and rose to 24.38% over corresponding month of the last year i.e. January 2022. The Rural Consumer Price Index for January 2023 is increased to 3.62% over December 2022 and rose to 32.26% over corresponding month of the last year i.e. January 2022. The Wholesale Price Index for January, 2023 increased by 1.77% over December 2022. It rose to 28.53% over the corresponding month of the last year i.e. January, 2022.

Over the last few years, people of Pakistan have also been hard hit by rising food prices with double-digit year-on-year food inflation numbers observed in most months since mid-2019 - as high as 23.6 percent in January 2020, 17.8 percent in July 2020, and 15.9 percent in April 2021 amidst lower fluctuations, according to the State Bank of Pakistan.

The government needs to provide relief to the people by reforming monitory policies, raise salaries of lower and middle class employees besides reducing imports of luxury items. It also needs to manage the supply of commodities, including food and oil at reasonable rates, besides controlling devaluation of rupee against dollar.

There is urgent need to raise minimum wages of employees, particularly those working on the posts of BPS-5 to 15 because salaried class has badly been affected by the price hike. The wages of private employees also need to be raised at same level forthwith; otherwise, the nation will never forgive these rulers who are hell-bent to slap price hikes time and again.

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A debt-trap spanning 75 years

Pakistan's journey towards a sovereign default

— Shahbaz Rana —

Pakistan – for the first time in its peacetime history – is on the verge of a sovereign default. While this is due to a host of factors, the root of the problem lies in imprudent economic and debt policies – in only 22 years, the nation's gross public debt has increased over 1500%.

Since the year 2000, every successive government – irrespective of being a military dictatorship, civilian or hybrid regime – has almost doubled the country's public debt pile at the end of their political tenure. In 2000, Pakistan's gross public debt was Rs3.1 trillion. Statistics from the Ministry of Finance show that by the time General retired Pervez Musharraf's dictatorship ended in 2008, Pakistan's gross public debt had jumped to Rs6.1 trillion – an increase of 100% in the span of eight years.

By June 2013, Pakistan's public debt had mushroomed to Rs14.3 trillion – an increase of 130% in the five years of Pakistan People's Party (PPP) being in power. By the time Pakistan Muslim League-Nawaz's (PML-N) tenure ended, from 2013 to May 2018, public debt had jumped to Rs25 trillion – an increase of 76%.

Then came the government of former Prime Minister Imran Khan from the Pakistan Tehreek-i-Insaaf (PTI), who vowed to lessen the debt burden to Rs20 trillion. At the end of his 43-month rule, however, public debt stood at Rs44.3 trillion – recording an increase of Rs19.3 trillion or 77% in less than four years.

Today, Pakistan's total debt and liabilities have sky-rocketed to over Rs60 trillion. The nation added Rs12 trillion, or one-fourth of its total debt incurred in the past 74 years, in the diamond jubilee year.

Public debt is a by-product of many things; expenditures that are higher than revenues, a foreign-savings financed economic growth model, the depreciation of the local currency against foreign currencies (mainly the greenback) among other factors.

The other deadly combination to exist in Pakistan is to have relatively well-off people and a poor government. The nation's informal economy is generating huge amounts of wealth, particularly in the real-estate sector, creating demand for foreign goods that are being bought via increasingly pricey foreign loans – adding to the country's foreign financing needs.

Over the years, Pakistan's addiction to programme loans (read as non-project loans) also enabled it to run high budget deficits. Over time, however, this caused a shift in the debt structure and has now brought the country to the brink of a sovereign default – with multiple short-term foreign loans maturing one after another. These short-term loans are major contributors to the country's external financing requirements increasing to unsustainable levels – now at around $32 to $34 billion every year for the next three years. The State Bank of Pakistan (SBP)'s archives show that in the year 1971 – when the country was disintegrated into two – we took $564 million in foreign debt. All of which was taken under a long-term financing scheme which was used to create assets or make food purchases.

Dr Kaiser Bengali – a renowned economist – once wrote that if we look at the last two decades, we find that grant components have gradually been eliminated from international funding, be it from donor countries, consortium partners or international financial markets and banks, particularly the International Monetary Fund (IMF) and World Bank. The trend now is to give credit – not aid. Since developing countries have predominantly faced a balance of payment crisis over the last 20 years, they are being supported via loans given under certain specific programmes – such as the structural adjustment programmes of the IMF. These loans are generally granted for balance of payment support, debt servicing and other similar purposes.

According to Dr Bengali's research paper, project aid has been reduced quite considerably and soft loans have been reduced or replaced entirely with commercial loans. Short-term, high-interest lending is brilliant but vicious cycle that is hugely exploited – not only do these loans widen the debt burden, they literally create a balance of payment crisis – for which countries like Pakistan keep acquiring more and more loans at high-interest rates to payback.

Dr Bengali has written extensively on this subject and has warned of its unavoidable debt trap many a times. And as predicted, today the country needs to repay a foreign debt worth $23 billion, with a majority of it being short-term foreign commercial loans and cash deposits from Saudi Arabia, China and the United Arab Emirates (UAE). Since international aid and loans are being utilised in the budgetary framework of the economy, we have been noticing that the share of development expenditure, as of the percentage of GDP, has been reduced from an average of 8% to 3% over the last couple of decades, according to Dr Bengali's research. This means that the aid given has not literally been used for the development sector, but has instead been unwisely used to support the balance of payments and debt serving of expensive loans, defence and public administration, and subsidies in public services.

Besides, expenses on public administration and defence were not decreased, despite the fact that successive governments could have moved to curtail them. If we look at public finance, hardly any money from the tax revenue has been spent on health, housing, education, transport or the development of agricultural and physical infrastructure. The World Bank initiated lending to Pakistan with a loan for railways in 1952. The Asian Development Bank began providing lending in 1969, with a loan for the Industrial Development Bank.

Over a 54-year period, from 1960 to 2014, the World Bank provided 310 loans totalling $26.5 billion. Of these, 45% were project financing and 55% were programme loans, according to Debt Composition: Consequences for Economic Development by Dr Kaiser Bengali and Mehnaz Hafeez. In terms of amount, 39% of the loans have been project loans and 61% have been programme loans, according to the authors. Today, the cost of interest payments on the debt stock is Rs4.8 trillion, which is equal to 50% of the federal budget and 64% of the Federal Board of Revenue (FBR)'s taxes. The government cannot avoid debt restructuring even if it gives up its entire budget. The inevitable will happen – we just don't know when. Today, the gross foreign exchange reserves stand at $6 billion – not enough to back even one month of imports if the central bank were to cater to all its pending import requests. Today, effectively, Pakistan is reverted to a licensing regime, but the form has changed to grant permission for imports. ■

about renewable sources

EU Report

Islamabad: On 31 January, chapter one of the series, 'Busting the Myths', was published by Renewables First (RF), an energy and environment think-tank.

The research claims to bust myths about renewable sources and their integration into the energy mix of Pakistan. The first chapter explains the reality behind the myths about baseload of energy and the need for transition to renewable sources in Pakistan.

There is a widespread misperception that using renewable energy sources, such as wind and solar energy, will make the electrical system less reliable. This idea, called the "baseload" dilemma, contends that renewable energy cannot be relied upon as the main source of electricity since it is unable to deliver a continuous and steady source of power.

Numerous issues have contributed to Pakistan's current economic unrest, but the power sector's enormous circular debt of PKR 4,177 billion is at the top of the list (Dec 2022). Mostly because of issues, such as the import of pricey fuels for the energy mix, which has revived the conversation about moving faster towards an innovative and cost-effective energy mix. Policymakers' perspectives are changing significantly and as a result, this debate is in favour of an expedited transition through the use of renewable energy sources, which are also more affordable—the most recent tariff is as low as 4 cents/kwh. But opponents of the energy shift have been stoking concerns about the dangers of outdated energy systems, which might not even be real.

"One of the key problems about the proliferation of renewables is that the technologies like solar and wind are considered complementary (to the energy mix). People have assumed that these (renewable) technologies won't ever be central to our energy sector," says Muhammad Basit Ghauri, Author of the chapter and Program Associate at Renewables First.

"Their arguments are backed by an outdated understanding of the power sector. Often citing the baseload myth, which corresponds to the idea that higher integration of renewables will negatively impact the grid operations. Even though numerous researchers claim the contrary, here we bust these myths by answering these queries through specific objective analysis," he says. ■

Economic turmoil hits nation hard

No sign of recovery is seen presently; World Bank forecast GDP at low level of 2.0 percent this year; foreign exchange reserve plunges to alarming level of 3.8bn dollars; interest rate increased by 100 basis points to 17 percent; IMF further toughens conditions for loan

Special Report by Mansoor

Pakistan's economic turmoil has hit the nation hard as the government has been compelled to take tough measures to save the country from foreign loan repayment default and run much need expenses of purchasing oil and other goods.

By Feb 2, Pakistan's forex reserves plunged 16% to a dangerously low level of $3.08 billion — the lowest level of forex reserves since February 2014. The Monetary Policy Committee (MPC) of State Bank of Pakistan on Jan 23 decided to increase the policy rate by 100 basis points to 17 percent. The committee noted that inflationary pressures are persisting and continue to be broad-based. If these remain unchecked, they could feed into higher inflation expectations over a longer-than-anticipated period. The MPC stressed that it is critical to anchor inflation expectations and achieve the objective of price stability to support sustainable growth in the future.

According to a World Bank report of this month, in Pakistan, an already precarious economic situation, with low foreign exchange reserves and large fiscal and current account deficits, was exacerbated last August by severe flooding, which cost many lives.

About one-third of the country's land area was affected, damaging infrastructure, and directly affecting about 15 percent of the population. Recovery and reconstruction needs are expected to be 1.6 times the FY2022/23 national development budget. The flooding is likely to have seriously damaged agricultural production which accounts for 23 percent of GDP and 37 percent of employment. The flooding disrupted the current and upcoming planting seasons and pushed between 5.8 and 9 million people into poverty.

Pakistan's consumer price inflation reached 24.5 percent in December on an annual basis, recently coming off its highest rate since the 1970s.

Pakistan's consumer price inflation reached 24.5 percent in December on an annual basis, recently coming off its highest rate since the 1970s. In the region excluding India, growth in 2023 and 2024—at 3.6 percent and 4.6 percent, respectively — is expected to underperform its average 2000-19 pre-pandemic rate. This is mainly due to weak growth in Pakistan, which is projected at 2.0 percent in FY2022/23, half the pace that was anticipated last June.

Pakistan faces challenging economic conditions, including the repercussions of the recent flooding and continued policy and political uncertainty. As the country implements policy measures to stabilize macroeconomic conditions, inflationary pressures dissipate, and rebuilding begins following the floods, growth is expected to pick up to 3.2 percent in FY2023/24, still below previous projections.

Food prices have risen rapidly in SAR, especially in Pakistan and Sri Lanka, increasing the incidence of food insecurity in the region Several countries in SAR have taken steps to try to insulate people from the effects of rising food and energy prices; however, some of these may prove unsustainable and could lead to unintended and costly consequences (Espitia, Rocha, and Ruta 2022). For example, import controls have now been implemented in several economies, worsening the business environment.

Export bans on food, also increasingly prevalent, could have unintended consequences and exacerbate increases in global food prices. Afghanistan, Bangladesh, India, and Pakistan implemented export restrictions on food in 2022 including in rice, wheat, and sugar. Climate change is a significant threat in the region. Increasingly frequent extreme weather events have already imposed substantial costs, with droughts and floods damaging livelihoods and increasing the volatility of food prices.

Natural disasters have increased in frequency since 2000, and the average annual costs of damage in 2001-20 were double those in 1980-2000. The recent floods in Pakistan are estimated to have caused damage equivalent to about 4.8 percent of GDP (Government of Pakistan.

The recent floods in Pakistan are estimated to have caused damage equivalent to about 4.8 percent of GDP (Government of Pakistan et al. 2022). Extreme weather events can exacerbate food deprivation, cut the region off from essential supplies, destroy infrastructure, and directly impede agricultural production.

Asian Development Bank has also forecast in its report that Pakistan's economy to slow to 3.5% in fiscal year 2023 (ending 30 June 2023) amid devastating floods, policy tightening, and critical efforts to tackle sizable fiscal and external imbalances while World Bank's lates report said that Pakistan's economy is expected to grow by only 2 percent in the current fiscal year ending June 2023.

To mitigate the impacts of recent negative economic shocks and promote a strong and inclusive recovery, policymakers need to prioritize reforms that support long-term growth prospects and bolster the resilience of vulnerable groups. There is urgent need to bring down cost of oil prices, dollar, gold and other essential commodities. The government should reduce expenses on the luxuries of bureaucrats besides reducing their highest ever salaries. ■

WOMEN EMPOWERMENT

Sindh govt launches Pink Bus Service for women

The Sindh government has launched Pink Bus Service in Karachi for woman passengers with female bus hostesses who have been hired for the first time for any intra-city commuter service in Pakistan.

Sindh Information and Transport Minister, Sharjeel Inam Memon, along with female legislators and distinguished women from different walks of life, including Oscar-winning filmmaker, Sharmeen Obaid-Chinoy, launched the Pink Bus Service at Karachi's historical Frere Hall.

The Transport Minister announced that in one month's time, woman drivers would be hired for the new service. He noted that women in the country had already been flying fighter aircraft and driving dump trucks in the coal mining operation in the Thar desert.

Initially, eight fully air-conditioned brand new buses having a length of nine metres have been introduced with automated doors, cellular phone charging facility, electric doorbell for halting the bus, and space reserved for differently-abled passengers. Each of these buses could accommodate up to 50 passengers at a time. The buses will be available after every 20 minutes from 7 am to 11 am and from 4 pm to 9 pm daily. ■

RULES AND REGULATIONS BEING AWAITED TO INTRODUCE CLEAN HYDROGEN

Two to three multinational companies have completed all their paperwork to switch to the green hydrogen option, says **Bilal Naeem, CEO of Beyond Green,** in an exclusive interview with Energy Update

M. Naeem Qureshi

Prospective investors and businessmen have been long awaiting, the framing of rules and regulations by the government to introduce green hydrogen as an alternative clean fuel option in Pakistan. However, investors are ready to invest in this sector. The prospective investors don't have trust in the working of the government. One of the reasons behind the continuing financial deficit of Pakistan is its energy bill. The future of Pakistan's energy sector lies in renewable power, especially solar power.

This was stated by Bilal Naeem, The CEO of Beyondgreen, in an exclusive interview with Energy Update magazine. During the interview, he talked at length about the prospect of the clean energy sector of Pakistan and his company's plan to invest in the renewables arena. Following are the important excerpts from his interview for our readers:

Energy Update: Tell us how Beyondgreen was founded

Bilal Naeem: The Beyondgreen was established in 2015. It was my mission and vision to introduce solar energy in Pakistan. I had been associated with the solar industry in Australia since 2011. We formed our company in Pakistan in 2015 when only off-grid solar systems were being sold here. I launched my business in Pakistan in 2015 before the net metering system was introduced in 2019. Now, thank God we are doing very well in Pakistan.

EU: What clientele of the energy sector do you particularly serve in Pakistan?

Mr. Naeem: We are among the very few EPC companies in Pakistan that target power consumers in domestic, industrial, and commercial sectors. We don't have any specific target audience. We have been involved in over 1000 projects all over Pakistan. We have been working in the solar energy sector since the day the net metering system was introduced in Pakistan. We are based in Karachi, Lahore, and Islamabad.

EU: What solar technology you are using to serve your customers in Pakistan?

Mr. Naeem: As of now we have an exclusive partnership with Longi. I have been associated with the Longi since my early days in Australia starting in 2011. We have always been the early adopters of new technology as we present the same to our prospective customers. We have now started focusing on the newly launched "Green Hydrogen" sector.

EU: How much more time do we need to introduce the Green Hydrogen option in Pakistan?

Mr. Naeem: Net metering was introduced in Australia in 2010 and it took almost 10 more years to adopt the same system. Last month, I was in South Korea for an exhibition. They have been working at large to use the green hydrogen fuel option. They have introduced vehicles that will run on hydrogen fuel. Elsewhere in the world, trains and airplanes that will consume hydrogen are being introduced.

Many countries have come up with a resolution to fulfill their energy needs through renewable sources by 2030 amid the global climate crisis. Green hydrogen has been discovered as a substitution for fossil fuel whereas things have also been invented that could be operated on this clean energy. The only remaining mission is to make green hydrogen readily available in the country for its people.

EU: What is Pakistan's edge in the green hydrogen sector?

Mr. Naeem: Pakistan's main advantage in this regard is that hydrogen is produced from water and thus there is abundant availability of water in our country. We have all types of water resources like the sea, lakes, and rivers. We could produce hydrogen in abundance quantity from these resources through the electrolysis process. If we do the cost analysis, then hydrogen emerges as a profitable energy source.

EU: Is there any progress so far made to introduce the green hydrogen option in Pakistan?

Mr. Naeem: I know two or more multinational companies in Pakistan, they have completed all their hard work to switch to green hydrogen, In this regard, they have also held talks with prospective investors based overseas to invest in this clean energy in Pakistan. They have also acquired land in the country for establishing the plant to produce green hydrogen.

But, the main issue in this regard is the likely delay in the framing of rules and regulations by the government to formally introduce green hydrogen fuel in Pakistan. However, businessmen and prospective investors are keen to invest in this sector. I foresee that a major development would take place in this sector of Pakistan in the few years.

EU: What is the current state of the Pakistani solar industry?

Mr. Naeem: One of the reasons behind the continuing financial deficit of Pakistan is its energy bill. The future of Pakistan's energy sector lies in solar power. The government has made several announcements to adopt solar technology, but it is imperative to streamline Pakistan's import affairs. Solar equipment is being imported into the country. The concerned businessmen should be offered an ease-of-doing-business regime to motivate them to invest in solar power.

A five-year plan should be announced in this regard as no new government should have the power to change this plan. The prospective investors don't have trust in the working of the government. The overall economic conditions in the country should be improved as the businessmen should get the confidence that we are moving in the right direction

EU: What should be done to facilitate importers of solar equipment in Pakistan?

Mr. Naeem: The concerned businessmen in Pakistan associated with its clean energy sector could arrange the dollars on their own for the import of solar equipment. Earlier, if they were importing equipment in 100 containers, now they would be happier with the import of 50 containers as this would keep their businesses up and running.

Over 50 people have been working alone in one of my offices. It would be very difficult for me to continue engaging the services of all these people if I didn't get any new business. The government is under an obligation to resolve this situation. Businessmen everywhere are more willing to support the government, but first of all, you have to resolve this situation.

EU: What should be done to promote the indigenous production of solar equipment in the country?

Mr. Naeem: If we want that the local businessmen should establish their manufacturing units for indigenous production of solar equipment, then the government should impose anti-dumping duty on Chinese technology. A ten-year plan with all the important incentives should be prepared to motivate prospective investors to invest in setting up production lines for producing clean energy. ■

PM inaugurates nuclear power plant

EU Report

Prime Minister Shehbaz Sharif on Thursday inaugurated K-3, the third unit of Karachi Nuclear Power Plant (KANUP), which will produce 1,100 megawatts of electricity.

The project has been completed with assistance from China. Addressing the occasion, the prime minister said K-3 was a step forward in cooperation with Pakistan's trusted friend China.

He congratulated the scientists and workers of Pakistan and China which led to the completion of the project. The premier said the staff of the Pakistan Atomic Energy Commission who contributed to the project would be invited to the Prime Minister's Office for public recognition.

Shehbaz said in view of the $27 billion energy import bill, Pakistan required alternative and cheaper sources of energy including solar, wind, hydel and nuclear. He said Pakistan was gifted with enormous resources with the potential of producing 60,000 megawatts through hydel power, however, regretted that the power generation stood merely at 10,000 megawatts.

Shehbaz also mentioned that the electricity projects under the China-Pakistan Economic Corridor were greatly contributing to the country's energy demands through the production of thousands of megawatts. ■

Fast-track solar paradox

Ammar Qaseem

Three months ago, in a major attempt to generate affordable electricity, the new government unveiled its policy for fast-track development of solar photovoltaics (PV) projects at an investors' conference with strong incentives including exemption on all import duties and taxes and a 70 per cent dollarised indexation on tariff. The government also promised provision of land, interconnection and mandatory purchase of all power produced for 25 years. While the fast-track procurement of 10,000 MW of solar PV is an ambitious initiative with regards to substituting fossil fuel-generated electricity, the approach has a number of major problems.

First and foremost, the fast-track policy to procure renewables violates the primacy of the Indicative Generation Capacity Expansion Plan which is the power sector's central national planning document, akin to its constitution. The IGCEP is prepared by the National Transmission and Despatch Company on a yearly basis to plan all power capacity additions to the national grid for the next 10 years.

It selects projects based on a rigorous data modelling and least cost optimisation exercise through the state-of-the-art generation planning software, PLEXOS. In its latest version, the IGCEP 2022-31, almost 18GW of wind and solar PV have been optimised for addition to the grid by 2031, of which nearly 66pc is solar PV. This massive renewable energy (RE) capacity is to be procured through annual competitive bidding or auctions, as specified by the Alternative & Renewable Energy (ARE) Policy 2019. While developers and investors have been waiting for these auctions for more than four years now, none have taken place so far. Rather than addressing this delay and participating through IGCEP, the government's fast-track policy has created an entirely new category for RE projects, seeking a way around the national planning process.

Introduction of such fast-track initiatives by the federal government to ensure timely addition of affordable RE into the national electricity grid is clear evidence that the power sector institutions have failed to deliver on their mandate. Auctions for cheap RE continue to be delayed while dollar-bought expensive fossil fuels continue to burn.

RE costs today have fallen well below Rs10 per unit while some of the more expensive thermal plants continue to cost more than four to five times that amount. Moreover, even these exorbitant tariffs do not reflect the true cost of fossil fuels which includes capacity payments, paid regardless of power off-take, costing the nation Rs721 billion in FY 2021-22 alone.

In the oft-repeated words of chairman, Nepra, we are literally burning dollars to generate electricity for the consumer. Yet the continuous delay in RE auctions continues to cost the nation dearly and the fast-track mindset, seeking to circumvent this institutional impairment, only endorses the laziness of institutions and the status quo. Attempts to procure massive amounts of renewable energy all at once is more indicative of an anxious mindset than timely planning.

The biggest problem with the fast-track approach is perhaps its impact on investors. It is ironic that the government chose to unveil this so-called panacea for the power sector crisis at an investors' conference, yet forgot the category III investors whose projects have been waiting for competitive bidding by the relevant agencies for four years now despite directions by the Cabinet Committee on Energy to conduct auctions.

Some of the category III projects had even been approved and awarded tariff, the lowest in the country's history, but were deferred by the power division to instead participate through auctions in accordance with the ARE policy which had recently been drafted. Yet auctions never took place and when they finally did in the form of the fast-track initiative, these investors were ignored altogether. Investor confidence is a delicate matter and once shaken, takes years to recover. The fast-track mindset only adds to this distrust and market volatility.

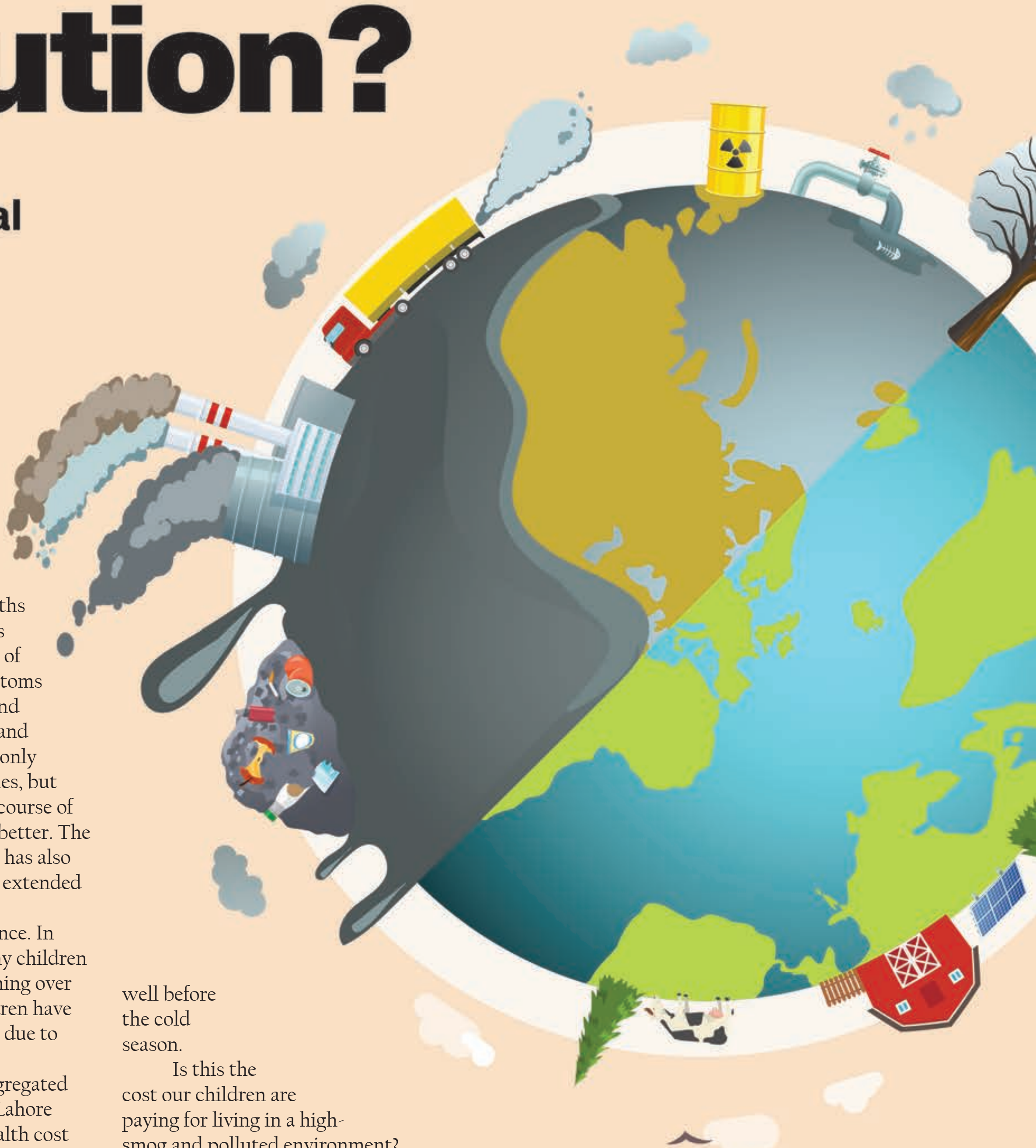
The power sector's own CTBCM initiative foresees a fully liberal and competitive market with flexible bilateral contracts between buyers and sellers within a few years, whereas the fast-track initiative offers 25-year energy purchase agreements with guarantees of mandatory off-take. We are still paying penalties for similar long-term contracts with thermal IPPs in the past and it is time we learnt a lesson.

While the IGCEP may have its own deficiencies, it cannot be sidestepped. Investor confidence and market perception cannot be ignored. Far more than quick additions to electricity capacity, Pakistan's national electricity policy envisions a developed market, active participation of the private sector, local value creation and socioeconomic advancement. Both the government and the power sector must recognise this vision, learn from their past mistakes and prioritise consistent policies if they wish to find a permanent way out of this electricity crisis and towards a stable economy. ■

Cost of pollution?

Environmental pollution reduces life expectancy and IQ of our children

Faisal Bari



Over the last seven months or so, our daughter has been unwell a number of times. The usual symptoms have been high fever and a cough. A couple of times the fever and cough went away after a week with only cough syrups and anti-fever medicines, but a few times she had to go through a course of antibiotics before she started to get better. The cough seems to linger on longer. She has also been on anti-allergy medications for extended periods over this time.

This is not an atypical experience. In our daughter's class and school, many children have been going through the same thing over the past many months. A lot of children have missed school for many days, largely due to cough and fever.

The cost of missing school, aggregated across millions of children living in Lahore alone, is staggering. Add to it the health cost and the possible impact on the future health and well-being of all children and the situation looks very alarming.

On any typical day when I have gone to drop our daughter to school, there are a couple of children in her class who have a cough but are still at school. Again, a lot of friends have been telling me, this is not out of the ordinary at all. A lot of children have been a lot sicker over this winter in particular but it started well before the cold season.

Is this the cost our children are paying for living in a high-smog and polluted environment?

Environmental pollution reduces life expectancy and also the IQ of our children. There has been some acknowledgement of the issue from the government side as well. Schools were shut down on Fridays to reduce the exposure of children to smog and pollution, winter vacations were also extended by a week or so and one of the reasons given for it was the smog.

Social media keeps telling us that the cost of living in a high-pollution environment is actually much greater than just being sick. It reduces life expectancy and it also reduces the IQ of children exposed to it for extended periods.

Exact estimates for these impacts could be difficult to work out as they may depend on exposure levels and many other factors, but the fact alone that these impacts are there is scary enough. But there has been little action on the part of the government, beyond some acknowledgement, to address the issue so far.

A friend, who is living in Beijing currently, was telling me how the city had much higher pollution levels a decade ago, but, today, though it is still not where it wants to be, the city has been cleaned up a lot and has much better air quality than Lahore.

The government implemented a fairly drastic clean-up programme to start the process. The measures included, among others, moving away from coal heating, moving factories away from the city, enforcing very strong emission standards, monitoring standards and imposing heavy penalties in cases of non-compliance, and moving public transport to lower emission options.

It took years of consistent, persistent and high-priority action for Beijing to get better quality air. By some estimates, the city has now added at least a couple of years to the life expectancy of city residents. I have not seen estimates of changes in health costs, but the life expectancy estimates are indicative of the cost savings on the health side as well.

This is one area where we do not really have private solutions available to citizens of Lahore. Those who can afford to, can put air purifiers in their homes and cars, but can you restrict the movement of children and adults to buildings and cars only? Not really.

Those who can move, could shift to other cities for high-pollution periods of the year or have their children move during those times, but a) how many can afford such solutions, and b) these solutions are not very practical given the demands of schooling and work, etc.

So, there is little that individuals can do in this case unlike, say, what happens in cases of problems concerning the provision of healthcare, schooling and even drinkable water. In these cases, those who can, may move to private provision in the form of private hospitals, private schools and bottled water, but we are still some distance away from private breathable air solutions. Hopefully, rather than force people to go in that direction, the government will spring into action and provide public solutions for all.

Short-term and stop-gap arrangements like closing down schools and/or forcing offices to use more work-from-home programmes are not going to be enough to change things. These might be good band-aids and even allow the government some space, but they cannot be a replacement for a worked-out long-term plan that needs to be strictly implemented and monitored.

It should also be borne in mind that not doing anything at this stage is tantamount to making the situation worse. More factories will keep opening, more vehicles will keep coming on the roads and pollution will not only continue but increase over time. This is known to the government. If, even after knowing this, the local administration, provincial government and federal government do not do anything, it would be akin to murder: they would be killing the citizens of Lahore.

Until the government gets serious and works out an effective strategy and starts implementing it well, the citizens of Lahore and other polluted areas of the country will continue to pay a heavy price.

The price is much higher for children of course but this price, eventually, will be borne by the entire nation in terms of lower life expectancy and higher health and other costs. So far, the government has been fairly complacent on the issue and has only announced cosmetic and superficial actions. We need much deeper and drastic actions. But will any government be willing to pay the political cost of such actions and be competent enough to manage their effective implementation? ■

The writer is a senior research fellow at the Institute of Development and Economic Alternatives, and an associate professor of economics at LUMS.

OGDCL recovers 3.29bcf gas reserves in Guddu

EU Report

Oil and Gas Development Company Limited (OGDCL) has discovered a hydrocarbon-rich field in Sindh having estimated reserves of 3.292 billion cubic feet (bcf) of gas.

Commercial production from the new discovery is poised to start in June this year. However, the company is seeking a one-year extension in the testing phase for the Umair SE-1 Guddu discovery.

OGDCL was granted an exploration licence for the Guddu block in May 1999 in accordance with the Petroleum Exploration and Production Policy 1997 and under the Pakistan Petroleum (Exploration and Production) Rules 1986.

OGDCL, which is the block's operator, has so far acquired 545 square kilometres of 3D and 243 line km of 2D seismic data. Based on the results of seismic data, the company has made a new gas discovery in Guddu from the Habib Rahi Limestone and Pirkoh Limestone by drilling a well namely Umair SE-1. According to the initial test results, total gas reserves are estimated at 3.29 bcf.

Petroleum Division has received an OGDCL's request, seeking permission for an extended well test to assess the discovery in the Umair SE-1 exploration well drilled in the Guddu block.

Rule 20(1) of the Pakistan Petroleum (Exploration and Production) Rules 1986 states "subject to the provisions of these rules, the licence gives the holder the exclusive right to undertake, within the licence area, all activities related to reconnaissance and exploration, including drilling for petroleum".

According to rules, "the holder of the licence shall not be entitled to extract any petroleum from discoveries other than such test and early production as the government may allow upon written request submitted by the holder of a licence, provided, however, that in no event such test or early production shall cause loss of revenues for the government".

Extended well test/ test production is a technical requirement and common industrial practice to examine the oil and gas discovery to establish the extent of the reservoir and evaluate the reservoir's performance to declare commerciality.

According to the Petroleum Division, OGDCL has made a rational request for extended testing and it is in line with the applicable petroleum policy and rules. The division examined the application and found it "in order". ■

We are planning to expand O&M capabilities

Muhammad Nazri Bin Pazil
MD TNB Remaco

Mustafa Tahir

TNB Remaco is a company providing services as a specialist in operation & maintenance (O&M), overhaul, and repair & maintenance (R&M) of energy-related industry, emphasizing on power plants such as gas, steam and hydro turbines, boiler, generator and many more. The company's technical experience and competencies covers all the product lines of the world's leading names in power plant and ancillary equipment.

Energy Update: How many power megawatts are added to Pakistan's national grid due to O&M services of your company in Pakistan?

Muhammad Nazri Bin Pazil: Active O&M contract: 1223 MW RLNG Combined Cycle Power Plant, Balloki, Lahore. Successfully completed O&M contracts: 235MW TNB Liberty Power; 225MW Combined Cycle Power Plant Narowal; and 84MW New Bong Escape Hydro Electric Power Plant, Mirpur AJ&K.

EU: What latest technological innovations are used by your company to ensure that power plants are efficiently operated in Pakistan?

MNBP: H Class Gas Turbine Experiences more than 60% efficiency operating on combined cycle mode. Condition Monitoring and Predictive Maintenance and Data analytical and diagnostic.

EU How do you ensure the safety of your staff during the operations of a power plant?

MNBP: The staff has proper SOPs to perform the works and are guided through the implementation of Occupational Health and Safety Management System, ISO 45001. Regular trainings have been conducted covering all aspects of safety for personnel and equipment as well as Emergency Response Plan.

EU: Is there any plan for your company to train manpower in Pakistan for the power sector?

MNBP: We employ and train manpower from Pakistan to operate and maintain all power plant contract in Pakistan

EU: Is there any plan for your company to become a part of efforts in Pakistan to maximize power production based on renewable energy resources?

MNBP: We take notice that Pakistan is embarking to renewable energy as a game changer for future power generation resources. We are exploring an opportunity to participate for the growth of RE in Pakistan.

EU: What are the plans to expand the services of your company in the Pakistani energy market?

MNBP: We are planning to expand the O&M capabilities not only in combined cycle gas turbine but also in coal and hydro power plants. In addition, we are also capable to provide MRO, test and diagnostic, project and technical services and advanced drone technology. ■

Energy crisis or catastrophe?

Oil and gas exploration, production badly affected

Haroon Rashid Siddiqi

The 18th Amendment to the Constitution is claimed with pride as a feather in the cap of Asif Ali Zardari ever since it was legislated during the last regime of PPP (2008-2013). Except for wresting greater provincial autonomy and a handsome 57.5% share from federal revenue collection under the NFC award, it has proved disastrous for the nation as a whole. The federation was immensely weakened financially and lost its constitutional prowess over a lot of subjects.

In contrast, the inept and corrupted provinces, barring Punjab to an extent, have acquired the sweetness of doing nothing except for squandering the bigger share in the pie. The responsibilities that devolved on the provinces with the 18th amendment remain entirely neglected, completely undermining the intent and purpose of the said amendment.

One sector of the economy that has suffered the most is the oil and gas exploration and production. I am a bit more aware about the oil and gas sector as I remained associated with it from 1984 until I retired in 2009. I had the opportunity to see through many dictatorial and political regimes for over a quarter of a century. The bureaucrats in the Ministry of Petroleum and Natural Resources — including its regulatory wing, the Directorate General of Petroleum Concessions (DGPC) — had their autocratic and gainful influence so long as they remained at the helm. But the undue meddling was typically akin to the then all powerful and a very long lasting DGPC. His directorate always acted high-handedly much beyond the mandate of a regulatory authority. Similarly, I witnessed many top layer changes in the Company and its Board of Directors. These were based on anything but meritocracy.

However, the managing directors in Pakistan Petroleum Limited were identified from within the Company and thoroughly groomed by Burmah Oil Company of UK (the parent Company) before saddling them to lead PPL with good corporate traditions and grace.

A lot of foreign oil and gas exploration and production companies had entered Pakistan during these catalystic years and made some formidable discoveries to bolster the indigenous oil and gas production.

The scenario changed abruptly when Gen Musharraf had to quit in 2008 and PPP gradually made destabilising ingresses and politicised the oil and gas sector by promoting their vested interests across the wide spectrum of this lifeline sector. The conundrum set in then had to transform into a catastrophe that is so rampant now. Most of the foreign oil and gas companies have winded their operations in Pakistan, and the last hope of a consortium-based discovery off Karachi (Kekra 1) went awry in 2019 extinguishing all hopes of finding a sizeable discovery.

All energy conservation policies unfolded are nothing more than a wishful and fantastic rhetoric. Like George Orwell said long ago, “Political language is designed to make lies sound truthful and murder respectable.” Keep your hopes aflame in the darkness of year 2023 which is even sinister today. Return to the basics of life if you wish to survive gracefully. I am constrained to quote Ghalib for increasing my compatriots’ threshold of pain. Ishrat e qatra hai darya mai fana ho jana; Dard ka hadd sai guzarna hai dawa ho jana. ■

GOODWE launches 3-Phase Hybrid 30KW solar power equipment

Khalid Iqbal

Pakistan Muslim League-Nawaz (PML-N) Senator Capt Shaheen Khalid Butt hoped that Letters of Credit (LCs) for imports will be opened soon, which will help facilitate the solar energy sector in the country. The clean energy is absolutely vital not just for the environment but because it's cost effective for the consumers. In this context, I talked to Prime Minister Shehbaz Sharif and Finance Minister Ishaq Dar, and they expressed the hope that the government would soon be able to open LCs for imports as soon as economy's stabilization is ensured," said the Senator Capt Shaheen Khalid Butt while talking to journalists at the launching ceremony of 3-Phase Hybrid 30KW solar power equipment by Goodwe, a solar inverter manufacturing company, on the occasion of Solar Power Day at a local hotel.

The solar inverter company also signed MoUs for 400MW power products with three different investment companies for import of solar energy goods. The solar energy sector has been under a lot of stress after LCs were stopped with effect from July 2022, which not just hampered promotion of solar energy sector but also created a backlog of warranty claims. Senator Capt Shaheen Khalid Butt said that solar power was a very clean and efficient energy source, which must be tapped to optimum level to protect the environment. "Pakistan has suffered a great deal in the form of devastating floods due to global carbon emissions despite contributing very little towards greenhouse gases," he said, adding that the West, especially the European countries, must compensate for the loss incurred by Pakistan due to global warming. "The recent $10 billion to $11 billion pledges by the world community for rehabilitation of flood victims were nothing compared to the colossal loss of life and property suffered by the Pakistanis," he added. He said the Pakistan government must help and facilitate the renewable energy sector, which is the answer to Pakistan's energy woes in the future. "Everyone, including the country and the people, will benefit from solar energy," he said, therefore the government must patronize renewable energy sector as US government also helped manufacturers, policymakers and the consumers.

"The consumers can also sell out surplus energy in excess to their own usage through net-metering," he said and proposed that the government should launch one-window operation to facilitate the manufacturers and the public in installation of solar energy products.

Earlier, speaking on the occasion, Goodwe country manager Syed Salman Mohiuddin said that LCs closure had caused significant damage to the solar energy sector, while the widening gap between supply and demand had also raised prices of products up to three times in the consumer market. He said that Pakistan's oil bill had gone up to 65 percent of the Gross Domestic Product (GDP). "If Pakistan government supports the solar energy sector for 4 to 5 years, it can reduce Pakistan's forex oil bill substantially," he added. Ahmad Rafay Asad, Head of Operations and Technical Services, Goodwe, said that the company had launched a new energy storage product - ET 30KW - and a single-Phase high ampere - G2 - product, which are efficient, environment-friendly, digitally controlled easy-to-use and cost-effective products.

SOLAX POWER On-grid Inverters, Your Most Reliable Option

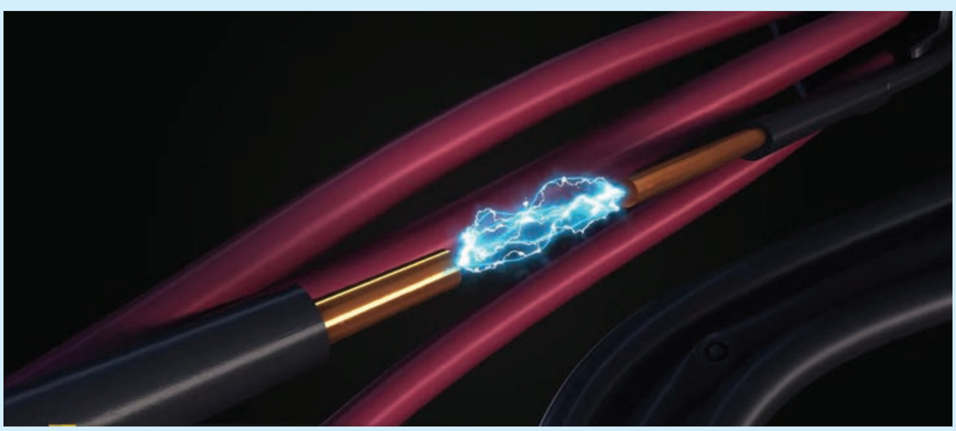
As one of the world's leading inverter suppliers, SolaX on-grid inverters enjoy great popularity all over the world and they are now also available in Pakistan. These inverters stand out not only for their superior performance but also for many excellent functions, such as reactive power compensation and AFCI protection.

Reactive Power Compensation

Since inverter load consumes both active and reactive power in practical cases, reactive power compensation is developed to maximize active power output of the inverter. And SolaX inverter would intelligently alter the power factor when providing active power, generating reactive power for intelligent reactive power compensation.

AFCI Protection

To prevent electrical fires caused by DC arcs, the arc detection function (AFCI) turns out to be one of the necessary protective measures. The integrated AFCI function developed by SolaX can detect all series arcs within the DC side circuit from 200 to 750 J. When an arc is detected, SolaX inverter stops running immediately and an error notice will be displayed within 2.5 seconds.



In addition to the functions mentioned above, SolaX also provides some solutions to meet the potential needs of its customers. Some of them are quite impressive, including the following two.

Master / Slave Parallel Solution

One of the currently popular methods to achieve high power output is the Master/Slave parallel solution for inverters, which allows a flexible power rating, and improves overall maintainability and interchangeability. SolaX on-grid inverters such as X3-PRO G2 8-30 kW enable up to 5 units in parallel with a maximum output of 40-150 kW, which can meet the needs of small-scale C&I scenarios.

On-grid Inverter + Hybrid Inverter + Datahub

SolaX three-phase grid-tied inverters, for example, X3-MEGA G2 40-60 kW can be supported in parallel with storage inverters for energy storage via Datahub 1000, a professional device that is used to monitor and manage user's site with multi SolaX inverters. In this Solution, it supports up to 40 on-grid inverters and 10 hybrid inverters. The loads will use the energy from on-grid inverters in priority to avoid unnecessary discharging.

SolaX is dedicated to offering more possibilities so as to satisfy the demand of customers, and strives to be at the solar power front line and devote itself to achieving a clean and sustainable future.

Future Energy Summit concluded

The 2023 World Future Energy Summit concluded a three-day session at Abu Dhabi National Exhibition Centre (ADNEC) recently, with the 14th edition of the leading business event for future energy and sustainability being hallmarked by high-level partnership signings, start-up incubator support, and sector policy disclosures ahead of November's hosting by the UAE of COP28. "The 2023 summit will be long seen as a powerhouse platform of inspiration and progressive action across key sustainability sectors," said Leen Alsebai, Head of World Future Energy Summit, and General Manager of Summit organiser RX Middle East. "It has set the stage for further advancement of the summit with Abu Dhabi, the UAE and the wider Middle East demonstrating a strong appetite for energy transition solutions and knowledge."

POINT OF VIEW

An Insight into Pakistan's Project Logistics Segment

Mithun Kantharia

Country Manager

deugro Projects & Logistics Pakistan Pvt Ltd

Compared to Pakistan's logistics industry in general, the country's project logistics segment is becoming more and more saturated each year. And within this project logistics segment, which is a niche segment of the logistics industry itself, adherence and compliance remain scarce despite the presence of a National Freight and Logistics Policy. At the same time, Pakistan has seen improvement in terms of growth of its logistics sector, a result of external factors based on past dynamics.

It is a fact that we have seen a lot of changes and developments in the logistics sector due to a gap in supply and demand created by the Pakistan–China Bilateral Trade Volume, as well as significant developments in the China Pakistan Economic Corridor (CPEC) from 2008 and onwards. However, infrastructural challenges remain the second most important element next to health, safety and environmental (HSE) management. HSE regulations are a key factor in the logistics sector of Pakistan for sustainable and responsible growth and to further step into the modern framework.

deugro stepped foot in Pakistan back in 1997. At that time, deugro was the first international project logistics company to enter the market and served a small demand-based framework for the industrial set-up. Looking at Pakistan and Afghanistan, it gives me immense pleasure to state that deugro has been part of more than 50 industrial projects to date. Today, the rapid growth in Pakistan's industrial units has enabled the growth of the project logistics segment.

These days, we find many projects logistics companies, project forwarders and others operating in Pakistan. However, compared to global standards, we still have room for improvement when it comes to formalization, such as compliance with a proper logistics policy and with global HSE, as well as to having a predefined outlay of best practice in Pakistan's logistics sector. Sustainable growth occurs over a period of time; due to a long-term sustainable policy and some basic incentives to boost improvements and investments, we assume that inclusive growth will take place.

Growth is inclusive when it broadly leads to the creation of performance and improvement overall in the sector, and not just specific segments of the sector. Currently, despite our present adverse economic situation, Pakistan's logistics sector needs to redefine and revamp procedures, policies and processes, along with formalization and compliance of the same.

The sector has seen a lot of growth in past 10 years and is expected to see more in the coming 10 years. So, there will always be an opportunity to enhance the characteristics of inclusive growth. The relevant regulatory authorities need to focus on the industry, its segments and the community as a whole to grow.

About deugro

deugro is a highly specialized project freight forwarder with a strong focus on turnkey logistics solutions for various industries.

deugro was founded in 1924 in Frankfurt am Main, Germany and is a family-owned enterprise in its third generation, with nearly a century of experience in the logistics industry. The company has an extensive conceptual framework of standard operating procedures and protocols with respect to compliance and HSE, and is an ISO-certified company. The safety slogan "Defining Logistics. Delivering Safety." underscores the importance of HSE within the company.

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COUNTYWIDE POWER FAILURE

Farhan Bokhari

Jan 23's prolonged power failure across Pakistan was a powerful reminder of the deepening fault lines across the nation, as political rivals raced to seize authority in spite of the country's growing disarray. On Jan 23 too came the State Bank's latest verdict to raise interest rates to a staggering 17 per cent as inflation hovers around 30 per cent.Together, these challenging events at the beginning of the week again popped up a compelling question: after Sri Lanka shot to global headlines following the default on its foreign debt repayments, is Pakistan next in line to meet a similar fate?

Pakistan following Sri Lanka's footsteps has become an oft-repeated question across the country's gossip circles, from living rooms to boardrooms and beyond. It is a riddle whose answer eventually lies in Pakistan's ability to avert its looming disaster.

As Pakistan's political rivals intensify their battles, the country's worsening outlook is evident all around. Consequently, members of the elite ranging from its ruling class to the opposition have increasingly become detached from real-life trends.

In sharp contrast to the mood across the power corridors, mainstream Pakistanis have increasingly suffered the fallout from galloping inflation and other challenges on a regular basis.

And while political rivals repeatedly urge their followers to support democracy, there's a bigger disaster lurking just over the horizon. Fast mounting inflation coinciding with a balance of payments crisis and Prime Minister Shehbaz Sharif's government's delayed return to the IMF loan programme have together caused what could best be described as an unprecedented and imminent perfect storm.

Meanwhile, the failure of the ruling class to appreciate the gravity of a rapidly worsening security outlook has just added to the intensity of the storm. In brief, Pakistan has fast become the proverbial titanic surrounded by a powerful storm in a vast ocean with no relief in sight close by.

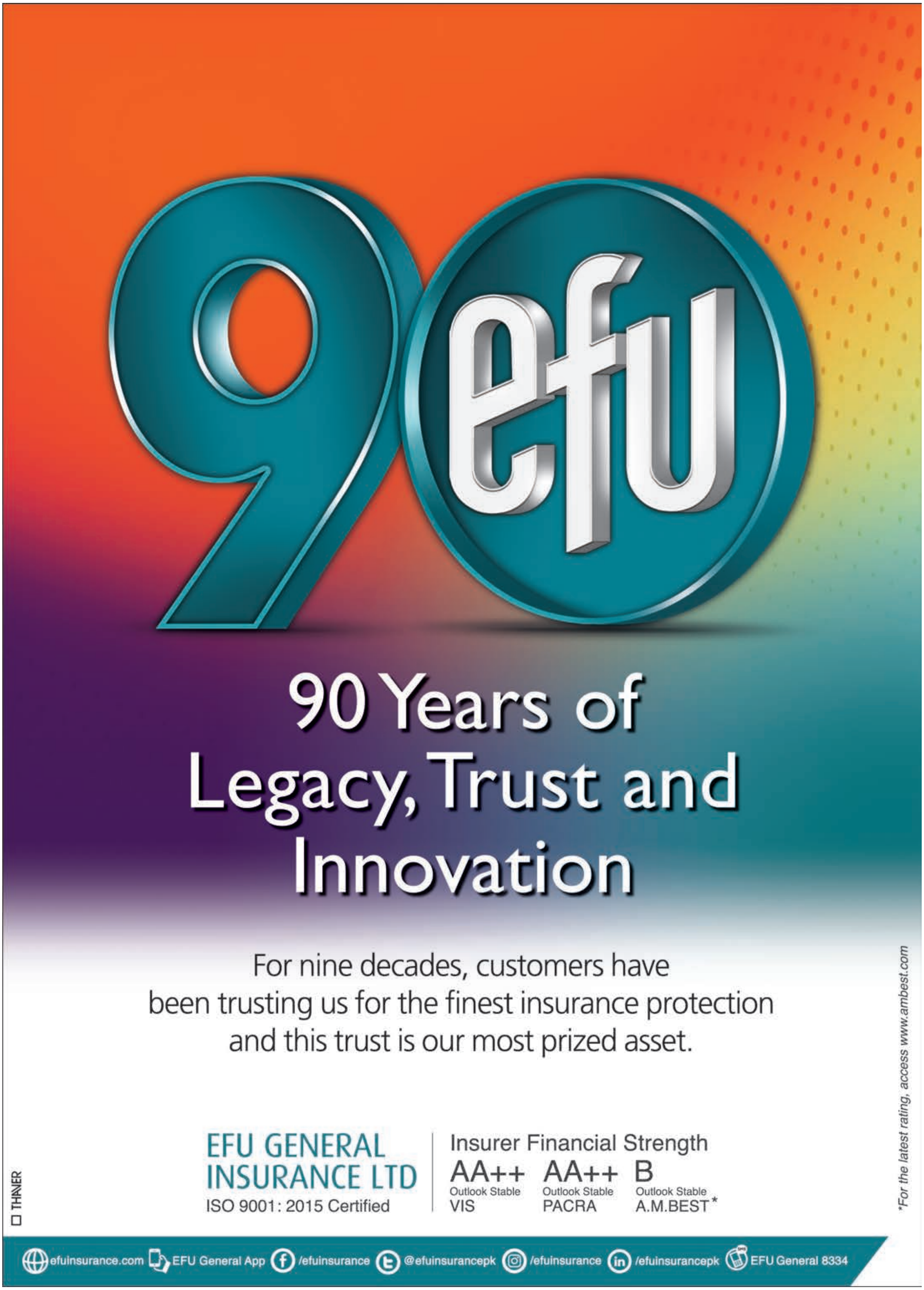
The country's mounting policy failures have only been made worse by the likes of Finance Minister Ishaq Dar who is now almost begging for a resumption of the IMF loan, not long after he publicly proclaimed his 'I don't care' about the IMF line early December. And his promise of overseeing an appreciation of the exchange rate of the rupee versus the US dollar has simply become a hoax.

Meanwhile, Interior Minister Rana Sanuallah in recent days has spent time lavishly playing Pakistan's politics from London, close to his leader, former prime minister Nawaz Sharif. As Sanaullah proudly announced the planned return of Maryam Nawaz to Pakistan to lead the ruling party in their next election campaign, more Pakistani security personnel fell in the line of duty during terrorist attacks. Is the interior minister still fully in command of his ministry? That question has become increasingly pressing as bloodshed mounts across the country.

Averting Pakistan's looming disaster is more about stabilizing the state and its institutions than successfully carrying the democratic process forward. Indeed, the next round of elections may throw up a clear majority rule in favour of a single party or a group of well knit allies. Yet, to date that prospect has failed to answer the central riddle facing Pakistan – exactly how will the country go through a range of tough and potentially painful reforms to stabilize its future?

Pakistan's fast deepening economic malaise is driven by two equally competing challenges.

On the one hand, a chronic resource crunch has been driven by a stubborn failure to reform one of the world's worst performing tax collection systems. It is also driven by a failure to cut expenditure that begins to target privileges of the elite. Only such a latter approach will begin to...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and this trust is our most prized asset.
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AA++ Outlook Stable PACRA
B Outlook Stable A.M.BEST*
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GIVING E-BIKES A BOOST

Govt announces package to promote e-bikes sale

Syed Akhtar Ali

The government has announced a financing package to promote the sale of e-bikes. These environmentally friendly bikes have the potential to contribute towards achieving environmental objectives, industrial growth and reduction of petrol imports and consumption.

E-bike manufacturing is a volume business, and the Pakistan market has the required potential volume. There are 26 million petrol bikes on the road, and around two million new bikes are sold every year. Also, it is relatively cheap to own and operate an e-bike than a conventional motorcycle. While the upfront purchase cost is higher than that of conventional motorcycles – at least 30-50 per cent, the fuel cost is lower.

In this regard, an affordable financing scheme with some interest rate subsidy may be beneficial. It is also a good omen that there is continuity of policy in this respect, irrespective of political changes.

E-bikes have a large market share in the developing and poor countries of Africa, South America and Asia-Pacific. It appears that the EV car market is small and possibly not feasible either for imports or for progressive manufacturing. The story of progressive manufacturing of automobiles is not a successful one. Small volumes have been a major constraint in building a viable automotive industry.

There has been some success in small cars where the price and volume factors are dominant. There have been quite a few successes in the area of agricultural tractors, which are being manufactured and even exported. The price and volume factors are visible in this case also although there is an added factor of the peculiarity of the tractor market. Cheap credit financing has also promoted the tractor market and its local manufacturing. The tractor industry has also benefitted from a lack of dominance and oligopolistic market, something that has been seen in the case of cars.

The import promoting policies of the last two-three decades under the WTO regime and the IMF-World Bank ideology and the entry of cheaper Chinese goods has not only slowed down local manufacturing initiatives but also damaged the timely emergence and strengthening of the industrial base. The result and consequence is obvious in the prevailing economic circumstances focusing around current account deficit – imports of $80 billion vs exports of $36 billion. High energy imports are one of the leading causes of this problem.

EV expansion may help alleviate these problems to some degree. EV initiatives ought to be associated with the localization of energy sources as well. The fast-track solar PV programme may help achieve some targets to a great extent. Progress in solar PV has been slow in the last few years partly due to the over-capacity issue, which is a common problem in electricity generation due to the lumpy nature of supplies involving 1000-1300MW capacity power plants in the fossil fuel sector. E-bikes have an especially attractive aspect, and can boost and encourage roof-top solar which would be much more economical for e-bike users. One or two panels without an inverter might be a good package for DC systems. A subsidized electricity tariff for e-bikers in off-peak periods may also be considered.

Another market for EVs are trucks and buses. These vehicles consume high volumes of diesel. These are expensive items, operating in a tough and competitive market. These would also require a well-spread charging network. Recently, the Sindh government bought a fleet of EV buses for Karachi's public transport network. Authorities have installed charging infrastructure in bus garages. For a government, upfront costs which may be as high as $300,000 may not be as big an issue as it may be for the private sector.

International subsidized financing lines can be found for financing EVs. The conversion of diesel buses can be a viable approach since diesel engines are to be replaced every five years. At this replacement juncture, the conversion of diesel buses to the EV system may be a feasible approach. Only institutional operators may be able to own and operate EV buses due to the issue of expensive charging infrastructure.

If one starts with an initial production rate of 175,000 units per year with a growth rate of 10 per cent per annum, one would get the annual sales of 341,000 units. It is much lower than the required sales of 2 million per year by FY 2030 (50 per cent market share of e-bikes). One would have to start with an initial production of 400,000 units per year with an annual production growth of 25 per cent per annum to be able to get the required production rate of 2 million units per year. More aggressive policies may have to be designed in the mid term to achieve these targets.

This shows that it may not be feasible to achieve the 2030 target of a market share of 50 per cent in new e-bike sales. It may be worthwhile to explore other policy options as well, such as conversion of the existing motorcycles to e-bikes; it costs Rs50,000 for one such conversion. These rates may go down if the market expands. Many countries, including Indonesia, have made conversion a part of their policy programme. In India, conversion is being pursued in the bus sector; one conversion costs INR6 million. There are plans in Karnataka to convert 30,000 diesel buses to e-buses by 2030. ■

Let’s conserve energy

Endless spiral of import bills burgeoning fiscal deficit; govt needs to manage fiscal outlook by either increasing revenues or cutting down expenses

Muhammad Basit Ghauri

The endless spiral of import bills burgeoning the fiscal deficit of Pakistan is leading to somewhat draconian measures by the government, which one may argue are needed to address the import bill crisis.

As the concerns for default looms over the country due to debt obligations, the speculations around it discourage investors from taking a risk tolerance view on the country. This leads to a tight labour market and slowed business growth. Therefore, it becomes pertinent for the government to manage fiscal outlook by either increasing revenues or cutting down expenses.

Given that the energy sector accounts for the highest expenses, it is understandable that the government routinely intervenes in this sector to reduce its expenses for a net positive outlook on the economy. However, it is also the most difficult sector as it not only comes with a political cost for the ruling party but also disturbs the country’s growth.

The Pakistani government recently devised a national contingency energy-saving plan aimed at conserving energy and reducing the import bill to deal with the incumbent energy crisis. The plan mainly focuses on reducing imported fuel by reducing energy demand.

The plan has already been approved by the PM Office, and is expected to be approved by the federal cabinet, where provincial chief ministers are also invited to get broader political buy-in on this plan.

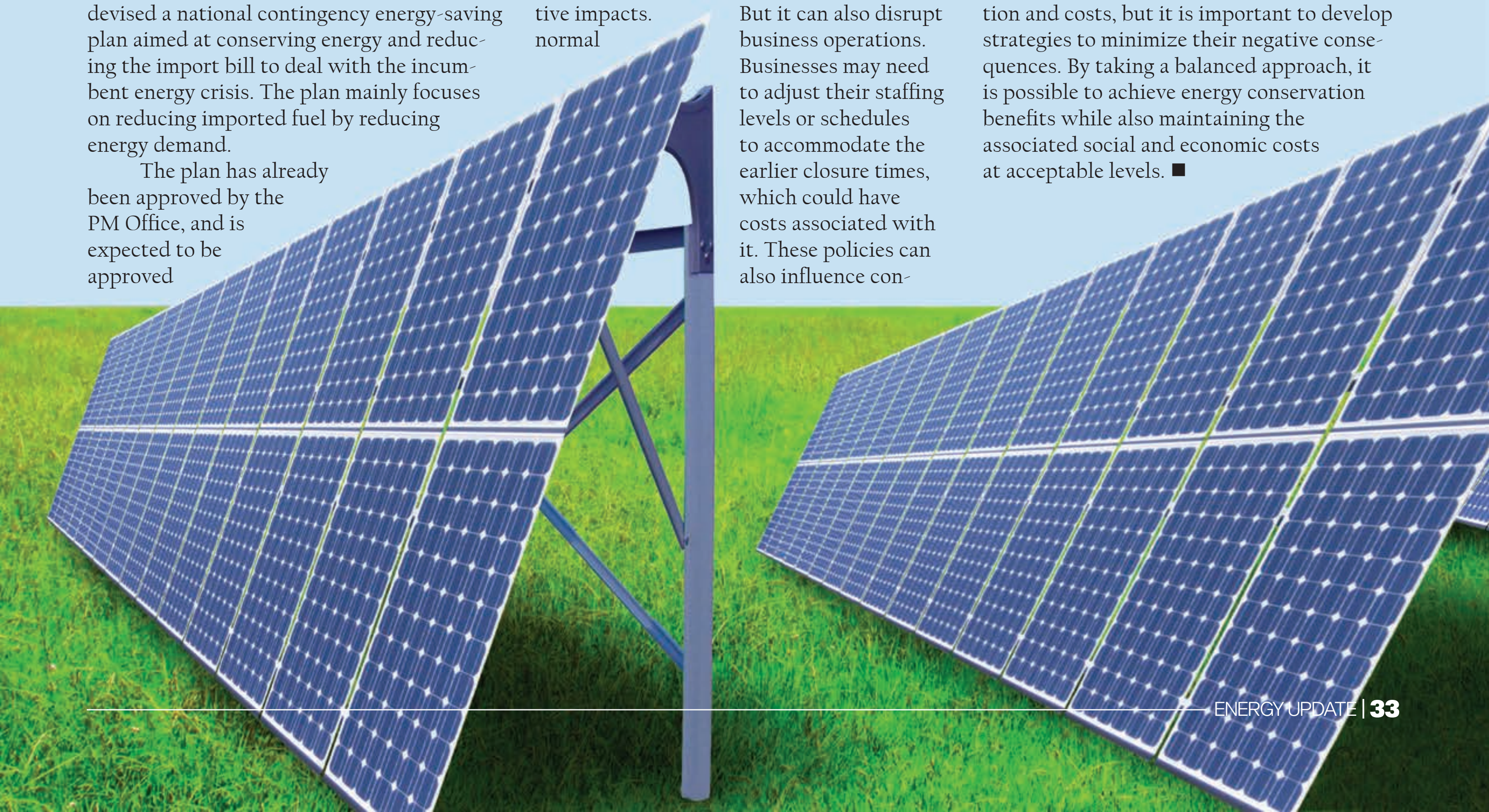
These government-backed interventions include the adoption of the hybrid work model, removal of duties on e-bikes manufacturing, establishment of EV charging infrastructure, partial closure of street lights, solarization of public buildings, and reduction in electricity theft. In addition to these measures, the plan also includes public awareness campaigns pertaining to energy and water conservation, which will be actively pursued over social media and TV.

Initial estimates by the government suggest that these interventions will save over Rs250 billion. This is equivalent to approximately $1.11 billion – same as the latest instalment by the IMF. However, this amount is quite meagre against the enormous import bill of $80 billion. Additionally, some activities have social and economic costs associated with them. It becomes important to be aware of all the concerns pertaining to these interventions.

The call for the early closure of commercial activities may have some positive impacts. But it can also disrupt normal business operations. Businesses may need to adjust their staffing levels or schedules to accommodate the earlier closure times, which could have costs associated with it. These policies can also influence consumer behaviour as people may adjust their shopping or dining habits in response to the new operating hours. This could potentially impact the overall demand for certain products or services. In some cases, these policies may lead to job losses or reduced economic activity, while in others they may create new opportunities or stimulate economic growth.

Reintroducing remote working regulations is a good step. One benefit of the hybrid work model is the potential to conserve energy by reducing the number of people commuting to and from work. This can help reduce the demand for transportation fuel and decrease the country’s import bill. Also, working from home can also reduce the energy used for running lighting, heating, and cooling systems in office buildings. However, it is important to note that remote working can also have negative impacts on energy conservation. For example, employees may use more energy at home to power their computers and other equipment, offsetting some of the energy savings from reduced office usage.

Overall, these interventions can be a useful strategy for reducing energy consumption and costs, but it is important to develop strategies to minimize their negative consequences. By taking a balanced approach, it is possible to achieve energy conservation benefits while also maintaining the associated social and economic costs at acceptable levels. ■



EXAMINING THE DIESEL CONUNDRUM

Pakistan relies on international markets for around 40pc of its diesel supply

Sarfaraz A. Khan

The year 2022 was difficult for oil-importing countries, including Pakistan, as commodity prices shot through the roof. The steep increase in the cost of refined products, such as diesel, placed a significant strain on their trade balances and left consumers feeling the pinch at the pump. With a volatile global market, government officials in Pakistan must take proactive measures to mitigate any potential crisis in the future.

Diesel is a kind of middle distillate, as opposed to lighter distillates such as gasoline and heavier distillates like furnace oil. These distillates, as the name implies, are produced when crude oil goes through the distillation process and other stages of treatment in an oil refinery. What sets the middle distillates apart is that they are mainly used in the commercial sector. They are consumed by freight transportation, agriculture, manufacturing, and other industries. Their demand, therefore, primarily comes from economic activities.

The demand for diesel skyrocketed in 2022 as the global economy rebounded from the pandemic. On top of this, supply-side issues, such as inadequate distillate production in two of the world's biggest producers of refined products — the US and China — as well as the Russia-Ukraine conflict, led to record-high refining margins for diesel. The refining margin is the difference between the price of a refined product and the cost of crude oil.

The refining margins on gasoil, which serves as the foundation for diesel, reached an unprecedented peak of more than $70 a barrel in Asian markets in mid-2022. While it has since fallen to the $30 to $35 a barrel range, it remains significantly higher than the single-digit levels it often traded in 2021 and 2020.

If domestic refineries operate at full capacity, which can fulfil all local diesel demand, the annual net forex savings could be close to $1bn

Pakistan has historically relied on international markets for around 40 per cent of its diesel supply. The country has five oil refineries that could theoretically meet all of its diesel demand. However, these refineries often operate below capacity due to longstanding industry issues that have yet to be addressed by policymakers. This leaves Pakistan with little choice but to import diesel, placing a strain on the country's foreign reserves.

In the last financial year that ended in June, Pakistan imported 5.39 million MT of high-speed diesel (HSD), mainly from Kuwait and the UAE, with a cost of $3.85 billion (average exchange rate of Rs178.12 per USD), as per PBS data. This shows the high cost of importing HSD, despite low refining margins in the latter half of 2021. With persistently high refining margins, the import bill may remain elevated in the future as well.

The future of diesel prices is uncertain, with the potential for both bullish and bearish scenarios to unfold that could impact refining margins. On the one hand, the global economy is experiencing a slowdown, as warned by World Bank, the International Monetary Fund, and other notable institutions. Pakistan's economy will also likely face challenges this year due to precarious economic conditions characterised by double-digit inflation, inadequate foreign exchange reserves, and substantial fiscal and current account deficits. This will likely decrease the demand for fuels, including diesel, in Pakistan and abroad.

Concurrently China, which boasts the largest refining capacity in the world at 17.5m per day, has increased export quotas for its refineries for 2023 by 20pc so far as compared to the same period last year. Moreover, Kuwait and India could also ramp up diesel exports. These changes in demand and supply can exert downward pressure on refining margins.

On the other hand, China's reopening may outweigh concerns about the global economic slowdown, potentially resulting in an increase in demand and a rise in prices for crude oil and refined products. At the beginning of this year, China lifted border restrictions that had been in place since the onset of the coronavirus pandemic. This coincides with the 40-day Lunar New Year travel period, which is likely to lead to a surge in travel activity.

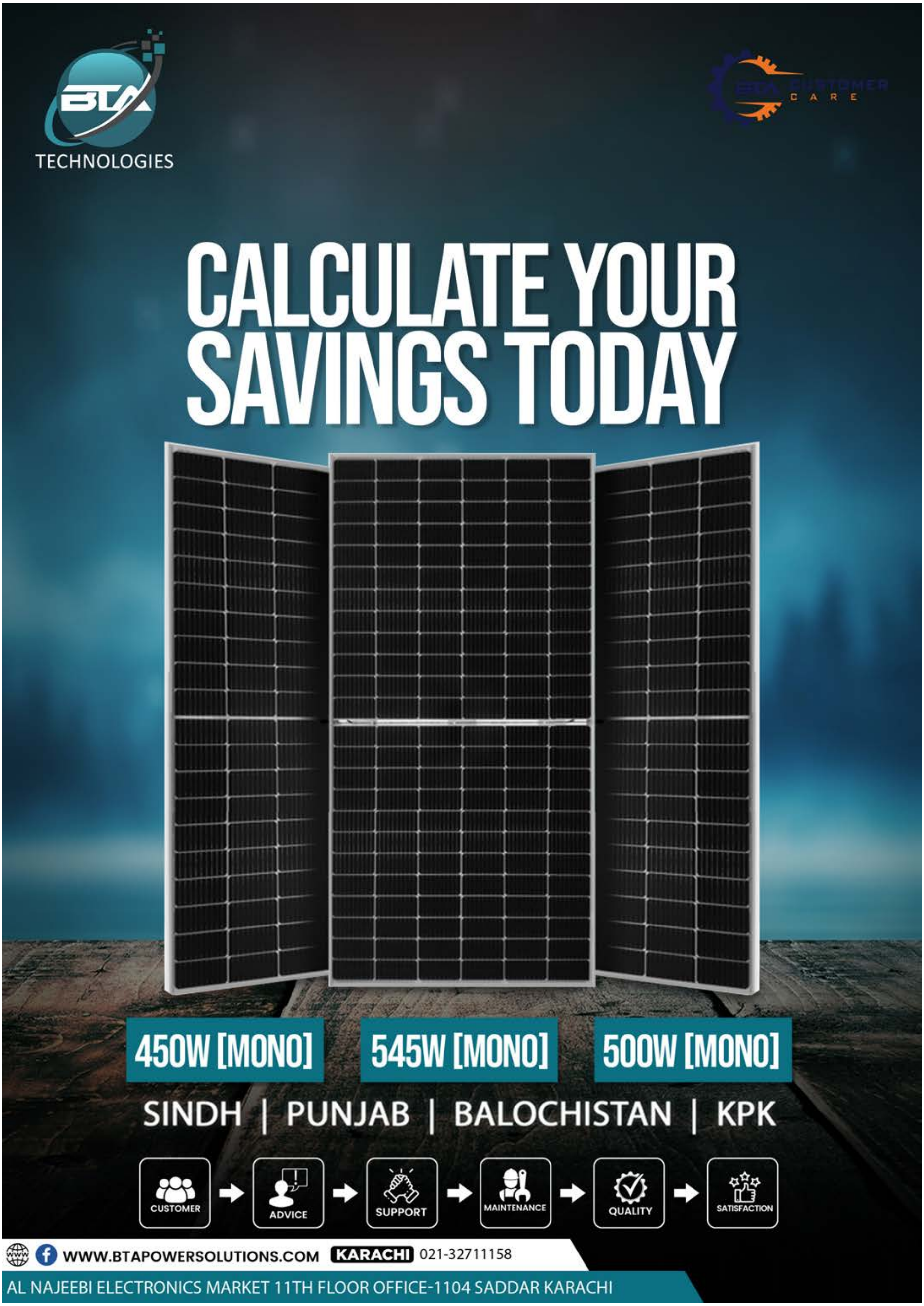
Additionally, the European Union is planning to ban imports of Russian diesel from February, which may lead to a decrease in Russian exports. These factors may push the refining margins on diesel higher.

The future is uncertain, and it is imperative for Pakistan to plan for potential adverse scenarios. This includes ensuring economic stability and protecting the country from the negative impacts of fluctuating diesel prices. As previously noted, diesel margins are already high, and any further increase in prices can have a severe impact on Pakistan's finances.

Considering the challenges that oil companies have been facing with obtaining letters of credit, a sharp increase in prices could make it difficult for them to procure diesel from abroad, potentially triggering a fuel crisis. It is essential for policymakers to take a proactive approach to mitigate these risks and ensure the country's resilience.

Effective crisis management entails taking preventive measures. Policymakers must anticipate the potential threat of rising diesel prices and take action accordingly. One effective strategy is to ensure that domestic refineries operate at full capacity, which can fulfil all local diesel demand and save foreign exchange reserves by eliminating imports. As per one estimate, the annual forex savings (net) could be close to $1bn. Moreover, this can also reduce the country's vulnerability to any geopolitical or supply-chain disruptions that may occur in the international markets in the future.

Despite a volatile global market, it is crucial for government officials to take preventive measures to mitigate future crises. Addressing the longstanding issues with domestic refineries and strengthening local energy sources could be viable options for the country to reduce its dependence on imports and improve its resilience against future oil price shocks.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World Economic Forum 2023

Speakers hope economic growth could rebound

The speakers at the recently concluded World Economic Forum-2203 at Davos noted that recent economic signals have given experts reasons for hope, if not complacency about the outlook for 2023. Signs of declining inflation, resilient consumer spending and strong labour markets, among others, suggest that economic growth could rebound in the short term.

"My message is that it is less bad than we feared a couple of months ago, but that doesn't quite get to us to being good," said Kristalina Georgieva, Managing Director of the International Monetary Fund.

The threat of rising inflation seems to have abated in many parts of the world, thanks in part to interest rate increases from some central banks. While many decision-makers have expressed determination to sustain rates, there is a risk that recent improvements could cause leaders to ease rates.

"The greatest tragedy in this moment would be if central banks were to lurch away from a focus on assuring price stability prematurely and we were to have to fight this battle twice," said Lawrence H. Summers, Professor at Harvard Kennedy School of Government.

A major economic priority worldwide for 2023 involves accelerating decarbonization. Recent legislation in the United States to support green energy will provide billions of dollars in funding but has provoked concerns of launching a subsidy war between Europe and the US over decarbonization technology. On the one hand, competition to promote green energy could accelerate progress for the benefit of all. On the other hand, the risks that nations will block technological developments and turn inward would deter global progress.

"I hope very much that this subsidy race we are hearing about is not going to be a race for the bottom," said Christine Lagarde, President of the European Central Bank. A negative repercussion of Europe-US competition would be overlooking the imperative to finance the green energy transformation in the developing world, which is the most vulnerable to the impacts of the climate crisis.

Competition over green energy could amplify other risks of fragmentation in global trade as many nations prioritize national security over global integration. "Over the last three years, we have entered a new era of globalization. We have shifted from market-driven globalization to politically powered globalization," said Bruno Le Maire, France's Minister of Economy, Finance and Industrial and Digital Sovereignty.

In Japan, inflation remains a concern, but the nation has seen recent improvements in job creation. "We made that change I should say mainly due to increased labour participation of women," said Kuroda Haruhiko, Governor of the Bank of Japan.

"If we don't succeed when it comes to the trade and investment agenda, we will not revive global growth." So warned Børge Brende, President of the World Economic Forum, at a press conference highlighting a set of initiatives aimed at facilitating global trade in a time of increasing fracture, haunted by the threat of de-globalization and decoupling. Two of the initiatives focus on eliminating bureaucratic red tape and harnessing technology to remove friction and boost the efficiency of trade and cross-border investment.

Meanwhile, a basket of initiatives focused on tradetech – the set of technologies and innovations that enable global trade to be more efficient, inclusive and equitable – including a pilot three-year partnership between the Forum and United Arab Emirates, hopes to use the cutting-edge technologies of the Fourth Industrial Revolution to streamline

MoU signed to explore sustainable fuel opportunities

PARCO

Pak-Arab Refinery Limited (PARCO) has a signed a memorandum of understanding (MoU) with two foreign companies to explore opportunities in sustainable fuels and feedstock production in Pakistan, a statement said on Thursday. UAE-based Mubadala Energy and an Austrian petrochemical firm OMV Downstream GmbH (OMV) to help PARCO find out possibilities of pursuing projects in circular economy initiatives, including sustainable fuels, plastics production and recycling, feedstock, and development of synthetic oil and chemical products. The collaboration seeks to utilise cutting edge technologies while leveraging existing infrastructure and market access. The agreement would also support a recently launched sustainability strategy that pinpoints three key priorities: creating a positive environmental impact, supporting responsible operations, and being a partner of choice. Through the MoU, the partners also hope to further support efforts to ensure energy security within key customer centers. "We have set out a clear strategy to pursue new energy sectors and low carbon solutions in support of the energy transition," Mansoor Mohamed Al Hamed, Mubadala Energy CEO, said.

Climate change implications

Need to shift global financing system

Patricia Scotland

The floods in Pakistan last year caused devastation and carnage, leaving enduring impacts on the lives of millions. Thousands of lives, tens of thousands of homes, and hundreds of thousands of livelihoods have been consumed by water on an unimaginable scale. More than 30 million people have been affected, with more than half a million displaced.

They have been the worst floods in Pakistan's history and — with atypically heavy monsoons combined with melting glaciers, on the back of severe heatwaves — they have been an obvious expression of the clear and present danger of climate change, and a most painful reminder that inaction on climate change today is a wilful choice to make tomorrow's crises even worse.

This is true in Pakistan; it is true across India and Bangladesh; it is true across Commonwealth countries in Africa, the Caribbean, and the Pacific. It is a truth which forces us to assess the quality of our immediate response when disaster strikes, and to assess our overall approach to global financing in the age of climate change.

The UN Secretary General stepped forward quickly to mobilise international support for relief, rehabilitation and reconstruction. This month, the Government of Pakistan and the UN co-hosted the International Conference on Climate Resilience in Pakistan to address climate resilience and adaptation, following the disaster. I wholeheartedly support these efforts. Yet, in doing so, I urge the world to recognise that the traditional cycle of crisis followed by one-off mobilisations of support is no longer sufficient.

In an age when the frequency, scale and impacts of climate change continue to intensify — and interlink with ongoing global economic, energy and food insecurity to further amplify their impact — business as usual will not work.

We need to combine the generosity of people and governments with a more modern, skilful institutional approach which can enable countries with complex vulnerabilities, facing potentially

crippling crisis, access to the fullest range of short- and long-term finance mechanisms, based on a hard-headed assessment of their real vulnerabilities, not on the blunt metric of GDP.

Pakistan is the world's 8th most climate-vulnerable country, yet 172 countries sit below Pakistan in global GDP rankings. This influences the scale and nature of financial support from global institutions which Pakistan is able to access, whether in times of profound crises, or in the vital long-term effort to build resilience and reduce the impacts of future crises.

This is not a problem for Pakistan only, but for a host of our 56 countries also.

The Commonwealth, alongside many organisations, including the UN, is attempting to drive more nuanced and constructive ways of defining and measuring the vulnerabilities of nation states.

We are working closely with our member states to hone our Universal Vulnerability Index, which assesses a country's real resilience in order to provide global financial institutions with a reliable, transformational tool with which to assess where the need is greatest.

And recently, Commonwealth FMs discussed the need for institutional financing to prioritise vulnerability. This vulnerability dialogue overlaps with a vital debate around perceived injustices — both current and historical — which sits at the heart of global climate politics and links the global finance agenda, as we observed at the COP27 in Egypt.

Many developing nations are asking the developed world to satisfy their demand for more urgent action: both by keeping promises made on climate finance for adaptation and mitigation, and by compensating the most vulnerable countries which did nothing to cause anthropogenic climate change, but which have already suffered damage which cannot be undone. Inertia, both in real-world climate action and in negotiations around finance which could unlock political progress, works for no-one. The situation in Pakistan has been both heart-breaking and urgent. It has also been another wake-up call: a call which asks us what kind of world we are, and what kind of world we want.

In a just world, where solidarity and empathy are active values, we would respond to such emergencies with the pace and urgency required, and we would be honest with ourselves about the need for a more complete, more compassionate overall approach. ■

The writer is the Commonwealth Secretary General

Conserving energy: Behavioural change and awareness needed

Decision to shut down marriage halls by 10pm will not result in fewer wedding events

Enem Ali Abbas

The decision to shut down marriage halls by 10pm will not result in fewer wedding events or a revenue shortfall for wedding banquets. People still held these events when the then Punjab chief minister, Shehbaz Sharif, imposed a ban on multiple wedding meals in the province.

Such restrictions will eventually make it easier for marriage hall owners to save on electricity bills. The same goes for shopping and other economic activities. This is a shift in the right direction. The Covid-19 pandemic is a good example to explain how desperate times led to some good decisions. The stay-at-home restrictions made virtual meetings and learning possible – something we had been ignoring for decades.

This mandatory shift helped us save on boarding and lodging costs, even in the corporate world. The new normal after the pandemic proved to be beneficial immediately, and this is what we need to replicate for energy conservation. Also, this conservation drive should not be limited to electricity or gas but also extend to water and fuel conservation.

Long lines of cars parked outside various schools around noon not only add to environmental pollution but also increase the fuel import bill. Carpooling apps should be promoted and regulated at the government level, and this disastrous trend of one car per child should be discouraged at all costs.

The government should also work on automation and digitization of services. The Punjab Land Records Authority (PLRA) has already digitized most of its records. This was endorsed and regarded as a great success story for the region by the World Bank. We need to develop similar projects that minimize travelling and eliminate the requirement to appear in person to avail government services. The PLRA has introduced online Fard facility which has enabled landowners to obtain the required document without leaving their homes or offices. This not only eliminates corruption and saves time but also saves the fuel consumed to visit patwaris. Technology is the way forward for a greener and better tomorrow; we just need to adapt.

Before we emphasize on the monetary value of energy conservation, we need to understand that it is not energy-crisis management, it is actually the new world order that we must comply with. Energy conservation in all its forms is the only healthy lifestyle solution for creating sustainable societies. Therefore, an energy conservation roadmap is a move in the right direction. It is not being introduced as just another conservation campaign but is backed by research and figures to estimate the outcome.

The prime minister's team has already made substantial progress in the gas conservation initiative. Petroleum Minister Dr Musadik Malik has already been emphasizing the use of conical baffles and other gas conservation devices through communication campaigns. The Oil and Gas Regulatory Authority (Ogra) has made it mandatory for all households to have conical baffles installed in their geysers. The Sui Northern Gas Company is installing these saver cones that could help consumers save energy.

Fortunately, the petroleum division is employing outreach tools to connect with its consumer base through social media applications, including TikTok. This is an intelligent strategy to inculcate conservation habits among young people. Conservation communication through cricket stars, role models and influencers can develop relevant conservation habits.

The government needs to promote water conservation as well. As world leaders have successfully prioritized food security as a matter of national and global security, governments and heads of states need to recall the forgotten concept of water security – a far greater problem and a global crisis affecting the developed and underdeveloped worlds. Unfortunately, Pakistan lacks a provincial narrative regarding water conservation and the reuse and safe use of water.

Behavioural change and awareness campaigns can facilitate much-needed change in people's attitude towards resource use, which can eventually prevent the water table from depleting in big and populous cities.

Nuclear power expansion hits snags

IMF loan seems to have tied govt hands about sovereign guarantee

EU Report

The development of C-5, which is the fifth unit of the Chashma Nuclear Power Generating Station, has hit a snag because of the reported refusal by the Ministry of Finance to furnish a sovereign guarantee.

The Chinese partner has agreed to provide financing for up to 85 per cent of the $3.7 billion nuclear power plant having a nameplate capacity of 1,200 megawatts, subject to the sovereign guarantee.

Such guarantees are meant to assure the creditor that the government will satisfy the obligation if the primary obligor — the Pakistan Atomic Energy Commission (PAEC), in this case — defaults on the loan repayment.

The loan programme of the International Monetary Fund (IMF) seems to have tied the government's hands with regard to the sovereign guarantee. As part of the 2022-23 budget, the government has laid before the National Assembly a Statement of Contingent Liabilities. The list contains all guarantees expected to be issued during the fiscal year. The government is treating it as a ceiling to contain fiscal risks and safeguard the public debt trajectory.

The share of nuclear power in the national energy mix has grown at a sharp pace in recent years. With a share of 27.1pc, it was the largest contributor to the energy pie in December. Hydel, coal and local gas were the other main sources with respective contributions of 20.4pc, 18.1pc and 15.1pc.

The quantum of nuclear power generation grew 47.5pc in December on a year-on-year basis, thanks to the addition of new capacities. In terms of the fuel cost alone, nuclear was the cheapest source of energy in December with an average of only Rs1.10 per kWh versus Rs11.50 for coal and Rs10.50 for local gas.

As many as six nuclear power plants are currently operational in the country. The first nuclear power plant, known as Kanupp-1, started generating 137MW of electricity way back in 1971. It was de-commissioned in 2021 after a 50-year run.

Meanwhile, the PAEC set up and has been running four nuclear power units based on Chinese technology near Chashma, Punjab. With a nameplate capacity of 325MW each, C-1 and C-2 started operations in 2000 and 2011, respectively. C-3 and C-4 became operational in 2016 and 2017, respectively, and have a gross capacity of 340MW each.

Separately, PAEC established Karachi Nuclear Power Plant Unit-2 and Unit-3 at Paradise Point, once a popular public beach on the outskirts of Karachi. The two units have a nameplate capacity of 1,100MW each. K-2 and K-3 started generating electricity in 2021 and 2022, respectively.

The six nuclear plants have a combined installed capacity of 3,530MW, constituting a share of 8.1pc in the country's total nameplate power-generating capacity.

Spending $10bn pledged at Geneva conference

Top-down investments cannot succeed without strengthening coping capacity of local communities; Resilient development is not possible without institutional reforms

Ali Tauqeer Sheikh

The world's first donor conference in Geneva, convened specifically to support the victims of climate-induced disaster, has pledged more than $10 billion for Pakistan. This offers Pakistan a rare opportunity to shed its image of a passive recipient of climate disasters. Instead of being a victim only, the country can now undertake a series of well-deliberated, long-term measures for strengthening the resilience of its people and infrastructure.

The strategic vision shared by the Pakistani leadership with the international community at the conference was that Pakistan will pursue social inclusion and participation as a strategic objective. How can Pakistan honour this commitment, or spend the $10bn put on the table? This is as good a time as any to initiate reforms to reduce climate vulnerability, consolidate these partnerships, and build back stronger and faster.

Resilient development is not possible without institutional reforms. The urgency is staring us in the face with a current price tag of eight per cent GDP loss and projected GDP shrinking 20pc by 2050. In fact, resilience, reforms and economic development have become intrinsically linked. Pakistan's existing political and economic systems breed climate vulnerability, made worse by food and water insecurity, degraded land and polluted air. The proposition is relatively straightforward: higher degree of preparedness can help us avoid public and private losses from climate-induced disasters. Resources saved can be invested on climate-smart development.

But no matter how important, reforms are always driven by local politics. They are particularly hard to undertake in a traditional society. Provinces and regions in our federal system are governed by different political parties who jealously guard their autonomy. Pursuing a reform agenda is particularly challenging in the present political context where consensus-building in a coalition government can be risky and time-consuming. The first order of business is to build political consensus that reforms for climate security are essential and cannot be postponed any longer. Fortunately, most of the essential institutional, legal and economic reforms are part of the unfinished agenda of the 18th Amendment that enjoys national consensus, except for occasional dissension by some interest groups.

Not all international pledges will be delivered this month or during this fiscal year, even if many are recounted, recycled and repurposed existing commitments. Yet, Pakistan is notorious for delayed implementation of its public sector projects. Unfinished projects have accumulated over time to an unbelievable number — more than 1,200 projects worth Rs1.6 trillion.

Top-down investments cannot succeed without strengthening the coping capacity of local communities. This is many times higher than the size of the annual Public Sector Development Programme. Given the long list of already approved projects by PSDP, the Planning Commission and ECNEC and their provincial counterparts can obligate the pledged amounts in a matter of weeks, if not days. But then, like hundreds of earlier projects, these will not be finished in a timely manner, efficiently and impactfully. Inordinate delays in implementation not only mean cost overruns, but delays also obstruct accountability and cast shadows on transparency.

The project delivery system is already

stretched to the seams. Going forward, it is imperative for us to take a fresh look at how best we can spend development funds. The risk is that unspent funds will be repurposed yet again, as has become frequent practice in the country in recent years. The underspend of allocated budgets is, more often than not, a sign of mismanagement and incompetence. Public sector projects often have over-allocation to give headroom to senior officials and project managers for other urgencies.

This is the right time for Pakistan to learn from two recent experiences. First, after the 2005 earthquake, a similar Conference on Rehabilitation and Reconstruction of the areas affected resulted in pledges of $3.5bn. Likewise, a meeting of Friends of Pakistan co-convened in 2008 by the World Bank and Japan, resulted in commitments of $5.8bn for development and counter-terrorism. In both cases, Pakistan could not fully avail the pledges, and there is still no report on the reasons why such opportunities were allowed to slip by.

Some operational lessons from recent experiences in different provinces under various projects can guide us. The delivery speed was appreciably high under the early harvest projects during the first phase of CPEC. Can this experience be repeated? Likewise, in some important projects, the federal and provincial governments successfully set up Special Purpose Vehicles or SPVs, instead of struggling with existing institutions. Also, in some recent instances, the planning boards in various provinces have effectively delivered larger projects through Special Projects Units or SPUs.

The biggest risk to our infrastructure, however, comes from archaic building guidelines, standards and associated laws, and procurement rules and procedures. Had Pakistan aligned her construction standards with internationally accepted standards, we would have saved ourselves a very high percentage of the infrastructural losses. The country desperately needs to upgrade its construction standards, materials, technologies, and approval processes — and this needs to be fast-tracked by creating more operational and policy space for the private sector to lead in infrastructural development.

Finally, while we will need to address several practical questions relating to implementation capacity at the federal and provincial levels, undertaking two fundamental reforms will test our national resolve and commitment:

First, we need to remember that climate vulnerability is fundamentally a local issue, and without strengthening the coping capacity of local communities no amount of top-down investments can succeed. Fortunately, there is a growing realisation that local governments need to be operationalised, resourced and empowered for locally-led development. A specially constituted taskforce can recommend how the National Finance Commission Award can be restructured to have provincial- and district-level financial awards.

Second, none of Pakistan's project planning, procurement, project delivery and project closure documents are climate-proofed. They do not capture our climate risks and vulnerabilities nor measures towards adaptation and mitigation and their co-benefits for economic development, job creation, productivity or inclusion of youth, women for equity and inclusion. They have not really changed since being introduced decades ago by Dr Mahbub ul Haq or cosmetically revised in 2005. Reconstruction and rehabilitation cannot be resilient without revising them. Countries do not fail, but institutions do if they do not evolve and change. Let's not allow stagnation to set in. ■

CIRCULAR DEBT

Gas tariffs: Circular debt will stay

EU Report

As the regulator determined consumer end gas prices for both Sui companies – analysts were quick to link it to the IMF and more importantly a step towards an end to the gas sector circular debt. Only the prescribed price increase does little to address the bulk of the circular debt, the government will have to find ways to clear the circular debt stock, and also find a way to keep the flow from rising. The Ogra price increase does not take care of that, quite contrary to popular perception.

Perspective often goes missing, especially when it comes to energy sector pricing in Pakistan. The same seems to be the case this time around, where positions are taken based on political leanings, and generalized (and often lazy) observations in the guise of analysis end up deviating from the focus. First things first – the price increase was long overdue and is a continuation of Ogra's November decision, which was reviewed by the Sui companies, on new ground realities.

The average price for SNGPL has been prescribed at Rs952/unit – higher than 29 percent from the existing average price and not 75 percent, as a number of media outlets, have been reporting. The onus still rests with the federal government which has 40 days to finalize consumer end prices for different categories and consumption slabs.

A failure to do so would mean the average price of Rs952/unit applies to all categories – meaning a massive increase in lower-end domestic slabs and fertilizer sector, and a significant decrease for most other users. The likelihood of this happening is next to none. Expect the government to continue with the cross-subsidy currently in place, and the recent statement from the finance minister very much assures that domestic consumption will continue to be subsidized by other users, who will pay more than the cost of gas.

In terms of the financial health of the sector, it should be a zero-sum game as long as the companies are getting the cost plus the required return – regardless of who pays how much. For anyone pinning hopes on this exercise even moving a needle on the circular debt is best advised to thoroughly go through the regulator's price determinations.

It is often what is missing and not what is included in the final price – that is the cause of concern. Ogra has maintained its earlier stance of continuing to exclude the prior year's shortfall, which makes up for nearly one-third of what is now called the gas sector circular debt. In SNGPL's case alone, the prior year's shortfall stands at Rs295 billion – all of which is disallowed. The shortfall stands at Rs973/mmbtu at today's indigenous gas consumption – more than the average prescribed consumer end price. ■

CYBER WARFARE

Ukraine war and power outage in Pakistan

World must wake up to this damaging war by other means by the West

Dr Muhammad Ali Ehsan

West blames Russia for executing massive missile strikes using precision-guided munitions to attack, disrupt and destroy critical infrastructure including the electric power industry of Ukraine. In the ongoing Russia-Ukraine crisis and in the fog of war it is really difficult to peep in deep and carry out an objective analysis of the West's blame.

Yet, the American desire to resort to cyber warfare and conduct cyber-attacks on the Russian power industry is also well-grounded. West's support for Ukraine in all domains — political, economic and military — rests on one overarching principle: provoke the Russian population to indulge in large-scale protests and demonstration against the Putin regime. Nothing will promote that more than the US and NATO cyber-attacks on the Russian electric power industry. Clearly, power grid outages are very discomforting and disruptive — it is not only the loss of light, but other allied state-provided services also get disrupted like water treatment and gas stations that refuel our generators, trucks and cars. Such attacks are military coercive actions that can hamper the ability of the state to execute its state functions — all done without dropping a single bomb and just by getting into the adversary states network.

Just few days ago, more than 230 million people in Pakistan experienced a major power breakdown. If this was a modern welfare state, the energy minister would not have stayed in the office. He would either have resigned on moral principles or the government would have forced him to resign. The way things stand in this country we would even not know what caused this and why the grid failure happened, resulting in the nationwide blackout. But why I am mentioning this is because of its very relevant context. The battle out there between the major powers today is being increasingly fought in the cyber domain and these powers are nuclear powers. Beset by our own unending political problems, we are still a nuclear power. So what does this kind of grid failure means to the nuclear capability of a state? Could this have been a cyber-action carried out to determine how a high value target like Pakistan can be thrust into darkness without firing a single bullet?

If it can be successfully done against Pakistan, why can't it be done against Moscow, Beijing or Tehran? We must remember the world is clearly divided between a democratic and an autocratic world. Causing operational problems in the information space to the autocratic world is an easy way of creating public dissent. The military objective of the Western cyber warfare is very explicit — it is to disorganise the functioning of the key administrative, military and defence-industrial facilities, railway stations, sea ports, airports and other administrative complexes of the autocratic world that challenges the Western order and an international system that promotes Western interests and favours West.

Six months before the 'Estonian Cyber Exercise' in June 2022, the head of the US Cyber Command, General P Nakasone announced a series of offensive digital operations "in support of Ukraine". The US already has, in its defence budget of 2023, earmarked $11 billion for cyber-attacks against governments of hostile states. Is even planning such an activity not a gross violation of international laws?

Considering that the ongoing war in Ukraine is fundamentally the Western world's encroachment of Russian sphere of influence, NATO's eastward encroachment and encirclement of Russia, would the US plans of acting as a global hegemon in cyber warfare go uncontested? These are dangerous signs for the world and the complete blackout in Pakistan is a reminder to the entire world of the type of cyber capabilities that the major powers may have acquired.

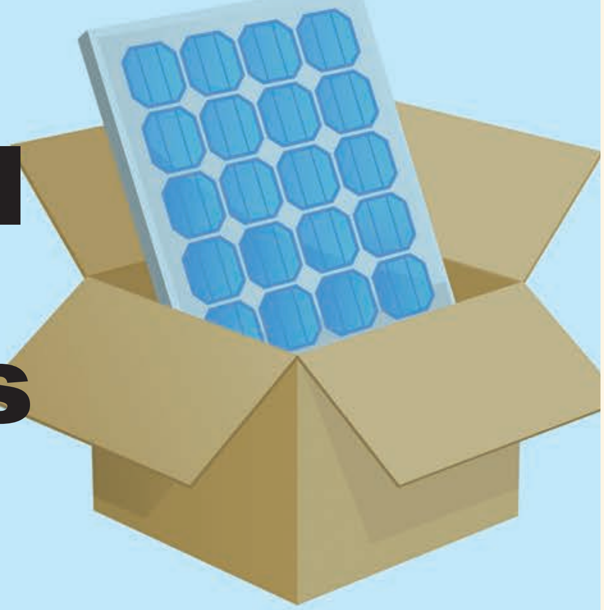
Two other countries of the autocratic bloc — China and Iran — have already accused the US of conducting massive cyber-attacks on them. In September 2022, China accused White House of conducting a cyber-attack on its national education institutions; and in October 2022, Iran blamed the US for cyber-attacks that disrupted the operation of its national gas station network.

The world must wake up to this damaging war by other means by the West. It must work on its recovery capabilities, undertake all possible actions and formulate policies to prevent their power grids both from physical and cyber-attacks. T

Cyberspace has evolved into the main domain of military operations and like all previous introduction of destructive military technology we may again thank West for introducing this new threat. The autocratic world is under attack and countries like Russia and China would do well to defend themselves not only in air, land and sea but also in cyberspace. Pakistan would also do well to learn the early lesson and plot a roadmap that shields it against such attacks by its enemies.

CHALLENGES

Work on small solar projects halts



Investors await easing of restrictions on equipment imports

Zafar Bhutta

Investors in solar power projects have aired serious concern over the blocking of equipment imports by the central bank, saying such restrictions have led to a halt in project implementation.

The issue was taken up in a meeting National Electric Power Regulatory Authority (Nepra) held with small and large solar power project owners, especially those who were working in Balochistan.

It was noted that there were several areas in Balochistan that had huge opportunities for developing solar energy projects and in such a situation, people could come forward to finance and execute the projects.

Meeting participants pointed out that Balochistan had also opportunities for installing off-grid solar plants. In a sign of difficulties being encountered, the representatives of different companies said that the State Bank of Pakistan (SBP) had blocked equipment imports for solar energy projects and sought the power-sector regulator's intervention to smooth the flow of imports.

They have not been able to import equipment for the past six months, which has delayed the execution of plans. They asked for Nepra's support in the form of a firm policy to help implement the projects. Solar projects would pay back in two years if the import of equipment was streamlined, the company executives emphasised, adding that small projects could save $200 million in fuel substitution.

According to them, the solar industry is using up to 40% locally produced equipment but it requires further support to rely more and more on such supplies.

They regretted that the domestic manufacturers had got no support from anyone, who needed a strong backing for their localisation drive. Citing an example, they pointed out that India was supporting its suppliers of solar equipment by providing a 10% premium, adding that Pakistani suppliers expected the same from the government.

The absence of a recognised body of solar project owners was blamed for the lack of required support. They dubbed SBP's import policy regressive. Nepra authorities, present in the meeting, gave assurances to company officials that they would hold separate sessions with the industry to listen to their issues.

They said that there were tube wells which did not have electricity meters and were getting illegal supply. Calling them a cause of circular debt, they emphasised that those tube wells should be shifted on to solar energy with private-sector cooperation.

However, they proposed performance guarantees from the government on behalf of farmers to implement the switchover plan. The government was giving subsidies to the tube wells in Balochistan, which should now be diverted to find out solar solutions for those projects, emphasised Nepra officials.

"These tube wells are not paying bills. Government should come up with a plan to solarise the tube wells," said a company representative.

A K-Electric official revealed that the company was working on a solar project in Lasbela district. He saw a lot of potential for solar plants and said that their project would help to boost industrial growth in Lasbela region. "K-Electric has put in place a plan. But it faces problems in land acquisition from the Balochistan government. Land acquisition process has challenges," he said. ■

Much-awaited refinery policy finalised

EU Report

The government has finalised a draft of the oil refinery policy that envisages several tax exemptions and incentives to enable refineries to invest in upgrading their plants. In the past 40 years, no new refinery has been set up in Pakistan, which needs a new plant that can process 400,000 barrels of crude per day to meet the country's high petroleum demand.

Upgrading of the existing refineries can also lead to an increase in their installed capacity to cater to the consumer needs. At present, Pakistan's oil refineries are meeting 55% of the annual demand for petroleum products and saving foreign exchange of $1 billion. They utilise around 70,000 barrels of local crude and condensate per day. They say they are providing more than 100,000 direct and indirect employment opportunities and are making reasonable contribution to the national exchequer and the gross domestic product (GDP).

Unveiling the salient features of the much-awaited refinery policy, sources said that there would be a minimum customs duty of 10% on motor gasoline and diesel of all grades as well as imports of any other finished products for a period of six years from January 1, 2023 to December 31, 2028.

Refineries will be allowed to keep the 10% customs duty applicable to finished products in the ex-refinery price under the existing price mechanism or the regulated price mechanism from January 1, 2023 to December 31, 2028.

However, 2.5% of net taxes on diesel and 10% on gasoline would be deposited in a dedicated bank account of the respective refinery for plant upgrade purposes, sources said, adding that the customs duty above 10% would be returned to the Oil and Gas Regulatory Authority (Ogra) under the Inland Freight Equalisation Margin (IFEM) framework.

According to the draft policy, in case the pricing regime is deregulated, during the period from January 1, 2023 to December 31, 2028, the refineries will be allowed to retain the prevalent customs duty in the ex-refinery price. ■

World owes Pakistan $30b a year for pollution

EU Report

The monsoon season of 2022 brought forth the most devastating floods to Pakistan. Two of the country's provinces received 8x more rain than their 30-year average, resulting in widespread destruction and loss of life.

A study conducted by World Weather Attribution has found that human-caused climate change significantly increased the intensity of the monsoon rainfall that Sindh and Balochistan experienced this year. It found that the rain during the region's five most extreme days was 75% more intense than it would have been without the 1.2-degree Celsius increase in global temperatures.

The inescapable nature of climate change makes such destruction inevitable. The losses from such events are always quantified in terms of lost crops, infrastructure, and human lives and any expectation by the global community to foot the bill is met by inadequate remuneration in the name of aid, charity, or loans with no accountability.

Pakistan has received less than $1 billion in charity for the last flood, peanuts when compared to the damage the country has suffered. This pattern of asking for aid after natural disasters has been the norm for Pakistan, as if the country is solely responsible for the effects of climate change and not a victim of.

Pollution, for centuries, has been the passive cost of global economic development. Since the industrial revolution, economies have relied heavily on fossil fuels to power their growth. The largest economies China, the United States, and India contribute the most to pollution, emitting more than the rest of the world combined.

As the global economy has grown, so has the impact on the environment. However, much like economic prosperity, the distribution of pollution and its effects has not been equal, with some countries bearing a disproportionate burden.

Pakistan sits at the top of the list of countries most severely affected by the consequences of climate change, despite contributing very little to the pollution that drives it.

With a population of nearly quarter of a billion people, Pakistan's annual carbon emissions are only 217 metric tons, or roughly 1 metric ton per person. In comparison, the worst polluting countries emit more than 20 metric tons per capita, while the global average is 4.5 metric tons per person – four times the average Pakistani.

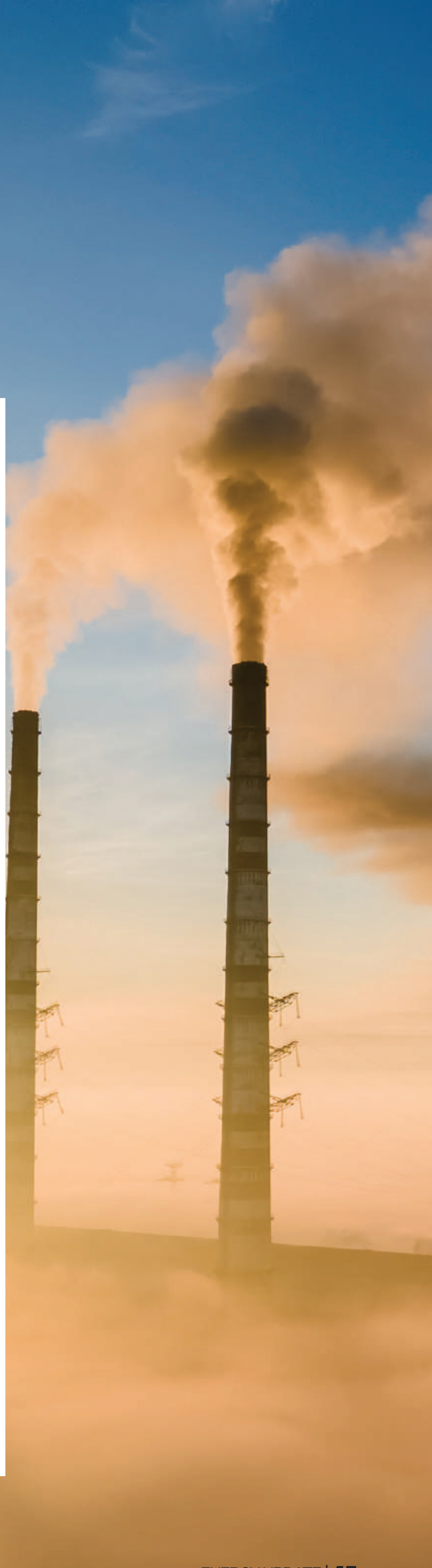
Despite making up 3% of the global population, Pakistan contributes only 0.6% to overall emissions; yet it bears the brunt of climate change impacts. This inequity merits compensation!

If we equate the 737 million tons of CO2 savings and use the lower end of the current price range of $40 per ton of CO2, Pakistan is entitled to receive $30 billion on an annual basis – a bill that should be footed by the net emitters of the world, a long list of extremely wealthy nations.

The $30 billion annual compensation to Pakistan for reducing its carbon emissions below its fair share may seem excessive, but it is in fact a small fraction of the benefits that these emissions reductions generate for the world.

Global CO2 emissions are around 36 billion tons per year, and the global economy generates $96 trillion in economic activity annually. Therefore, for every ton of pollution, an average of $2,666 worth of economic activity is generated.

Pakistan's pollution reductions, which amount to 736 million tons per year, allow the world to create nearly $2 trillion in economic activity or wealth every year. In comparison, the $30 billion compensation for these emissions reductions is only 1.5% of the total monetary benefits that the world receives from Pakistan's environmental conservation efforts.



Made-in-Pakistan panels

NET-LINE aims to make solar power accessible

Sana Jamal

Solar power currently generates only a fraction of the country's overall electricity but the trend continues to grow. Pakistan is rapidly accelerating the shift to renewable energy such as solar, wind, and hydroelectric, to cut dependence on costly fuel and free the economy from volatile fuel prices, and curb energy costs.

To realize this vision, a Pakistani solar energy pioneer Netline has unveiled renewable energy ambitions with a big solar push to boost domestic solar manufacturing and accelerate the country's shift from imported fuels to clean energy.

180MW solar factory

Netline is gearing up to build a modern solar panel manufacturing facility on a three-acre industrial land on the outskirts of Islamabad with a 180MW (megawatts) of electricity generation capacity annually. The factory will be built using technology initially imported from Turkey.

The nearly $30 million factory will be built in three phases with the last phase costing the largest amount of $20 million as it will involve the mining of quartz — a crystalline mineral composed of silica used for solar panel manufacturing. The facility is expected to be completed in 2026 which will "localise the solar panel production in Pakistan", Umair Zavary, the group director for the Netline group of companies, told media.

Netline has so far installed solar systems with a power generation capacity of almost 15MW with 400 active locations across the country from Skardu to Karachi.

Rs28.5bn loan pact signed for power project

EU Report

France will provide a loan of 28.5 billion rupees (120 million euros) for the Khayal Khor hydropower project, a 128 MW facility located in the city of Patan in Khyber Pakhtunkhwa (KPK). A press release issued by the French Embassy said that a financial agreement was signed between the two governments in Islamabad. The agreement was signed by Secretary, Department of Economic Affairs (EAD) Dr. Kazim Naij, French Ambassador to Pakistan Nicolas Guille and Country Director of the French Development Agency (AFD) Philippe Steinmetz. he concessional loan from France will support the Water and Power Development Authority (WAPDA) to develop the hydropower sector in Pakistan. The funding will also help increase the competitiveness of renewable electricity generation. This will help in increasing the supply of affordable power and energy. The Khyal Khor Hydroelectric Project harnesses the energy potential of the tributaries of the Indus River. The 128 MW hydroelectric plant will generate 420 GW per year, of which 25 percent will be overloaded.

"Pakistan Based Netline Group Awarded Project For Solar In Saudi Arabia"

Pakistan's leading group Netline that recently secured "series A" funding has just signed an exclusive agreement with Saudi based Tamheed Energy for solar based projects in Saudia Arabia. Tamheed Energy incorporated in 2017, the company has executed many MEP and Renewable Energy projects in various sectors both private and public. Tamheed Energy offers innovative solutions to help customers all over the Kingdom of Saudi Arabia. Senior Board Member of Tamheed Energy Mr. Aamir Khan, visited Netline office to personally sign the MOU agreement and exchange documents with Managing Director Mr. Umair Zavary of Netline Group.

Both companies have agreed to work exclusively on projects and increase business between the two partner nations for more growth in the renewable sector. "We feel that more partnerships like this will not only benefit Pakistan but also the region and open the door to more opportunities,"said Mr. Umair Zavary at the signing ceremony.

Sindh launches Pakistan's 1st electric bus service

EU Report

The Sindh government has launched the country's first electric public bus service in Karachi. Launched under the Peoples Bus Service of the provincial transport department, the vehicles started operations from Jinnah Avenue near Malir Cantonment to Sea View near the city's coastline. Electric buses will also start operating on other routes in the city as well. Sindh Information and Transport Minister, Sharjeel Inam Memon, along with Labour and Human Resources Minister, Saeed Ghani, and Local Government Minister, Syed Nasir Hussain Shah, launched the service. They also travelled in one of the electric buses and checked out facilities for the commuters. Memon said that the new service reflected the vision of the ruling Pakistan Peoples Party to introduce the most environment-friendly, modern, comfortable, and cheap mass transportation facilities for the urban population in the province. He said the new buses imported from China were fully compliant with the European environmental protocols as they don't cause any form of environmental pollution.

SOCIAL ROUND UP

Condolence meeting held at Pakistan Embassy Türkiye & prayer of martyr of earthquake

Globol President ASHRAE Farooq Mehboob, VC NED Dr. Sarosh Lodhi, Abbas Sajid Inaugurated Plumping and Firefighting expo at Karachi

A group photo of guests with Erum Khan at Launching of Wellness Centre

LSindh Chief Minister Syed Murad Ali Shah along with Minister Local Government Syed Nasir Shah, Professor Dr. Abdul Bari, and others cut the ribbon to inaugurate Blood Transfusion Services at the New Building of Indus Hospital

Friesland campina Engro Pakistan holds a grand musical evening, Organzining team member are seen in the picture

Global Industry Suppliers Social Responsibility drive event at the Center for Speech and Hearing Mardan (a school for under-privileged hearing impaired students in the city of Mardan)

President JDC Zafar Abbas presented crest to Chairman NEPRA Tauseef H. Farooqi on his visit to JDC

Tauseef H. Farooqi Chairman NEPRA cutting cake at Pakistan Independent living centre

A wedding ceremony of daugher of M. Zakir Ali CEO Inverex a picture of Marketing Head Anas Zafar, Naeem Qureshi and Mustafa Tahir

Prof. Dr. Khaliq Iraqi VC University of Karachi, President Unicare Prof. Ijaz Farooqi and President Arts Council of Pakistan at University Day 2023 at University of Karachi

Ambassador to Russian Federation visited ACT Engineering stall at Pakistan Solar 2022

At Wedding Ceremony of Daughter of Muhammad Zakir Ali CEO Inverex. CEO Reon Energy Mujtaba Khan, CEO Greeves Pakistan Amir Raza, Managing Editor Energy Update M. Naeem Qureshi, Marketing and Communication Manager Mustafa Tahir are seen in the group photo

ENERGY NEWS

Gas project inaugurated at Hafizabad

EU Report

Minister for Energy (Petroleum Division) Senator Dr Musadik Malik has inaugurated gas transmission project in district Hafizabad.

The project, which is expected to benefit 57,000 consumers of 150 villages, has been completed at a cost of Rs2,142 million. Sui Northern Gas spent Rs1,609 million while funding of Rs533 million was provided by the government of Pakistan.

The inaugurated gas transmission project includes 25.3 kilometers 8" dia long transmission line, distribution network of 582 kilometers and a Sales Metering Station (SMS) at Pindi Bhattian. The distribution network has already been commissioned by connecting with the existing supply mains.

This project, while ensuring supply to the new consumers, will also help in addressing low pressure issues of existing consumers of Pindi Bhattian, Kot Sarwar, Kaley ke Mandi, Jalalpur Bhattian and surrounding villages.

Gas project delay

Iran warns of $18bn penalty

EU Report

ISLAMABAD: In a new development, Iran has asked Pakistan to construct a portion of the Iran-Pakistan (IP) gasline project in its territory till February-March 2024, or be ready to pay a penalty of $18 billion.

The authorities in Tehran communicated this to the visiting Pakistan official delegation some three weeks ago. During the visit, Iranian authorities said that the US sanctions on Iran were illegal and Pakistan, under the revised agreement, was bound to erect the pipeline in its territory till February-March 2024. Iran had already completed part of the pipeline in its own territory from the gas field to the Pakistan border.

The Inter-State Gas Systems (ISGS) of Pakistan and the National Iranian Gas Company (NIGC) had inked a revised agreement in September 2019 for the construction of the gas pipeline between the two countries.

Under the revised accord, Iran would not approach any international court if there was a delay in the construction of the pipeline, and neither would Pakistan pay any fine to Iran till 2024. Pakistan would be able to construct its pipeline by 2024 after which it would have an intake of 750 million cubic feet of gas from Iran daily.

Mohmand Dam Project in progress

EU Report

Chairman WAPDA Engineer Lt Gen Sajjad Ghani (Retd) was briefed during his visit to under-construction Mohmand Dam Project that the diversion system is scheduled for completion in November this year, while the project is likely to be completed in 2026.

Member (Finance) WAPDA Naveed Asghar Chaudhry and Member (Power) WAPDA Engineer Jamil Akhtar were also present during the Chairman's visit to Mohmand Dam Project. WAPDA is constructing Mohmand Dam Hydropower Project on River Swat, upstream of Munda Headworks in Mohmand District of Khyber Pakhtunkhwa Province. During his visit to the project today, the Chairman reviewed construction work on different sites, which included re-regulation pond, main dam, spillway, diversion tunnels, access tunnel, power intake, power house, switch yard and irrigation system etc.

He urged upon the project management to strictly adhere to the specifications laid down for construction of the project. Reviewing the pre and post-flood situations, the Chairman was of the view that concerted efforts are needed to complete this mega project in accordance with

the timelines. WAPDA's project management, the Consultants and the Contractor will have to work pro-actively in this regard, he further said.

Pakistan's rude awakening to its energy insecurities

Dr. Shahid Rahim

The turmoil in the world energy market in the aftermath of Russia's invasion of Ukraine has exposed Pakistan's vulnerability to fuel supply disruptions and price shocks which ultimately impinges on its national security. Our leaders are trying to manage this new challenge in their typical style of quick-fix and ad hoc solutions like fast-track solarization, energy saving by early closing of commercial markets, and switching of some coal-fired power plants from imported to local coal as part of their new-found love for indigenous energy supplies.

Such remedies may provide some temporary relief and may be politically expedient but cannot secure economic and sustainable energy supplies for the nation. Our leaders, regardless of their political leaning, should resist snap reactions and band-aids. They should carry out a vision-led systemic and comprehensive overhaul of the whole energy system—production, transportation, and delivery system—if they seriously want to secure energy supplies for the country's economy and its people.

Of the total 87 mtoe (million tonnes of oil equivalent) primary energy supplies during FY2022, we imported 42.71 mtoe (or 49%) which cost us USD 23.5 billion (excluding coal imports). This exposes our economy, defense, and society to high risks from energy supply disruptions and price volatility, and consequently our ability to pursue an independent foreign policy. Over 14.5 mtoe (or 35%) of the annual fuel imports went to power generation and makes power sector a prime target for the efforts to eliminate, or at least alleviate, our dependence on imported fuels.

Since these are serious and imminent risks, it's tempting to consider total indigenizing of our energy supplies. However, for a host of reasons—lack of resource endowment, technology constraints, locational issues, and economic and financial issues, to name but just a few—this may not be practicable. Energy infrastructure is also both capital-intensive and long-lived, and once in place, locks a nation into supply and consumption patterns that cannot be changed quickly and without heavy costs.

In today's highly interdependent world, chasing objectives like energy independence or self-reliance (by shifting to local resources for all our needs) though sounds nice to ears, will not be practicable or even worth the cost. It will also negate the progress the world has made by cooperating and harnessing the comparative advantage of different countries in certain physical and natural resources in the collective advancement of society. We should focus all our efforts on building "energy security" which is a more realistic goal and will embrace in its folds a reasonable and achievable proportion of “indigenous” sources.

Energy security for a country or society is generally understood to mean availability of uninterrupted energy supplies at affordable socio-economic and environmental costs. It bases on four threads: (i) availability—the ability of a country to secure its energy needs by

having an extensive commercial market and sufficient physical resources, investments, technology, systems, and legal and regulatory frameworks to back them up; (ii) reliability—the extent to which energy services are protected from disruption through diversification of energy sources and supply chains, resilience to handle shocks and recover from failures; (iii) affordability—low and equitable prices relative to income and their stability over time; and (iv) sustainability—minimal socioeconomic and environmental damages that can result from the energy system.

Many countries had tried to eliminate their dependence on foreign energy supplies but had to settle for indigenization well below 100 percent. Instead, they found it more prudent to improve their energy security through a myriad of other efforts. Japan, for example, lacks commercial energy resources but still ranks among the top energy-secured countries, mainly because of its strong economic ties with energy suppliers and other developed countries. China also depends a great deal on foreign energy supplies, but any serious disruption to its energy supplies is considered implausible since the economies of many developed and fuel exporting countries depend a lot on supply of cheaper products from China.

Energy security, however, is not a static concept but a dynamic one as the world around us keeps changing continuously. The shifting geopolitical landscape, technological developments, market trends, and new knowledge can easily render a previously energy-secured country vulnerable to new threats, thus undermining its energy security. It’s, therefore, desirable that both its definition and the metrics to measure it are reviewed periodically, or whenever a significant change in the background conditions warrants.

While energy independence may be a pipe dream, energy security is more plausible, practicable, and achievable. Unlike the former, the goal of which is to become self-sufficient in the production of energy, the latter focuses on increasing the supplies of energy by exploiting all the sources available, not just those restricted to energy. A singular focus on import reduction or indigenization will not address the multiple political, social, economic, and environmental impacts of energy supply, and many other issues. Many additional considerations should drive our policies and plans in the energy sector.

Pakistan was not born with imported fuel dependencies. The noose was tightened around our neck in the early 1990s through ill-conceived policies, devised and implemented on personal whims and vested interests, bypassing the regular institutional channels. Coupled with our successive governments’ refusal to let go of tight political control on the energy sector entities and failure to entrust their executive management to capable, competent, and independent hands have strengthened these chains so much that now they defy any half-hearted efforts by our governments to reform that are invariably devoid of a firm resolve and commitment from them.

Policymakers in Pakistan are not unaware of the criticality of energy security and have been striving to make the country energy secured. An integrated national energy policy is, perhaps, still on the drawing board, but the National Electricity Policy 2021 (NEP2021),

identifies energy security among the three primary goals of the country. Section 3.2: Energy Security of the NEP2021 states that: “The goal of the Government is to diversify the fuel mix of the generation capacity in the country, by optimal utilization of energy resources, such as hydro, renewable sources, indigenous coal, natural gas, and nuclear.” The need now is to not restrict it to power sector only but extend it to the whole energy sector.

Our energy sector is arguably in dire need of a fundamental transformation which must span and involve every facet and segment of its value chain, from legal and regulatory frameworks, policy, planning, and institutional arrangement, to investment, financial, and accounting systems, and executive and line management in the energy sector entities. There is no dispute that energy policies are to play a fundamental and decisive role in managing this transformation. But the government will have to tread with utmost care and prudence in this pursuit.

Pakistan’s energy sector suffers not by a lack of policies but by having too many of them. Majority, however, is disjointed, fragmented, and inconsistent, often at odd with each other. Starting with the 1994 private power policy, we have seen a streak of policies, introduced at regular intervals by our successive governments in their bid to attract private investment, mostly in the power generation function. These policies failed to deliver the intended results, however, and have led to serious unintended consequences like excess capacity, suppressed demand, runaway circular-debt, shifting of businesses to other countries, and punishingly high rates.

After assuming office in April 2022, our new coalition government seems quite keen to add its own share to the country’s energy policy galore, even though it should have left this task to the new government after next general elections. It’s forming multiple taskforces to deliberate and recommend reforms in specific areas. Energy policy formulation, however, is too serious an undertaking to be left to taskforces composed of representatives from ministries and other entities as a part-time job. Such efforts did not succeed in the past and may not work this time also. Members of these taskforces may be well-meaning, dedicated, and sincere, but they just don’t have the requisite expertise that such tasks demand.

Energy policy formulation is a complex, multi-faceted, and highly-specialized discipline,

and requires a team of capable and experienced professionals who have good grasp of the diachronic nature of global energy markets, continuously evolving technological trends, complexities of the global energy resources distribution, and geopolitical dynamics around these issues. It is a specialized job and, therefore, must be left for the specialists to handle.

Effort should always be made to set a clear hierarchy among different policies, from top national down to local ones. It's also ensured that the policy for a specific sector of the economy guides those in its subsectors. Our governments have followed a reverse order instead and issued sub-sector policies first, for instance, ARE Policy 2019 and Electric Vehicles Policy 2019, then the National Electricity Policy 2021, and we believe it's planning

to issue a National Energy Policy soon. Relatively new to join our energy policy portfolio are fast-track solarization, local manufacturing of solar panels, and energy conservaion.

Consistency, continuity, and stability of a policy is considered as important as the policy itself. Not in Pakistan, however, as before a new policy is fully grasped by the stakeholders, a new one is churned out by a new government, leaving them and others totally perplexed. Consistency of policies among the major sectors of the economy and sub-sectors and their stability over time are two pre-requisites for converting the strategic vision of our leaders into reality as they will raise investors' confidence, reduce risk perceptions, and increase investment flows.

Take the ARET Policy 2019, for example. There has been a Renewable Resources Policy in force in the country since 2006. The previous government thought that it needed significant improvement. Instead of modifying the 2006 policy, it decided to scrap it and develop a new one in its place. After almost 2 years of groundwork that had involved consultations with major stakeholders (a pratice previously unheard of), the new ARET Policy 2019 was approved and actually issued in 2020. This new policy had hardly gained foothold when the new government started tinkering with it.

The government should streamline and institutionalize the policy formulation and implementation process in the country by making it transparent, objective, and consultative. Every proposed policy must be screened through a specified criteria such as efficiency, cost-effectiveness, and distribution of its cost and benefits among various stakeholders. Specifically, the compatibility of the existing institutions for effectively implementing the intended reforms intended through these policies must not be overlooked.

The existing policies should be reviewed and, if need be, improved to encourage the deployment of distributed energy resources and discourage mega projects, especially those based on foreign technologies and fuels. These policies should also encourage deployment of storage technologies in the system to enhance the value of renewable energy technologies while relaxing their intermittency and variability constraints. Similarly, besides being a source of demand, battery packs in EVs can also support the power grid in more economical ways than the traditional solutions.

While new threats continue to emerge within and around our borders, new opportunities also evolve that we can use to reduce our dependence on imported fossil fuels. We must be ready to review our energy security challenges afresh and periodically since it is a critical link to our national security and liberty. "The price of liberty is eternal vigilance.", as aptly remarked by Thomas Jefferson. We must be ready to pay this price. ■

The writer is a freelance consultant specializing in sustainable energy and power system planning and development.

Annual Technical Conference held

EU Report

Annual Technical Conference was held to discuss oil and gas self-sufficiency through exploration and production revitalization

The 28th Annual Technical Conference & Oil Show was held on 9-11 January 2023 at a local hotel in Islamabad . The event was organized by the Pakistan Association of Petroleum Geoscientists (PAPG) and the Society of Petroleum Engineers (SPE) Pakistan. These companies provided generous technical and financial support to organizers for the event.

Around 1500 delegates from E&P, services companies, regulatory authorities and academia participated at the program. At the event, technical sessions featured 35 professional papers, 36 student presentations, and two-panel discussion sessions. The chief guest of the event was Hassan Mehmood Yousufzai, Additional Petroleum Secretary, Petroleum Division (Admin Wing). Other distinguished guests of the event were Ms Benish Fatima, Deputy Secretary, Corporate Affairs; Sayed Iftikhar Rizvi, Chairman ATC 2022, GM Reservoir Department OGDCL; and Syed Tariq Hussny, Vice Chairman ATC 2022.

Nepra approves IGCEP-2022

EU Report

The National Electric Power Regulatory Authority (Nepra) has approved the Indicative Generation Capacity Expansion Plan 2022-31 (IGCEP-2022), submitted by the NTDC in keeping with the relevant provisions of the Grid Code 2005. According to a statement of the Authority, it is pertinent to mention that the IGCEP is a dynamic document covering a planning horizon of 10 years and will be revised annually. It will act as a primary document for adding new capacity for generation to meet future electricity demand in a scientific and systematic manner; thus, avoiding the boom and bust cycles that have become a recurring issue in the country.

The IGCEP-2022 builds on the plans laid down by the preceding iteration and proposes a gradual shift from an energy mix heavily dominated by imported fossils like coal, furnace oil and RLNG towards one pillared by indigenous sources of energy, including hydel, Thar coal, wind, and solar. Furnace oil is expected to be phased out by 2031. Similarly, electricity generation from RLNG and imported coal will drop to two per cent and eight per cent, respectively, in 2031. At the same time, there will be a substantial increase in the electricity generated by hydel, wind and solar PV. The contribution of hydel, wind and solar PV which currently stands at 28 per cent, four per cent, and one per cent, respectively, will be increased to 39 per cent, 10 per cent, and 10 per cent, respectively; thereby, increasing the total share of green electricity to around 59 per cent.

Commissioner Karachi Marathon held

EU Report

Residents of Karachi actively participated in the 4th Commissioner Karachi Marathon, held in collaboration with the National Bank of Pakistan on January 29, 2023, at the Nishan-e-Pakistan, Sea View.

The people of all ages and all walks of life attended the event in large numbers from different parts of the city despite cold weather. Several dignitaries attended the event, including Barrister Murtaza Wahab, Adviser to Chief Minister Sindh and other members from the diplomatic corps. Sohail Rajput, Chief Secretary Sindh, was the chief guest who commended the event organizers and congratulated the winners.

The gold medal and the cash prizes were awarded by Rehmat Ali Hasnie, President of the National Bank of Pakistan to winners. Muhammad Akhtar won gold medal in the 1st Category of 12km race, and Muhammad Yasir Gil in 2nd Category of 7.5km. In the women's category, Nimra Iqbal won the gold medal and Fida Hussain clinched gold medal in the special category. The gold medalists were also awarded a cash

prize of Rs 50,000 each. The 1st and 2nd runner-up in each category were awarded a cash prize of Rs30,000 and 20,000, respectively. Prizes were given to the winners in the fun run category. Representatives from Japan, Malaysia, Morocco and Russia participated in the race and won prizes.

TY Wellness Sanctuary launched

Erum Khan, a renowned wellness and tourism expert, and Chairperson, Travel and Tourism Committee, Gwadar Chamber of Commerce and Industry (GCCI) held a soft opening ceremony of TY Wellness Sanctuary in DHA area of Karachi.

A large number of guests, including wellness experts, doctors, media persons, Chinese business professionals from different CPEC projects in Pakistan, friends, and dignitaries attended the program. Also president on the occasion were Khursheed Haider from HUM TV, Tara Dawood from Ladies Fund, skin specialist Dr Azam, nutritionist Hina Anis, Naeem Qureshi from Energy Update magazine , and Ataullah Nothezai from Nothezai Minerals.

The brand was initiated under the banner of strong Pak China friendship ties. The sanctuary will provide rich cultural exchange between the two countries.

A traditional Chinese tea making ceremony was also held to promote lifestyle in the stressful lives of Karachiites. Beside the TY Wellness Sanctuary, TY Sustainable Fashion was also inaugurated.

Govt may exempt solar equipment from all taxes

EU Report

The government is likely to exempt solar equipment from all taxes aimed at achieving the target of 10,000 MWp from solar plants and promote local industry, well informed sources told Business Recorder.

In this regard, Ministry of Industries and Production (MoI&P) has drafted "Solar Panel and Allied Equipment Manufacturing Policy 2023" to be presented to the Economic Coordination Committee (ECC) of the cabinet.

According to the draft policy, the prevailing severe energy crisis, global hike in fossil fuel prices and resulting ballooning of energy import bill have triggered pressure on the county's balance of payment (BoP). Resultantly, government has focused on increasing the share of indigenous energy resources from existing 40% to 90.2% by 2031 as part of Indicative Generation Capacity Expansion Plan (IGCEP), which will be achieved primarily through Renewable Energy (RE) sources. In this context the prime minister has approved to generate 10,000 MW of solar energy to overcome energy crises. The country has already witnessed a surge in the use of solar energy during the last few years.

The expected demand is expected to create huge potential market of solar modules and allied equipment as investors (local as well as foreign) are showing interest in investing in installing solar PV Panels and ancillary equipment manufacturing facilities in Pakistan. To make local manufacturing feasible, policy intervention from the government is needed.

Existing tax and tariff structure on import of solar equipment reflects that 17% sales tax is levied on imports of parts/components of solar modules/panels whereas imports of complete modules/panels are at zero percent duties and taxes. However, India and Turkey are applying up to 40 percent tariff differentials in order to promote their local industry.

DEA provides piped gas to city of GB

EU Report

Major milestone in the downstream gas sector has been achieved by DEA Group of Companies to provide alternate piped gas to the city of Gilgit-Baltistan (GB).

Dynamic Engineering and Automation as an EPC contractor and authorized distributor of AETHER dbs., USA has supplied and installed 100 mmbtu SNG Plant (Synthetic Natural Gas / LPG-Air Mix) for about 40000+ households.

Sui Northern Gas Pipeline Limited (SNGPL), as the owner and operator of the project, got the license for operation and distribution of LPG Air-Mix, through pipeline from explosive department and OGRA for this international standard alternate gas project with DEA assistance.

SNG/LPG-Air Mix is the safe and reliable alternate energy solution of piped gas for domestic, commercial and industrial consumers. Choosing the best energy source can be challenging, especially if you are located above 7,000 meters off Grid Gilgit Biltistan heights.

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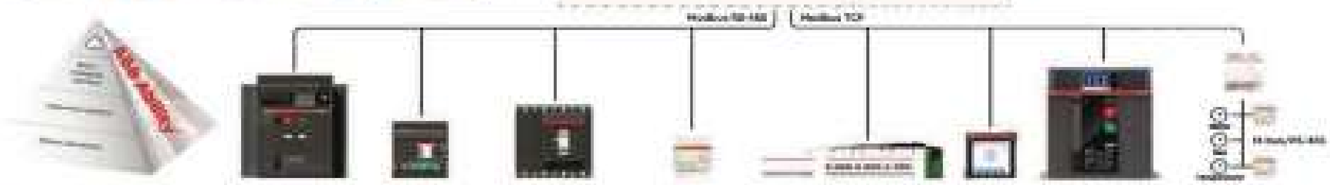

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