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ENERGY UPDATE

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INTEGRATED COAL MINE

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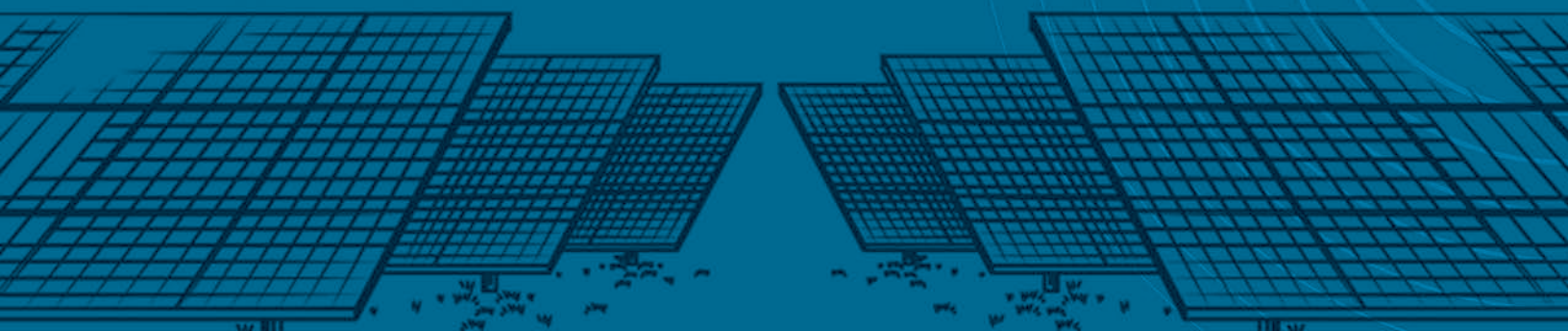

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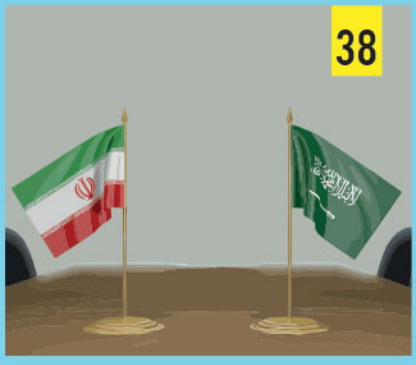


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FROM THE EDITOR'S DESK...

Inflation Curse

The inflation rate in Pakistan has climbed to an alarming level, making the life of poor people miserable and badly affecting socio-economic conditions of middle-class people besides hitting the businesses of rich-class people hard. Amid Ramadan, millions of Pakistanis are struggling to arrange simple food for Iftari and Sehri.

It seems that there is no rule of price hike control as everyone, including the government itself, is raising the prices of commodities at their will.

According to the Pakistan Bureau of Statistics, the year-on-year trend of the consumer price index depicts an increase of 46.65%, which is the highest in the history of Pakistan.

The prices of the main commodities on year-on-year basis have risen sharply - onions 228.28%, wheat flour 120.66%, gas charges for Q1 108.38%, diesel 102.84%, tea Lipton 94.60%, bananas 89.84%, rice Irri 81.51%, rice Basmati broken 81.22%, petrol 81.17%, eggs 79.56%, pulse Moong 68.64%, potatoes 57.21%, and pulse mash 56.46%.

The inflation last month surged to 31.5 percent, which was its highest level since 1974. As a result, life has become miserable for the average person. The general public's standard of living is not the only thing this phenomenon is affecting; it is also fueling social unrest across the nation.

The one reason for the hike in inflation is due to the rise in fuel prices, abolition of subsidies, and additional taxes imposed by the government in order to get the International Monetary Fund (IMF) loan. The other reason for the inflation is political instability, no writ of price control authorities, and lack of government interest in providing relief to the inflation-hit classes due to IMF fear.

The inflation rise in Pakistan is also caused by an increase in the money supply, a shortage of goods and services, increased production costs, and currency devaluation. This all is forcing people to pass a difficult life. The rising inflation has hit almost all classes of people and there is no remedy in the sight.

To control inflation, the government needs to control the money supply in the economy. If the money supply goes down, the demand for goods will reduce, causing a price fall. The government needs to keep inflation within an optimal range that could promote economic growth without dramatically reducing the purchasing power of the currency. Price controls are price caps or floors mandated by the government and applied to specific goods. Wage controls can be implemented in tandem with price controls to suppress wage push inflation.

The government needs to take revolutionary steps to rid people of the skyrocketing inflation; otherwise, there will be more political instability, crimes, chaos, unemployment, and poverty.

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From LNG to renewable energy

There is considerable potential in renewable energy sources like wind and solar power

Shujauddin Qureshi

This winter, there was a major gas shortage in many parts of Pakistan, leaving residents with no choice but to use alternate fuels like LPG, coal and wood to heat their houses. The winter, when the demand for electricity is at its lowest, was made worse by increased load shedding due to the natural gas shortfall.

Due to declining domestic gas supplies, Pakistan has relied primarily on imported liquefied natural gas (LNG). Every winter there is a significant spike in gas demand, particularly in Balochistan's snow-covered northern regions and in the Punjab and Khyber Pakhtunkhwa. This year, the Russia-Ukraine war made the imports unpredictable.

Pakistan imported $3.078 billion worth of LNG during the first eight months of the current fiscal year (ending on February 28). This marked an increase of $1.499 billion over the same period last year. Gas supply from Russia to wealthy European nations remained lower this winter. The Europeans therefore turned to Gulf suppliers. This raised the LNG prices globally.

Pakistan has a long-term LNG import contract with Qatar. However, it became harder for Pakistan to purchase LNG for the rest of its needs from its regular Gulf sources. The rising price of LNG in the global market was a major factor in the failure of several foreign LNG shipping companies to deliver their cargo to Pakistan. Pakistan Petroleum Limited, a government-owned company, issued a request for proposals in August 2022 for the supply of at least 72 LNG cargoes from foreign providers for the years 2023 to 2028. On the final date for submission and opening of these bids in the first week of October 2022, not a single bid had been received.

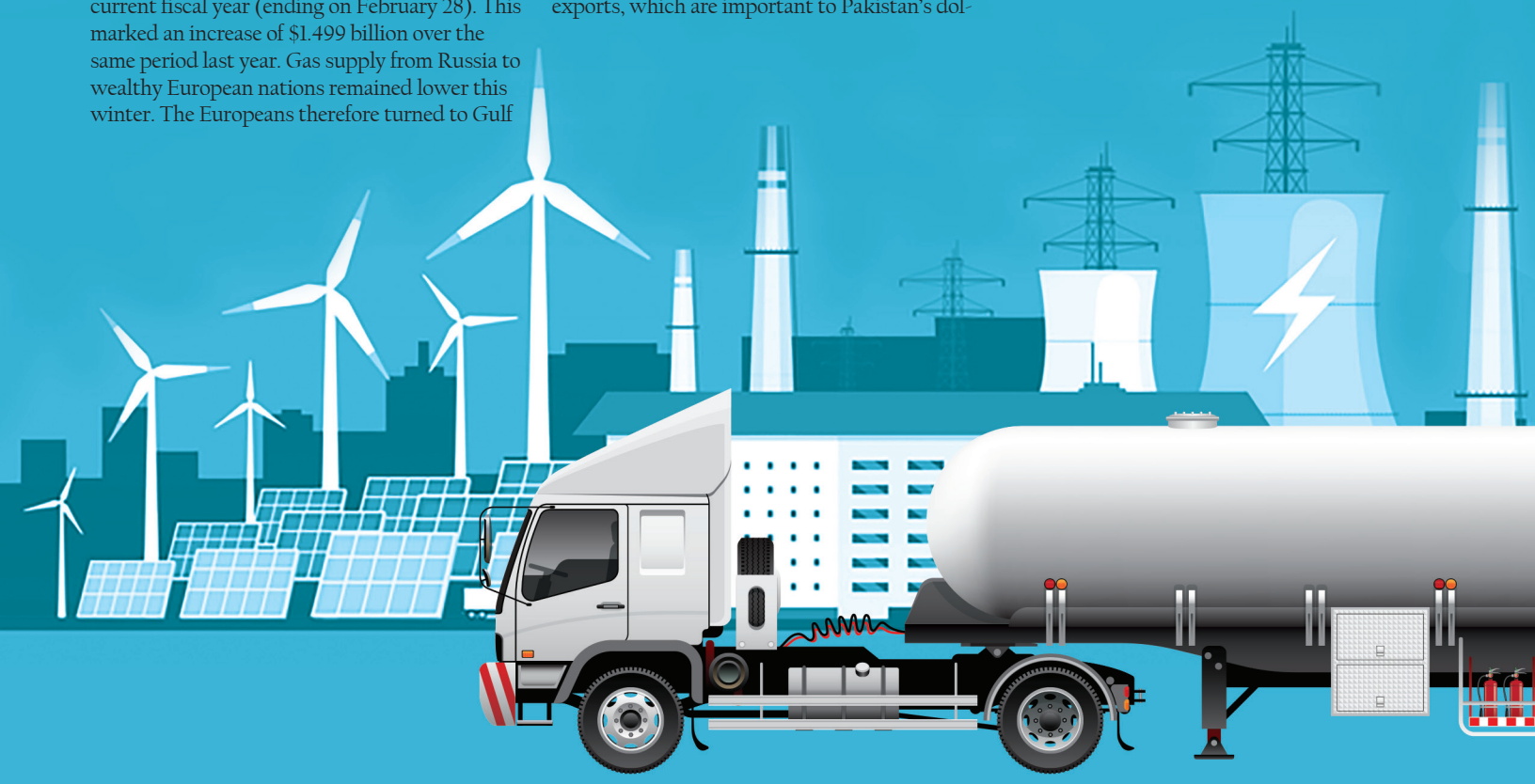
Eni SpA and Gunvor Group Ltd, two significant conventional LNG suppliers, also had at least two cargoes cancelled. They also anticipate delays involving deliveries in March, April and June. Gas shortages led to decreased textile exports, which are important to Pakistan's dollar-based export economy. They also resulted in frequent power outages and load shedding in most parts of the country. This hurt businesses as well as households.

Pakistan has witnessed electricity shortages despite having adequate installed capacity. Almost 45 million people in the country are not connected to the energy grid. Those who are, are subject to load shedding. When it comes to providing its residents with reliable electricity, Pakistan is ranked 110th out of 135 nations.

Pakistan uses coal, nuclear power, hydropower, furnace oil and natural gas to produce electricity. It depends heavily on imported oil and gas, which exposes it to price changes and supply disruptions. Pakistan's energy demand is estimated at around 25,000 MW against a supply of 22,000 MW, leaving a 3,000 MW gap. The gap widens in summer when electricity demands peak in most areas.

Pakistan depends mostly on natural gas to produce electricity. When LNG is in short supply, it affects domestic power production as well. By 2030, Pakistan's gas reserves are predicted to be exhausted. New discoveries won't be enough to meet the country's needs.

Pakistan has risen to sixth place in the global LNG Build Out due to its extensive use of natural gas in key sectors including the fertiliser, cement and textile industries. Even though further LNG terminals are planned, they are being delayed due to strong opposition from the environmentalists. Pakistan has so far completed two LNG terminals with an annual handling capacity of 10.4 million tonnes.



Environmentalists and climate change activists contend that despite its acceptance as a viable substitute for other fossil fuels like coal and furnace oil, LNG is not eco-friendly. The environmental advantages of LNG over other energy sources, such as lower carbon emissions and consistent support for renewable energy, are frequently emphasised. Some specialists in climate change dispute these claims and point out risks like methane leaks and sulphur oxide.

Zeenia Shaukat, director of The Knowledge Forum, a local think tank advocating against fossil fuels, says methane gas leaks during the transfer of LNG in pipelines at the terminals could affect the overall ecology of the coast, especially mangroves along the coast of Karachi.

She claims that "mangrove forests are rapidly disappearing due to industrial and municipal pollution and the cutting of trees for industrial and commercial activities. Future LNG installations could severely harm the remaining ones."

It has also been argued that LNG is now too expensive for Pakistanis. Government officials are now focusing on locally available fuels like coal and renewable energy sources, such as solar and wind. Prime Minister Shahbaz Sharif recently opened a coal-fired power plant in Tharparkar, set up with Chinese investment.

In Block-I of the Thar Desert, Chinese Shanghai Electric is funding two 660 megawatt coal-fired power stations. A 7.8 million tonne per year integrated coal mine and power plant are included in the Chinese-funded project. The Shanghai Electric power plant was connected to the national grid on December 5. It is to produce 2,640 megawatts of electricity using domestic coal. At the K-3 nuclear power unit's opening ceremony at the Karachi Nuclear Power Project on February 2, the prime minister declared that Pakistan will build no new power plants dependent on imported coal, LNG or furnace oil. ■

The writer is a senior journalist, working for a news channel in Karachi.

IPPS ISSUE

PPIB to drop litigations against IPPs

IPPs claim they were unable to meet capacity obligations

Mushtaq Ghumman

Private Power & Infrastructure Board (PPIB) has reportedly decided to withdraw all suits/ litigation against Independent Power Producers (IPPs) subject to reciprocal action by them.

PPIB's Projects' Committee, sources said, has submitted its recommendations to the Board of PPIB headed by Secretary Power, for final approval.

Managing Director PPIB Shah Jahan Mirza apprised that in 2011 an issue arose between IPPs and NTDC on account of delay/ non-payment under PPAs.

The IPPs claimed that they were unable to meet the capacity obligations due to non-payment of invoices by NTDC, resulting in their inability to procure fuel. Therefore, IPPs were 'deemed available' under their respective PPAs and NTDC was not entitled to deduct capacity payments there-under. This triggered a series of litigation before various courts/ forums by IPPs and GOP's agencies including PPIB, NTDC, CPPA-G, etc.

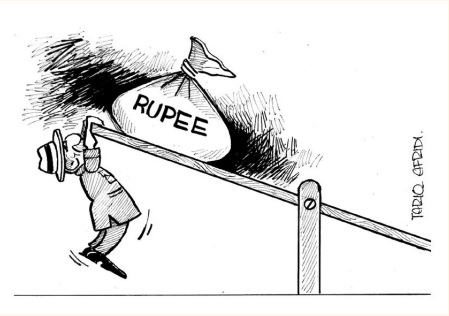
Later the Federal Cabinet constituted a committee to negotiate with IPPs and after successive rounds of discussions a MoU was signed with IPPs, whereby it was agreed that all pending legal claims will be withdrawn upon satisfaction of the settlement terms. In view of Settlement Agreement (SA), Supreme Court of Pakistan (SCP) disposed of a CPLA arising out of one of the orders of Lahore High Court and in light of SCP's decision and terms of SA, all litigation for/ against GoP now needs to be withdrawn.

According to sources, representatives of GoKPK expressed concern regarding financial implication of withdrawal of litigation. DG Law PPIB explained that outstanding lawyers' fees, if any, will be payable in case of withdrawal of litigation. CEO/ CFO CPPA-G explained that this cost will be negligible as compared to the quantum of award, which was in favour of IPPs and if executed would have been payable by CPPA-G.

Moreover, all litigation between IPPs and CPPA-G, quantum of which was in billions of rupees and was in favour of IPPs, had already been withdrawn; accordingly PPIB and IPPs must also withdraw any pending litigation. MD PPIB added that while negotiating SA, the maximum tariff indexation adjustment in US dollar was capped at Rs 168, which is very beneficial today as the US dollar is equivalent to around Rs281.

Representative of GoKPK inquired about the increased delayed payment ratio which today is KIBOR+2.0-2.5 5%, whereas in SAs, KIBOR+4.2% has been mentioned for delay beyond 60 days. DG Law PPIB explained that after negotiation the Settlement Agreement was approved by Federal Cabinet at that time, which cannot be renegotiated today. MD PPIB added that delayed payment rate in PPAs of these IPPs was KIBOR+4.5% and rate of KIBOR+2% for first 60 days which is actually a concessional rate in context of PPAs. After detailed deliberations on pros and cons of the proposal, the Projects Committee unanimously agreed to proposed withdrawal of litigation.

The Committee has requested PPIB Board to consider and approve withdrawal of all suits, applications, petitions by GoP/ PPIB against the IPPs subject to simultaneous withdrawal of all proceedings, applications and writs filed by the IPPs against GoP/ PPIB in respect of disputes as fully enumerated whether through joint statement or otherwise as deemed appropriate. ■



A major milestone for energy security

Thar Block-1 Integrated Coal Mine Power Project starts operation

Dr Basharat Hasan Bashir

Pakistan has vast reserves of natural resources, including coal, which is primarily found in the Thar Desert region. The Thar coal deposits are considered one of the largest coal reserves in the world, with an estimated 175 billion tons of lignite coal. Despite the potential, Pakistan has historically relied on expensive and unreliable imported coal, oil and LNG for its energy needs, leading to a significant energy crisis.

However, in recent years, the Pakistani government has been taking steps to tap into the Thar coal reserves to address the energy crisis and promote economic development. This paper will explore the Thar coal deposits in Pakistan, their potential benefits and drawbacks, the challenges and opportunities associated with their exploitation, and the way forward.

The Thar coal deposits are primarily located in the Thar Desert region, which is situated in the southeastern part of Pakistan. The Thar Desert is spread over an area of 22,000 square kilometers and has a diverse landscape, including sand dunes, rocky outcrops, and seasonal lakes. The coal deposits are present in the form of lignite, which is a low-grade coal with high moisture content and low calorific value.

The Thar coal deposits were formed during the early Eocene period, around 55 million years ago, when the Indian subcontinent collided with the Eurasian plate. The collision caused the uplift of the Himalayas and the formation of the Indus Basin. The Thar coal deposits were formed in the fluvial and deltaic sediments of the Indus Basin, which were deposited by the rivers that flowed through the region during the Eocene period.

The Thar coal deposits have significant potential benefits for Pakistan, including addressing the energy crisis, promoting economic development, and reducing dependence on imported oil and gas.

Pakistan has been facing a significant energy crisis for the past few decades, with a shortage of electricity and natural gas leading to power outages and high costs for businesses and households. The Thar coal deposits offer a viable solution to the energy crisis, with an estimated 175 billion tons of lignite coal. If fully exploited, the Thar coal reserves have the potential to produce over 100,000 MW of electricity, which would meet Pakistan's energy needs for decades to come.

Promoting Economic Development:

The exploitation of Thar coal reserves has the potential to promote economic development in Pakistan. The coal reserves are located in a remote and underdeveloped region of the country, and their development can create employment opportunities and stimulate economic growth. The construction and operation of coal-fired power plants, coal mines, and related infrastructure can generate revenue and contribute to the national economy.

Drawbacks of Thar Coal Deposits: Despite the potential benefits, the exploitation of Thar coal reserves also has significant drawbacks, including environmental concerns, social issues, and technical challenges.

Environmental Concerns: The exploitation of Thar coal reserves can have significant environmental impacts, including air pollution, water pollution, and greenhouse gas emissions. Coal-fired power plants are significant emitters of greenhouse gases, including carbon dioxide and methane, which contribute to climate change. The extraction of coal can also cause environmental degradation, including the loss of biodiversity and soil erosion.

Social Issues: The exploitation of Thar coal reserves can also have significant social implications, including displacement, resettlement, and health issues. The construction and operation of coal mines and related infrastructure can displace local communities and disrupt their way of life.

Apart from the Sindh Engro Coal Mining Company, various other companies, both domestic and international, have expressed interest in exploring and mining coal in Thar. This has led to concerns about the potential environmental impact of such activities. Mining and burning of coal produce greenhouse gases and other pollutants that contribute to climate change and air pollution.

Moreover, the development of coal-fired power plants in Thar raises questions about the long-term viability of this source of energy. The world is moving towards renewable energy sources, such as solar and wind, which are becoming cheaper and more efficient. Pakistan has set a target of generating 60% of its electricity from renewable sources by 2030. Therefore, it is crucial to evaluate the economic viability of Thar coal in comparison to renewable energy sources.

In conclusion, Thar coal deposits offer a significant opportunity for Pakistan to meet its growing energy demands and reduce its reliance on imported fossil fuels. The development of Thar coal requires significant investment in infrastructure, including mining, transport, and power generation. However, the potential benefits of Thar coal must be weighed against the environmental and social costs. Therefore, it is essential to ensure that mining and power generation activities in Thar are carried out in an environmentally sustainable manner and that the local population is adequately compensated for their land and livelihoods. Moreover, the long-term economic viability of Thar coal must be evaluated in comparison to renewable energy sources. By taking a balanced and sustainable approach to the development of Thar coal, Pakistan can achieve energy security while protecting the environment and promoting economic development.

One of the major challenges faced by the government and private investors in the development of Thar coal reserves is the high cost of initial investment. The required infrastructure for mining, transportation, and power generation requires significant capital investment, which may not be readily available to private investors. The government needs to provide subsidies or incentives to investors to encourage the development of the coal reserves. Another challenge is the lack of proper environmental protection and rehabilitation measures. The coal mining process generates a significant amount of dust and other pollutants that could have harmful effects on the local population and environment. There is a need for strict regulations and enforcement of environmental protection measures to ensure that the development of coal reserves does not harm the environment or local communities.

Another challenge is the lack of adequate infrastructure to support the development of Thar coal reserves. The region lacks proper transportation networks, power grids, and other necessary infrastructure, which increases the cost and time required for the transportation of coal and electricity to other parts of the country. The government needs to invest in the development of necessary infrastructure to support the mining and power generation activities in the region.

The lack of local expertise in coal mining and power generation is another challenge faced by the government and private investors. The development of Thar coal reserves requires specialized technical expertise in coal mining, power generation, and environmental protection hence the government MUST APPOINT QUALIFIED AND EXPERIENCED SPECIALISTS IN THESE FIELDS. The government needs to invest in the development of local technical expertise and training programs to ensure that the development of the coal reserves is sustainable and environmentally friendly.

SWOT Analysis of Thar Coal Deposits

Strengths: Thar coal reserves are estimated to be the fifth-largest in the world, with an estimated potential of 175 billion tons. Thar coal has low sulfur content, which makes it an environmentally friendly fuel for power generation. Thar coal reserves are located in close proximity to major urban centers, making it an attractive source of energy for the domestic market. The development of Thar coal reserves would help Pakistan reduce its dependence on imported energy sources and ensure long-term energy security. The development of Thar coal reserves would create thousands of jobs, both directly and indirectly, in mining, power generation, and other related industries.

Weaknesses: The development of Thar coal reserves requires significant capital investment, which may not be readily available to private investors. The region lacks adequate infrastructure to support the development of coal mining and power generation activities, which increases the cost and time required for transportation. The coal mining and power generation process generates significant amounts of dust and other pollutants, which could have harmful effects on the local population and environment.

Thar coal reserves can meet the growing energy demand of the domestic market, reducing Pakistan's dependence on imported energy sources. Thar coal reserves can also be exported to neighboring countries, providing an additional source of revenue for Pakistan.

Need to develop a long-term energy policy

Given the significant potential of Thar coal reserves, the Pakistan government should prioritize the development of a long-term energy policy that includes the development of Thar coal as a key component. Such a policy should have clear objectives, targets, and strategies for the development of Thar coal reserves, along with a timeline and budget allocation.

One of the key elements of such a policy would be to ensure that the development of Thar coal reserves is sustainable and takes into account the environmental and social impacts. This can be achieved by establishing a regulatory framework that ensures that the development of Thar coal reserves is carried out in an environmentally responsible manner and that the local communities are adequately compensated for any adverse impacts.

Another important aspect of a long-term energy policy that includes the development of Thar coal reserves is to promote research and development activities aimed at improving the efficiency and environmental performance of coal-fired power plants. This can be achieved by establishing partnerships with leading international research institutions and companies, as well as providing incentives for local universities and research organizations to carry out research in this area.

In addition, the Pakistan government should prioritize the development of infrastructure in the Thar region, including the construction of roads, railways, and ports. This will not only facilitate the transportation of coal to power plants but also help to unlock the economic potential of the region.

The Pakistan government should also consider promoting the development of downstream industries that utilize coal as a feedstock. This can include the development of chemical, fertilizer, and steel industries, which can provide additional employment opportunities and contribute to the economic development of the country.

Finally, the Pakistan government should explore the potential for export markets for Thar coal, particularly in neighboring countries such as India and Bangladesh, which are facing similar energy challenges. This can not only help to generate additional revenue for the country but also contribute to regional energy security.

The development of Thar coal reserves has the potential to play a significant role in addressing Pakistan's energy challenges. However, this requires the development of a long-term energy policy that takes into account the environmental and social impacts and promotes sustainable development practices. By prioritizing the development of Thar coal reserves, Pakistan can not only address its energy challenges but also contribute to regional energy security and economic development.

The development of Thar coal reserves must also be accompanied by the promotion of renewable energy sources such as wind, solar, and hydropower. Pakistan has significant potential for renewable energy, and a diversified energy mix will ensure energy security and stability in the long run. Moreover, investing in renewable energy will not only reduce Pakistan's carbon footprint but also reduce its reliance on imported fuels.

In conclusion, the development of Thar coal reserves has the potential to transform Pakistan's energy sector and provide a reliable and affordable source of energy for its growing population. However, its development must be sustainable and take into account the social and environmental implications. A long-term energy policy that includes the development of Thar coal reserves, along with the promotion of renewable energy sources, is crucial for Pakistan's energy security and economic growth. It is high time for the government to prioritize the development of Thar coal reserves and take concrete steps toward achieving energy independence.

The government should prioritize the development of renewable energy sources, such as solar and wind power, to reduce the country's reliance on fossil fuels. It should promote energy conservation and efficiency measures to reduce the overall demand for electricity and minimize the need for additional power generation capacity. The government should invest in infrastructure, including transmission lines and road networks, to ensure efficient and reliable delivery of electricity to end-users.

The project operators should prioritize environmental protection measures and meet all environmental standards and regulations to avoid fines or legal action. The project operators should engage with local communities and address their concerns to ensure their participation and support for the project.

The government should develop a long-term plan to transition from fossil fuels to renewable energy sources, with specific targets and timelines for the deployment of renewable energy technologies.

POPULATION INFLUX

Sustainable cities need of the hour

Mega structures in cities produce 39% carbon dioxide emissions

Waqar Hassan

IBN-e-Khaldun declared towns as places that bulwark their residents from all pernicious things and are pure of all kinds of adulterants.

Present-day megalopolises, on the contrary, offer a different story. Today, cities look like asphalt jungles. With the supersising of the populace, small towns are turning into mega burgs. In 1950, only 83 cities with a population of over a million existed.

By 2025, the number is likely to be over thirty mega-cities. Most of these places are fast losing their sustainability which in terms of climate, transport, livelihood and food is an alien concept in many developing societies.

Sustainability is the puissance to draw a stasis between consumption and availability of resources, meeting the current needs without exhausting the ecosystem. Modern metropolises are home to environmental degradation, widespread inequality, urban flooding, food insecurity and slum areas, making cities devoid of the features of sustainability.

Various factors have led us to this situation. First, present-day cities clamor for electricity produced through fossil fuels. Transport facilities also beckon greenhouse gas emissions. This sector is liable for twenty-three percent of C02 emissions. Mega structures in cities produce almost 39% of carbon dioxide emissions, according to the US Green Building Council.

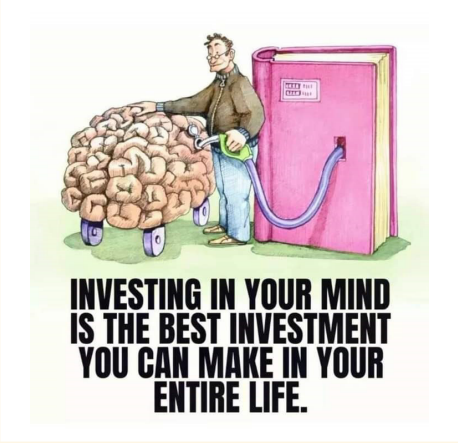
Hence, the use of fossils has dispossessed cities of their environmental sustainability. Second, modern metropolises rely on food imports from the adjoining areas and are not sustainable enough to feed the ballooning population. To fulfil the requirements for food, livestock farming has become necessary for feeding the population and is a driver of deforestation. Third, cities produce an elephantine amount of waste, and waste collection mechanisms in cities also add up to greenhouse gas emissions. The disposal of waste in the surroundings of cities also invites the anathema of air and water pollution to mega towns. Fourth, the imminence of urban flooding has become a reality for modern cities.

Feckless sewage systems and unplanned cities are a cause of urban flooding. Fifth, slums around cities are a breeding ground for poor human development, depriving people of economic sustainability. According to the UN, between 2014 and 2018, the proportion of the urban population living in slums worldwide increased from 23 percent to 24 percent, translating to over one billion slum dwellers.

Indeed, sustainable cities ensure parity and equality in opportunities for all people. But developing countries do not believe in devolution of power to the grass-root level, which jacks up inequality among the social strata, making cities unsustainable. In fact, modern cities have turned into wicked places owing to the prevalence of these factors. Therefore, resilient and self-sustaining cities are the need of the hour. overnments must prioritize energy efficiency to minimize energy consumption to make cities sustainable. For example, Sweden has a per capita gross domestic product almost equivalent to the USA but uses 40 percent less energy per capita owing to its ability to adopt more energy-efficient policies.

Shifting buildings to clean and green energy by installing solar panels can achieve this goal. The concept of sponge cities can help address the menace of urban flooding, and improving the sewage system of cities can also counter the threat. De-carbonization of energy is the need of the hour, but it demands agreement from all the global stakeholders to accomplish the milestone. Affordable housing schemes can solve the problem of slums.

Last, population control is a prerequisite for reducing resource burden and ensuring sustainability. Sustainable cities thrive on the concept of sustaining population, economy, and ecosystem. ■



UN World Water Development Report

Pakistan's 80% population is under water stress

Urban water demand projected to rise 80% by 2050; agricultural sector accounts for 69% of all groundwater abstractions

Special Report by Mansoor

The UN Sustainable Development Goal (SDG) 6 is the part of the 2030 Agenda and is the promise that everyone will have to safely manage water and sanitation by 2030. Right now, progress towards all the targets of SDG 6 is off-track and in some areas the rate of implementation needs to quadruple, or more.

According to United Nations World Water Development Report, Groundwater accounts for 99% of liquid freshwater on Earth and is the source of one quarter of all the water used by humans. Large volumes of fresh groundwater are present below ground surface and distributed over the entire globe; however, this volume of freshwater is irregularly distributed over the continents.

Competition for freshwater between cities and agriculture is projected to grow due to rapid urbanization, for which urban water demand is projected to increase by 80% by 2050. The agricultural sector accounts for 69% of all groundwater abstractions. Domestic uses account for 22% of all groundwater abstractions. Industrial purposes account for 9% of all groundwater abstractions. Nearly 50% of the global urban population are believed today to be supplied from groundwater sources.

Around 80% of people living under water stress lived in Asia, particularly in northeast China, India and Pakistan. The global urban population facing water scarcity is projected to increase from 933 million in 2016 to 1.7–2.4 billion people in 2050, with India projected to be the most severely affected.

The energy sector, particularly power generation, conventionally uses much water and its efforts to decarbonize have an impact on water in countries of all income levels. The effects of drought and water scarcity have large repercussions on cooling water for thermal generation and on reservoirs for hydropower.

Decarbonization, particularly through renewables, is reflected through the SDG 6 targets concerning water quality, water use efficiency, integrated water resources management and water-related ecosystems. However, in low-income countries and water-stressed areas, there is an added dimension of safe drinking water and sanitation, where poor water availability or poor access can be mitigated by providing increased access to electricity.

This means water can be pumped and moved more efficiently, thus improving the lives of people – particularly benefiting women who would otherwise spend much time and effort obtaining water. This shows that the energy sector does not work in a vacuum, as collective action

Water, sanitation and hygiene (WASH) is crucial for human health and well-being. Global data show that on average, progress needs to be four times faster to meet the promise on safely managed WASH for all by 2030.

Safe water for irrigation, food processing and food hygiene in homes and restaurants is an essential part of protecting human health in food systems, along with risk reduction measures at the farm.

Climate change has already had adverse impacts on water and food provisioning, and roughly half of the world's population experience severe water scarcity for at least some part of the year, due to both climatic and non-climatic drivers.

Cooperation is critical to achieving water-related goals and targets, and any 'acceleration' of progress towards the sixth Sustainable Development Goal (SDG 6) depends heavily on the efficient and productive performance of partnerships.

A fundamental role of government is to provide the enabling environment in which partnerships and cooperation can innovate (Chapter 11) and flourish. They are responsible for establishing and overseeing regulatory frameworks, and are often expected to contribute with financial, technical and institutional support.

UN Agencies are working closely with international and local NGOs, as well as governments, to address water-related challenges, for example, issues related to water supply, sanitation, hygiene and health, including pandemics.

Climate and water are intrinsically linked and so are the climate change and sustainable water development agendas. For these agendas to materialize, the water and climate communities need to collaborate and strengthen partnerships. Furthermore, it would be necessary to facilitate, demonstrate and scale up science-based joint solutions and innovation, including open science, citizen science, women and youth-led initiatives, as well as traditional and indigenous knowledge to achieve more effective and climate-resilient water and sanitation management. This has to be in line with national priorities and circumstances. ■

Our company is essential player in TRADE-ECONOMIC SYSTEMS

We have various CSR initiatives,

Mubasher Hussain, Director PKG International Shipping & Logistics Limited

Mustafa Tahir

As a part of Pakistan's leading logistics and shipping company, I am proud to say that our company is an essential player in Pakistan's trade and economic systems. We have embraced new technologies at PKG International Shipping & Logistics Limited to improve our logistics and warehousing services. We have invested in advanced transportation management systems, which help us to optimize routes and reduce transit times.

This was stated by Mubasher Hussain, Director, PKG International Shipping & Logistics Limited, in an interview with the Energy Update. Following are the important excerpts from his interview for our readers:

Energy Update: What is the importance of your company in the trade and economic systems of Pakistan?

Mubasher Hussain: As a part of Pakistan's leading logistics and shipping company, I am proud to say that our company is an essential player in Pakistan's trade and economic systems. With over 60 years of experience, we have established ourselves as the country's leading logistics and supply chain management solution provider. Our commitment to delivering services beyond excellence has led us to become a provider of transportation, customs clearance, warehousing, and shipping services in Pakistan and beyond.

By offering customized solutions to meet the specific needs of our clients, we contribute to the smooth and efficient flow of goods and products across Pakistan and the rest of the world. As a company, our ability to adapt to the evolving needs of the industry and our customers has helped us maintain our position as the key player in the logistics sector and a significant contributor to Pakistan's economy.

EU: What lessons were learned from the Coved-19 era for Pakistani

logistics and shipping companies?

MH: From a broad perspective, I believe this pandemic taught us the importance of adaptability, agility, and resilience. It has also taught the business industry the importance of having robust contingency plans to deal with unexpected disruptions to supply chains.

As we can see, the pandemic has led to various tech transformations in the tech world; now, the individuals, who will not adopt these changes and prepare themselves with the required skills, won't be able to survive in the industry. So, to cater to our clients' ever-changing requirements, we have introduced new technologies and digitized our operations to improve efficiency and resilience.

Considering the devastating impact of Covid on the logistics industry, I believe the companies must be prepared to adapt quickly to changing circumstances, such as disruptions to supply chains, changes in demand, and restrictions on movement. Pakistani logistics and shipping companies can learn lessons from the Covid-19 era by investing in technology, building more resilient supply chains, and developing contingency plans for future disruptions.

EU: What technological improvements and advancements have your company adopted to upgrade its logistics and warehousing services?

MH: We have embraced new technologies at PKG International Shipping & Logistics Limited to improve our logistics and warehousing services. We have invested in advanced transportation management systems, which help us to optimize routes and reduce transit times.

We have also implemented warehouse management systems, which enable us to manage inventory more efficiently and accurately. We also have adopted automated packing and sorting systems to improve the speed and accuracy of order fulfillment.

EU: To what extent has your business been affected by import restrictions in the country and the foreign reserve crisis?

MH: I believe the foreign reserve crisis and import restrictions have significantly impacted our business, as they have on many other companies in Pakistan. We have had to adapt to the changing environment by adjusting our supply chain strategies and finding alternative suppliers for some products.

We have also worked closely with our customers to help them navigate the challenges and minimize the impact on their businesses. Despite the challenges, we have remained committed to providing reliable and efficient logistics services to our customers.

EU: What are the plans of your company to expand its services and operations?

MH: At PKG International Shipping & Logistics Limited, we always seek opportunities to expand our services and operations. We are currently exploring new markets and industries where we can leverage our expertise and capabilities.

We are also investing in new technologies and infrastructure to enhance our service offerings and operational efficiency. Additionally, we are focused on developing new partnerships and collaborations that can help us to expand our reach and provide even greater value to our customers.

EU: Tell us about the CSR initiatives of your company?

MH: As a responsible corporate citizen, PKG International Shipping & Logistics Limited is committed to giving back to the communities where we operate. We have various CSR initiatives focusing on education, health, and environmental sustainability. Like we support local schools and educational programs to help improve access to quality education for children in underprivileged communities.

We have also arranged health camps and awareness programs to promote health and wellness. Furthermore, we have implemented environmental initiatives, such as recycling programs and energy-efficient practices to minimize our environmental impact. ■

LNG CHARGES

Pakistan's dwindling LNG relevance

EU Report

As Europe seems to have escaped a harsh winter, LNG prices have come down quite a bit from the peak seen six months ago. LNG Japan-Korea Marker (JKM) benchmark future contracts have reduced to a fifth from the peak of September 2022 – last seen trading at a little over $14/mmbtu. Pakistan meanwhile has slipped further down the pecking order of countries, making a marked difference to global LNG supply and demand dynamics – from being a key player outside of Far East giants not so long ago. Of course, the paucity of dollars ensured Pakistan was not even in the race. But even before the dollar shortage had hit hard, there were not enough vessels doing rounds around the Pakistan shores. There just simply was not enough LNG available for the likes of Pakistan, at a time when Europe was stocking on gas like there is no tomorrow. Despite all the talks of isolating Russia in the energy export market – the European Union was the second largest buyer of Russian LNG in 2022 – and more of the same could be in store for 2023.

The LNG price drop could not have been more ill-timed for Pakistan, as there is not much to look forward to. Even if dollars were arranged today, Pakistan would struggle to find a willing seller outside the long-term government agreements, under which 6-8 cargoes have been regularly arriving every month. The Pakistan LNG Limited (PLL) has not bid for a spot cargo since July 2022 – when it failed to attract a single bid. Another attempt at a 6-year arrangement found no takers a month later – as Europe was paying hefty premium – and vessels were happy queuing up for weeks instead of looking eastwards. The price dip may not last long, as supply disruption in France and more importantly much faster than expected demand resurgence from China will come to the fore. The long-term contract delivered LNG price for Pakistan is expected to stay in the range of $10-11/mmbtu for 4QFY23 – as the outlook for Brent crude stays north of $85/bbl for Mar-Jun – to keep the 3-month trailing average price around current levels.

As electricity demand gradually starts to go back up with rise in temperatures at home, RLNG demand will be created and most likely remain unmet, creating disallowance of fuel charge variances on account of deviation from economic merit order. China and West have been gearing for longer term contracts – which is likely to leave Pakistan at the mercy of bigger players. From politicking on the failure to have an additional LNG terminal a year ago to now staring at idle capacities has been quite a story. ■

Climate change: also a political and economic issue

Climate change is not just an environmental issue but also a deeply political and economic one; wealthiest countries responsible for majority of greenhouse gas emissions; Pakistan's share in global emissions is less than one percent

Dr Khalid Waleed

The global anthropogenic climate crisis has become one of the most pressing issues of our time. Its impact is already being felt in many parts of the world and includes an increase in the frequency and intensity of extreme weather events, rising sea levels and the loss of biodiversity. At the same time, the issue of energy security is critical, particularly for developing and less developed nations.

The interrelated issues: climate justice, sustainable energy security and the economy demand urgent attention and action.

In his book, The Brief History of Equality, Thomas Piketty argues that climate change is not just an environmental issue but also a deeply political and economic one. He points out that the wealthiest individuals and countries in the world are responsible for the majority of greenhouse gas emissions that contribute to global warming and climate change. Meanwhile, the poorest communities are the most vulnerable to climate injustice through more frequent and severe natural disasters, food and water shortages and displacement from their homes.

Climate justice recognises the unequal distribution of the impacts of climate change. It acknowledges that the people who have contributed the least to the problem — primarily those in developing countries — are the ones who are suffering the most.

Pakistan is a notable example of this anthropogenic climate injustice. Its share in global emissions is less than one percent. However, in terms of climate change, it is facing and will be facing a severe water-dilemma. First, water is disappearing, i.e., no rains, extreme heat waves and droughts. Second, glaciers are melting due to global warming. Lastly, the water is falling from the skies and causing floods.

The Centre for Climate Justice at the University of California, identifies six pillars of climate justice. The first pillar is a just energy transition (JET). It is followed by community resilience and adaptation, natural climate solution, social racial and environmental justice, climate education and engagement, and indigenous climate action.

Energy transition and climate change are intricately linked as the sources and types of energy that we use have a significant impact on the health of the planet. Climate change is driven by an increase in greenhouse gas emissions, primarily through the burning of fossil fuels.

According to United Nations Environment Programme (UNEP), in 2020, the energy sector contributed 37 percent (20 GtCO2e) of the CO2 emissions followed by industry 26 percent (14 GtCO2e), agriculture, forestry and other land-use change (AFOLU) 18 percent (9.5 GtCO2e), transportation 14

percent (7.6 GtCO2e) and buildings 5.7 percent (3.1 GtCO2e). These emissions trap heat in the earth's atmosphere, leading to a rise in global temperatures and a host of environmental impacts like the 3Ws crisis and more frequent and intense weather events even in countries that are not contributing to emissions.

Thus, a global drive towards energy transition is needed. This refers to a shift from fossil fuels to renewable and cleaner energy sources like solar, wind and micro-hydropower. This transition is crucial to mitigating the negative effects of climate change.

However, the energy transition is not without its challenges. One of the main obstacles to it is the upfront cost of transitioning to renewable energy sources. This can be a significant barrier for many individuals and businesses. Additionally, the infrastructure and technology needed to support renewable energy can be complex and expensive.

Overall, the relationship between energy transition and climate change is clear. The choices we make about the types of energy we use have a direct impact on the health of the planet. By transitioning to renewable energy, we can reduce our carbon footprint and mitigate the negative effects of climate change while also creating economic and social benefits.

Piketty argues that addressing climate change requires a global effort to reduce emissions, but also a more equitable distribution of the costs and benefits of this transition. He advocates for policies that would redistribute wealth and income from the richest individuals and countries to the poorest and invest in renewable energy and sustainable development. There is a need to make climate justice and just energy transition an integral part of economic policies.

Investing in renewable energy projects holds the key to Pakistan's financial troubles but the country's current economic situation does not allow it the luxury of importing renewable energy-related materials. Due to the financial turmoil, Pakistan is heavily dependent on imported fossil fuels.

As a result, Pakistan is exploring its indigenous resources from Thar coal. While these reserves provide a cheaper alternative, they are not environmentally sustainable and will only serve as a short-term solution to the problem.

In order to break this vicious cycle and to solve this economy-energy-environment (3Es) dilemma, we need to make sustainable energy security and climate justice a part of our economic policy and diplomacy. Pakistan needs to develop a holistic policy roadmap involving long-run economic planning coupled with diplomacy based on climate justice and just energy transition partnerships.

Resulting investments in renewable energy can bring forth a shift in our energy profile from fossil fuels to renewable energy sources such as wind, solar, and micro hydropower.

This transformation is not easy. It requires significant investment in infrastructure, technology and human capital. It also requires political will and leadership, as well as international cooperation and support. The developed nations must understand and provide financial and technical support to help countries, such as Pakistan in terms of transition towards a sustainable energy future.

Pakistan needs to present this case through strong climate diplomacy and just energy transition partnerships. This support must be based on the principles of climate justice. The following actionable recommendations can be suggested in this context:

First, the United Nations Framework Convention on Climate Change (UNFCCC) has recognised the importance of the intersection of climate justice and energy security. The Paris Agreement, adopted in 2015, calls for efforts to keep the global temperature rise well below 2 degrees Celsius above pre-industrial levels and to pursue efforts to limit the temperature increase to 1.5 degrees Celsius.

It also recognises the need for a just transition towards low-carbon development and the importance of providing support to developing nations. The UNFCCC has also established the Green Climate Fund (GCF) to help finance climate mitigation and adaptation projects in developing nations. The GCF is based on the principle of "common but differentiated responsibilities and respective capabilities," which recognises the different responsibilities and capacities of developed and developing nations in addressing the climate crisis. The GCF aims to mobilise climate financing to support developing nations in their efforts to address climate change.

Second, the recent initiative of the Asian Development Bank (ADB) on the Energy Transition Mechanism (ETM) is an opportunity. It targets the early retirement of coal-fired power plants and provides financing so that coal power plants are replaced with renewable alternatives. This has been implemented in Indonesia where a 660MW coal plant was retired earlier through ETM.

Currently, the ADB is conducting a pre-feasibility study in Pakistan to establish criteria for the early retirement of coal-fired power plants.

The initiative also calls for the exploration of similar initiatives under the China-Pakistan-Economic-Corridor (CPEC), so that the vision of Chinese President Xi that "China would not build new coal-fired power projects abroad" can be achieved.

This will not only reduce Pakistan's carbon footprint but also give Pakistan a better platform for climate diplomacy.

These suggestions can provide Pakistan with a sustainable solution to its economic, energy and environmental problems. ■

The writer is associated with the SDPI as an energy consultant.

EU REPORT

KE observes annual safety week

KE recently concluded its annual Safety Week for 2023, a company-wide exercise focused on creating awareness regarding the importance of safety at workplaces and homes. Safety Week encompassed activities driving awareness across electrical safety, road safety, emergency preparedness, and well-being. Employees from across the company, including KE's Leadership, participated in a number of webinars, workshops, and training sessions on pertinent topics. A significant component was also a collaboration with external partners and giving back to the community.

In this regard, KE teams were invited by NEPRA to conduct a live webinar on HSE culture with representation from distribution and generation companies across Pakistan. KE teams shared their success story in transforming the organizational culture and the best practices that can be implemented to elevate the safety standards in the power sector. Engagement sessions were also conducted with students of NED and Ziauddin University along with primary and secondary schools across the city to further the safety narrative.

Safety also encompasses a clean operating environment. In this regard, KE has collaborated with Sindh Solid Waste Management Board (SSWMB) to initiate projects to clean its customer care centers, sub-stations, and area offices in Karachi. An HSE training was also conducted for SSWMB workers regarding their safety. Additionally, KE also collaborated with Driving License Sindh to set up a camp for issuing driving licenses to KE employees.

Kashif Qureshi, Safety Director at SEPCO, was also invited to visit KE premises to observe the company's protocols and processes to maintain a safe operating environment. Chairman NEPRA, Tauseef H Farooqi attended the closing ceremony as the Chief Guest. NEPRA Chairman Tauseef H Farooqi appreciated the efforts of KE pertaining to its quest for safety at all levels which is also in line with one of NEPRA's CSR pillars. ■

Earth is already solar powered

Imran Jan

I was once watching an interview with Michael Jackson. The interviewer asks him about his creative work in music. Michael Jackson says something which stuck with me and continues to serve me. He said that the mistake an artist makes is to get in the way of natural creativity... let it all flow out freely. Likewise, Albert Einstein once said, "imagination is more important than knowledge." They may appear as totally different statements said in totally different contexts by totally different people in completely different fields. However, to me both men are actually saying the same thing. We may overcomplicate the natural course of events with our human input.

Sometimes, the solution or the right way of doing things is not to be searched for because it might be right in front of us. All we need to do is let it happen. Free thoughts and the natural world can find solutions to problems we find unsolvable, provided we are really paying attention.

I receive a lot of emails from various people asking me to teach them how to write. If I can reply, I always tell them nothing different than what Jackson and Einstein said. I tell them to jot down their original thoughts, whatever they may be, and once everything has flown out then get down to organising it on paper. I wish there was another way. When we get into the way of those natural thoughts and try to manufacture them so that they can fit into whatever frame of acceptable understanding is out there, we only end up creating a boring narration.

Humanity made the same mistake when mankind realised that it would need a lot of energy to support the new way of life after the Industrial Revolution. Perhaps that is humanity's original sin of the previous millennium, the consequences of which would live on with us and affect us. In order to power the machines mankind made, energy started to be generated using fossil fuel.

There was a time we had water machines. They were powered by the fast moving water of the streams. They were abandoned and fuel powered machines became the new way of generating energy. We went from stream to steam. Instead of looking up, we looked down in search of energy and started digging up raw and filthy fossil fuel, which had to be refined and transported in order for it to be useful. The burning of those fossil fuels creates an enormous amount of carbon dioxide that accumulates in the atmosphere. The heat that the sun sends to the earth rebounds back into the sky and gets trapped in the atmosphere of the earth because of those accumulating carbon dioxide. We literally got in the way of nature. We not only did not use that free energy, we turned it into our enemy.

The earth was always solar powered. Our star, the sun, is this massive power generator that sends us light and energy everyday, which supports life on earth.

We could have made machines that were an extension of the natural world, which were designed to harness the energy of the sun. We could have avoided climate change that threatens the entire life on earth. We could have avoided the situation where few companies hold the ability to power our cars, machines, and the entire grid. No nation with superior guns in their hands would have invaded another land with inferior guns in hands but more oil under their feet. Nobody can lay claim to the rays of the sun. We would be breathing fresh air, drinking water from the hose, not rushing to fill our cars when the government announces an increase in prices tomorrow. Africa perhaps would have been the most advanced, at least the most energy rich. And a lot of other evil won't have existed that does exist today- if we had not gotten in the way of nature. ■

The writer is a political analyst

COAL RETURNS TO CPEC

Zofeen Ebrahim

News that the Pakistan government plans to secure financing and start construction on a long-stalled 300 megawatt coal-fired power plant in the port city of Gwadar has triggered a debate on the direction of the country's energy sector. Set to be built and funded by Chinese state-owned entities, recent developments have also raised fresh questions about China's pledge – made at the UN General Assembly in 2021 – not to build any new coal power plants overseas.

The Gwadar coal power plant was first conceived in 2016, with an estimated cost of USD 542.32 million. It is to be constructed by the Chinese company CIHC Pak Power, a subsidiary of the state-owned China Communications and Construction Group. The plant was recently reported to have secured financing from the Industrial and Commercial Bank of China (ICBC), China's largest commercial bank. Once completed, it is intended to supply power, on a priority basis, to the industries being set up at the Gwadar Free Zone (GFZ), a special economic zone at Gwadar port that forms part of the China-Pakistan Economic Corridor (CPEC), the USD 62 billion bilateral infrastructure and connectivity project between China and Pakistan.

The environmental impacts of coal power – from local air and water pollution to carbon emissions – have made the project controversial.

"We are pushing the Chinese company to complete its financial closure by 31 December 2023, and start construction at the earliest so that it can be completed by 2025," Shah Jahan Mirza, managing director of the Pakistan government-owned Private Power and Infrastructure Board told The Third Pole. "Electricity shortage is the biggest impediment to developing Gwadar," he said.

Pakistan's energy sector is dominated by fossil fuels. According to the country's Finance Division, as of April 2022, just under 60% of total installed generation capacity used fossil fuels, including gas, oil and coal. Just 3% of generated electricity in the 2022 fiscal year came from non-hydropower renewables. Pakistan's Nationally Determined Contribution (NDC) – its climate pledge under the Paris Agreement – targets 60% renewable energy generation by 2030, including hydropower. The NDC also states: "From 2020, new coal power plants are subject to a moratorium."

In 2021, China's president Xi Jinping announced that China would not build any new coal-fired power projects abroad. He also stated that the country would increase support for low-carbon energy in developing countries.

Bao Zhong, political counsellor at the Embassy of the People's Republic of China in Islamabad, told The Third Pole that the Chinese government stands by the pledge. "The Gwadar coal-fired plant is not a new project and has been in the CPEC framework since 2016," she said. "We hope the Gwadar power plant's construction begins as early as possible to ease the power shortage there."

China's no new coal power overseas pledge, one year on

Ahsan Iqbal, Pakistan's federal minister for planning, development and special initiatives, seconded Bao's comments. "This project was approved in 2017, long before the Chinese president's proclamation."

In April 2022, China's National Development and Reform Commission (NDRC), the country's top economic planning and management body, released an interpretation of the 2021 pledge, clarifying a moratorium on all "new build" projects. It also stated that projects already under construction should proceed "steadily and cautiously". Some commentators suggested that the wording also left the door open to renegotiating contracts and pursuing alternatives to coal, such as gas, solar and wind power projects.

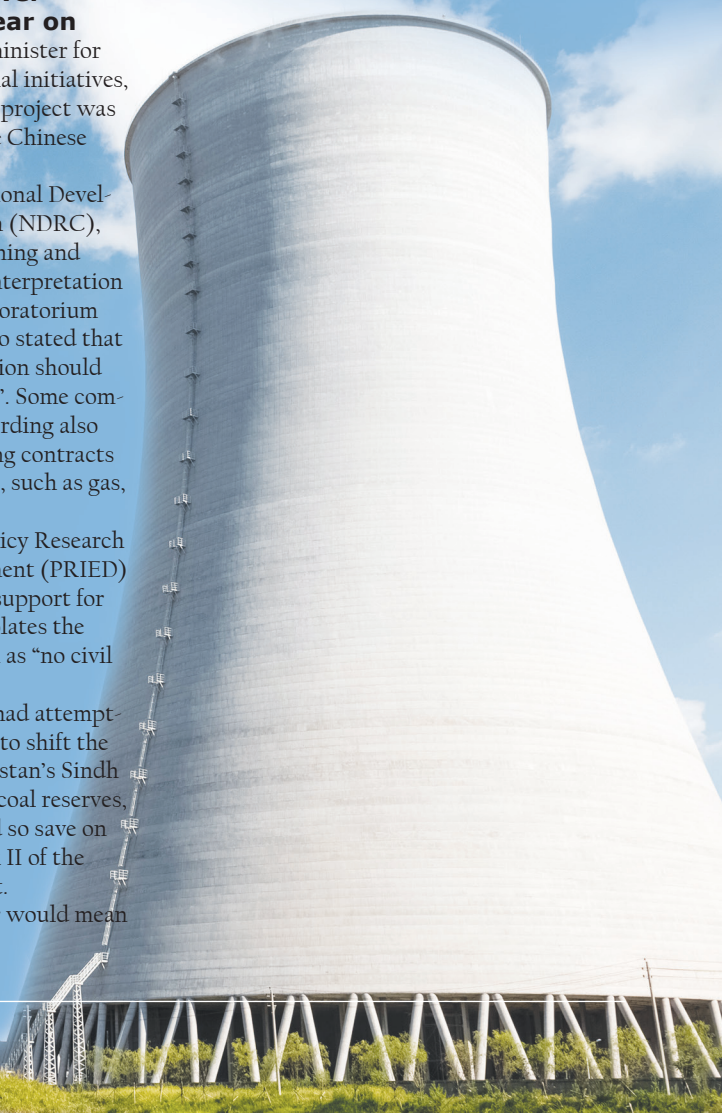
Azhar Lashari from the Policy Research Institute for Equitable Development (PRIED) believes that China's continued support for the Gwadar coal power plant violates the April 2022 NDRC interpretation as "no civil works on the plant had started."

The Pakistan government had attempted to persuade Chinese partners to shift the project to Thar, a district of Pakistan's Sindh Province which is rich in lignite coal reserves, in order to use domestic coal and so save on precious foreign exchange. Block II of the Thar coal mine is a CPEC project.

"Shifting the plant to Thar would mean including this as a new coal project and China has taken a principled stand not to support new coal projects," Bao told The Third Pole. She added that China was well aware of environmental issues around coal. "We have scrutinised the plant from every angle, including the environmental one, and tried to look at alternatives. Coal is the only feasible fuel. We want to help Pakistan develop Gwadar, and bring in investment; the only way to be able to attract investors is to give it sustainable power," she said.

Questions have also been raised around how the Gwadar coal power plant fits into the Pakistan government's long term energy policies. In 2020, Pakistan's former prime minister Imran Khan announced to the world at the Climate Ambition Summit that Pakistan had "decided that we will not have any more power based on coal", and that two power projects approved under CPEC that were to use imported coal – at Muzaffargarh and Rahim Yar Khan – had been scrapped. He also said that with regards to indigenous coal, Pakistan would focus on producing energy through coal liquefaction or gasification, "so that we do not have to burn coal to produce energy." ■

Courtesy: Third Pole



15th CSR Award Ceremony & Seminar

Group Photo of Award Winners with Governor Sindh Kamran Khan Tessori. Pictures shows President NFEH M. Naeem Qureshi, GS Ruqiya Naeem and VP Engr. Nadeem Ashraf and others

Governor Sindh Kamran Khan Tessori addressing on the occasion

Sindh Governor Kamran Khan Tessori has said that bona fide charities and non-profit organizations had come to the rescue of the destitute people suffering from unprecedented inflation after state and successive governments failed to ensure their welfare.

The Sindh governor stated this while speaking as the chief guest at a seminar on "Entrepreneurship: much needed for the national economy", organized by the National Forum for Environment and Health (NFEH) here at the Governor House.

The governor acknowledged that the state had failed in providing employment and fulfilling the fundamental needs of underprivileged families as charitable organizations had emerged as the last hope for the people living below the poverty line.

He acknowledged that underprivileged families had to face unbearable economic conditions due to massive increase in inflation as the head of a family earning a few thousand rupees every month didn't have the means to fulfill all the basic needs of the people in his house.

The governor assured the audience that he would fully support non-governmental organizations like NFEH to combine the CSR-related activities of the corporate sector for the needy people and increase tree cover for improvement in the environmental conditions in the country.

Karachi Administrator Dr Syed Saifur Rehman said the Karachi Metropolitan Corporation (KMC) had the complete resolve to make clean and green all open urban spaces in the city. He told the audience that devastating floods in the country last year showed that everyone should act responsibly to tackle the situation of deforestation.

He said that extensive tree plantation should be carried out in the urban areas to avoid such deadly disasters in the future.

Chief Operating Officer of Saylani Welfare International Trust, Muhammad Ghazal, told the audience about the continuous drive of his non-profit organization since 2013 to impart Information Technology-related skills to thousands of students from needy families for ensuring their economic turnaround.

Syed Azfar Hussain, Project Director of the National Incubation Centre in Hyderabad, said the corporate sector should fully support the emerging technology-led startups in the country for generating jobs and livelihood opportunities for thousands of graduates who passed out from the universities every year.

NFEH President Naeem Qureshi said that his NGO had been constantly running a campaign of tree plantation in Karachi for the last nine years to make the city clean and green. He said the NFEH had planned to develop an urban forest in Karachi in collaboration with the KMC and the corporate sector.

GS NFEH Ruqiya Naeem praised the CSR initiatives of leading companies in Pakistan for helping out needy people. Engr Nadeem Ashraf Vice President NFEH, Raafia Mamujee, Director NUST Dr Maria Qadiri and President CSR Club Anis Younus also addressed on this occasion. ■

3rd Int'l Solar Clean Energy Pakistan Expo and Conference inaugurated by Governor Sindh Kamran Khan Tessori. Pictures shows Secretary Energy Sindh Abu Bakar Ahmed, M. Naeem Qureshi, Ruqiya Naeem, Engr. Nadeem Ashraf, and Mustafa Tahir.

Panel discussion includes moderator Anis Younus, Rafia Mamujee, Abu Bakar Ahmed, M. Ghazzal and Maria Qadri.

Huawei FusionSolar showcases latest innovations at mega fair

EU Report

Huawei FusionSolar, a leading provider of solar inverters and smart energy solutions, participated in the Solar Pakistan 2023 Exhibition, which took place from March 10-12 at the Lahore Expo Centre.

The exhibition brought together over 100 local and international exhibitors to showcase the latest technologies, products, and services in the solar industry.

At the event, the company showcased its latest innovations in solar technology, followed by a grand launch of the new C&I product range SUN2000-50KTL-M3, SUN2000-115KTL-M2, SUN2000-330KTL-H2, and LUNA2000-200KWH-2H1 on the first day of the exhibition, including its advanced AFCI (Arc-Fault Circuit Interrupter) technology. The product launching ceremony was conducted by Huawei FusionSolar and Bahum Associates senior management.

The event was followed by a ribbon-cutting ceremony and a brief presentation regarding upcoming products given by solution manager Liang Litao. All key stakeholders graced the event with their presence and showed immense support. During the exhibition, Mirza Afridi, Deputy Chairman Senate, visited the Huawei booth and appreciated the efforts that were put into the solar industry by Huawei FusionSolar and showed support for the new technology featured new product specially LUNA2000-200KWH-2H1 smart string energy storage system.

"Participating in Solar Pakistan 2023 was an excellent opportunity for us to showcase our latest innovations and solutions in the solar industry," said Liang Litao, Solution Manager of Huawei FusionSolar Pakistan, during a media interaction. "We are committed to providing safe, reliable, and efficient solar power solutions that meet the needs of our customers in Pakistan and around the world."

An MoU ceremony was also held during the exhibition at the Huawei booth. "Huawei FusionSolar is proud to be part of this project, which will help us reduce our carbon footprint and contribute to a greener world," said Xingxiaobing during a media interaction.

To accelerate our mission towards a cleaner and more sustainable future, Huawei FusionSolar in collaboration with Bahum Associates partnered with Reon Energy Limited and signed 80MW Inverter MoU at the exhibition.

Followed by another ceremony, Huawei FusionSolar & Bahum Associates team up with DSG Energy for a new milestone in solar energy, with an MoU signing for 50 Megawatts Inverter, bringing one step closer to a cleaner and more sustainable world. On the last day of the exhibition, Huawei FusionSolar signed an MoU for a 50MW project with zero carbon in collaboration with Bahum Associates. Overall, it was an overwhelming and great opportunity for all solar stakeholders to showcase upcoming innovative solutions and witness immense growth in the solar industry.

Coal still dominant fuel in US, many other countries

Low sulphur coal is available in US, Australia, South Africa, and Columbia; high calorific value coal has reduced efficiency and a higher risk of mill fires; PC boiler is cost-effective and economical as it has sizes ranging from 100MW to 1300MW: Report

Muhammad Aijaz Umer

Coal remains the dominant fuel for power generation in the United States and in many other countries of the world as well. The selection of boiler technology for coal-fired plants is generally based on coal specifications. Low sulphur coal (0- 1.5 %) will be required to avoid boiler and air–heater corrosion. Low CV coal impairs flame stability and affects coal throughput. Internationally traded low sulphur coal has an NCV (Net calorific value) between 20 to 28 MJ/kg.

The high moisture in coal is associated with poor handling/flow properties. The lower limit is associated with the possibility of mill fires, and spontaneous combustion during stocking coal with excessive fines, which is very difficult to handle with low moisture contents. The required moisture contents shall be between 5 to 15 %. Ash is another essential factor to select boiler technology. A low ash proportion is desired to avoid high transport / disposal costs and a higher rate of dust erosion. High ash concentration can induce flame instability and will increase deposits on boiler tubes. Thus, it will reduce heat transfer to the working fluid.

Selection of boiler technology and unit configuration

In the electric-generating coal-fired thermal power plant, the boiler is the most important equipment as the primary unit converts the chemical energy of fuel into heat energy. At present, coal-firing boiler technologies in thermal power plants in the world are as the following:

- Pulverized Coal Combustion (PPC) technology.
- Circulating Fluidized Bed Combustion (CFB) technology.
- Pressurized Fluidized Bed Combustion (PFBC) technology.
- Integrated Gasification Combined Cycle (IGCC).

Among them, technologies of Pressurized Fluidized Bed Combustion and Integrated Gasification Combined Cycle have been newly developed with high economic performance factors. However, the commercial experience of these technologies is still very limited, particularly based on high-volatile content fuels, and requires a substantially higher initial investment cost. Therefore, these technological configurations are not considered for the Egypt Coal IPP project. In the following sections, two main commercially available coal-firing technologies are:

Pulverized Coal Firing (PC) and Circulating Fluidized Bed (CFB) will be studied for selecting the most suitable one for the project.

Criteria and Requirements for Boiler Technology of the Plant

Based on the features of the project and characteristics of coal fuel as mentioned below in the table, the criteria and requirements for the selection of boiler technology for the Egypt Coal IPP Project can be defined as below:

Stable and reliable combustion process, especially at low load and/or sudden/ rapid load changes; high complete burnt-out i.e. reducing unburned carbon in ash, in order to increase boiler's efficiency; and meeting with current, and possibly more stringent in future, the requirement of environmental protections without a must of high complex and high costly treatment means.

- The design technology must ensure safe, reliable, economic, and easy operation and maintenance.

- Further, as noted above, the environmental requirement is also an important factor to consider and select boiler technology. In this regard, an economic factor should be considered in conjunction with technical matters.

Pulverized Coal Firing Technology

INTRODUCTION

Pulverized coal boiler is traditional technology and highly developed with almost complete design, high efficiency, and high capacity.

At present, up to 1,300MW capacity PC boiler is in commercial operation but the popular unit boiler capacity range is 300-1,000MW. Many boiler manufacturers can supply a PC boiler of 660MW. This kind of boiler technology is very suitable and popular for bituminous and sub-bituminous coal. PC boiler experience is also available with anthracite coal, however, less popular than bituminous and sub-bituminous, and the maximum boiler capacity is also less, around 600MW.

PC firing technology is normally categorized into two types: direct firing (without pulverized coal storage bin) and indirect firing (with pulverized coal storage bin) in which, indirect firing is mostly applied for anthracite coal as it facilitates a more stable combustion process in the boiler's furnace thanks to the feature of independent operation of coal milling system and coal firing system.

B&W Beijing even claims that they have installed 600MW anthracite coal-fired supercritical boilers commercially operated since late 2009. However, this information is not verified.

At present, the largest PC boiler with a W-flame design firing anthracite coal in operation is 660MW at Hanfeng TPP, China. It should be noted that even though PC boiler firing anthracite coal has rich experiences in China, advanced low NOx PC combustion system is widely used in utility and industrial boiler.

The PC boiler is cost-effective and economical as it has sizes ranging from 100MW to 1300MW. PC boiler has improved flame stability and higher combustion efficiency. Coal from anthracite to lignite can be burned through a PC boiler.

For Egypt IPP, we are focusing on 2×660MW or 3×660MW units. For economic, efficient, and proven track record of boiler size, we intend to apply PC technology.

CFB Technology Overview

Limited commercial capacity scale: CFB boiler for power plants is available commercially at a capacity of about 300MW only. This would lead to a configuration of the unit for 1200MW(4x300MW CFB boilers – 2x600MW steam turbine & generator) and for 1800MW (6×300 MW CFB boilers - 3×600 MW steam turbine & generator). This causes the plant design more complex and, at a certain level, rise in investment cost and needs comparatively larger land.

Possibility of less competitiveness: It is understood that traditionally, the market of power CFB boilers has been dominated by only two key players:

Alstom and Foster Wheeler: Several Chinese manufacturers can supply up to 300MW CFB boilers which are basically based on a design developed by Alstom or FW. However, conditions and limitations of licenses to Chinese manufacturers may be an issue affecting the competitiveness of CFB boiler procurement ■

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Solar Pakistan Exhibition

Growatt highlights smart energy solutions

Mustafa Tahir

Growatt, a global leading distributed energy solution provider, has recently showcased its all-scenario solutions at the Solar Pakistan 2023 Exhibition. The company demonstrated its commitment to providing comprehensive and sustainable energy solutions by showcasing its on-grid and off-grid solutions, EV chargers, pump inverters, and portable power stations that can be tailored to Pakistan's applications and scenarios.

The SPH hybrid residential energy storage solution was a major highlight of the exhibition, including the SPH 3000-6000TL BL-UP, SPH 10000TL-X

Single-phase models, and SPH 4000-10000TL3 BH-UP three-phase models, as well as the compatible ARK LV and ARK HV lithium batteries.

The whole system comes with the ATS (Automatic Transfer Switch) function that simplifies the wiring process and makes installation easier. The company also presented its battery-ready inverters for residential solar + storage: the MIN 2500-6000-XH single-phase inverter and MOD 3-10KTL3-XH three-phase inverter, both of which have a battery interface that allows easy extension from the on-grid solar system to energy storage system, offering customers greater flexibility and fewer initial investments.

With regard to performance, the battery-ready inverters are set with full nominal power export to the grid plus full nominal power battery charge at the same time. For example, a MOD 10KTL3-XH inverter can provide 10 kW full power output plus 10 kW full power battery charge simultaneously, doubling the productivity of the system. What's more, its DC/AC ratio is as high as 2, and with dual MPP trackers and high string current, making it a good match with 500W+ high-power modules.

Growatt also introduced its powerful on-grid inverter MAX 100-125KTL3-X designed for C&I use. With a maximum input current of each string of 16A, it matches well with 600W+ high power and bi-facial modules. The inverters' 10 MPP trackers support 20 strings connection at most, which significantly reduces the energy loss caused by the shadow effect

and module mismatch.

System safety is always put first, and MAX 100-125KTL3-X is with Type II SPD on DC&AC sides, fuse-free design, integrated DC switch, IP66 protection as well as optional active arcing protection (AFCI) and built-in PID recovery to provide all-round protection for the inverter and even the whole PV system.

Additionally, we signed a 300MW MOU with AGN Solar, one of the region's largest distributors, to supply our on-grid and hybrid inverters to the Pakistan market. This deal will help to meet the market demand for reliable and advanced clean energy products and solutions, especially for the residential energy storage market.

Growatt will continue to develop innovative and high-quality PV products and solutions tailored to the specific needs of the Pakistani market, which helps to support the country's renewable energy goals and drive progress towards a greener Pakistan! ■

Need to transfer China's RE expertise to Pakistan

EU Report

"Cooperation between China and Pakistan can help Pakistan benefit from China's expertise in renewable energy, including solar and wind energy. Sino-Pak cooperation opportunities lie in renewable energy assessment, project investment and development, technology training, etc," said Qin Haiyan, secretary-general of the China Wind Energy Association.

In a webinar titled "Pakistan's Green Energy Pathways – Inspirations from China" hosted by energy and environment thinktank Renewable First (RF), Qin attributed China's wind power market growth to factors such as the Renewable Energy Law and a stable domestic market. He added that China has significantly reduced the levelized cost of electricity (LCOE) for onshore and offshore wind projects over the past decade, with a 60% reduction in offshore projects. As the world's largest market for wind power for 14 years running, China is sharing wind power technologies such as wind turbines with Pakistan, contributing to cost reductions in electricity generation in the country.

By the end of 2022, China's cumulative installed wind power capacity had exceeded 396 GW, the secretary-general said. China has built more than 20 power plants in cooperation with Pakistan and trained thousands of local wind energy professionals, claimed Leo Deng, a Pakistan-based consultant on the power project, in an interview with Gwadar Pro. ■

PM inaugurates two coal-fired power plants in Thar

Says projects will turn desert into an economic hub

Prime Minister Shehbaz Sharif on Wednesday inaugurated two coal-fired power plants in Tharparker with a capacity of 1,650 megawatt of electricity generation

The projects, including the 1,320 megawatt Shanghai Electric power plant and 330 MW Thal Nova power plant, will annually generate 11.24 billion units of low-cost electricity. Through the direct investment of $3.53 billion into these projects, the production of coal-based electricity in Thar will increase up to 3,300 MW.

Addressing the launching ceremony at the Islamkot area of Thar, the prime minister said the projects would turn the desert into an economic hub.

He dismissed the criticism by a section of people against Thar's coal, terming it a blessing with immense potential for power resources that needed to be untapped.

He expressed confidence that the journey of progress would spread across the country and would strengthen the national economy. The projects, which were abandoned during the last four years, are being made operational on the directive of Prime Minister Shehbaz Sharif.PM Sharif said by April 30, the power turbines would be installed at the projects to generate electricity, which would be supplied to the rest of the country through transmission lines. He expressed gratitude to the government of China for extending support to Pakistan in carrying out development projects under the CPEC.

He vowed that the coalition government would put in all efforts to materialize the CPEC projects, with the agriculture sector as its next phase. The PM announced a hospital for the people of Tharparker to provide them with medical facilities at their doorsteps.

Corporate Renewable Power Purchase Agreements

Engr. Abubakar

A corporate Renewable Power Purchase Agreement (RPPA) is a contract between a power producer (energy seller, developer) and a consumer (energy buyer) to purchase renewable electricity for a certain price and duration. Power Purchase Agreement (PPA) is a broad term which cover many types of contracts involving the purchase of energy between two parties but when we talk about specifically Renewable PPAs, then it is for long-term, on-site or off-site renewable energy and renewable energy certificates (REC) from a renewable energy project, which enable energy buyer to hedge the future energy cost.

Secondly, traditional power purchasing is from thermal plants, which depends upon fuels, and fuel prices are not under direct control of buyer or supplier. With a renewable PPA, a developer is willing to offer a fixed price for electricity in exchange for the ability to get the project financed with guaranteed revenues from the buyer.

This, in conjunction with the environmental attributes bundled with the energy (RECs), offers corporations a unique opportunity to buy long-term PPAs with carbon-offset options, a dynamic which has only existed in the past few years. Demand for renewable procurement is largely driven by ambitious decarbonisation targets set by governments and companies in the region. But more importantly, falling renewables premium and rising power tariffs in Asia Pacific are making corporate renewable PPAs more attractive. Corporate renewable PPAs is widely used term worldwide and according to BloombergNEF, corporations has purchased record 36.7 GW of clean energy in 2022 up 18% from 2021. A physical PPA for renewable energy is a contract for the purchase of electricity and associated renewable energy certificates (RECs) from the seller / generator / developer to a consumer / buyer / purchaser of renewable energy. Physical PPAs are usually long term from 10 to 20 years and in which all commercial terms have defined like schedule of delivery of electricity, terms and conditions of payments, force majeure, termination etc.

Physical PPA can further classified into "On-Site PPA" and "Off-Site PPA". On-Site PPA is when developer install the equipment on the consumer site and directly injects energy intro the consumer electricity system and Off-Site PPA is when developer installs the equipment on any other site and supply energy to the consumer through utility company. Transferring of electricity through the utility infrastructure is known as sleeving in many markets so it is also called as Sleeved PPA. A financial or virtual or synthetic PPA, allows a consumer to purchase renewable energy virtually. There is no physical supply of energy but companies can create green impact by having the certificates. Financial PPA has the structure such that it creates same economic effect as a physical PPA has for both parties. There type of PPAs are common in liberalized markets such as US.

So in a physical PPA, the consumer receives the physical delivery of electricity through the grid but in a financial power purchase agreement (financial PPA), they do not. A financial PPA treated as financial derivative and falls under specific accounting requirements by IFRS but on other hand Physical PPAs only account for realized sale. ■

Writer is seasoned professional having vast experience in energy sector. He has served different organizations from utilities like NTDC, KE to MNCs Siemens, GE (Alstom) etc. and currently leading Power & Energy Projects Department at Amreli Steels Limited. He has worked on different renewable projects including PPA options at Amreli Steels Limited.

M. Naeem Qureshi

Massive power curtailment from wind energy plants

Pakistan's drive to produce clean electricity hit snags

All wind turbines in Jhimpir-Gharo wind corridor in lower Sindh seen stationary; industries in Sindh are vanishing: Report

Massive electricity curtailment from wind energy plants is hampering Pakistan's drive to produce clean electricity. There has been widespread resentment among the concerned quarters in the energy sector as several reports emerged that wind power projects in the country faced massive curtailment of electricity produced by them for the national grid in the months of February and March 2023.

During a train journey in late February from Karachi to Lahore, the rail passengers while crossing through the Jhimpir-Gharo wind corridor in lower Sindh witnessed that all the wind turbines were stationary. It was a strange sight that speaks volumes about the apathy shown by the relevant government authorities towards the cause of producing clean electricity through indigenous renewable energy resources abundantly available in the country.

Pakistan at present needs to generate as much renewable electricity as it could to reduce to the maximum possible extent its reliance on imported fossil fuels for electricity generation. This policy should be implemented in letter and spirit given the serious foreign exchange crisis Pakistan has been facing for the past many months.

The Sindh government, which otherwise champions the cause of energy generation from the wind corridor of the province, has also been mysteriously silent on this issue. In the wind energy sector, there are 11 wind power projects (WPPs) in the country registered under the Clean Development Mechanism, and in the case of some of these plants, their crediting periods are fixed up to 2027. A question to think about is if wind energy is not getting into the grid then what's happening with the invisible money in terms of carbon credits?

In only the first four days of March 2023, only one wind energy plant's curtailment volume is around 1GWh. Just estimate what will be the total curtailment volume of 36 WPPs in the first 63 days of 2023. It is a net loss scenario. The country's three dozen WPPs have reportedly accused the National Power Control Centre (NPCC) of discriminating against them through excessive curtailments. The representatives of WPPs who wrote a letter to Prime Minister Shehbaz Sharif and other authorities were recently invited by National Electric Power Regulatory Authority (Nepra) to voice their viewpoints in the presence of NPCC and the Central Power Purchasing Agency.

According to sources, both sides hurled accusations against each other for the current mess. However, the power sector regulator pacified both sides and directed NPCC to give dispatch to wind projects, as their rate is far cheaper than other sources.

Irfran Ahmed, a senior renewable energy expert, said that wind power projects in the country had signed the energy purchase agreements in which curtailment of power transmission is allowed only in emergency conditions.

The WPPs are on the priority dispatch list and operate on must-run conditions but the CPPA/NPCC play all kinds of tricks to curtail wind projects as NTDC's network has huge system constraints and becomes unstable even if the renewables load exceeds seven per cent of the system load. In western countries whose system standards are followed by NTDC, the networks can sustain even up to 100 per cent of the renewables load. This only shows the incompetence of our agencies.

The demand for electricity at present is in Punjab whereas the maximum power generation capacity is in Sindh. The industries in Sindh are vanishing for which the provincial government is equally responsible. It is a sheer lack of planning on the part of the relevant ministries and agencies of the federal government.

The CPPA may have an internal Political Merit Order. In the past, they have been cur-

tailing wind to run Jamshoro thermal power plant on RFO (Residual Fuel Oil) at a much higher tariff for political reasons thereby creating environmental issues in the area.

Nuclear power plants are also not cheap in terms of electricity generated by them. Moreover, the decommissioning costs have not been included in the tariff. Thar coal plants (based on local coal) may be cheaper but only if mining and transmission costs are excluded. The environmental hazards of both nuclear and coal-fired plants with present technology are still not known, said Irfan Ahmed.

There are a total of 36 wind energy projects of 1842MW generation capacity in the country, but nobody knew that in past few years, especially the last few months there is a huge curtailment of power generation from these wind power projects. We are talking about the green revolution and in reality not taking care of already established green energy projects.

In order to keep wind power plants ready for operation but not using them for electricity generation has a huge toll on these projects because of the energy they import to keep the auxiliaries running. In this way, we are transforming power generators into power consumers and it is a pity. It is humbly requested to the leadership of NTDC / NPCC to fully utilize the potential of RE in Pakistan and remove the bottlenecks in the way of green energy evacuation.

Another serious shortcoming in all such conferences and seminars is that we talk too much without putting words into action. The Alternative Energy Development Board (AEDB) was established in 2003 and even now in 2023, 20 years down the road, we don't have a firm integrated RE development plan. The logical conclusion of such conferences should be preparing a road map, a future action plan, and a way forward. But we prefer to meet and greet only.

The Energy Update contacted the NTDC and AEDB senior officials several times to get their version on the issue of power curtailment faced by WPPs but it received no response until the publishing of this article. ■

ENVIRONMENT DEGRADATION

Renewable energy and EVs: Time is running out

Over 50% pollution in cities is caused by traffic: Country needs to work to harness more wind, solar and hydel power: Report

Bilal Hussain

Pakistan is the third most vulnerable country to climate change, which is slowly inflicting heavy damage on the economy. Last year's floods have already caused a loss of $30 billion to the country, estimates suggest.

However, Pakistan does not contribute even 1% to global carbon emissions. The question then arises: if Pakistan consistently tries to reduce carbon emissions by reducing its usage of fossil fuels, will it escape the impending dangers of climate change such as floods and barren land? From that point of view, it may have little impact because Pakistan's fate is tied to what the rest of the world does, especially the developed world, widely considered to be the biggest polluters of the environment. However, according to researchers, pollution, especially in congested cities with population clusters, makes the big urban centres like Karachi, Lahore, and Islamabad dangerous places to live in.

According to estimates,128,000 lives are lost in Pakistan due to health hazards caused by pollution. Power plants that are located close to these cities contribute to this, especially those established by different industries. And then there's a huge social and health cost.

According to research conducted by Darya Lab, over 50% pollution in cities is caused by traffic. Therefore, reducing pollution coming from fossil fuel vehicles is very important. That's one reason why Pakistan should take Electric Vehicles (EVs) and renewable energy seriously. Energy imports have remained the biggest import group for Pakistan. In the first seven months of the ongoing fiscal year 2023, Pakistan spent $10.6 billion on energy imports – over 29% of total imports.

Along with political drama underway in Islamabad, Pakistan's economy is also tanking. The government continues to sweep things under the rug as if nothing is amiss. On top of that, foreign exchange reserves have depleted to critical levels and a default may be just around the corner. Even if the current setup manages to evade an immediate default by managing to convince a reluctant International Monetary Fund (IMF), it will only be a few months before things again become the way they are right now. This is because Pakistan is heavily dependent on imports. The current account deficit will remain as it is while exports remain stagnant. The best thing the country can do is structural change in the true sense of the word. It should first target the biggest spenders of foreign exchange and that should begin with reducing energy imports. he country should work to harness more wind, solar and hydel power. It should also consider switching to electric vehicles. The government has tried to facilitate buying of electric vehicles during the last few years but unfortunately this space has also been haunted by elitism.

Hybrids or EVs: which one should Pakistan go for?

The encouraging part is that you can now easily spot EVs on Pakistan's roads especially in busy metropolises like Karachi. However, you won't find an EV that costs below Rs30 million and the price can actually go up to Rs60 million.

These EVs are equivalent to fossil fuel SUVs. Around three-fourths of the market in Pakistan consists of cars with engine sizes 500cc to 1,000cc, and EVs equivalent to these engine size vehicles are not very expensive.

Nur-E 75: Pakistan's first electric car prototype unveiled on Independence Day

However, when one factors in the savings that come from not spending on petrol or diesel, these EVs, in the long run, become much cheaper. Pakistanis could buy ten small EVs instead of one expensive e-tron. But unfortunately, here, the needle points in favour of the rich.

First things first

Reducing fuel imports by facilitating the use of renewable energy sources. Pakistan gets enough sunlight and then there's wind as well. Raw material for solar panels, mainly quartz, is abundantly available in Pakistan also. Quartz glass is used in many facets of photovoltaic (PV) cell manufacturing.There's every ingredient for Pakistan to get back on track. But there is a dire need of a will to do the right thing. There are mafias, and powerful lobbies in every industry, sector and market. They are sitting like vultures just to find a way to benefit from loopholes in the law without any regard for the country. Those loopholes in the law exist solely so that they can be exploited.

Under these circumstances, citizens will also be happy to invest in businesses based on imports or in real estate so that they don't have to invest in riskier areas. ■

Solar Pakistan 2023 Lahore

GoodWe leads the way in solar power

Khalid Iqbal

GoodWe, a world-leading manufacturer of solar inverters and energy storage solutions, makes a big impact at Solar Pakistan 2023 event with its cutting-edge products and advanced technologies.

From 10th –12th March 2023, GoodWe showcased its latest range of solar inverters and energy storage solutions at Solar Pakistan 2023, one of the biggest solar energy event in the country. The event brings together industry leaders, experts, and enthusiasts to discuss the latest developments, showcase innovative products and technologies and explore new business opportunities.

GoodWe's booth attracted thousands of visitors during the exhibition and more than 100 guests to the after-show party, who were impressed by the company's innovative solutions which can be applied in different scenarios from residential to C&I, on-grid to energy storage.

A wide range of GoodWe products were displayed at the exhibition, including the SDT G2 series, new SMT 50 – 60kW, ET series (15-30kW), EV charger – HCA series, and lithium battery - Lynx F series. Among them, SDT G2 and ET series received the most attention from the audience.

The SDT G2 series is a smart inverter designed for commercial and utility-scale solar projects. It features a cutting-edge topology that enables it to achieve maximum efficiency, even under harsh environmental conditions. While the ET series combined with a lithium battery – Lynx F series created an ideal three-phase solar energy storage system for large-scale residential and small-commercial solar applications.

The system seamlessly combine ET series' compact design, high power density & wide voltage range, and Lynx F series' high-performance & scalable backup capacity, making it a versatile and reliable solution for solar energy systems.

The HCA series of EV chargers are among GoodWe's newest creations to help bring a complete solution for the futuristic lifestyle of green & sustainable. The product allows homeowners to use the energy drawn from PV rooftops to charge electric vehicles (EVs), providing a highly cost-effective and environmental-friendly option for fast charging of EVs at home.

Especially, during the exhibition, GoodWe collaborates with Sky Electric to sign an MoU pertaining to 50MW for 2023. Sky Electric is a long-time partner of GoodWe in the Pakistan market, the company is a producer of clean and cost-effective solar energy solutions for homes and businesses. It provides intelligent energy solutions. It is a privately held company based in Florida, United States with operations and presence in Islamabad, Lahore, Karachi, and other cities of Pakistan.

"GoodWe & Sky Electric cooperation is a wonderful step forward for both parties in Pakistan. Together, we provide complete solutions and services of the highest quality for customers. The MoU marks GoodWe's commitment to accompany Pakistan in achieving its sustainable energy goal," said Jell Jiang, GoodWe Central Asia & SEA business head.

GoodWe is well-positioned to meet the growing demand for solar energy solutions in Pakistan.

"We are thrilled to be part of Solar Pakistan 2023 and to showcase our latest products to the Pakistan market," said Syed Salman Mohiuddin, GoodWe Pakistan Country Manager. "We believe that our innovative solutions will help accelerate the adoption of solar energy in Pakistan and contribute to the country's sustainable development. We are committed to providing our customers with reliable and cost-effective solar solutions that meet their energy needs and help them achieve energy independence."

About GoodWe

GoodWe is a world-leading PV inverter and energy storage solutions manufacturer and is listed as a public limited company on the Shanghai Stock Exchange (Stock Code: 688390).

With an accumulative delivery of more than two million inverters and installation of 35 GW in more than 100 countries and regions, GoodWe solar inverters have been used in residential and commercial rooftops, industrial and utility scale systems and range from 0.7kW to 250kW.

GoodWe has more than 4,000 employees situated in over 20 different countries and is regarded as the Global Top 3 storage inverter supplier by Wood Mackenzie in 2021. ■

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Iran-SA reconciliation: an opportunity for Pakistan

Pakistan could get major benefits from the recent diplomatic breakthrough

Ureeda Khan

Iran and Saudi Arabia, which have been major rivals in the Middle East, recently announced they intend to restore diplomatic ties and reopen their respective embassies. This historic breakthrough was achieved after talks in Beijing that were brokered by China. As part of the agreement, both countries have agreed to resume diplomatic relations within two months. Diplomatic ties between Iran and Saudi Arabia were severed in 2016 after the Saudi execution of Shia cleric Nimr Al-Nimr, which sparked anger and protests in Iran. This recent development is seen as a positive step toward resolving long-standing tensions and conflicts in the Middle East.

The normalization of ties between Iran and Saudi Arabia presents implications and opportunities for Pakistan, as Iran's neighbor, Saudi Arabia's partner, and China's key ally. The animosity between Tehran and Riyadh has had serious implications for Pakistan, which claimed neutrality but in practice titled toward Saudi Arabia, mainly due to economic dependence and religious affiliation. However, Pakistan has made efforts to bring the two states to the table, with then-Prime Minister Nawaz Sharif of Pakistan calling mediation between the two countries a "sacred mission" in 2016.

In 2019, Pakistan's then-Prime Minister Imran Khan visited Iran and Saudi Arabia and displayed the intent of acting as a mediator. In May 2021, Pakistan's foreign minister visited Iraq, which was playing an active role in seeking rapprochement between Saudi Arabia and Iran, to contribute to the process. Although no significant breakthrough was made at the time, this rapprochement positively impacted Saudi-Iran reconciliation.

The restoration of diplomatic ties between Iran and Saudi Arabia is a significant development for Pakistan, which has welcomed the agreement as a positive step toward regional peace and stability. Pakistan has a vested interest in maintaining friendly relations with both Iran and Saudi Arabia. In the past, these relationships have been impacted by cross-border crime and terrorism, and a balanced approach toward both countries is crucial for addressing such issues.

The normalization of ties between Iran and Saudi Arabia presents massive opportunities for trade and energy ties. Pakistan can benefit from increased economic cooperation with both states. Neighboring Iran has always been an important trading partner of Pakistan, and Saudi Arabia is a significant economic ally, with a large Pakistani diaspora working in the Kingdom, which is a significant source of remittances.

Pakistan has been plagued by sectarian violence for decades, with Sunni-Shia tensions being exploited by extremist groups to fuel conflict and create instability. This situation has been exacerbated by the regional rivalry between Saudi Arabia and Iran, as both countries have sought to exert influence in Pakistan and use sectarianism as a tool to further their geopolitical interests. Therefore, the normalization of ties between Iran and Saudi Arabia could have a positive impact on Pakistan, as it may help to defuse sectarian tensions and reduce the influence of extremist groups. Improved relations between these two regional powers could also lead to a more stable and peaceful Middle East, which would be beneficial for Pakistan as well as the broader international community.

Pakistan has a significant Shia population, which has historically faced discrimination and marginalization. Improved ties between Iran and Saudi Arabia could help to alleviate the suffering of this community and promote greater religious tolerance and coexistence in Pakistan. The normalization of ties between Iran and Saudi Arabia has the potential to bring about positive change in Pakistan by reducing sectarian tensions and promoting religious tolerance.

Moreover, it would provide Pakistan with an opportunity to pursue a neutral foreign policy, which could help to strengthen diplomatic and economic ties with both countries. Pakistan's friendly relations with Saudi Arabia could result in economic and political support, particularly on issues such as Kashmir. Additionally, strengthening ties with the GCC could offer Pakistan new opportunities for economic cooperation. Meanwhile, closer ties with Iran would be essential for improving regional security; while close ties between China, Iran, and Pakistan would be crucial for the success of the China-Pakistan Economic Corridor and the larger Belt and Road Initiative (BRI).

Pakistan has a history of playing a constructive role in the Middle East and has consistently supported and coordinated efforts to bridge gaps between countries in the region. In light of the recent restoration of diplomatic ties between Iran and Saudi Arabia, it is important for Pakistan to continue this role and help maintain the positive momentum and contribute to a more stable and peaceful Middle East, while also strengthening its own position as a regional player. This will require a nuanced approach that takes into account the interests and concerns of all parties involved, but the potential benefits for Pakistan and the wider region are significant. ■

No end in sight to country's economic woes

Pakistan's economic issues are not going anywhere

Mehtab Haider

Pakistan's external sector vulnerabilities have plunged into a completely "messy" situation, and it is yet to be determined how the upcoming 10th and 11th reviews under the IMF programme will be accomplished by the end of June 2023.

Pakistan's economic woes are not going anywhere on a short-term basis, as the IMF will remain around the corner during the preparation of the upcoming budget for 2023–24, so more tough conditions will have to be implemented on the voiceless, inflation-stricken masses.

One possible option could be clubbing the 10th and 11th reviews, as the 10th review had already become due on February 3, 2023, while the last review of the IMF programme would be scheduled to start on May 3, 2023.

However, the pending ninth review could not yet be accomplished until March 14, 2023, despite hectic efforts and engagement between both sides.

The outstanding ninth review under the IMF programme was scheduled to kick-start on November 3, 2022, and it should have concluded in December 2022. But it could not be done.

Now the external sector vulnerabilities have increased manifold, and it is yet to be determined how the exchange rate will respond when the floodgates of imports are opened after the revival of the IMF programme. No one exactly knows how many containers are stuck at ports, as it is roughly estimated that the clearance of containers requires at least $4 billion to $6 billion. It is one of the outstanding issues that needs to be resolved because Pakistani authorities consider that they will continue opening up Letters of Credit (LCs) in a gradual and phased manner. It will be hard for the IMF to digest halting imports by placing a restricted regime after the revival of the programme. Any kind of trade restriction is sternly opposed by the IMF programme. If Pakistan and the IMF strike a staff-level agreement within this ongoing week, the Fund's executive board is expected to take up Islamabad's request for approval of the next tranche of $1 billion in the latter half of April 2023. But if it is further delayed, the IMF's executive board may meet in May 2023.

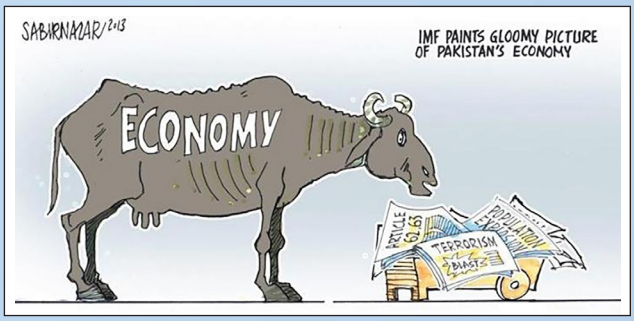
In such a scenario, the Pakistani authorities will be busy with budget-making exercises, and it will become hard for both sides to conclude the fund's review while the authorities are still considering the main contours of the upcoming budget for 2023–24.

It is premature to discuss the future course of action at a time when Pakistani authorities are running from pillar to post to accomplish the pending ninth review and release of the $1 billion tranche under the existing $6.5 billion Extended Fund Facility (EFF) programme.

The story does not end here in June 2023 because anyone who will be ruling over Pakistan in the aftermath of the upcoming budget will have to approach the IMF for securing the programme keeping in view the external debt repayment requirements ranging over $27 billion and the current account deficit (CAD) hovering around $5 to $6 billion at least amid the possibility of increased import needs.

There is a bumpier path ahead on the economic front as the era of window-dressing or patchwork is over at a time when the risk of default is looming large over the heads of economic managers. ■

Courtesy: The News



Boosting renewables

Pakistan can generate 33,000MW solar-wind power

Nasir Jamal

Pakistan must pursue a more ambitious plan to tap its variable renewable energy (VRE) — solar and wind power — potential to significantly increase its share in the country's energy mix than the one planned in the National Transmission & Despatch Company (NTDC) 10-year Indicative Generation Capacity Expansion Plan (IGCEP) prepared last year.

In its analysis of the IGCEP 2021-22, a German think tank, Agora Energiewendie, suggests that Pakistan has the potential to generate at least 33,000 megawatts of solar and wind power or more than 48 per cent of the the planned increase in electricity production to nearly 70,000MW in the next 10 years. That will result in generation cost savings of 15pc and emission savings of almost 50pc, says the recently commissioned Agora study titled 'Solar and Wind Roadmap for Pakistan'.

The study examines VRE scenarios beyond 2022 and reviews the 10-year generation expansion planning for Pakistan, evaluating the possibility and benefits of pursuing a more ambitious solar and wind power target by 2030-31. Based on the hourly dispatch of 2030, the study concludes that an increase in the planned total VRE capacity is possible by adding minor grid infrastructure reinforcements.

"Increasing VRE to 33,000MW by 2030 or 60pc greater than the IGCEP planned 21,000MW has high benefits and is stable under all scenarios. For any unexpected change in demand or others, the annual tender capacities of solar and wind can be adjusted flexibly in the future," it adds.

German think tank suggests that Pakistan can generate 33,000MW through wind and solar power in the next decade.

The study further recommends including this more ambitious target in the next iteration of the IGCEP, which is due in June this year. It also suggests pursuing a strategic reinforcement of road infrastructure (including the high-voltage direct current link to Chaghai in Balochistan), focusing on the flexibilisation of the operation of hydro and coal units, and implementing a stringent and localised annual tender plan for auctioning out the 33,000MW of solar and wind power over the life of the NTDC plan.

The NTDC prepares IGCEP every year as required under the National Electric Power Regulatory Authority law to forecast the electricity demand and supply scenarios in the country over the next decade and gives plans to boost power generation from different fuels to meet the increase in demand.

The IGCEP encapsulates power generation additions required to meet the country's future energy and power demand, including NTDC and K-Electric (KE) systems. Three scenarios of long-term forecast are prepared for the low, normal and high GDP growth of 3.40pc, 4.30pc and 5.42pc, respectively.

Agora has made its VRE recommendations based on the 'base case' scenario developed by the NTDC on a normal scenario of the long-term forecast, existing contractual obligations and retirements of power projects during the planning horizon. For the study, 8,021MW of existing power generation capacity is retired during the planning horizon in every scenario.

In the base case, the demand and installed capacity of the whole country, as forecast by the IGCEP, is 41,338MW and 69,372MW, respectively, by 2031, according to the IGCEP executive summary.

It is to highlight that in the planned future installed capacity, the optimised share of VRE is 20,548MW — 13,680MW from solar photovoltaic (PV) and 6,868MW from wind. That will be about 30pc of the total projected installed generation capacity in 2031. This is in line with the 2019 alternate energy plan that seeks to increase renewable energy share in the power generation fuel mix from the existing 7pc to 20pc by 2025 and 30pc by 2030.

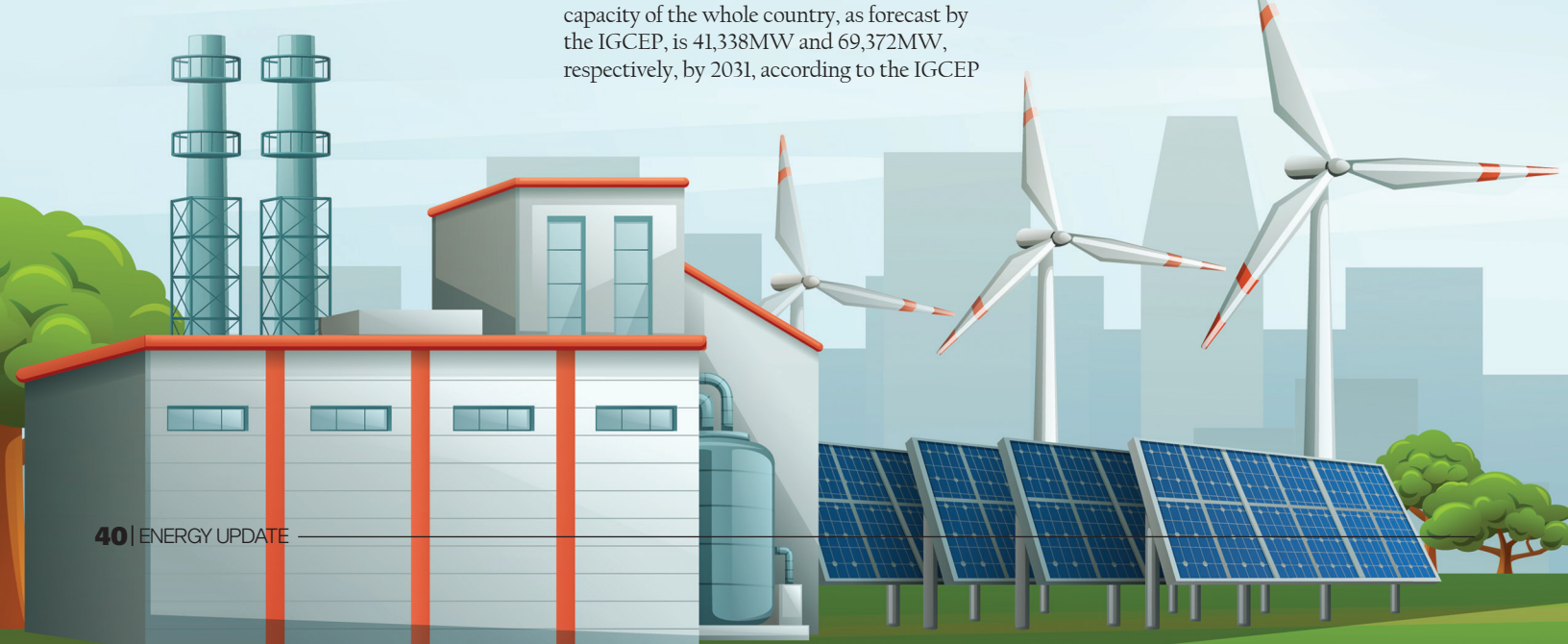
The salient features of the IGCEP base case include aggressive inclusion of VREs, minimal reliance on imported fuels, that is, coal, RLNG and Residual Furnace Oil (RFO), and increased share of hydropower as well as local coal, with all optimised generation based on indigenous resources.

The IGCEP says the inclusion of VREs, hydro and local coal will help lower the basket price of the overall system, thus providing much-needed relief to consumers though in the long run.

The current installed generation capacity in the country is 41,239MW megawatts, including 3,319MW produced by KE. The committed projects will have a capacity of 14,159MW, while the candidate projects of 17,812MW.

Historically, Pakistan strongly relies on hydropower. Heavy capacities in thermal plants have been added over the years based on coal, heavy fuel oil, gas and nuclear to cover demand-supply. Apart from some domestic coal and gas, all fuels are imported. Solar and wind are at their initial stages with a share of 1pc and 4pc in the total energy mix, respectively. ■

Courtesy: Daily Dawn



Policing climate change

Police need to manage human security impacts of climate disasters

Ali Tauqeer Sheikh

Police have recently been given horses to patrol the walking track on Margalla Hills National Park. The Motorway Police have been given new automobiles and laser guns to monitor speeding. The police have been provided with the latest technology for safe cities and digitalising crime investigations, a few bicycles for patrolling certain parks and motorbikes for female officers to promote gender equity. All these endeavours are aimed at improving public safety and service delivery.

Can the police be resourced to improve public safety in Karachi during recurrent urban floods, bouts of heatwaves in Jacobabad, droughts in Zhob, air pollution in Lahore, cloud outbursts in Nowshera, or glacial lake outburst floods in Hunza? Because of the frequent incidence of extreme weather events, we need to rely on, first and foremost, police and other law-enforcement agencies (LEAs) as first responders.

Climate change has significantly impacted law enforcement and policing functions. It has led to the need for enhanced policing capabilities. The police are increasingly required to perform roles that are distinct from their typical daily duties when responding to climate-induced disasters. The increasing temperatures and rainfall trends demand a rethink of approaches to internal security, with an emphasis on preventive rather than reactive strategies. Can we consider streamlining these functions, without converting the country into a police state?

The police department and other LEAs have thus far paid little attention to their role in climate disasters. There are substantial problems associated with responses to climate-induced disasters involving other emergency responders, communities, and other stakeholders who have a role to play. Resilience policing in Pakistan will need a new approach and a non-colonial mindset to prepare for and perform duties during climate disasters. Elsewhere in the world, it is often linked to community-managed policing models, and building networks within communities prior to disasters.

The police have an increasingly important leadership role in managing climate-triggered crises. Recent police engagements during the unfolding climate crises in Pakistan can be classified in four main categories: a) supporting the local administration in responding to the increasing frequency of climate disasters such as floods, heatwaves, droughts, landslides and snowstorms; b) assisting the government in enforcing environment and climate-related laws by coordinating with the concerned departments; c) managing changes in the incidence and types of crimes, due to large-scale climate-induced disasters; and d) responding to land mafias and criminal groups that cause environmental damage by illegally exploiting public goods and natural resources such as communal lands, forests, parks, riverbanks and sand-mining in riverbeds and mining and stone-crushing in mountains.

The police have several functions in climate disasters and are expected to take a lead role in ensuring a safe and secure environment. They are responsible for public safety when extreme weather strikes.

Police are called upon to assist in crisis management and to address crimes that occur during or after these events as well as riots and law-and-order situations resulting from reduced food and medical supplies. They have an increasingly important leadership role and responsibility in managing climate-triggered crises.

Environmental crimes are illicit activities that violate national and provincial laws. The nexus between climate change and crime is redefining the country's criminal landscape. In Pakistan, environmental crimes have become one of the fastest-growing types of organised crime.

They include several pollution-related crimes such as dumping hazardous waste into the waterways and releasing pollutants into the air, smuggling ozone-depleting substances, carrying on with wildlife trade, poaching, illegal logging, deforestation and transboundary trade in timber.

Most of these issues are tackled by the concerned departments but they often need support from police and other law-enforcement services. How can the police support the departments' actions to protect the environment from criminal activity if they are not sensitised, trained and equipped with SOPs and the necessary regulations?

The exploitation of public goods by criminal groups causes environmental harm and adds to vulnerability. In some conflict-affected areas of Pakistan, it serves as a source of financing for non-state armed groups, and LEAs do not always have the will or the capacity to investigate and dismantle criminal networks that involve environmental crimes.

The use of technology is linked to strategy development and organisation-wide changes within the police department that can help them better prepare for climate impacts. The starting point is strategy and internal restructuring, not technology acquisition. Procurement is easy, transformation is hard but sustainable.

Police functions are in support of civic functions and are best delivered together with community and volunteer groups. Unending reliance on the military for emergency services is the sign of an ailing if not failing society. Law-enforcement institutions need not be disproportionately weak and in disarray. After all, the police have an important role to play in managing the human security impacts of climate disasters. ■

Courtesy Dawn

Tightrope between recoveries and circular debt

Circular debt issue in power sector still uncontrolled

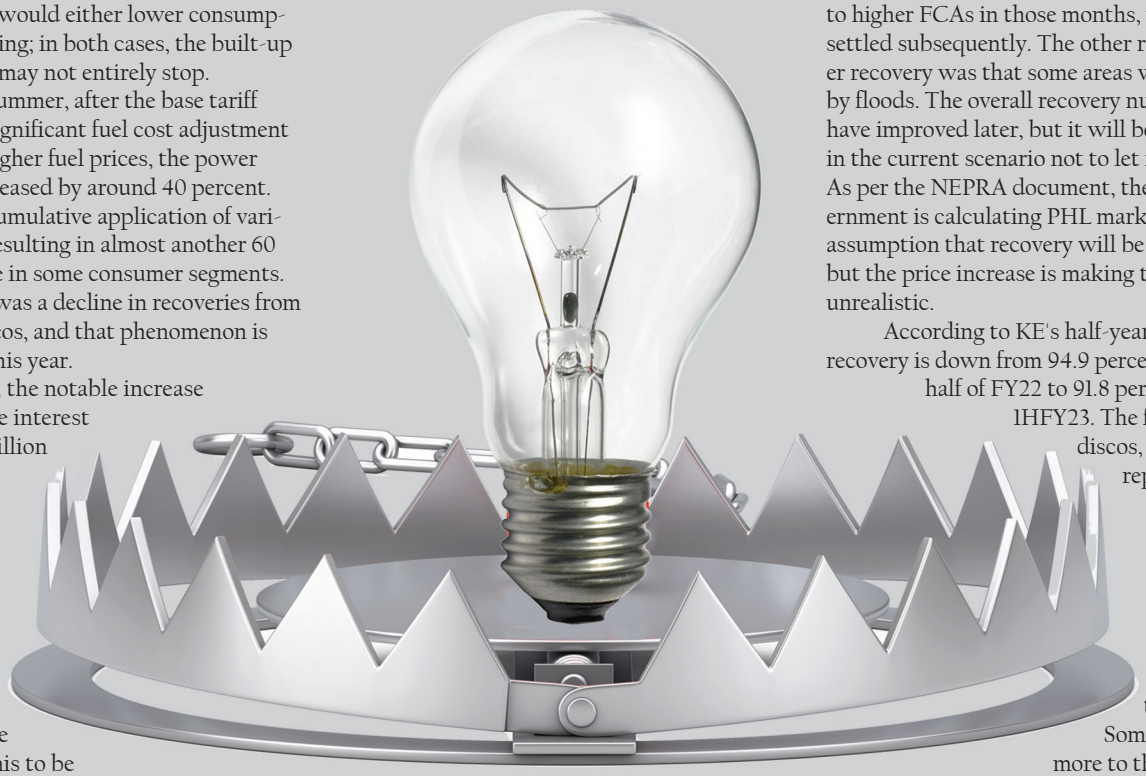
EU Report

To end or limit the increase in the power sector circular debt flow, under the condition of the IMF, the government is yet again passing on the inefficiencies in planning and governance to the end consumers. This summer, the average consumer tariff inclusive of all taxes is estimated to exceed Rs38-40 per unit. At such high rates, the marginal consumer would either lower consumption or stop paying; in both cases, the built-up of circular debt may not entirely stop.

The last summer, after the base tariff revision and a significant fuel cost adjustment (FCA) due to higher fuel prices, the power tariffs were increased by around 40 percent. This time, the cumulative application of various charges is resulting in almost another 60 percent increase in some consumer segments. Last year there was a decline in recoveries from most of the Discos, and that phenomenon is likely to grow this year.

This time, the notable increase is passing on the interest cost of Rs800 billion circular debt parked in the PHL. Dealing with this surcharge was one of the impediments with the IMF because the Fund wanted this to be part of the tariff as the government had no solution to clear the debt. In contrast, the government wanted this to be a surcharge for some months. However, NEPRA wasn't unhappy with this as it meant passing on system inefficiencies to the consumers. The surcharge of Rs3.82 per unit is imposed till June 2023 for all consumers but Rs0.43 per unit for those below 300 units and nothing for lifeline consumers. However, on 16th March, NEPRA concluded a hearing on the implementation of the PHL surcharge in the new fiscal year. The government is proposing that the majority categories pay Rs3.23 per unit from July until October 2023; and from November 2023, all categories except lifeline will be paying these charges.

Then there are deferred FCAs from last summer – mainly for 300-unit consumers or below - as high FCA for May, June, and July 2022 applied in the Jul-Sep quarter were deferred temporarily and only applied partially to bills. These deferred charges will be passed on now in eight installments to lower the monthly increase. However, the recovery timings are odd relative to when those were deferred, as inflation is touching new records. In such a situation, it won't be easy for lower-slab consumers to absorb this increase. There would also be FCAs on existing consumers requiring quarterly adjustments. Furthermore, the GST has increased by 1 percent to 18 percent. Overall, the increase could be very painful when added to last year's increase amid high inflation and falling real incomes.



It's a no-brainer to assume that the consumers won't be able to afford the high-cost electricity. So there would be two options. One is to reduce consumption, and the other is to default on bill payments. A combination of both may occur, preventing circular debt flow from lowering to the desired levels.

Already the recoveries are falling. In FY22, Discos' recovery (barring KE) reduced from 97 percent to 90.5 percent. And based on news reports, the decline in the recovery of the first quarter of FY23 was to 83 percent. This lower recovery was partially attributed to higher FCAs in those months, which were settled subsequently. The other reason for lower recovery was that some areas were affected by floods. The overall recovery number could have improved later, but it will be challenging in the current scenario not to let it fall again. As per the NEPRA document, the Federal Government is calculating PHL markups on the assumption that recovery will be at 90 percent, but the price increase is making this number unrealistic.

According to KE's half-year report, the recovery is down from 94.9 percent in the first half of FY22 to 91.8 percent in the 1HFY23. The fall in other discos, as per news reports, was steeper.

Not every disco is equal. Some have higher losses than others. Some contribute more to the circular debt than others. But now, all have to share the interest payment on that circular debt, which is unfair to good-paying consumers and efficient discos.

The industrial sector also faces these problems, where the exporting sectors are paying tariffs of Rs40 per unit while the production cost is close to half. And the industries have to pay for domestic consumers' subsidies and discos inefficiencies. This is not fair, either.

With exuberantly high tariffs, it's about time to revisit this policy of uniformity, as even good consumers or discos might not remain good. There is a need to call a spade a spade. ■

Transition to clean energy is about making investment in future

Mian Fahad

Due to the high cost of electricity and petroleum, an average middle-class household with an income of Rs35,000 per month, using 400 units (KWh) of electricity and a motorcycle as the primary mode of transportation, is spending half of its monthly income on electricity and fuel expenses, not leaving much for food, rent, and children's education.

The high cost of electricity and petroleum is placing a heavy financial burden on middle-class households in Pakistan. The situation is expected to worsen with the removal of electricity and petroleum subsidies based on IMF requirements. However, this situation can be an opportunity for the government to accelerate the implementation of technological solutions, such as solar power, electric motorcycles, and lithium-based batteries.

These solutions offer several benefits, including reducing the burden on the middle class, reducing the oil import bill, creating a cleaner environment, and an opportunity for economic growth by establishing local manufacturing for internal consumption and exports. To reduce electricity bills, consumers can rent a portion of a large solar farm or consider expanding rooftop solar and community solar subscriptions. Rooftop solar installations have been successful in recent years due to the reduction in solar panel prices, net metering, and the escalation in electricity tariffs. LFP batteries with 15+ years of life are becoming financially feasible for peak hour use with an imminent peak rate hike.

While more than 20,000 net metering licenses were issued by the end of 2021-22, there is still much room for growth. Pakistan has 610,000 households using 700+ units and 16.8 million households consuming 300-700 units on average per month. By continuing with current net metering and export rate incentives, the country can achieve at least 10,000 MW of rooftop solar installations on just 5% of these houses during the next five years.

For households using 500-700 units per month, rooftop installations can be accelerated by providing incentives such as reinstating low-cost loans, removing current limitations on net metering, and eliminating the 17% general sales tax on solar equipment for 10KW or smaller installations.

For lower-income households (300-500 units per month consumption), rooftop solar is not a practical option due to the higher cost per kilowatt for a smaller system, financial constraints, roof space availability, rental housing, and apartment living. Community solar, a recent innovation gaining momentum in various countries for large solar farms, along with virtual net metering (VNM), provides a practical and lower-cost solution for these households and industrial facilities. In the community solar subscription model, consumers either purchase or rent a small portion of a large solar farm operated by the utility or a private developer.

The per kilowatt cost of these solar farms is 15- 20% lower than a rooftop system, thus reducing the purchase or rental cost. The industry can also provide equity investment, and the government can offer a 15-20% tax credit to further incentivize industry investment. With the community solar model, the industry will receive almost free electricity for their purchased portion as the return of equity and will only pay Rs10 per unit for additional electricity needed during the day.

Household consumers will also pay Rs10 per unit, but they will receive a credit of Rs3,800 using virtual net metering. Pakistan can achieve up to 20GW solar installations in the next five years through rooftop and large solar farms, significantly reducing the impact of costly and pollutant fossil fuel-based energy generation.

OGDCL to distribute 100 ambulances to hospitals

Oil and Gas Development Company Limited (OGDCL) has devised a program to distribute fully equipped 100 ambulances worth Rs200 million to District Headquarters (DHQ), Tehsil Headquarters (THQ) hospitals, and Basic Health Units (BHU) across the country.

The ambulances will play a major role in strengthening the referral system, a key aspect in achieving health coverage. The delivery of these ambulances will enhance the ability of public health services to respond to medical emergencies and provide timely referrals for patients in severe and life-threatening conditions, especially for people living in hard-to-reach areas or those not able to afford transportation. These ambulances will be distributed in collaboration with the local administration to BHUs, THQ and DHQ hospitals surrounding OGDCL operational fields.

The launch ceremony in this regard took place at OGDCL Head Office Islamabad and was attended by distinguished guests. The Federal Secretary of Petroleum Division, Capt (R) Muhammad Mahmood, was the chief guest on the occasion.

Speaking at the launching ceremony, Ahmed Hayat Lak, MD/CEO, OGDCL, highlighted the importance of the program in the country's health sector and emphasized that the initiative would help improve people's access to health services. He further added that as a responsible corporate citizen, OGDCL has not only launched several initiatives in the health sector but also in education, water supply, sports, and infrastructure development.

Zia Salahuddin, Executive Director (Services), OGDCL, provided a comprehensive introduction to the program, outlining the salient features of the ambulances and the modalities for their distribution.

Speaking on the occasion, Federal Secretary for Petroleum Division Capt (R) Muhammad Mahmood emphasized the importance of the CSR program. He commended OGDCL for taking such an initiative to ensure health facilities for masses across the country. He gave valuable suggestions for augmenting the CSR initiatives and improving the outreach.

Huawei FusionSolar Advanced AFCI Technology:

Ensuring Safe and Reliable Solar Power

PV and ESS safety is the cornerstone of industry development. This requires us to systematically consider all scenarios and processes, fully integrate power electronics, electrochemical, thermal management, and digital technologies to upgrade system safety.

Arc Fault Circuit Breaker (AFCI):

In distributed PV scenarios, power plants have small capacity, scattered locations, and complex application scenarios, mostly in industrial or residential areas. Therefore, the building and personal safety becomes a common concern and active safety protection are increasingly important. At present, more than 80% of fires in PV modules are caused by DC arcing. Once the contact points of PV modules are in poor connection, the wire is damp, or the insulation material is damaged, high voltage arcs will occur. Because the arc signal is related to many factors such as line length and current, and the equipment operating environment is complex and changing, the precise arc detection faces great challenges. Currently, according to China General Certification Center (CGC)/GF 175:2020 Technical Specifications for Arc Detection and Rapid Shutdown Performance Evaluation, AFCI is usually divided into four levels by performance.

Requirements / Items \ Level	Level 1	Level 2	Level 3	Level 4
Arc Fault Point Locating	Unable to Locate	Unable to Locate	Unable to Locate	Locate
Detectable Cable Length	61m	80m	80m (single-phase) 200m (three-phase)	80m (single-phase) 200m (three-phase)
Max. Current	0.9 Imax	0.9 Imax	0.9 Imax	Imax
Arc Energy	750J	600J	600J	500J
Shutdown Time	2.5s	1.5s	1.5s	0.5s
Detection Precision	100%	100%	100%	100%
Technical Requirements	PV String Detection	Optimizer system +1% high-precision independent CT	> 200DMIPS high-performance CPU+0.5% independent CT	> 200DMIPS high-performance CPU+0.5% independent CT

Module-Level Rapid Shutdown

The PV modules on the DC side are connected in series. When the PV modules are exposed to sunlight, the PV strings generate a high voltage of 600 V to 1000 V, which poses a threat to the personal safety of rooftop O&M personnel. In the event of a fire in PV modules, the high voltage of the PV string will affect the fire extinguishing and rescue efforts of firefighters. Therefore, it is necessary to implement the rapid shutdown function at the module level using power electronics technology.

Application

More and more countries around the world have issued stricter regulations on the PV DC side safety. Forexample, the US NEC 2017 Section 690.11 and the Canadian Electrical Code 2021 stipulate that any PV system above 80 V must support AFCI. In actual applications, China National Petroleum Corporation (CNPC) and Sinopec have used Huawei Fusion- Solar solution in some gas stations in Wuhan and Inner Mongolia. The solution provides AFCI and rapid shutdown for PV modules, meeting strict safety standards

Technical Features of Huawei AFCI Solution

By leveraging its advantages and experience accumulated in other fields, Huawei has proposed its AI BOOST AFCI intelligent arc detection solution to solve the preceding difficulties. The solution features the following highlights:

(1) Combines AFCI and deep learning technologies based on Huawei technical experience in the ICT and AI fields. Unlike manual induction design, AI is based on a highly nonlinear model, and simultaneously calculates and iterates massive data to find high-dimensional feature rules that effectively distinguish characteristic signals with similar forms.

(2) Uses AI and deep learning technologies to enable the detection model to continuously learn unknown spectrums, effectively improving noise adaptability. In addition, the model generalization capability has improved so the model can effectively identify arc characteristics in different scenarios, improving scenario adaptability.

Table 2-1 Traditional arc detection solution vs. Huawei AI BOOST AFCI intelligent arc detection solution

Item	Traditional Solution	Huawei's Solution
Noise adaptability	• Likely to raise false alarms for signals with similar characteristics	• Can effectively distinguish between noise and arc characteristics • Can avoid false alarm and missed alarm completely
Scenario adaptability	• Supports only the input cable length (**61 m**) required by the certification • Supports only the input current (**14 A**) required by the certification	• Supports the maximum input cable length of **200 m** • Supports the maximum input current of **26 A** • **supports module-level arc fault locating when system is fully-equipped with optimizers**

Comprehensive Evaluation

Based on the technical review and performance verification results, it can be concluded that the AFCI function integrated into Huawei inverters achieves the following:

(1) Complies with the UL 1699B-2018 standard and reaches the L4 level in CGC/GF 175:2020.

(2) Features mature series arc detection and rapid shutdown technologies, which can be used to effectively prevent arc hazards in the rooftop PV system with complex environment.

(3) Delivers module-level precise arc fault location when optimizers are fully configured.

(4) ImplemeInts high-precision detection in a wider scope (for example, when the cable length exceeds 200 m or the current exceeds Imax) with the AI BOOST AFCI intelligent detection solution based on existing performance levels. ■

Energy giants will lead pursuit of green hydrogen projects

EU Report

Oil & Gas Development Company Limited (OGDCL), Pak-Arab Refinery Limited (PARCO), Pakistan Petroleum Limited (PPL), Mari Petroleum Company Limited (MPCL), and Government Holdings Private Limited (GHPL) have signed a Memorandum of Understanding (MoU) to explore and pursue green hydrogen opportunities within and outside Pakistan.

The MoU was signed by Ahmed Hayat Lak, MD/CEO OGDCL; Shahid Mahmood Khan, MD PARCO; Imran Abbasy, MD/CEO PPL; Fahim Haider, MD/CEO MPCL; and Masood Nabi, MD GHPL on behalf of their respective companies. Federal Secretary of Petroleum Division, Capt (R) Muhammad Mahmood, witnessed the MoU signing ceremony at the OGDCL Head Office, Islamabad.

Under the MoU, the companies will consider joint venture projects and areas of mutual cooperation for green energy initiatives. "This collaboration is a significant step towards building a more sustainable future for Pakistan and beyond," said Capt (R) Muhammad Mahmood, Federal Secretary Petroleum Division.

The MoU will be initially effective for two years from the date of signing, with the option to extend by mutual agreement. The energy giants will lead the pursuit of green hydrogen projects, engaging consultants and advisors subject to the agreement of the other parties.

Risen Energy is participated first time in any event in Pakistan .Risen is leader in HJT technology. We show case our HJT modules and it get so much attraction and interest from visitors and Epc customers. HJT modules have higher efficiency then Topcon and perc and also lower degradtion ratio then topcon and perc . Thank you to all the visitors , Partners , customers and friends who visited us during exhibition and give us more strength that we continue our contribution to sustainable and greener Pakistan.

HABITAT LOSS

Islamabad's forests vanishing gradually

Green area reduces by 36pc in last two decades; city experiences 100pc increase in population in 20 years; more urban flooding and forest fires feared; Miyawaki forestation project scope remains limited

Zohaib Mehmood Shah

Forests are incredibly important for our survival and well-being. They provide us with the air we breathe and the wood we use and offer habitats for animals and livelihoods for humans.

Additionally, forests play a crucial role in protecting watersheds, preventing soil erosion, and mitigating the effects of climate change. In fact, climate change is the biggest threat our country faces today, and even though Pakistan only contributes one per cent of global greenhouse gas emissions, it is still considered the 5th most vulnerable country to its effects. Despite our dependence on forests, we are allowing them to disappear at an alarming rate.

In recent years, Pakistan has suffered from natural disasters such as floods, droughts, and cyclones. However, the monsoon season in 2022 surpassed all previous destruction records on every scale. Heavy rainfall led to severe floods, landslides, and urban flooding, displacing 33 million people and causing over 1,730 deaths.

The floods affected all the provinces, impacting about 15pc of the population. The damages were widespread, with houses, roads, bridges, and rail networks being washed away. The government estimated the total damage to be more than $30 billion.

As the temperature in Islamabad rises above 40°C in May and June, the incidents of fire in and around the city have significantly increased. The primary cause of these fires is the drought and high temperatures, harming trees and animals. Recently, there was a fire outbreak at the National University of Sciences & Technology (NUST) in Sector H-12, Islamabad, which is a cause for serious concern. These fires have adverse effects not only on the infrastructure but also on the socio-economic and environmental conditions of the region. It is crucial to address this issue to prevent further damage.

In recent years, many people have moved to cities in search of better living conditions, job opportunities, and access to education. Islamabad is no exception, attracting migrants from all over the country.

To accommodate the growing population, the city must build new infrastructure such as roads, schools, buildings, and housing societies. The city covers an area of 906 square kilometres and has experienced a 100pc increase in population over the last 20 years, making it difficult to monitor its resources and provide the necessary services to the public.

The Image Analysis Lab, which operates under the School of Interdisciplinary Engineering and Sciences at NUST, has conducted research using Artificial Intelligence techniques on satellite imagery to monitor the resources of Islamabad city.

The research shows that the green area of Islamabad in 2000 was 656sq-km with a water body of 7.09sq-km, barren land of 183sq-km, and a build-up area of 60sq-km.

However, in 2020, the green area was reduced to 420sq-km, representing a 36pc reduction in the last two decades. The water body also decreased to 6.38sq-km (decline of 0.71sq-km), which is approximately a 10pc reduction. Barren land fell to 100sq-km, a total decrease of 45pc from 2000.

The local government has implemented initiatives such as the Miyawaki forestation project to combat this issue. While this is a commendable effort, the volume and scope of the project remain limited.

The changes in Earth's resources in Islamabad have significantly impacted weather patterns with natural disasters, such as urban flooding and forest fires. As a result of climate change, there is a possibility that these hazards will become more frequent and severe in the future.

Although these initiatives are positive, more must be done globally to address deforestation and promote reforestation. Collaboration among governments, organisations, and individuals is necessary to protect and restore forests, which play a critical role in mitigating the impacts of climate change and supporting biodiversity.

Companies must join efforts in addressing deforestation and promoting reforestation alongside government and public initiatives. Businesses can actively support by committing to using only sustainable forest products in their operations, funding or volunteering for reforestation projects, and collaborating with stakeholders to promote sustainable forestry practices. ■

PRESIDENT OF PAKISTAN CONFERRED CIVIL AWARDS

President of Pakistan Dr. Arif Alvi awarded Tamgha-e-Imtiaz to Governor Sindh Kamran Khan Tessori at Aiwan-i-Saddar Islamabad

Iqbal Latif Sr Drama Producer and Director PTV , Chairman drama committee Arts Council awarded tamgha imtiaz

Mirza Ishtiaq Baig, President Make-A-Wish Foundation Pakistan receives Sitara-i-Imtiaz from President of Pakistan

Jehan Ara is the Founder & CEO of Katalyst Labs a Technology Startup Accelerator and Innovation hub. President of Pakistan Dr. Arif Alvi awarded Tamgha-e-Imtiaz

IEEEP holds symposium at PC Karachi recently CEO Enercon Imran Zafar, Engr Nadeem Ashraf Naeem Qureshi from Energy Update and others are seen in the picture

Team NFEH met with Executive Director OGDCL Zia Salahuddin on CSR Activities.

SOCIAL AND BUSINESS ROUND UP

MOU signing ceremony of Sungrow with Wateen Energy

A Group picture of Solar Fraternity with Howard Fu Country Manager Sungrow at Solar Pakistan

MOU signing ceremony of Sungrow with Sky Electric

K-Electric & Nutshell has organized localization growth summit in Karachi

Huma Zafar Manager CSR Mari Petroleum receiving corporate philanthropy award at PCP award ceremony

Group Photo of Team Zonergy at Solar Pakistan

Agreement signing ceremony of DSG Energy to establish Solar Power Plant

ENERGY NEWS

Solis participates in solar expo

Solis participated in Solar Pakistan Expo in Lahore to promote the usage of clean electricity in Pakistan, Lahore

Solis, one of the leading and most experienced solar inverter brands in the world, participated in the recently concluded three-day Solar Pakistan Exhibition and Conference in Lahore. The products displayed at the solar expo in Lahore included Solis-(80-110)K-5G-PRO, S6-EH1P(3-6)K-L, S6-EH3P(5-10)K-H, S5-GR3P(3-20)K.

The Solis's active participation in the event was in line with its commitment to help Pakistan meet its national renewable energy targets for minimizing the consumption of fossil fuels for power generation.

The Solis booth at the Solar Expo was visited by a large number of prospective consumers who intend to use the latest and most reliable technology available in the market for using renewable energy for electrifying their homes and businesses.

The prospective consumers were briefed in detail on the latest technological options available for uninterrupted power supply using solar power in the upcoming summer with the least reliance on grid connectivity. They were briefed as to how these options would help them to save on their electricity bills and also to contribute to the national cause of maximizing the use of green energy options for environmental protection and saving precious foreign currency reserves otherwise used for importing fossil fuels.

NEECA revises building code

EU Report

Following instructions of the Prime Minister, National Energy Efficiency & Conservation Authority (NEECA) has revised building code for energy provisions and charging infrastructure regulations for E-vehicles.

The new Energy Conservation Building Code 2023 has been presented and approved by the Technical Committee of NEECA on March 21, 2023. The code has been developed by a technical committee of experts from various government departments across the country, and subsequently reviewed by an advisory committee comprising developers, builders, and field experts and practitioners. Furthermore, to incorporate modern research and add value to this code, it has also been reviewed by experts from academia. This energy conservation building code (ECBC-2023) encompasses building envelope optimization, passive design of buildings, building insulation, retrofitting of existing buildings to convert them into energy-efficient ones, monitoring devices for energy analysis, renewable and geothermal energy potential in buildings, and energy management systems. Through the implementation of this code, the overall energy demand of the building sector can be significantly reduced, up to 45%, resulting in the saving of millions of public funds. Furthermore, this code will also promote the construction of environment-friendly buildings, leading to a potential reduction of GHG emissions by 35% and improved climate-resilient characteristics of buildings.

LONGi participated in Solar Exhibition

LONGi Solar has announced its successful participation in the recent Solar Pakistan Exhibition. The exhibition provided a platform for us to showcase latest products and innovations to potential customers, partners, and industry experts.

At the exhibition, LONGi showcased the newest product, HIMO6 (HPBC Tehnology) which is a groundbreaking solution for C&I and Utility projects. The product generated a lot of buzz and interest among visitors, who were impressed by its unique features and efficiency capabilities, atheistically appearance.

LONGi Pakistan team also showcased other products, including HIMO5 series, which has been well-received in the market since its launch. The product's high quality and reliability were appreciated by visitors, who expressed interest in purchasing it for their projects.

PSA seeks $800m limit for solar imports

EU Report

The Pakistan Solar Association (PSA) has sought an annual limit of $800 million for import of solar panels and equipment, claiming that the issue of money laundering is largely eliminated.

The Association which recently held a meeting with the Minister for Power Khurram Dastgir Khan apprised him about their issues, and have now sent a letter to him with some recommendations.

PSA's Secretary General, Mohsin Sahukat in his letter has requested the government to remove the solar energy sector from the list of non-essential items and consider it as an essential utility in the present times as recognised globally.

The import of solar panels in the previous fiscal was about 2.4 GW with an import value of solar panels and equipment of almost $ 1.2 billion in the last fiscal demand of around $ 1.8 billion during this year based on growth trends from previous years is predicted in the letter. According to the letter given the adverse economic conditions, the PSA stands with the SBP and the government and understands the difficulty faced in financing imports.

At the same time, with the genuine need for solar energy in context of the Pakistan market and about 1-year payback of each dollar spent on solar equipment vis-a-vis saving in oil imports, it will be beneficial for the country to at least partially resume solar imports.

The PSA has requested Power minister to advise SBP and commercial banks to facilitate the imports of solar equipment by allowing an annual limit of $ 800 million i.e. $ 65 million per month for import of solar equipment, representing a reduction of around 56 per cent versus the estimated market equipment.

Import of solar panels: SBP asks govt to prepare list of 'reputable' suppliers

The PSA has proposed that the limit for import may be implemented within the industry, based on previous import history with the following limitations: (i) only companies that are members of the Pakistan Solar Association and have been AEDB-certified for at least 3 years to be allowed to import solar equipment; (ii) Companies that have past track record of import of Tier-1 Panels in the past 5 years; and (iii) import to be limited to Tier 1 solar panels (as defined by BNEF classification) with only the direct manufacturer of the solar equipment being the "beneficiary" of the LC / payment documents for the shipment.

The proposed conditions will ensure that import of solar panels is restricted to industry players, thereby significantly reducing, if not completely eliminating, the issues faced due to low-quality imports and chances of money laundering. The PSA contends that it is evident from the report submitted by the PSA in 2016-2017 and subsequent meetings and correspondence with the SBP officials, the issue of money laundering under the HS Codes 84 and 85 was largely eliminated.

Record 9.6% growth in renewables achieved

EU Report

Abu Dhabi: By the end of 2022, global renewable generation capacity amounted to 3372 Gigawatt (GW), growing the stock of renewable power by 295 GW or 9.6 per cent. An impressive 83 per cent of all power capacity added last year was produced by renewables. Renewable Capacity Statistics 2023, released by the International Renewable Energy Agency (IRENA) shows that renewable energy continues to grow at record levels despite global uncertainties, confirming the downward trend of fossil fueled power generation. "This continued record growth shows the resilience of renewable energy amidst the lingering energy crisis," IRENA's Director-General Francesco La Camera said. "The strong business case of renewables coupled with enabling policies has sustained an upward trend of their share in the global energy mix year on year. But annual additions of renewable power capacity must grow three times the current level by 2030, if we want to stay on a pathway limiting global warming to 1.5°C."

While many countries increased their renewable capacity in 2022, the significant growth of renewables is persistently concentrated in a few countries and regions like Asia, the USA and Europe. IRENA's data finds that almost half of all new capacity in 2022 was added in Asia, resulting in a total of 1.63 Terawatt (TW) of renewable capacity by 2022. China was the biggest contributor, adding 141 GW to the continent's new capacity.

Renewables in Europe and North America grew by 57.3 GW and 29.1 GW respectively. Africa continued to expand steadily with an increase of 2.7 GW, slightly above last year. Oceania continued its double-digit growth with an expansion of 5.2 GW and South America continued an upward trend, with a capacity expansion of 18.2 GW. The Middle East recorded its highest increase in renewables on record, with 3.2 GW of new capacity commissioned in 2022, an increase of 12.8 per cent. La Camera added: "As energy demand is expected to rise in many regions of the world, the energy transition requires a step-change that delivers a strategic shift beyond the decarbonisation of the supply side. Any expansion of new non-renewables capacity in light of recent global events must be connected to efforts to accelerate the energy transition to make the system more resilient, inclusive and climate-proof.

Power tariff will be reduced to Rs7 per unit: Malik

EU Report

Minister of State for Petroleum Dr Musadik Malik claimed that the electricity tariff would be brought down to Rs7-8 from Rs26 per unit before the end of the present government's tenure. "We will be able to do it as we are committed to it and working on it," Malik asserted while addressing a seminar titled 'National Policy Dialogue: Localisation for Growth'. The minister reiterated that one third of the crude oil would be imported from Russia at low rate as the government has done immense work to strike a deal with the country for cheaper energy.

Replying to a query at the end of his speech, he also claimed that the Unaccounted for Gas (UFG) losses of gas companies, including Sui Southern Gas Company (SSGC), would be brought down to zero before the tenure of this government expired.

He also said that the low-income segment would remain largely unaffected from gas tariff hike by putting in place separate tariffs for rich and poor segments of the society by breaking the ring fence.

Wellhead circular debt has been reduced to zero and circular debt of LNG remains, which would also be reduced to zero by the end of the government's tenure, as work was underway on it.

IMF loans never invested for country's betterment: Tessori

EU Report

The loans taken from IMF were never invested for the betterment of the country while the business community was also not taken into confidence for the future economic policies.

This was stated by Governor Sind Muhammad Kamran Khan Tessori while addressing the business community at a dinner reception hosted by Khalid Tawab, former Sr. Vice President FPCCI, at his residence Tawab House Karachi.

The Sindh governor further said: "The business community is the backbone of our country and are the real heroes as they are facing the worst challenges." He further said that other developing countries like India and Bangladesh had gained economic prosperity through their investment policies and export prospects.

Bakheet Ateeq Al Remeithi, Consul General of UAE in Karachi, spoke about the Pakistan-UAE economic relations which need to be further expanded in all sectors.

Khalid Tawab highlighted the problems being faced by the business community, particularly SME and cottage sectors, which were almost on the verge of collapse. He proposed that Pakistan should be given the same incentive of zero rating on its export to UAE as given to India. President KCCI Tariq Yousuf, and President UBG Zubair Tufail also spoke on the occasion.

The ceremony was also attended by prominent figures including former Governor Sindh retd Gen Moinuddin Haider, Hanif Gohar, Sardar Yasin Malik, Gulzar Feroze, Engr Daru Khan, Mian Zahid Hussain, Tariq Haleem, Ahmed Chinoy, Rashid Siddiqui, Shoukat Saleem, Zubair Chhiyazah Saeed, Nadeem Kushtiwala, Dr Ikhtair Baig, Sheikh Umarihan, Naheed Masood, Rizwana Shahid, Maryam Chaudhry, and Saeeda Bano.

Uch gas field project in jeopardy

EU Report

The fate of $82.3 million Uch gas field compression project is in jeopardy as the joint venture of the Sui Northern Gas Pipelines Limited (SNGPL) and a local emerging firm that had won the contract of the project is in shambles.

The firm has enchased the bid bond of Sui Northern worth Rs135 million on March 3, 2023 over a failure of depositing the performance guarantee of Rs1 billion.

The decision made Oil and Gas Development Company (OGDCL) unhappy as the company doesn't want to afford any delay in completion of the project.

The Uch gas field compression project is scheduled to get completed and commissioned by July-September 2024 under the gas sales agreement (GSA) with the French company owning Uch power plant.

If the project gets delayed, then OGDCL's repute will not only be at stake but it will have to pay a penalty of $6,60,000 per day to the French company.

When contacted, a spokesman of the OGDCL said the joint venture rifts were not welcoming. However, he added, OGDCL management was committed to completion of the project on time and it has all rights to evaluate all options, including encashment of bid bond of the local firm of worth Rs267 million.

"We cannot afford any delay and do not want to waste the time anymore," the spokesman said, adding OGDCL was likely to encash today (March 17, 2023) the bid bond of Rs267 million for not providing the performance bank guarantee, which is the 10 percent of the total cost of the project.

"Fifteen days have elapsed but the firm has not deposited performance bank guarantee," the source said.

600MW solar project in jeopardy

EU Report

The government's flagship project of 600-MW solar plant at Muzaffargarh (South Punjab) is reportedly in jeopardy as Planning Commission (PC) has refused to extend funding due to resources constraint during the current fiscal year.

Majid Hussain Memon, Assistant Chief, in a letter, duly approved by the Secretary Ministry of Planning, Development and Special Initiatives has informed Power Division that due to non-availability of savings at this stage under Public Sector Development Plan (2022-23), it is not feasible to provide additional funds of Rs 3.958 billion as Cash Development Loan (CDL) to Power Division for two unbudgeted projects approved by the Central Development Working Party (CDWP) on October 28, 2022 titled, land acquisition for installation of 600 MW solar power plant at district Muzaffargarh, (Rs 1.4 billion) and land acquisition for installation of 600 MW solar power plant at Tehsil Athara, district Jhang (Rs 2.558 billion).

In September last year, the government had unveiled its policy on fast-track development of solar PV projects at an investors' conference to offer projects of 600 MW.

The sources said, several domestic and international parties including, United Arab Emirates, Qatar, Saudi Arabia and China have show interest in solar projects. Last month, Pakistan organized a road show in UAE to attract investment in solar projects.

Alternative Energy Development Board (AEDB), sources said, was also facing issues in purchase of land in Muzaffargarh after location of project was shifted.

US to help restore power infrastructure

Will assist in research on EVs, transition to renewable energy

EU Report

The United States has announced new programmes for advancing energy cooperation with Pakistan, which include a $500,000 project to restore electricity infrastructure in flood-stricken areas in Sindh.

Other initiatives include a grant to augment research and development work on electric vehicles at Lahore University of Management Sciences (LUMS) and support for the second cohort of US-Pakistan Women's Council's Future of Women in Energy Scholars Programme, launched with Texas A&M University, to support women's leadership in renewable energy. The announcement came in a joint statement following energy security dialogue between the US and Pakistan, chaired by Federal Minister for Energy Khurram Dastgir and US Department of State Assistant Secretary for Energy Resources Geoffrey Pyatt. The dialogue concluded recently.

Group photo of Pakistan Dealers Association leaders Abdul Sami Khan, Malik Khuda Bakhsh and other petroleum dealers on the occasion of meeting with Federal Minister of Energy, Petroleum Musadik Malik

ECC links SOCAR deal with price mechanism

EU Report

The ECC has linked the approval of SOCAR's agreement for a distressed LNG cargo with the price discovery mechanism, which was not mentioned in the draft summary, a senior official the energy ministry told The News.

The recommendation for linking the approval of the agreement with the price discovery mechanism was given by former PM Shahid Khaqan Abbasi, who is currently acting as chairman of the task force on energy. More importantly, Abbasi said that the Petroleum Division is also needed to establish the demand for LNG from any sector of the economy for procuring distressed LNG cargoes.

Abbasi, who is also an ECC member, asked ECC participants not to approve the agreement framework to be signed with SOCAR, until and unless the price discovery mechanism for any distressed LNG cargo was not carved out. He recommended issuing a tender inviting bids for the LNG cargo and harnessing the bid price prior to taking the decision to procure the distressed LNG that SOCAR will offer.

The ECC chair after listening to Abbasi, asked authorities in the Petroleum Division headed by the State Minister of Petroleum to come up with a price discovery mechanism. The Minister of State tried to convince the ECC, arguing that Pakistan LNG Limited (PLL) will evaluate the offered price in comparison with the prevailing international price, and also consult downstream customers (power sector) to ensure affordability. However, the meeting participants asked the authorities to first carve out the price discovery mechanism, and then come up with the revised summary draft.

GIZ to start two projects in Pakistan

Germany has proposed to start two new projects in Pakistan for promoting the textile industry and enhancing employment through women empowerment.

It was disclosed by a three-member delegation of the German Development Organization "GIZ (Gesellschaft für Internationale Zusammenarbeit) at a meeting with Farhan Aziz Khawaja, CEO of the Small and Medium Enterprises Development Authority (SMEDA).

The delegation comprised of GIZ Advisors Nana Sikaba, Anke Green and Muhammad Ubaid, Component Manager of GIZ Projects. From SMEDA, Nadia Jehangir Seth, General Manager Policy Panning and Ashfaq Ahmad, General Manager Central Support Division also attended the meeting. Ubaid told that a three-year project started in the year 2021 to develop labour and environmental standards in Pakistan's textile industry would be completed by the end of the current year.

The project successfully aims at improving the competitiveness of the Pakistani textile and fashion industry in the world market by improving and enhancing labour and environmental standards, he said.

On successful completion of the aforementioned project, the government of Germany had decided to initiate two new projects; one for raising the standards of labour environment in the textile industry and the other for promoting employment through women empowerment.

Be the First to Know SolaX's Groundbreaking New Product

SolaX Power, a prominent manufacturer of solar inverters, is preparing to launch a game-changing product in the industry in April - a low-voltage hybrid inverter, X1-HYB-LV. This innovative product is designed to satisfy the increasing demand for a more efficient and cost-effective solar solution.

The development of this product was largely driven by customer demand. One of the most important features requested by customers is a low-voltage design, which SolaX incorporates into the X1-HYB-LV. This makes it an ideal choice for customers who have low-voltage solar systems, as it can operate at a much lower voltage than traditional inverters.

In addition to its low-voltage design, X1-HYB-LV also boasts a number of other features that are sure to impress customers. These include a maximum MPPT current of 16A, 200% peak EPS apparent power, dual output for higher yield and AFCI protection (optional). With the SolaXCloud app, customers can keep track of their energy consumption in real-time using their smartphones or tablets.

As a hybrid inverter, X1-HYB-LV is compatible with multiple battery solutions including lithium, lead-acid/gel/lead-carbon batteries. Its performance is enhanced when used together with SolaX batteries, such as T-BAT R2.5 series which has a stackable design. This enables customers to effortlessly expand their energy storage capacity and have access to backup power during blackouts or periods of low solar power generation.

Another main reason for the high level of anticipation surrounding the launch of X1-HYB-LV is its fresh design. X1-HYB-LV inverter comes with a full-color LCD touchscreen that has a dual waterproof design, ensuring enhanced durability and reliability. Its user-friendly interface makes it effortless to operate. Moreover, SolaX offers a selection of shell color options, all featuring vibrant and eye-catching hues.

SolaX has collaborated closely with its customers to understand their needs, resulting in the development of the highly anticipated X1-HYB-LV product. With its innovative features and high-quality manufacturing, it is sure to be a hit with customers who are looking for a better way to generate and store energy. ■

PEEC

PAKISTAN ENERGY EXHIBITION & CONFERENCE

14 - 16 September 2023 | Expo Centre, Lahore

Bringing Energy Industry Under One Roof

We are excited to announce that the Pakistan Energy Exhibition & Conference (PEEC 2023) in Pakistan is coming soon! This event will feature leading energy industry professionals, suppliers, and entrepreneurs from around the world. Attendees will have the opportunity to network, learn about new technologies and products, and build relationships that will help transform the energy sector in Pakistan.

The event will be held in Expo Centre, Lahore and will feature top keynote speakers and panelists from around the world. There will be interactive workshops, panel discussions, and roundtable discussions on topics such as energy efficiency, renewable energy, energy storage, and the business of energy. Attendees will have the opportunity to meet with representatives from energy companies, research and development organizations, and venture capital firms.

We are looking forward to this event as a great opportunity to showcase the energy industry in Pakistan and to foster relationships that will be beneficial for all parties involved. We are confident that this event will be a great success and will help shape the future of the energy industry in Pakistan.

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