

MONTHLY

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ENERGY UPDATE

CRIPPLING CRISIS:
RUNNING OUT OF GAS

KARACHI TEMPERATURE RISES
BY 3°C: INVESTIGATIVE REPORT

EXCLUSIVE REPORT ON
**11TH FIRE SAFETY AND
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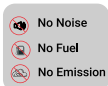


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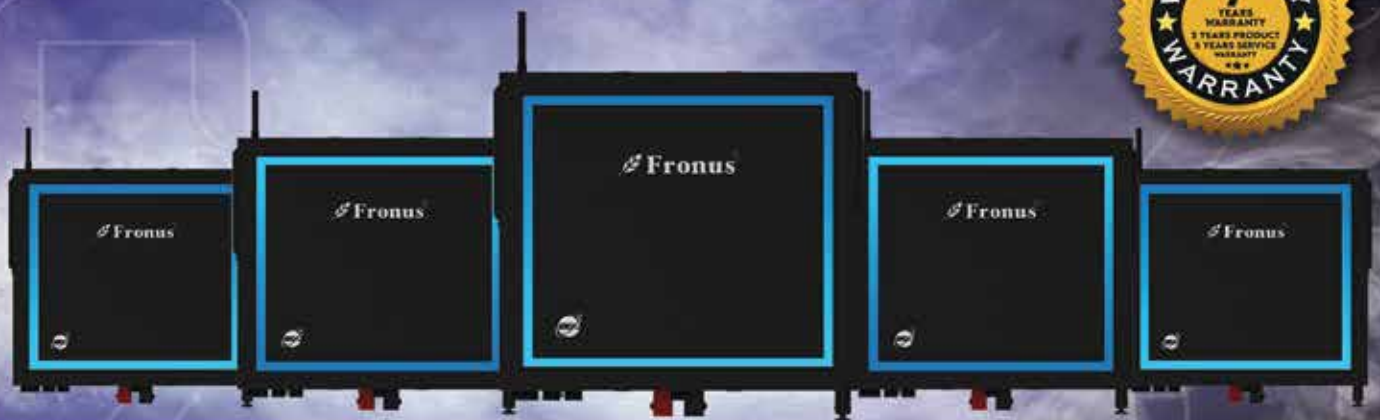


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Gas crisis a wake up call to govt

Severe gas shortfall in Pakistan in the current winter has become a burning issue all across the country that could lead to turmoil and chaos anytime.

People have started taking to streets in different areas to register their protest against unavailability of natural gas as the situation could become violent and uncontrollable anytime.

The government, it seems, is yet to realize the gravity of the situation as the due corrective measures are yet to be taken to bridge the ever-widening energy shortfall. The smaller provinces, which mostly have the indigenous hydrocarbon resources in the country do feel that their citizens have not been getting fair treatment as far as the gas supply issues are concerned.

The Sindh government of Pakistan People's Party believes that Sindh has ample resources to meet its own natural gas demand. Sindh Chief Minister and other provincial ministers are of the firm view that industries, households, and commercial sector of the province shouldn't be deprived of natural gas that is indigenously produced.

They often give reference to the Article-158 of the Constitution to emphasize their point that the residents of Sindh should get preference to consume the natural gas produced in the province.

The Sindh government's authorities also say that industries in Karachi and in other areas of the province shouldn't be compelled to buy expensive Re-gasified Liquefied Natural Gas (RLNG) when the cheaper indigenous gas resource is sufficiently available in the province.

Similarly, the Sindh authorities also believe that the Compressed Natural Gas sector shouldn't face such a prolonged shutdown during winter months as it is highly detrimental to the public transport sector in Sindh.

The PPP asked its supporters and activists to stage protests in every district of the country on December 17 after Friday prayers against the persisting gas crisis. Those who addressed the protestors criticized the government for its utter failure to provide natural gas to the households for domestic heating and cooking purposes. They said that situation had worsened to an extent that people had started burning woods in the urban centres in order to avoid hunger, as natural gas is not available to cook food.

They called for resignations of the relevant federal authorities whose sheer incompetence had caused such a serious natural gas crisis in the country.

The federal government should wake up to the situation and start taking the due emergency measures to save the situation from utter crash. It should fix the responsibility so as to know who are the officials and authorities responsible for the delay in the arrival of the LNG shipments in the country. The government should take the due corrective measures speedily as the gas crisis issue is becoming highly politicized with each passing day. The Opposition could find the energy shortfall as a valid excuse to launch a full-fledged campaign to send packing the government given that unprecedented inflation has already caused immense suffering to the masses.



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Crippling crisis: Running out of gas

Upsurge in the cost of LPG, coal, wood, and electricity has people worried about making food and keeping warm

— Qaiser Sherazi/Aamir Khan/Wisal Yousafzai/Muhammad Ilyas —

The annual gas crisis in the country makes many in the country wish that winters are either minimal or non-existent because having hot food, taking a warm shower, or keeping oneself cozy become luxuries.

While some can comfortably switch to alternatives like liquefied petroleum gas (LPG) cylinders, wood, or coal, in the colder months, for the average person these are out of reach due to retailers jacking up prices.

For instance, in the twin cities of Islamabad and Rawalpindi, the price of wood used as fuel has gone up to Rs 1,400 per kilogram (kg) and the price of coal has gone up to Rs 160 per kg. Whereas a small gas cylinder retails for Rs 900, a medium one for Rs 1,700, and a large one will cost consumers Rs 3,000.

The same prices are being charged in the raging metropolis that is Karachi, as well. Shahnaz Akhtar, a resident of the Liaquatabad area, while talking to The Express Tribune, said that since there was either no gas or incredibly low pressure between 7 to 9 in the morning, 1 to 3 in the afternoon and 8 to 11 at night cooking food had become a nightmare. "I bought a LPG cylinder for Rs 3,000 just so I could make food on time," she lamented.

Similarly, Nadeem Islam, a resident of the Orangi Town area, complained that since gas was missing his monthly household budget had blown out of proportion. "I have to buy breakfast and dinner from restaurants which cost me an additional Rs 500 to 600 per day

just because we do not have any gas," an irate Islam said.

Currently, not being able to make breakfast seems to be a national problem. Khalid Khan, a rickshaw driver, and resident of Peshawar told The Express Tribune that he had to send his two children to school without breakfast because there was no gas during school timings. "I am being compelled to arrange an LPG gas cylinder, but the price point is beyond my range," a visibly frustrated Khan said.

Some 514 kilometers away from Peshawar, Naila, a resident of the Garhi Shahu area of Lahore, expressed her anger at having to wait for hours just to be able to make food. "It is not even that cold yet and the gas cut-off has already started, cooking a meal for the adults and children at my house has become impossible," she said.

Despite the gas-shortage or low pressures the bills have remained high. Shafiq Qureshi, who works at a bread making oven in Rawalpindi, colloquially known as a naan center, informed that even though gas was not available his normal monthly bill of Rs 15,000 was now between Rs 25,000 to 30,000. A despondent Qureshi remarked that even the protest against low gas pressure had no effect on anyone.

Considering the situation, some in the federal capital's twin Rawalpindi, have taken matters into their own hands. The sale of gas pressure regulating machines, a gas generator of sorts which regulates gas pressure at the expense of other households, have gone up. The Express Tribune learned a Pakistani-made motor retails for Rs 3,000 to 4,000 while a Chinese-made one sells for anywhere between Rs 5,000 to 7,000.

Zafarullah, a resident of Rawalpindi, who complained about one of these devices as the reason for the low gas pressure at his house to the gas control room, said, "I was told that the issue would be fixed in 48 hours, but it has been 10 days now and I am still deprived of gas."

Tired of protesting and complaining, Shehzad, a resident of the China Scheme area in Lahore, who made the switch from gas to electricity, informed that even this switch was not a solution. "The use of electric heaters and stove has made my electric bill go through the roof due to the high cost of electricity," he said.

With the temperature expected to drop further, Lahore's residents' problems might not be over anytime soon. A Sui Northern Gas Pipelines (SNGPL) spokesperson, informed The Express Tribune that they estimated that demand for gas, which was already at 700 million cubic feet per day (mmcf), would reach 1,200 to 1,300 mmcf as the cold snap intensified.

In Khyber-Pakhtunkhwa, where like Punjab, the SNGPL has curtailed gas supply to compressed natural gas (CNG) stations to prioritise domestic consumers in the winter, it has replaced 78 km of pipeline to ensure a smooth supply of gas, as per General Manager SNGPL, Taj Ali Khan. "We spent Rs 12.9 million this year replacing old pipelines in Peshawar and hopefully this will fix the issue," he added.

As far as the gas generators are concerned, Sui Southern Gas Company spokesman Salman Siddiqui told the Express Tribune, that numerous complaints had been received and the department was taking action. "These devices obstruct the flow of gas in Karachi and are illegal to install," Siddiqui. ■





NEPRA

is biggest champion of RE:

Tauseef H. Farooqi

Says Sindh will be the biggest beneficiary as we induct cheapest RE

—◆ Halima Khan —◆

Energy Update: What is the role of NEPRA in implementing IGCEP?

Chairman NEPRA said in an regulatory authority of Pakistan, we arranged discussions and public opinions on the finer points of IGCEP to ensure that the roadmap for power procurement set out by the report nurtures sustainability and innovation. This means that RE sources feature heavily in the planned power projects over the next 10 years.

It also means that the door is left opened for sustainable technologies such as battery storage to make an entry as soon as they are financially and technologically viable in Pakistan's power sector. We actively participated in the discussion during the approval process of the assumptions for IGCEP

at the Council of Common Interests (CCI). It is the highest forum in Pakistan, chaired by the Prime Minister of Pakistan and attended by the Chief Ministers of each province. Ultimately, we gave the final approval for IGCEP, which made this the first ever generation plan based on a scientific, least-cost principle, in the history of Pakistan.

EU: To what extent NEPRA agrees with IGCEP or are there any reservations of the authority in this regard.

THF: We unequivocally agree with and stand by IGCEP. It is a landmark in the history of the power sector of Pakistan and will provide a sane and logical foundation for power system planning in the future. Prospective power generators will find much incentive to look for modern solutions to meet the least-cost

criteria.

The fact that IGCEP will be revised on an annual basis means that power projects already included in the process will be kept on their toes to meet deadlines and cost estimates. Thus, as a whole, IGCEP ensures that Pakistan's power sector will be open to technological innovation like never before. For me, it is another step towards our vision of fostering a modern culture in Pakistan's power sector. We are moving towards a culture that encourages a scientific approach to planning and problem-solving, while holding the consumer's interests paramount. On a similar note, NEPRA's endeavours to transition to a more inclusive market structure, the Competitive Trading Bilateral Contracts Market (CTBCM). We are doing away with inefficient monopolies by involving new stakeholders and ideas in the power sector. The future is here for Pakistan.

EU: What is your viewpoint regarding the recent government decision to count hydro-based electricity among the renewable energy resources being tapped for clean energy generation?

THF: NEPRA advised the Prime Minister of Pakistan to include hydropower in RE, as practiced all over the world. We followed it up with an advisory to the Ministry of Energy (Power Division) in June 2020, and also raised it in the last CCI meeting which made it a binding for the MOE-PD to implement it within 90 days.

Hydroelectric power is an important resource in the context of global warming. It allows us to cut down carbon emissions while at the same time, ensuring a stable and reliable source of electric power during the summer season.

EU: What role the NEPRA could perform to allay the reservations of Sindh regarding IGCEP so that there would be maximum utilization of wind and solar as being clean energy resources?

THF: I am happy to say that Sindh will be the biggest beneficiary of IGCEP in future years as we induct the cheapest RE (solar and wind) in compliance with our least-cost principle for adding capacity to the system. The province promises a vast untapped potential for RE power plants that will drive economic prosperity throughout the country, starting from Sindh. NEPRA has no comments on their recent objections and wishes them well for an earlier resolution through the political recourse available to them.

EU: What latest measures NEPRA has adopted for maximum utilization of clean electricity resources abundantly available in Pakistan?

THF: NEPRA had already given Generation License and Tariff to 12 RE projects with the lowest tariff in the history of Pakistan that is around 3.7-3.5 cents per KWh. Unfortunately, MOE PD didn't notify the tariff in the official gazette of Pakistan. NEPRA is the biggest champion of RE, which coincidentally is the cheapest as well as the cleanest source of energy available to us, whilst towing the line of the Prime Minister of Pakistan.

The overwhelming majority of the power projects envisioned by IGCEP are based on clean electricity sources. At the same time, Battery Energy Storage Systems (BESS) were also considered as candidate power plants in the report, offering a seat at the table for the first time in the history of the power sector of Pakistan. The introduction of BESS will strengthen the RE case by substantially reducing the intermittency problem. We envision a power sector, driven by sustainability that matches the green of the flag we look up to. ■

SOLARIZATION



Sindh, WB, KE sign MoU to establish 350MW solar park

Sindh Energy Department, World Bank and K-Electric have signed an MoU to establish a solar park with a capacity of 350MW under the ambit of the 'Sindh Solar Energy Project'.

The objective of the project is to increase solar power generation and access to electricity in Sindh province. The purpose of this tripartite arrangement is to develop and implement sustainable, cost-effective, and competitive utility-scale IPPs in Karachi under a competitive bidding structure.

Through this collaboration, an additional 700 GWh of clean energy will be added to KE's electricity supply mix that would offset carbon emissions by 300-350 kilotons per annum. The MoU was signed between Secretary, Energy Department, Government of Sindh, Abu Bakar Ahmed Madani; CEO K-Electric, Syed Moonis Abdullah Alvi; and World Bank Country Director for Pakistan,

Najy Benhassine who joined via video from Islamabad. Speaking on the occasion, the Sindh Minister for Energy Imtiaz Ahmed Shaikh said, "This project has been in the works for some time and is being achieved with close collaboration and support of the stakeholders."

CEO K-Electric Moonis Alvi also said, "We appreciate the Sindh Energy Department and the World Bank for coming together on this historic event, which demonstrates our collective commitment towards the sustainable growth and future of Karachi and the Province of Sindh at large."

Joining remotely, Country Director for the World Bank Pakistan, Najy Benhassine said, "Sindh Province is key to increasing the share of renewable energy generation in Pakistan and developing new ways of providing electricity access." ■



Karachi temperature rises by 3°C: Investigative Report

Experts blame this race for 'concretization' of the landscape

— Nawaz Khuhro —

An investigative report on rising Karachi temperature that poses future threats to the mega city said on Sunday that imagine a vast tract of prime land, blessed with temperate climate and a sprawling coastline dotted with beaches, creeks hosting migratory birds from afar, rare green and olive ridley turtles in addition to an inland crocodile sanctuary, shrines and a thriving seaport; a cosmopolitan habitat, famous for its diversity, housing people of almost all faiths and beliefs. And you would have rightly imagined Karachi on the eve of Independence in 1947.

Now imagine a cluster of humanity, being fattened every single moment of each passing day for over seven decades with fellow citizens from the remotest corners of the national boundaries, legal or illegal immigrants and refugees from neighbouring troubled lands and beyond; all pouring in by road, rail, air transport almost unchecked (rather facilitated in their journey by corruption at all levels); and, in the process making this land literally a 'hot' property for greedy land grabbers: Welcome to Karachi 2021.

From day one of the new country, massive demand for housing accommodation, government and private offices, industrial buildings and commercial structures for its first federal capital. Planning was beaten hands down. A loot sale ensued.

The accompanying cropping up of a complex network of roads, highways, flyovers and underpasses replacing the natural plantation further turned the city into a

concrete jungle.

Experts blame this race for 'concretization' of the landscape, the preference for a grey environment in total disregard for the green and healthy atmosphere for what eventually emerged as a city growing hotter by adding 3°C to its summer temperature in the last 60 years, according to the investigative report made by senior journalist M Nawaz Khuhro.

The other contributing factors to the plight of the megalopolis have been the manifold increase in the number of vehicles, proliferation of industrial units and commercial enterprises; unchecked burning of garbage all over the city, skyrocketing usage of electrical and gas appliances; coastal erosion, rising sea levels, and pollution.

The Pakistan Meteorological Department's (PMD) data for over six decades reveals that from April 1961 to June 2021, Karachi's mean temperature of January rose by 1°C, February by 5.9°C, March by 2.1°C, April by 4.4°C, May 3.6°C, June by 1.2°C.

Dr Syed Raza Ali Gardezi, an environment expert and general secretary at Citizens for Environment, stresses that the construction frenzy in the name of development – coupled with arbitrary tree hacking and no plantation – gave rise to the Urban Heat Island effect, which comes into play when cemented buildings absorb warmth of the sunlight during the day and emit it in the evening and night, causing high night temperatures.

Mentioning the Greenhouse effect, he said that under this effect, sunlight strikes the earth and a major part of it goes back to the upper atmosphere while some of it is trapped in the polluted atmosphere above

the earth, contributing to the warming on the land below.

"Trees provide life-giving oxygen. When we hack them down, the temperature



automatically goes up,” said Gardezi, adding that “the Bus Rapid Transit (BRT) Red Line Project had also caused tree cutting, while trees along Kashmir Road, Tariq Road, and various other roads had been uprooted ruthlessly”.

He pointed out that the establishment of high-rise buildings in PECHS and other areas had caused the demolition of houses that once had lush green trees. Similarly, high-rise buildings in Gulistan-e-Jauhar and other parts of the city had also caused tree cutting, causing rise in the city temperature.

To tackle the warming issue, Gardezi emphasized the urgency for proper city planning. He suggested vertical gardens in all the new and old buildings besides establishment of rooftop gardens. “Solar panels should be used in place of generators, while wind turbines should be installed in coastal and other open areas.”

The federal government has formulated an electric vehicles policy that should be implemented, while electrically powered BRT buses should be introduced in the city, Gardezi concluded.

Ahmed Shabbar, an environmentalist running the GarbageCan initiative, observed that Karachi generates 6.2 million tonnes of garbage on an annual basis. “Out of this, 60 percent is disposed of at garbage dumping sites, while 40 percent is abandoned and burnt at various places in the city. The practice is not only illegal but is a contributor to the rise in the city temperature in a big way.

To a question that a Senate committee has reported that Karachi would sink by 2060 due to sea level rise caused by galloping global temperatures, Shabbar replied with an emphatic: “There is no doubt it.”

“Karachi could drown in future as sea level is rising due to melting of glaciers,” said Shuhab Usto, a civil rights lawyer and environment activist. He said that Sind Environment Protection Agency had badly failed to control environment degradation in the metropolis.

According to a Centre for Strategic and Contemporary Research report, Karachi’s rapid urbanization and global warming have inflicted the Urban Heat Island (UHI) effect on the city. Moreover, the weather conditions due to which such extreme calamities take place are caused by persistent air depression upon the Arabian Sea.

In addition to the causes, in Karachi specifically, the UHI effect is rising due to the slowed process of evapotranspiration.

Moreover, in the past years, the increase in the number of buildings has resulted in the ‘urban canyon effect’, the provision of multiple surfaces for the reflection and absorption of sunlight, ultimately increasing the city’s temperatures. The increased number of skyscrapers leads to blockage of wind, which also inhibits cooling by convection and air-borne contaminants from dissipating.

UN’s Intergovernmental Panel on Climate Change (IPCC) says Karachi could experience conditions equivalent to the deadly 2015 heatwaves on an annual basis under 2°C of warming. The global surface temperature has increased by about 1.0 °C and is estimated to rise further over the 21st century by 1.10 °C, according to the report.

Dr Qutubuddin, a senior doctor at Dow University Hospital Karachi, said that temperature in Karachi has risen significantly, adding high temperatures cause heat strokes, dehydration, exhaustion, muscle cramps, heat swelling, fainting and other diseases.

Another health expert, Dr Qaisar Sajjad, General Secretary of Pakistan Medical Association (PMA), pointed out that heat-stroke occurs when brain fails to bear high temperature, while dehydration happens when water in the body decreases to very low levels.

“The people should adopt preventive measures like staying under shed of trees, buildings and houses instead of sunshine during the heatwaves. They should also drink much water, preferably by adding salt in it. Those who have blood pressure should not add salt to the water,” the PMA leader added.

According to the US Environment Protection Agency, many communities are taking action to reduce UHI using five main strategies: increasing tree and vegetative cover; installing green roofs, installing cool – mainly reflective – roofs, using cool pavements (either reflective or permeable), and utilizing smart growth practices.

According to a UN standard, a country should have at least 25 per cent of its total land under forest cover to reduce rising temperatures. The new annual economic survey of Pakistan released in June 2021 says Pakistan is a forest deficient country as it has 5.01 percent area under its forest cover.

The Sindh government claims it has eight per cent forest cover, a claim that is denied by independent experts who mention Sindh’s forest cover less than two percent.

An IUCN report titled Pakistan’s Coastal and Marine Resources says the man-

grove ecosystem has been under severe stress resulting from human-induced and natural pressures such as, reduction in inflow of freshwater from Indus due to construction of barrages and reservoirs, pollution, cutting for fuel wood collection and livestock grazing, especially camels.

Muhammad Naeem Qureshi, President of National Forum for Environment and Health told this scribe: “To reduce warming in Karachi, we need to plant trees as much as we could. Mass transit should be launched in Karachi as early as possible besides launching electrical vehicles.”

Qureshi said: “Widespread tree hacking has taken place in all districts and in all localities of Karachi in the name of development and urbanisation. During the last 10 years, 17,000 trees have been hacked between New Sabzi Mandi to Cattle Market along Super Highway, 7,500 hacked along both sides of the University Road, and over 15,000 hacked in different areas of Karachi in the name of development.”

Qureshi said that out of city’s total daily garbage, including hospital waste, half of it is dumped at garbage dumping sites, while remaining is torched, discharged in storm-water drains and abandoned at various places across the city. “The burning of the garbage across the city is also adding to the temperature rise. A new modern waste management system should be established in the city to dispose of garbage at dumping sites.”

According to an IPCC report of August 2021, in the coming decades, some aspects of increasing climate change may be amplified for cities, including heat, flooding from heavy precipitation events and sea level rise in coastal cities (like Karachi).

An iconic crusader for city planning, Director of Orangi Pilot Project Parween Rahman, had consistently waged a relentless struggle to achieve an ideal green environment instead of a grey future for the city. She said the city wants mega-management, not mega-projects. She was rewarded for her pursuit with bullets on March 13, 2013. Seven-and-a-half years later, many more megaprojects dot the city skyline.

Parween had also tried to warn us: “You can block the waterways, but you cannot stop water.” In 2020, with submersion of posh New Nazimabad, Defence Housing Authority, Clifton and other city localities in massive flooding, her prophecy came true.

The environmentalists are worried. But are the government and the city authorities? Seems not! ■

Writing a safe, smart, and sustainable future:

Hammad Amjad

— Engr. Nadeem Ashraf —

Hammad Amjad is Vice President, Commercial Operations for ABB's Electrification Business for Middle East and Africa Region. He has played an instrumental role for electrification business turnaround in Pakistan market from single digit million US dollars to double digit million US dollars business in Pakistan with significant growth keeping the focused strategy related to profitable growth covering various sectors.

Q1) How do you see the potential of the electrification sector in Pakistan?

Pakistan is a high potential country in terms of electrification outlook, but there is a much room for improvement and growth with a surplus in generation and weak distribution network. Moreover, we have many instances of loss of human lives due to broken conductors and oil spillages from transformers; therefore, safe distribution of power is an important area to be focused.

E-Mobility is another growth area, and ABB is the pioneer in EV charging solutions globally. We are helping our customers seamlessly to make this transition by offering the latest EV charging technology and round-the-clock services.

Q2) What strategies ABB is opting for to enjoy a maximum market share in Pakistan?

Understanding the market's need and acknowledging that, the local consumers are price conscious and have helped us optimize our supply chain to provide the best quality European products at competitive prices with local partners to ensure product availability.

Our approach has led to a complete paradigm shift and helped our customers move toward high-quality solutions that comply with global IEC standards. Furthermore, this also helped bringing down the market prices and giving rise to healthy competition, which allowed the industries to opt for these solutions.

Furthermore, we are leading the EV revolution globally with more than 7,5000 chargers already sold. In Pakistan as well, ABB installed the 1st DC fast charger, and we are working with all the major oil marketing companies to create a network of DC chargers.

Q3) Please share some landmark projects won by ABB in the near past.

ABB has its products and solutions today installed across all sectors, including infrastructure, industries, and utilities. From the most significant infrastructure projects in Pakistan like DHA, Emaar, Bahria Town to major industrial groups like Nestle, Engro, Nishat, Fouji, Tata, Lucky, Artistic, we have a large installed base.

From renowned hospitals like SIUT, Aga Khan, Indus Hospital, PKLI to utilities like NTDC, K-Electric, WAPDA, DISCOs, we are helping our customers by providing the best solutions and products.

Q4) Please elaborate your long-term and short-term plans.

At ABB, we are committed to writing the future of safe, smart, and sustainable electrification for everything from industry and power plants to infrastructure and transportation. Our vision is to achieve a zero-emission reality not only for the future but also today.

As pioneers in electricity and automation, we help address the world's energy challenges. Our solutions make homes, offices, factories, and transportation more energy-efficient and safer.

Our people make difference. Their expertise is why customers come to us with their biggest challenges. Together, we push the boundaries of technology to drive performance, shape new business models, and find new ways of working that

benefits our customers, partners, and society.

In alignment of ABB global, we have re-emphasized on two straightforward goals in 2018 in local market, made available best-in-class technology at market to promote healthy competition and achieve double-digit growth, enabling us to provide these solutions to a maximum number of customers.

Having already achieved these goals, we are now on the way to create a safe and sustainable electrification for our customers.

Q5) How is ABB handling the competition in the local market?

As previously outlined, we strongly believe in healthy competition because it brings out the best for the customers in all aspects. We serve our customers with our leading technology, best-in-class solutions, vital product availability through our distributors and partners, and preferred services to all.



Q6) What are some major challenges in the local market and how ABB is trying to overcome them?

The biggest challenges we face in the market are unethical business practices and counterfeit products. We at ABB operate with the highest ethical standards, and that is the reason our customers trust us. ABB offers the authenticity of its products by a network of distributors and partners and by providing barcode / QR code-based authentication.

Q7) Experts are of the view that post-Covid situation will be highly encouraging for the business in the local market. Will ABB be able to take the advantage and how?

The industrial sector has already come out of the COVID challenges, and there is significant growth in every sector with favorable government policies. With the accessible financing facilities to large-scale manufacturing units and infrastructure, the industry, especially textile and housing, is expanding.

We are fully aligned with the growing momentum at ABB by increasing resources and strengthening our partner network to fulfill the increasing market requirements.

Having a double-digit growth for the past four years and even higher growth anticipated this year, we have availability of products and solutions to serve the market's growing needs.

Q8) Do you think that positive macroeconomic indicators will help ABB in Pakistan?

We appreciate the proactive approach taken by the Government of Pakistan due to which our country has come out of the situation, while the effects of COVID are minimum.

The growth trajectory, restored at the end of 2020, helped our business growth, and we are working with customers in all sectors across Pakistan for collaborative value creation.

Q9)-What are the targets of ABB Pakistan for the next 5-10 years?

In the next 10 years, we aspire to become a technological leader in electrification by writing a safe and sustainable future for our customers in Pakistan.

Q.10) As the EV charging stations are the need of the time, how ABB is planning to take charge of the situation?

ABB is the world leader in EV charging solutions globally, with more than 75,000 chargers sold and more than 18,000 chargers already installed.

We installed the first DC fast charger in Pakistan and already have multiple charging sites across the country. We are working with

major OMCs like PSO, APL, Shell, GO, Total PARCO, and private stakeholders to further expand the charging infrastructure for the ease of the EV owners. In addition, we have put in place a network of partners for product availability and after-sales services to serve our customers.

Q.11) Are your suggestions for the overall market improvement based on your past experience?

We are currently in the fourth industrial revolution globally, building on millions of digital devices. Our digitalization initiative and ABB ability helps customers in utilities, industry, transport, and infrastructure develops new processes and advances existing ones by providing insights and optimizing planning and controls for real-time operations. It will leverage the power of the digital revolution by enabling reduced maintenance costs, longer asset life, more efficient operations, reduced environmental impacts, and improved worker safety.

In Pakistan, we see a slower adaptation of digitalization. Based on my experience, we need to increase the pace of digital transformation to help the industry assess, automate, optimize and collaborate.

You are welcome to comment on some points not raised through these questions.

More Comments

ABB understands and takes full responsibility for the reduction in carbon emissions and climate change. It has a long history of sustainable and responsible business practices. In 2020, ABB exceeded many of its sustainability targets, including reducing its greenhouse gas emissions by 58 percent compared with a 2013 baseline. With the introduction of the company's 2030 sustainability strategy, even more ambitious targets have been set, focusing on enabling a low-carbon society by reducing emissions, preserving resources, and promoting social progress. ABB's 2030 low-carbon commitment includes achieving carbon neutrality in its operations and helping its customers reduce their CO2 emissions. ABB's sustainability targets contribute to the United Nations' Sustainable Development Goals, of which ABB has always been a strong advocate.

Over the past seven years, ABB has focused on reducing its carbon footprint. Our work to reduce ABB's carbon footprint during the current reporting cycle has been highly successful. This achievement forms the foundation for our ongoing ambition to make even more significant contributions to the global effort to realize the climate goals enshrined in the Paris Agreement, which is fundamental to limiting global warming. That is why, despite achieving our climate action target a year ahead of schedule, in 2020, we pushed to achieve further reductions in greenhouse gas (GHG) emissions in ABB's operations. ■

BPPL renamed as Cnergyico Pk Ltd

Byco Petroleum Pakistan Limited (BPPL), Pakistan's largest

oil refinery in terms of both design and installed capacity,

has announced that it

would change its name from Byco Petroleum to Cnergyico Pk Limited.

Commenting in the regard, Amir Abbassciy, Chief Executive Officer, Cnergyico Pk Ltd, said, "The journey from Bosicor to Byco and then Cnergyico had been challenging but exciting. Since the company's inception, innovation has played an important role, as a result, we have, throughout the years, evolved from an oil company to a strategic oil refining and marketing company." He further said, "In light of the present worldwide pandemic and financial crisis, the oil and gas sector continues to experience significant transformations. "We are evolving to further modernize our refining infrastructure, diversify our business, and cater to tomorrow's petrochemicals and energy requirements of the country. To commemorate this diversification and expansion reflecting our new position in the industry, we are re-branding ourselves as Cnergyico Pk Limited."

Cnergyico Pk Ltd. is the only oil company in Pakistan in possession of a Single Point Mooring (SPM) located in the open sea off the coast of Mouza Kund Hub, Balochistan. The company has expanded production capacity from 13,000 barrels per day to 156,000 barrels per day and operates more than 400 retail outlets across the country. The name Cnergyico Pk Limited, derived from chemical energy integrated company, represents the company's new position in the market where creating synergy in the energy vertical is the goal. Cnergyico intends to achieve this by making use of its existing assets as well as investing heavily in exploring varieties of energy that are emerging both domestically and globally. ■



Netflix doesn't cost Rs. 499,
it costs you your time.
Pepsi doesn't cost Rs. 25,
it costs you your health.
Social media isn't free,
it costs you your focus.
There is always a hidden cost.

Remember the Golden Management quote -
"When something is free,
You are the product"

COP26: glass half-full or half-empty?

— Dr Shaukat Ali Fatima Saeed and M Arif Goheer —

The 26th Conference of Parties (COP26) was held from October 31 to November 12, 2021 in Glasgow, UK with great enthusiasm, bringing together about 200 countries and 50,000 participants.



The UK Presidency at COP26 was expected to articulate the most important goals for this crucial decade, under the four main themes of mitigation, adaptation, climate finance, and collaboration. Goal 1 was to reach global net-zero emissions by 2050 and limit the global temperature to 1.5°C target by the end of the century. Goal 2 stressed upon adapting to protect communities and natural ecosystems, followed by Goal 3 to mobilize climate financing. Goal 4 emphasized the critical need for global collaboration since working together is the most important approach to combat the climate crisis.

Before the beginning of COP26, around 154 parties had submitted their Updated Nationally Determined Contributions (NDCs). These NDCs represented almost 80 percent of the global emissions covering almost 90 percent of the world's net-zero targets. The updated NDCs of Pakistan proved exceptional in depicting the country's high priority mitigation initiatives, such as becoming 60 percent zero-carbon in energy generation, and 30 percent electric in transportation. The ongoing Ten Billion Tree Tsunami is said to have sequestered 148.76 MtCO₂e by 2030.

The NDC document reports that the government initiatives in Pakistan have already led to an 8.7 percent decrease in emissions during 2015-18, and that the government plans to reduce overall emission to 50 percent by 2030. Furthermore, Pakistan's adaptation plans include increasing the number of protected areas from 12 percent to 15 percent by 2023, as well as a 20-year programme to reduce flood risk in the Indus-Basin and improve water recharge. The updated NDC document vindicates the determination and resolve by the government of Pakistan in tackling the crisis despite the fact that the country is highly vulnerable

to the impacts of climate change. The special adviser to the PM on climate change not only actively participated in COP26 but also vehemently presented the Pakistan case before the world.

More than 100 countries have committed to the 2050 goal of net-zero, though major emitters, such as China and Saudi Arabia, have committed to net-zero emissions by 2060, while India claims it will reach net-zero emissions by 2070. Pakistan has not declared a net-zero year since the energy transition as per the NDCs alone would require \$101 billion by 2030 and an additional \$65 billion by 2040 to complete the in-progress renewable energy projects, phasing out coal and replacing it with hydropower.

According to the Climate Action Tracker, current global policies and actions will result in 2.6 °C to 2.7 °C warming by 2100. If countries meet both their conditional and unconditional NDCs established for 2030, the warming by 2100 will be 2.4 °C. Even if countries meet their optimistic 'net-zero' targets by 2100, we will still have a warming of 1.8 °C. Meeting the Paris Agreement goals of limiting warming to 1.5 °C is still a hard-to-realise idea.

Negotiators ended the intense two-week-long talks at COP26, making several goals in areas like energy, transport, agriculture, finance, children's rights, and gender equality, with consensus on urgently accelerating climate action. Some remarkable achievements have emerged out of the negotiations at COP26. The Paris Rulebook has been finalized after six years of strenuous discussions. The most eminent agreement from COP26 is the Glasgow Climate Pact agreed upon by nearly 200 countries to keep the 1.5 °C limit hope alive and report their progress towards more climate ambition next year. However, it is the only deliverable if global commitments are put into rapid action.

Among other encouraging announcements, the most noteworthy was the Glasgow Leaders' Declaration on Forests and Land Use – a pledge by 120 countries to halt and reverse deforestation by 2030. These 120 countries represent about 90 percent of the world's forests.

The Global Methane Pledge was launched by the US and the EU, seeking to reduce global methane emissions by at least 30 percent by 2030. An impressive number

of more than 100 countries, including Pakistan, agreed to cut emissions of this greenhouse gas.

Forty countries, including major coal users, such as Poland, Vietnam, and Chile pledged to shift away from coal which is one of the biggest generators of CO₂ emissions that can also be marked as the major breakthrough in COP26. In another agreement, to halt unabated overseas coal investments, the US and China have joined 19 other signatories including the UK, Canada, and New Zealand. However, China and India propelled last-minute changes to the draft concerning the reduction of coal use. India suggested replacing 'phasing-down' with 'phasing-out' of coal, which was ultimately agreed upon by all Parties.

What came as a great surprise to the world was a joint pledge between two of the leading global CO₂ emitters, the US and China, to boost climate cooperation through 2030 – keeping aside their political differences. In the joint declaration, both countries agreed to accelerate efforts on a range of issues like decarbonisation, methane emissions reductions, and transition to clean energy.

COP26 was especially focused on the financial targets required to boost adaptation capacities in developing countries. The developed world committed \$100 billion per year in climate finance for developing countries. Developed countries were further urged to double their support to developing countries through the Climate Adaptation Fund and agree upon a financial support package by 2024. The UK and Germany have pledged more than GBP55 million and \$150 million respectively to help Pakistan tackle climate change.

The private sector showed profoundly strong engagement with nearly 500 global financial service firms agreeing to align \$130 trillion – almost 40 percent of the world's financial assets – with the goals set out in the Paris Agreement.

The Glasgow Declaration on Zero-Emission Cars and Vans was signed by more than 100 stockholders to promote green and sustainable transport. This agreement will ensure that sales of internal combustion engines end in leading markets by 2035, and worldwide by 2040. At least 13 countries also committed to end the sale of fossil fuel-powered heavy-duty vehicles by 2040.

Other smaller but equally inspiring initiatives include the Beyond Oil and Gas Alliance (BOGA) launched by 11 countries. Twenty-three countries, including Pakistan, have made national climate education pledges, such as net-zero schools and to include climate education in national curriculums. Despite the impressive commitments and agreements, COP26 has failed to achieve a strong declaration on cutting out coal and inefficient subsidies for fossil fuels. It also remained unsuccessful in bringing developed countries to a definite agreement upon loss and damage funds. However, the UN chief emphasized the urgency of implementation of the agreements made at the conference concluding that it is time to go "into emergency mode." ■

The writers can be reached at pirshauki@gmail.com

NEW GRANTS

ECC approves Rs182bn grants, with major chunk for IPPs

Amid heating up of political climate, the government on Monday approved Rs10 billion supplementary grants for Sustainable Development Goals Achievement Programme (SAP) for utilisation on the recommendations of ruling party parliamentarians.

A formal decision to this effect was taken by the Economic Coordination Committee (ECC) of the Cabinet, which also approved about Rs182 billion worth of six other supplementary grants, including Rs135 billion to independent power producers (IPPs).

The government has already fully exhausted Rs46bn allocated in the federal budget 2021-22 that had been placed at the disposal of the Cabinet Division. It is rare for any development sector or ministry or division to get authorisation for consuming the entire annual allocation in the first quarter of any fiscal year.

Under the disbursement mechanism notified by the Planning Division, funds under all other heads are spent at the rate of 20pc in the first quarter, 30pc each in the second and third quarters and the remaining 20pc in the fourth quarter of a year. However, the Rs46bn allocation for SAP for 2021-22 has already been disbursed in the first three months of the fiscal year.

Informed sources said the government decided to give another supplementary grant of Rs10bn to SAP on an urgent basis given recent challenges in passage of a few government bills from the parliament

and maintenance of quorum in the National Assembly for more than a week.

An official statement said the ECC considered and approved the Rs10bn Technical Supplementary Grants (TSGs) under the SAP.

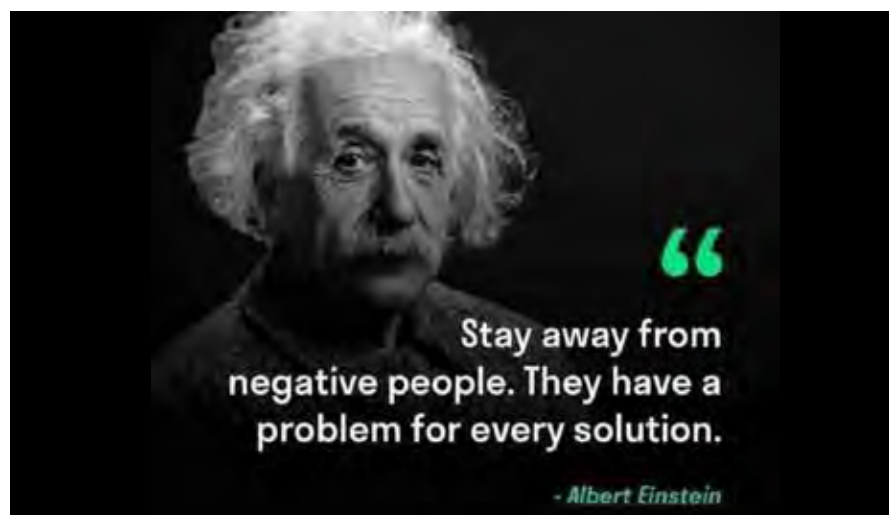
An official claimed that a block allocation of Rs22bn had been made in the budget in the PSDP in a separate head "SDGs Supplementary Funds" which have now been approved as TSG. These funds are now available for utilisation in various constituencies of estranged lawmakers.

The ECC meeting, presided over by Minister for Economic Affairs Omar Ayub Khan, also directed the Public Procurement Regulatory Authority (PPRA) to relax rules for the Trading Corporation of Pakistan (TCP) to facilitate import of 100,000 tonnes of urea fertiliser at acceptable rates for the current rabi crop. All the ECC decisions were earlier cleared by its technical committee, led by Finance and Revenue Adviser Shaukat Tarin.

The ECC allowed relaxation of PPRA rules for import of urea by the TCP due to emergency for publishing a second tender advertisement, enabling the corporation to republish the tender till fetching of a low price during the rabi season.

The meeting approved another supplementary grant of Rs134.783bn for payment to 35 IPPs on second instalment of 60pc as per payment mechanism agreed upon with IPPs under tariff renegotiation process. These IPPs were given Rs90bn in May as the first instalment of 40pc.

Courtesy Dawn



Engro Elengy

has pioneered LNG sector in Pakistan:

Yusuf Siddiqui

Says LNG will play integral role to bridge demand and supply gap

—♦— Mustafa Tahir —♦—

Energy Update: Briefly inform our readers about the Engro Elengy project and its significance for the energy sector of Pakistan?

Yusuf Siddiqui, Chief Executive Officer, Engro Vopak & Elengy Terminal Ltd, said in an interview that in the late 2000s, Pakistan faced a severe energy crisis as power shortages reached over 8500MW or more than 40% of the national demand. As a result, many towns and cities faced around 12 hours of load shedding, capacity utilization in key industries fell to 50%, export orders worth over USD one billion were cancelled each year and millions of jobs were at risk as Pakistan became uncompetitive in the global economy. To overcome this crisis, LNG imports offered the fastest solution as the other options (transnational pipeline projects, large hydel projects) faced complex geo-political challenges, high financing requirements and longer completion timelines.

In this backdrop, Engro Elengy Terminal Limited (EETL) was setup as Pakistan's first LNG terminal in a record time of 330 days. It

started operations in March 2015 and today the terminal contributes around 15% of gas supplies to Pakistan. It is recognized as one of the most utilized regasification terminals in the world with an availability factor of 97% (vs 44% globally) to ensure consistent gas supply. It also holds the record for one of the fastest 400 ship-to-ship transfers. Pakistan has saved approximately \$3 billion since the start of the LNG project, replacing the import of more expensive furnace oil with LNG.

To imagine the impact of this terminal, it should be comprehended that EETL

is Pakistan's largest gas field (630 mmscfd) compared to the largest indigenous gas field of Mari (450 mmscfd, adjusted for calorific value). EETL has paved the way for the development of the second LNG terminal and other upcoming LNG terminals.

EU. How's the experience of the Engro to work in the LNG sector of Pakistan?

Siddiqui: It is a privilege to be part of a company that has pioneered the development of LNG sector in Pakistan. With the support



from the Ministry of Energy, we have been able to successfully bring foreign investment into the economy and forge global partnerships. Today, Pakistan is an important global market in the LNG trade. Going forward, our aim is to provide Pakistan with a sustainable and affordable energy solution that helps open the LNG market for further development. This would lead to greater investments and efficiency in the LNG sector so that energy security for Pakistan is prioritized to fuel its progress.

EU: Are there any plans to carry out the expansion of the Engro Elengy project?

Siddiqui: EETL remains committed to carrying out the expansion through bigger FSRU under Third Party Access (TPA), which would allow private players access to the unutilized capacity of the terminal. Under TPA, no guarantees or investment will be required from GoP or state-owned entities, whilst at the same time and ensuring downstream needs of customers are met.

It is imperative to highlight that EETL's expansion under TPA is backed by the LSA contract with SSGC, LNG policy, and OGRA Rules. The same has been encouraged and allowed under the Economic Coordination Committee (ECC) decision of July 2019 and July 2020, under which existing terminals, including EETL, can expand through bigger FSRU and allocate the additional capacity to a private party under TPA regime. EETL remains committed to materializing the ECC decisions. The expansion can be done on an immediate basis once the framework is agreed with SSGC and the Ministry of Energy. This would play a crucial role to mitigate the ongoing gas crises.

EU: What is your own viewpoint about the role of LNG going forward in the country?

Siddiqui: Local gas has been depleting at a rate of 9 percent per annum as per OGRA State of Industry Report 2020. The local production of gas will only be able to meet 25% of the country's total demand in the coming years. Hence, LNG will play an integral role to bridge the demand and supply gap.

As the LNG market matures in Pakistan, there is a need for an imminent shift from FSRU-based terminals towards onshore terminals. The onshore terminals will ensure energy security by building a strategic national asset, while also resulting in foreign exchange savings, and larger regasification capacity, storage size, bunkering and trans-shipment capabilities.

Engro and Royal Vopak are evaluating the development of an Onshore LNG terminal. It is expected that the TPA shall pave a way for business-to-business onshore RLNG and storage.



EU: Has there been any incident, accident, or mishap, since the time Engro came into operation? Also, tell us about the safety standards of the project.

Siddiqui: Engro has always been a strong advocate of process and personnel safety to prioritize the wellbeing of our employees and contract staff. EETL thus has deployed state-of-the-art technology and diligent monitoring regimes to keep the operation as smooth and safe as possible. Since the start of operations, EETL has maintained an excellent safety record with zero lost-time injury. We ensure high levels of SHE (safety, health, and environment) leadership for zero injuries and Total Recordable Injury Rate (TRIR) at the terminal, which has helped us exceed our targets for safety leading indicators and organizational culture diagnostic instrument score in all elements.

Like elsewhere in the world, there have been some hiccups in the form of unplanned shutdowns and regasification slowdowns due to various reasons. But, since we have an emergency shutdown system in place, the site has always managed these instances safely and effectively. Additionally, in the event of any irregularity, we undertake root cause analysis to ensure that such incidents do not occur again. Given that EETL is not only the busiest terminal in Pakistan but also in the whole world with one of the highest availabilities and the number of process upsets at a very small percentage.

EU: What mitigation measures have so far been taken by the Engro Elengy to protect the environment in the immediate surroundings of the project area?

Siddiqui: Last year, we started the transition towards a Green Terminal, where we built a self-sustaining, fast-growing, and independent Urban Forest covering an area of 1000 square meters. With this project, we achieved higher CO2 absorptions rates with the plantation of 3,500 plants.

Engro Terminals, in partnership with

IUCN, has been working to restore the mangrove ecosystem around the Karachi coastline. We have undertaken a three-year project, with plantations of over 500 hectares to improve the coastal environment and enrich marine biodiversity.

EU: What are the CSR-related activities of Engro Elengy?

Siddiqui: EETL has consistently remained active on the CSR front. In 2019, EVTL in collaboration with Engro Foundation and WeConnect partnered with Circle Women's Association to develop Tech Karo program. Tech Karo specifically targets the lack of female representation in the field of technology and aims to create a pipeline of female talent in this sector. Over the years, the program has successfully completed three training programs teaching technology and life skills to 170+ young girls and boys from underserved and marginalized communities. We have placed over 50% of the graduates in jobs and internships to enable them to improve their livelihood chances. We moved to the online method of teaching during COVID-19.

As part of our commitment to developing skills in women in the energy industry, we place a lot of focus on diversity, equity and inclusion in the workforce. To extend this commitment in the Port Qasim area where we operate, a new community engagement project of Uraan Associate Training Program has been recently launched. Under this program, we have hired a batch of 17 women from the local community of Bin Qasim Town for a one-year technical training program at the terminal. We received an overwhelming response from the community and it was simply amazing to see how these talented women were just waiting for an opportunity to create an impact.

Under the sustainable coast program, Engro Vopak and Engro Elengy engage with the local fishing communities. This program aims to promote improved fisheries management by reducing pressure on marine ecosystems through training, provision of appropriate equipment and technology, and increasing awareness of marine life. ■

Tianjin Sure Instrument is flow measurement application & flow meter a manufacturer with more

10 Year Export Experience

Tianjin Sure Instrument is one of the leading flow meter manufacturer in China and it has long term business relations with Solutions Engineering Pvt Ltd in Pakistan. Solutions Engineering has supplied many products of Sure Instrument brand in Pakistan and got huge success especially for Vortex Flow Meter, Electromagnetic Flow Meter, Gas & Liquid Turbine Flow Meters.

VERTEX
FLOW METER



ELECTROMAGNETIC
FLOW METER



LIQUID TURBINE
FLOW METER



VORTEX & SWIRL
FLOW METER



ELECTROMAGNETIC
FLOW METER



GAS TURBINE
FLOW METER



Now considering great success and excellent feedback from customers, Solutions Engineering is pleased to introduce some more products of Sure Instrument brand in Pakistan. The new product include Variable Area Flow Meter, Coriolis Flow Meter, Positive Displacement Flow Meter & Gas Roots Flow Meter.

VARIABLE AREA
FLOW METER



CORIOLIS FLOW
METER



GAS ROOTS
FLOW METER



Open letter to PM seeks drastic changes in KE system

An open letter has been written to Prime Minister Imran Khan to put forth some candid and very valid suggestions and practical solutions to rectify the system of K-Electric in order to protect the national economy and save the power consumers in Karachi from exploitation.

The letter having the subject "Save Pakistan from economic collapse by addressing energy security" is written by Engineer Arshad H Abbasi, who is Adviser (Water & Energy) SDPI-BOG Member CRSS. Following are the important excerpts from the open letter for our valuable readers:

Non-use or underutilizing of the efficient power plants not only deprives the motherland of available cheaper electricity units but also increases the burden on the national economy in the form of capacity payments for un-utilized capacity. The reason for the continuous rise of the circular debt is the operation of inefficient power plants. The glaring example of non-usage of efficient power plants and capacity payments is 1200MW (Hubco) and 1600MW (Kapco) for Karachi. The 1200MW (Hubco) falls within jurisdiction but almost remained idle for the last two years, yet at same time both IPPs claimed capacity charges.

The city of 20 million people is deprived of cheap and consistent electricity. The large parts of it are regularly plunged into darkness. K-Electric is responsible for providing electricity to the city but has utterly failed to address the electricity needs of the industrial hub of Pakistan. The electricity shortage now in the city has reached critical level. This impact worsens on manufacturing units.

While there is surplus electricity in the national grid, K-Electric besides having a demand of 5000MW, only has an installed capacity of 1875MW with external power producers providing 1,818MW, which includes 1,100MW electricity from the national grid at the basket price.

It is unprecedented that in Pakistan, NTDC, now called Central Power Purchasing Agency (CPPA) and K-Electric maintain two separate generation baskets in their respective areas while the Economic Merit Order (EMO) for the Page 3 of 5 operations of power plants are being determined separately. These two EMOs result in the operation of

inefficient power plants despite the availability of efficient generation capacity in the country.

I strongly recommend that 1250MW Bin Qasim-I along with two IPPs Gul Ahmed and Tapal must be retired immediately. The fuel (gas or oil) for these power plants may be allocated to other efficient power plants connected to the national power grid having higher efficiency to reduce the cost of electricity. To bolster the future of Karachi's economic growth, I will request you to direct the Ministry of Energy to dedicate the electricity generation of 1,320MW Port Qasim Coal Plant, 1320MW Hub Coal Power Plant, 1200MW Hubco and 1,100MW KANUPP-2 (Karachi Nuclear Power Plant) to Karachi along with upcoming 660MW Lucky Coal Electric Power and 1,100MW (KANUPP-3). All these power plants are installed in Karachi.

All the EPC cost of 1200MW Hubco power plants has been paid by the public through tariff, so the GOP ought to take control of this power plant. There is a need to set an independent technical commission to hold an inquiry against the officials of NEPRA and Ministry of Energy involved in this most 'sophisticated crime of awarding Tariff Page 5 of 5 Differential Subsidy (TDS) to K-Electric since its privatization, which has placed the country almost at the verge of financial collapse. I will request you to kindly direct the Ministry of Energy to sup-

ply surplus electricity from the national grid to K-Electric by constructing new 500KV KKI and 220KV interconnections. This action will help meet the electricity demands of K-Electric, and also help avert huge capacity payments to idle power plants connected to the national grid.

This task can be completed in maximum six months. I strongly recommend for setting up an energy security unit at the Prime Minister's Secretariat to conduct a heat-rate audit of all thermal power plants at top priority. It is a hard reality that Pakistan's power sector is one of the major contributors of GHG emissions due to the low efficiency of fossil fuel-based thermal power plants.

This request is for the interest of Pakistan and global community. The Prime Minister must embrace this critical transition in the power sector to reduce the cost of electricity for the industrial boom in Pakistan. Your one step will help start a new era of the economic prosperity for Pakistan. ■

Engr. Arshad H Abbasi





shines in PV inverter-energy storage solution market

Riding on PV and energy storage waves, world-renowned company GoodWe's first-half energy storage inverter shipments match total shipments of the previous year. Energy storage is an integral part of renewable energy utilization. The development of innovative energy storage solutions that can allow for round-the-clock zero-emissions power has driven up the popularity of these solutions on capital markets. In recent years, the leveled cost of energy (LCOE) for renewable energy power generation and industrial energy storage has fallen significantly, making it a highly competitive energy alternative. GoodWe recently released its 2021 Semi-Annual Report. Through the Company's financial report, one can get a picture of the strengthening trends growing around both renewable energy generation and industrial energy storage.

The Semi-Annual Report shows that in the first half of the year, GoodWe shipped nearly 217,500 units of its grid-connected PV inverters to markets across the globe, accounting for 66% of the annual shipments in 2020 (which totaled 330,000 units). In the fast-emerging segment of energy storage Power Conversion Systems (PCS), GoodWe successfully made shipments of about 21,000 units in the first half of the year — coming to almost the same as the previous year's total annual shipments (22,300 units).

This not only proves that the GoodWe's penetration of energy storage inverter market is rapidly increasing but also indicates how that the entity has been able to retain its lead in the residential energy storage inverters market amidst fierce competition.

Riding the distributed PV development wave Financial data for the first half of the year shows that GoodWe achieved a revenue of USD 168 million, a net profit attributable to the parent company of USD 23.7 million, and a net profit after deduction of USD 22 million, consti-



tuting a 26.66% year-on-year increase.

As a manufacturer engaged in ongoing R&D around innovative net-zero-enabling systems, and the application of efficient power electronics technology, GoodWe has chiefly taken PV inverters and smart energy solutions (including energy storage inverters) as its entry point into the highly competitive global markets of PV and other renewable energy generation solutions. Thus far, GoodWe has been successful in being able to continuously gain more market share and higher dividends.

In the PV system, the inverter undertakes the core functions of AC/DC conversion, power control, grid switching, and energy management, making it both the 'brains' and 'heart' of the entire PV system. According to public industry information, inverter costs currently account for about 8–10% of PV systems. With the rise of the "Green Deal" and other public policies targeted toward addressing climate change, many countries, including China, have made significant commitments regarding emissions peaks and carbon neutrality.

This has stirred widespread optimism around the market's continued growth and future demand for new PV installations. New global installations are expected to reach 150–

170 GW — a 18.4–34.2% increase compared to 2020 (total installations reached 126.7 GW).

There is an even more optimistic view that holds that new global PV installations could actually exceed 300GW in 2025. As the PV market continues to mature, acceleration is also being seen in the development of the distributed PV sector. The vast user benefits of PV and the future electricity market demand (sales of electricity through partitions) are spurring this trend. Distributed PV systems are one of GoodWe's core competencies and this explains why capital markets are optimistic about GoodWe and its ability to leverage growing market demand and positive policy trends to deliver strong financial performance.

It is understood that GoodWe is also launching an "offensive" into the large-scale ground-mounted power plant market. Its HT 1500V high-power inverter along with high-current modules have been applied on many ground projects across the globe. The combination of safety and reliability is the competitive advantage that has enabled GoodWe to differentiate itself from competition.

The Semi-Annual Report shows that the company's string inverters currently cover a power range of 0.7–250 kW, making them

capable of fully meeting the energy needs of residential, industrial and commercial operations, as well as large-scale ground power stations. They are able to meet the requirements of various types of PV modules and grid connections, and can deliver stable and efficient performance in various natural environments, including those that are high and low temperature, high altitude, windy, sandy, or environments with sea or salt spray.

Seamlessly, entering the energy storage space, the general belief within the industry is that demand for energy storage inverters, especially residential ones, is still primarily concentrated overseas. There is industry-wide optimism that global energy storage inverter market will explode. Although energy storage inverters accounted for only 8.81% of GoodWe's total inverter shipments in the first half of this year, their performance is still expected to grow, both for the company and capital markets.

The working principle of the energy storage inverter is that the electricity generated by renewable energy is given priority to local loads, and the excess energy is stored in the storage battery, which can be selectively integrated into the grid when there is still a surplus of electricity. When the energy generated by renewable energy is insufficient, the storage battery then discharges to provide electricity for local loads. Energy storage inverters with such smart management functions, together with energy storage batteries, constitute the "energy storage system."

An energy storage system's main functions are three-fold: first, diluting the system's LCOE by increasing the number of hours of renewable energy generation; second, reducing the impact of renewable energy generation volatility on the grid, which is conducive to eliminating peaks and filling valleys; and third, giving users room for arbitrage between peak-valley difference in electricity prices, thereby increasing the investment rate of return (IRR) of power plants. The overseas market for energy storage inverters has huge potential.

In Germany in 2019, for example, the costs of PV storage and PV energy were 15.9 Euro cents/kWh and 9.6 Euro cents/kWh, respectively. The residential electricity price was 30.5 Euro cents/kWh, and the cost of PV storage and PV energy costs are 52% and 31% of residential electricity prices, respectively. With the decline in the cost of optical storage, in the future, the "scissor gap" between the residential electricity price and the optical storage LCOE will further increase, which will promote the increase of residential demand. According to data from SolarPower Europe, in 2019, European residential-side energy storage installed capacity was 744 MWh (a year-on-year increase of 56.4%). As of the end of 2019, the cumulative residential-side energy storage installed capacity was nearly 2 GWh, corresponding to the European residential PV storage penetration rate of about 7% at the end of 2019. It is estimated that 90% of buildings in Europe do not currently have rooftop PV installations.

Extrapolations of the current installation situation show that the total European household PV storage space is 285 GWh, and the demand space is considerable. Thanks to the strategic market positioning of its PV and energy storage inverters, GoodWe has also successfully managed to enter the energy storage lithium battery space, launching a variety of energy storage lithium battery systems that are suitable for residential, commercial, and industrial use. From an industry perspective, the market for this product line is poised to grow incrementally, and may be larger than that of inverters, making this a very interesting development that is certainly worth watching closely. ■

INVESTOR'S DEMAND

Foreign investors ask Pakistan to deregulate energy chain

—◆ Khaleeq Kiani —◆

Influential foreign investors have asked Pakistan to deregulate every segment of the energy chain as early as possible and ensure the sanctity of contracts currently being tampered within the upstream petroleum sector to protect business confidence in the country.

Speaking at a news conference, Overseas Investors Chamber of Commerce and Industry (OICCI) representatives Abdul Aleem, Ghias Khan and Asim Murtaza advocated complete liberalization and transformation of the monopolistic power and gas market into a multi buyer-seller marketplace to let the private sector bring in necessary competition and efficiencies.

Asim Murtaza Khan, who is also the Chief Executive Officer of Petroleum Institute of Pakistan, explained that the government was trying to introduce certain fiscal changes through supplemental agreements after the signing of a formal contract with the petroleum exploration and production (E&P) companies for retrospective implementation.

Responding to a question, he said the change being pushed pertained to the retention of windfall levy on oil production and lease rentals being indexed with inflation. He said those conditions were not in the original contracts with the E&P companies and obviously investments were booked under a different policy arrangement. "This has disturbed E&P companies and some of them have also gone into litigation," he added.

OICCI urges improvement in investor confidence

Khan said the upstream industry was in dialogue with the government and hoped the issue would be settled in the spirit of the policy.

OICCI vice president Ghias Khan added that whenever a government challenged contracts entered into by a previous government, this damaged

the overall investor confidence because investors had to then revise their business plans and returns.

"This sends negative signals to the international investors and that's not good for the country in the long term," he added. The business group - a collective voice of top foreign investors in Pakistan - said their electricity and gas costs had gone up by 18-19pc over the past three years.

They maintained that devaluation was harmful to investment climate even though it may be helpful to a select sector - the exports.

The OICCI proposed liberalization and transformation of the monopolistic power market into a multi buyer-seller marketplace considering that the exclusivity to sell and distribute power for distribution companies was scheduled to terminate in 2023.

This will create options for power purchasers as well as producers to enter bilateral deals i.e., energy sale via B2B mode through a fair and transparent wheeling regime.

As part of its energy recommendations 2021, the group focused on implementing an efficient and cost-effective energy supply chain, while increasing the share of green energy sources to meet the environment and sustainability milestones.

Ghias said those recommendations were the collective view of leading energy sector professionals associated with OICCI members and had been shared with the government including the prime minister.

Courtesy Dawn



Many power plants in Pakistan are ageing:

Dr Ahmad Shibli

Says running industrial plants these days is a complex matter

—◆— Halima Khan —◆—

Dr Ahmed Shibli is a practicing Materials Scientist. He is the Founder and Head of European Technology Development Ltd. - a UK based Research and Consulting Company based in Leatherhead, Surrey. He has been the leader of a number of European and International projects on the evaluation, properties, integrity and lifing of materials for high temperature plant. Dr Shibli has been running European Creep Collaborative Committee (an umbrella grouping for some 45 high-temperature industry and research organizations) and established many of its R&D development programmes over the years.

EU: What areas are you focusing on to provide reliable, sustainable, and efficient services in Pakistan or elsewhere?

Dr Ahmed Shibli, Chartered Engineer, Fellow Institute of Materials, Minerals and Mining, said in an interview that many power plants in Pakistan are ageing and have seen many years of operation beyond their design life. However, these days power plant life extension, beyond their design life of usually 25 years, is not uncommon. Many plants in Eastern Europe, some in Western Europe and USA are now running much beyond this life, some even are as long as 40 years of life. Most of these plants were

over-designed and therefore, have the capacity to run beyond the design life as long as some of the more vulnerable components can be repaired or replaced.

This can be achieved at a fraction of the cost of replacing an old plant with a new one. But large-scale refurbishment means that the older components, which are vulnerable to problems, have to be inspected and monitored more regularly.

The whole exercise needs a thorough plant condition assessment, life assessment of the critical components and working out a strategy as to which components need what type of repair and how to monitor these for their safe operation. This is similar to the life of humans. With proper food, medicine and healthcare, our life can be extended but as we get older we have to pay more visits to the doctor! Furthermore, in these days of both the financial and environmental concerns, we also have to make sure the plant remains financially viable for the plant owners/ shareholders and that it operates efficiently and with minimum

damage to the environment. So ETD also deals with the plant performance and financial analysis, and operation and maintenance budgeting. With regards to the new plants, it is important to know what design and materials have been used and that plant operators run it smoothly and that all the operating procedures are in place and are followed correctly to ensure that the plant runs smoothly with minimum damage to itself and to the environment. Furthermore, plant monitoring is also required to ensure that no temperature or pressure overshoots take place and that any damage that may start developing is recognized and its cause(s) eliminated as soon as possible.

EU: How do you justify the statement of providing in-house technical expertise to power plants?

Shibli: It is very important that a country develops its own technology absorption and technology development capabilities. Running industrial plants these days is a complex matter and new developments regularly taking place



means that to run these plants efficiently and cost effective as one needs in-house or in-country capabilities to ensure fast access to expertise for problem-solving rather than depending on foreign experts which may take time and can be very costly. Shutting down a plant for a day longer can cost millions of rupees in terms of lost production.

EU: What message would you like to give our readers?

Shibli: Modern running of power plants is quite complex. For example, take the case of plant maintenance which can consume a big chunk of the plant's annual budget. Different innovative philosophies and methodologies have been developed and promoted. These include risk-based maintenance, predictive maintenance, reactive maintenance etc. The old traditional maintenance methods are now outdated and are costly. Thus, for example, in Risk Based Maintenance (RBM) plant equipment and components are prioritized for inspection based on the level of financial and social or health risk involved.

As the plant maintenance budget during any outage can be limited, the components at highest risk are inspected/ repaired/ replaced first and it may become necessary to inspect the components at lesser risk during the next outage and so on. Similarly, in predictive risk management, the components that are predicted to fail (based on previous experience with similar materials and design etc.) in a given time are inspected before such a failure takes place and palliative measures are taken. This can avoid an unexpected failure that can lead to damage of the other nearby equipment resulting in unplanned and long outages with a great loss of income and much higher remedial costs.

Similarly, if damage in the form of, for example, a crack is found in a component then the original equipment manufacturers (OEMs) would insist on replacing it with a new component that will of course generate large income for the OEM, some of these costs can run into millions of dollars for the plant owners. However, we know that fracture mechanics has developed to an extent where we can safely and conservatively predict the safe operating life of crack-containing components even in nuclear plants. This is now a common practice in Europe and elsewhere. However, many developing countries still take the easy route of getting the OEMs to replace the components with the new ones at a huge cost. They also do this because they don't have the in-house or in-coun-

try expertise to analyse such cracks.

On another front, the failure of components needs to be properly investigated to avoid such future failures. The root cause of the failure helps to know where the problem lies, in the material, manufacturing, component design or plant operation etc. Once the root of the problem is known, appropriate measures can be taken to avoid repeat and costly failures.

Even humble small tube failures can result in large plant shutdowns with the daily loss of electricity production, in a large 600MW power plant, of about a quarter of a million dollars a day. For such root cause analysis, one needs to have in-house or in-country expertise with a good understanding of how power plants work, the role of high-temperature materials, the issues of water chemistry, and so on.

Thus, it is important that a country should have in-country expertise in a number of disciplines building up multi-disciplinary teams that can provide a comprehensive advice to power plant operators and owners on how to increase plant efficiency, carry out proper maintenance, inspection and monitoring, improve plant performance, decrease planned or unplanned outages, reduce the electricity cost for the customer and at the same time make the running of plants more profitable for themselves.

Such multi-disciplinary teams can interact with the Pakistan universities for generating fundamental knowledge that these teams may require or for providing test facilities etc. Such an approach will result in very important benefits for our local and national universities by generating income for them for applied research.

It is realized that building many such teams may be a difficult challenge but we can start with one national team and in the future possibly expand this into more such teams. This will not only save a lot of foreign exchange but will also provide quick and easy access for the power plant staff to the qualified engineers. Initially, some sort of overseas collaboration may be required for the transfer of knowledge and skill base to Pakistan.

Even after that as knowledge is an evolving issue, it is important for such teams to be involved with various international platforms to acquire the most up-to-date knowledge and benefit from new sources of data and information worldwide. In the medium to longer-term such teams can provide services to the power industry in the region (Middle East, Central Asia etc. ■

Gas entities sign business deal

A Memorandum of Understanding (MoU) was signed between Sui Southern Gas Company (SSGC) and Sui Northern Gas Pipelines Limited (SNGPL) to jointly explore opportunities for improving business sustainability, efficiency and productivity of Meter Manufacturing Plant (MMP) located in SSGC, Karachi.

Ali J Hamdani, MD, SNGPL and Imran Maniar, MD, SSGC inked the MoU at a simple ceremony held at the SSGC's Head Office. The MoU pledges initiation of a detailed technical, financial, commercial, legal and regulatory due diligence of MMP owned by SSGC with the objective to take a decision for the parties to enter into a joint venture arrangement. Senior officials from both companies were also present at the meeting.

KE installs 'Black Start' facility

K-Electric (KE) implemented a 'Black Start' capability for the first time in their generation fleet at the Korangi Power Complex (KPC), which is expected to generate 247 MW electricity for Karachi and curb unexpected blackouts, a statement said.

The facility augments KE's ability to secure power supply against unexpected large-scale outages, allowing power plants to go from shutdown mode to generating power without any assistance from the external power grid, making the utility self-sufficient in restoring power in case of blackouts. KE's generation team tested the power plant on October 28th & 29th under varying operational scenarios and fuel selection. Once the Black Start was achieved, KE was able to transmit the power to energize 220KV transmission lines. This indicates technical preparedness to export power to a network facing blackout. ■



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11TH FIRE SAFETY, SECURITY CONVENTION AND AWARDS 2021



Need stressed to train people to tackle fire emergencies

People at the community level should be given training to deal with fire emergencies to protect not only themselves but also those around them in their residential areas and workplace environment.

This was one of the demands made by the speakers at the 11th Annual Fire, Safety, & Security Convention organised here at a hotel by the National Forum for Environment & Health (NFEH) in collaboration with the Fire Protection Association of Pakistan (FPAP).

Speaking at the inaugural session of the convention, FPAP President Kanwar Waseem said that it was not enough to install the emergency equipment and train a few personnel to deal with fire emergencies in the commercial establishments including markets, but emergency drills should also be performed on a regular basis in commercial establishments so that all their employees and workers should know about the proven methods to save their own

lives and those in their surroundings in the case of any fire incident.

He said that training sessions at the

community level and in educational institutions should be held to create mass-scale awareness about the safety measures required against fire



11TH FIRE SAFETY, SECURITY CONVENTION AND AWARDS 2021



incidents. The FPAP president said that recent fire incidents in markets and industries of Karachi had highlighted the need to do more to safeguard property and lives at the workplaces.

FPAP Director Tariq Moeen said that people and businesses in Pakistan should realize that the fire brigade was the last line of defence whenever someone had to deal with any fire emergency as the commercial, residential, and industrial buildings had to have their own fire

safety measures on a compulsory basis to timely tackle any fire incident at their premises.

NFEH President Muhammad Naeem Qureshi said that his NGO had been collaborating with the fire protection association for over a decade to create mass awareness about methods and systems to be adopted to protect lives and properties in the case of fire incidents. He said the NFEH would continue to hold more such events to make people aware of the impor-

tance of fire safety measures at their homes and workplaces.

Shariq Ahmed Sindh Transport and Mass Transit Secretary, Wajahat Ullah Khan FPIP Joint Secretary, Qazi Zahid Hussain Vice President Karachi Chamber of Commerce and Industries, Engr Nadeem Ashraf Project Director Fire Safety, Ruqiya Naeem Secretary General NFEH. Saeed Jadoon Fire Expert and others also spoke on this occasion.



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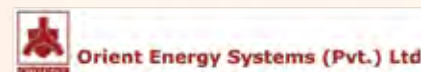
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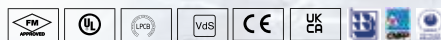


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Inverex

Solar Energy Awareness Seminar

— Mustafa Tahir —

The Sindh government has advised the general public to install solar systems as an effective and clean off-grid solution to meet their energy needs both for their homes and offices.

The advice to this effect was given by the Sindh government's Secretary for Energy Department, Abu Bakar Ahmed Madani while speaking as the chief guest at a seminar on solar energy awareness organized by Energy Update and Inverex Solar Energy here at a hotel. The Sindh energy secretary said on the occasion that there was no restriction at all in the country if an electricity consumer wanted to install a solar system to energize his home or office as an off-grid energy solution.

He said the power consumers could utilize the option of net-metering to earn money by installing the solar system as the additional electricity produced by the clean energy option would be supplied to the grid system. He told the audience that a one-window solution had been introduced by the Sindh government to encourage the installation of solar energy systems in the province.

CEO Inverex Solar Energy Zakir Ali said that his company is currently working on off-grid power generation which needs to be further increased. With the promotion of solar system, common people can generate electricity and sell it to the government and the general public.

The representative of the Electronic market dealers' association said on the occasion that the traders concerned were ready to perform their due role to promote usage of solar home systems in the country if they were given the right incentives by the government.

Inverex also Organized Awareness Seminar in Lahore. CEO AEDB Shah Jehan Mirza was the chief guest while former captain Inzamam ul Haq and other dignitaries and solar companies' representatives participate in the event. An MOU of 5MW was also signed between Inverex Solar Energy and Decent Technologies on this occasion. ■



New paint can replace ACs use, cool houses



Xiulin Ruan, a Purdue University professor of mechanical engineering, holds up his lab's sample of the whitest paint on record.

Ahsan Gardezi

In a breakthrough in science, a researchers team has succeeded to create a paint so white that it could ultimately lower or possibly stamp out the need for using air conditioners.

The paint has caught the attention of Guinness World Records as the whitest paint ever made to help fight global warming in the near future.

Common industrial white paints reflect just 80 to 90 percent of sunlight, making it hard for buildings to stay cool during the day. Xiulin Ruan of Purdue University in West Lafayette, Indiana, and his colleagues, have been working on whiter paints to “defrost” buildings similar to the inner workings of an air conditioner, but without the use of power. They looked at over 100 materials before limiting them down to ten and tested over 50 distinct formulations of each.

“When we started this project about seven years ago, we had saving energy and fighting climate change in mind,” said the research team in a statement. The idea was to create a paint that would essentially reflect sunlight from buildings. Making this paint more reflective also made it whiter, the said. Since the paint absorbs less heat from the sun, given its physical features, the researchers said it reflects 98.1% of solar radiation while also projecting infrared heat. With immediate effect, this attribute cools down the building far below the surrounding temperature without consuming any power.

The research team claims that if

this new paint is used to layer a roof area of about 1,000 sq. feet, it could generate 10KW of cooling power. “That’s more than the air conditioners used by most houses”, the researchers said.

What Makes It White?

So, what is it about this paint that makes it so protective? It’s all thanks to a chemical called Barium Sulphate, which is also used to generate white photographic paper. The paint’s different sized particles help make it more reflecting.

The researchers demonstrated in an outdoor experiment that the paint could keep surfaces cool at 19° Fahrenheit (10.5° Celsius), lower than the ambient temperature at night. It can also cool surfaces to as low as 8° Fahrenheit (4.4° Celsius) in direct sunshine during the midday hours.

Need Of The Hour

For hundreds and hundreds of years, people around the world have painted their walls and roofs white to reflect heat. However, in this new day and age, with global temperatures soaring, many people are heavily relying on air conditioners for comfort, and forget to consider the means that would prove less harmful to the environment.

The International Energy Agency estimates energy demand for air conditioners to triple in the next three decades, a stat equivalent to adding 10 new air conditioners every second by 2050. There is a significant aim to make the whitest paint available for commercial usage which could eventually diminish the need for air conditioners besides reducing energy use. ■



11,000 schools in Punjab solarized: moot told



—◆— EU Report —◆—

Punjab Minister for Environment Bao Muhammad Rizwan has said that solar energy will be instrumental in slowing down the process of global warming.

While addressing the audience at first station of “2021 GoodWe Technical Seminar Series” at a local hotel, the Minister quoted a study that suggested, “If just 1 degree temperature increases due to global warming, it will melt all glaciers to make environment unlivable for mankind.” “We all have to breathe in this air; therefore, it is everyone’s responsibility to reduce carbon emissions to a minimum,” he said, adding that vehicular emissions contribute 43 percent among all factors to overall pollution.

Director Technical (Power), Punjab

Energy Department, Muhammad Yasin, said that Chief Minister Usman Buzdar had declared Punjab as solar province. In this regard, he said that 11,000 schools in Punjab had been converted to solar energy. He further informed that net-metering was available for 3-Phase meters so far, adding that Punjab government is going to make agreement with National Electric Power Regulatory Authority (NEPRA) to allow distribution companies (DISCOs) to offer net-metering to consumers on single-phase meters as well.

Syed Salman Mohiuddin, Country Manager GoodWe, said that renewable energy was the future, adding that biggest source of renewable energy in Pakistan is solar energy. He informed that solar energy was a major component of reduction in greenhouse gases and carbon emissions. “The solar energy is most cost-effective, sustainable and environment

friendly option available in Pakistan,” he said, adding that Pakistan government could also take credit of carbon control under Kyoto Protocol owing to increase in use of solar energy.

He informed that the solar system for utility range, commercial and industrial range and residential range was sustainable up to 25 years, while it guarantees cost return within 3 to 4 years. “We offer solar inverters from 0.7 KW to 250 KW in both on-grid and hybrid categories,” he said, adding that GoodWe will soon launch off-grid solar inverters as well. Renewable energy expert Engineer Faiz Muhammad Bhutta and Manager Technical Services GoodWe Ahmad Rafay Asad also spoke on the occasion.

Later, the Punjab Environment Minister and the Director Technical (Power), Punjab Energy Department, distributed mementos and certificates of participation among expert speakers and the participants, respectively.



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on engineering firm as a sole proprietor and a trader of products related to MEP (Mechanical Electrical and Plumbing) Systems like Central Air Conditioning systems, Electrical system, Fire Fighting system and Plumbing System.

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CPEC

The last chance for industrialization

China Pakistan Economic Corridor (CPEC) is supposed to be a game-changer for Pakistan's economy. Several new power projects were installed at a time when the country was losing 2-2.5 percent of Gross Domestic Product (GDP) every year due to severe load shedding and no one in the world was ready to invest in the energy sector in Pakistan.

China stepped in. Later, however, the projects in line for the second round or phase-II of CPEC were almost halted due to economic slowdown and the growing circular debt. There may be some revival now as the Joint Cooperation Committee meeting took place in September as planned and China's President Xi Jinping called Prime Minister Imran Khan last month. Special Assistant to Prime Minister on CPEC affairs Khalid Mansoor recently described CPEC as Pakistan's last chance for industrialization.

Pakistan is prematurely moving from an agrarian to a service economy, and there is no way the country can cater to 220 million-plus population without having an industrial base. Perhaps, the lack of industrial depth is the reason for Pakistan's frequent boom and bust growth cycles. The world is not ready to finance the growing external imbalances without a promise of a sustainable path of economic growth by Pakistan. And that sustainable path is hinged upon industrial growth in the country.

The government should work on a priority basis to speed up CPEC. One of the prime reasons for CPEC slowdown is the delay in payments to Chinese investors in the power projects. Delays in IPPs' (Independent Power Producers') payments are a notorious norm in Pakistan. But the Chinese are not very amused at this treatment. Around Rs250 billion worth of payments are stuck due to which the projects are unable to pay dividends to the investors. Now, these investors are said to be reluctant to proceed further. Perhaps not surprisingly, the insurance premium on the projects is also rising. Reportedly, the delays in 6 power projects (mostly hydel and coal) are due to pending approvals from the insurer, Sinosure.

This could be attributed to over-dues of power projects amounting to Rs250 billion. There are statements by government officials every now and then through which it is claimed that the government is renegotiating the rates of return on quasi-equity IPPs that are secured by sovereign guarantees. There is nothing new that has been offered to the Chinese. The return structure template was made under the 1994 Power Policy (the Benazir Bhutto government signed a number of IPP contracts under this policy). At that time, mainly business people from the West invested in Pakistan, and later a similar structure was offered in the 2000s when local entrepreneurs emerged as major investors.

With the advent of circular debt that

began to grow in 2010s and a bleak security situation, foreign investment was hard to come by while the power demand and supply gap kept growing. The Chinese committed to Pakistan and most investments were on the then prevalent rate of return structure. Later, the government negotiated with local IPPs on their rates of return.

It is, therefore, important to note that some in the government have been advocating a similar treatment or concession for CPEC projects. Efforts should, therefore, be aimed at expediting the remaining power projects in the CPEC and kick-starting the CPEC's second and highly crucial round where private to private partnership in Special Economic Zones is important to bring foreign investment in efficiency-seeking sectors and technology transfer. In the past, the thrust of foreign investment was market-seeking projects, resulting in import substitution.

Rarely did any investment come to efficiency-seeking projects where foreign exchange can be earned by generating exports and also saving on imports through import substitution. That is why expediting work on SEZs is imperative. Clearing the air on overdue payments is also imperative; therefore, the authorities should be careful in making comments on CPEC publicly. All these have grave repercussions for Pakistan. ■

Courtesy Business Recorder



IGCEP 2021-30: New plan based on serve power demand

— Mushtaq Ghumman —

The newly-approved Indicative Generation Capacity Expansion Plan (IGCEP) 2021-30 will be based on serve power demand instead of traditional mechanism of computed demand.

This was disclosed by the officials of National Transmission and Despatch Company (NTDC) at a webinar jointly organized by the National Electric Power Regulatory Authority (Nepra) and NTDC to develop deeper understanding and educate stakeholders regarding various steps taken in preparation of IGCEP.

According to the plan, which will be reviewed in April each year, 32,000MW electricity on the basis of least cost mechanism is to be added to the system in the coming 10 years. The stakeholders raised different questions on the applicability of IGCEP, the implication of any type of delay in committed projects and candidate projects. "The formal plan has been approved by the highest forum and stands there. We should not worry about availability of power as the plan will be revised each year in accordance with ground progress of projects and demand and supply position. There is no chance of any sudden jerk in supply and demand," said the NTDC officials. However, they argued that if the government gives commitment to more projects over and above the requirement, payment which is already a problem will be more difficult.

A view was presented that serve demand will graduate with committed demand after seven or eight years, with gradual elimination of load shedding in different areas.

The representative of Alternate Energy Development Board (AEDB), said that introduction of new technology in IGCEP was necessary

so that those least cost projects could also be included in the plan.

Hydel projects have also been included in the renewable projects. He sought a viewpoint of NTDC on the evacuation of those solar or wind projects which would be away from the NTDC system and proposed that transmission expansion plan should also be prepared in parallel.

"We cannot move towards competitive bidding until and unless there is clarity that the least cost projects are feasible or not," he added. A representative of NTDC, Mr. Usman replied that NTDC would certainly encourage new technology in renewable generation, adding that as the IGCEP reached implementation stage, NTDC would bring its transmission expansion plan. However, he further contended that there can be some places in the country where evacuation of new generation from renewable technology would not be technically or financial viable. An official at Water and Power Development Authority stated that Dasu hydropower project was delayed by four months due to terrorist attack on Chinese and Pakistani engineers and staff. During the webinar, it was noted that the figures of net metering data and captive power plants received from Discos had been made

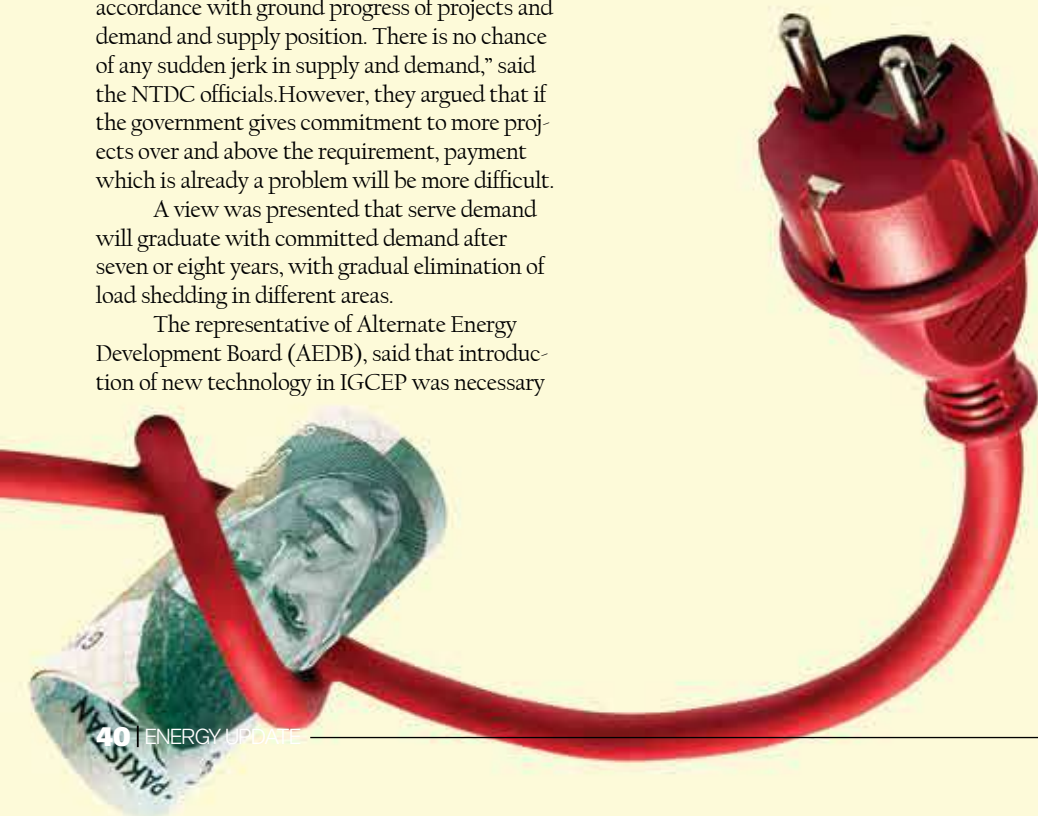
part of the generation projections. The officials maintained that net metering had no impact on peak demand of companies but was a burden on distribution system of companies. The official, however, argued that net metering is a cause for the increase in inter-circular debt.

Former Chief Executive Officer, CPPA-G, Abid Lodhi, suggested that a committee of key stakeholders be constituted to include any new project in the generation plan. In reply to a question, the NTDC officials said that 1100 MW electricity was pledged to KE during peak hours whereas it could be reviewed during off peak hours. Nepra approved first ever Indicative Generation Capacity Expansion Plan (IGCEP) on September 24, 2021 thereby fixing the cornerstone for future capacity additions for fulfilling future demand in a scientific and systematic way. Chairman NEPRA in his opening remarks highlighted the role of IGCEP for proper planning opportunities of future capacity additions through new emerging technologies.

He further emphasized that core aim of IGCEP was to strive towards achieving cheap energy mix by promoting indigenous and renewable energy sources which was in line with the vision of Government of Pakistan.

In addition, NTDC team briefed the audience regarding strategy and methodology involved in data gathering, compilation & optimization through PLEXOS, approval of assumptions from CCI and submission of IGCEP to Nepra for approval.

Courtesy Business Recorder



Pact inked to produce **supercapacitor storage systems**

— EU Report —

A US-based technology company and a Pakistani industrial group have entered into a formal partnership to start manufacturing supercapacitor energy storage systems in Pakistan for the first time to promote the usage of renewable electricity.

A ceremony was held here at a hotel for the signing of a joint venture (JV) agreement between Ghani Global Holdings Limited (GGL) and Kilowatt Labs Inc USA to build Pakistan's first facility to locally produce supercapacitor battery storage products. The manufacturing facility will be built at Allama Iqbal Industrial City in Faisalabad.

Speaking on the occasion, GGL CEO, Atique Ahmed Khan, said that indigenous production of supercapacitor batteries would go a long way to ensure the provision of renewable electricity at cheaper rates for the promotion of industrial and commercial activities in the country. He said that businesses would be able to save a lot on their energy spending with the availability of the most efficient and long-duration battery storage systems.

Khan told the audience of the ceremony that enhanced energy storage in the form of a supercapacitor was needed to promote the usage of clean electricity in Pakistan. GGL chief said that modern battery products would enable the Pakistani power entities to build such storage systems for the resumption of electricity in the case of a blackout. He said the joint venture agreement had been signed to build such a second manufacturing facility in the world.

Kilowatt Labs CEO Waseem Ashraf Qureshi said that his R&D company had entered into the latest business partnership to build one of the largest manufacturing facilities in the world for producing modern energy storage products. He said the supercapacitor batteries to be produced in Pakistan could easily be exported to 43 countries where the energy products and services of his company were already available. Qureshi said the modern batteries to be produced in Pakistan would last up to 45 years. Aqeel Karim Dhedhi Chairman of AKD Group and John Coronado, Counsellor for Commercial Affairs in US Embassy in Islamabad also spoke on the occasion. ■



Confluence of policy, market failure

—◆— Khaleeq Kiani —◆—

On the heels of the sudden surge in inflation beyond expectations and a record trade deficit, Prime Minister's adviser on finance and revenue Shaukat Tarin came out in the public to pump possible confidence to the markets that were seen rapidly shedding rupee value and share prices.

He expected the foreign exchange reserves to reach \$20.5 billion in a couple of weeks from about \$16bn at present with \$3bn inflows from Saudi Arabia, replacement of a

recently matured \$1bn Sukuk bond and some Eurobonds soon. In his view, the fundamentals of the economy are also showing strength as revenues grow and agriculture, services, industry and construction sectors show growth.

He was candid and diplomatic at the same time about the double whammy. He appeared incessantly parking some responsibility on the legacy he carried over from his predecessor and the recent policy directions from the central bank to which he plans to ensure full autonomy through an act of parliament within days. But then he would shrug off suggestions for accountability on the grounds that he did not believe in 'witch-hunt' but course correction.

The shares market has generally been in a tailspin since the International Monetary Fund announced to have reached a staff-level agreement with Pakistan's authorities two weeks ago but a record 2,200 points plunge recently alone sent a shock wave among the government rank and file. The finance adviser also accepted that there were uncertainties in the market because of double-digit inflation, currency depreciation, interest rate hike and higher import bill — a situation that was quite different at the time of the budget five months

ago. The new budgetary measures would take 8-10 days to reach parliament for approval, according to Mr Tarin.

Shaukat Tarin conceded policy fault lines while reporting that the biggest \$508m contribution to the \$1.4bn higher import bill was fuel imports of products that could be produced locally

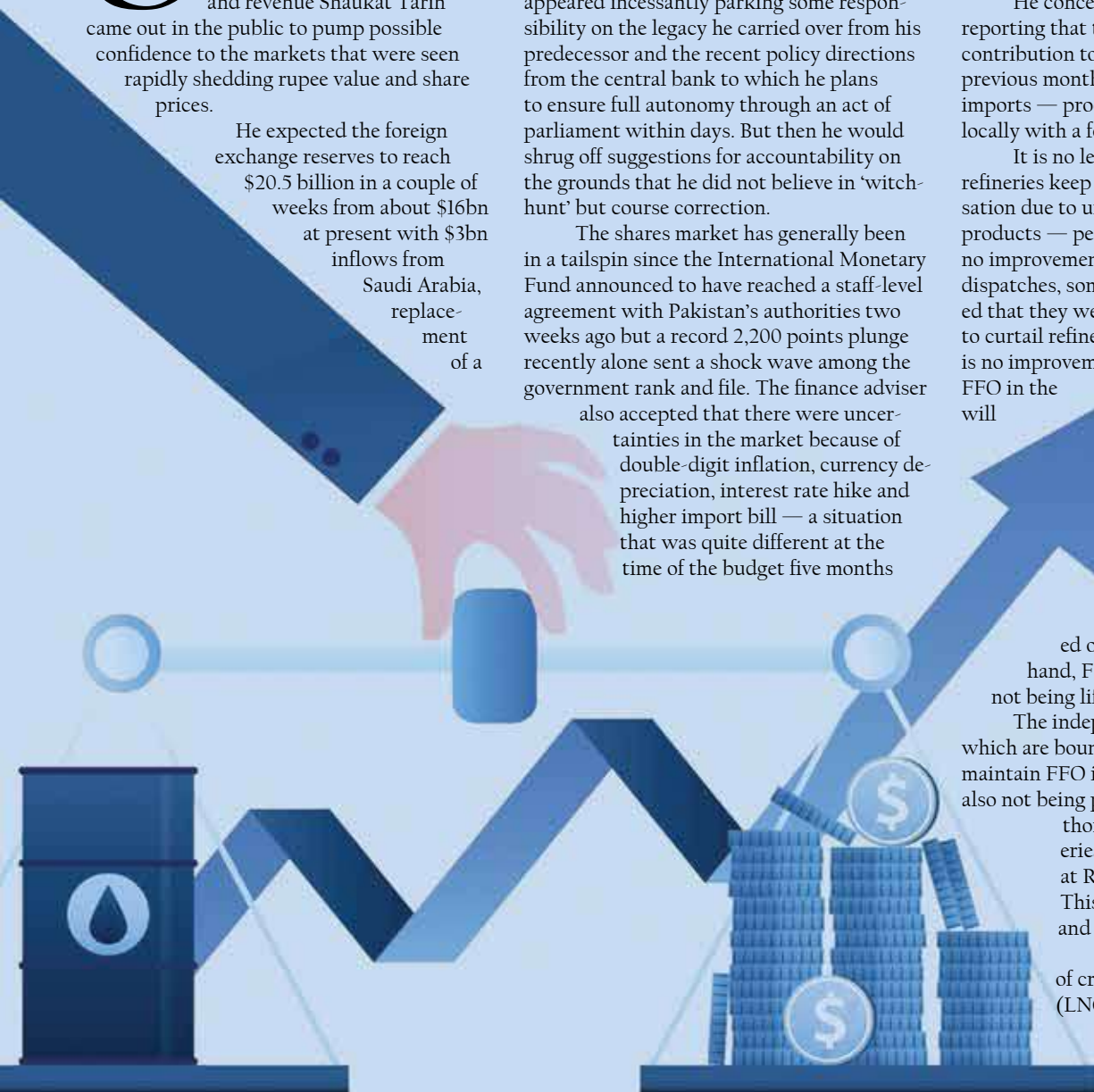
He conceded policy fault lines while reporting that the biggest \$508 million contribution to the \$1.4bn higher than the previous month increase in imports was fuel imports — products that could be produced locally with a foreign exchange saving.

It is no less than a crime that domestic refineries keep crying over low capacity utilisation due to unnecessary imports of finished products — petrol, furnace oil, jet fuels. With no improvement in Furnace Fuel Oil (FFO) dispatches, some of the refineries have reported that they were left with no option except to curtail refinery throughput. In case there is no improvement in the upliftment of FFO in the next few days, these will be forced to shutdown distillation units one by one ultimately leading to total shutdown, they have warned.

The refineries have expressed surprise that huge volumes of FFO had been and were "being imported on one hand and on the other hand, FFO from local refineries was not being lifted".

The independent power producers which are bound by their agreements to maintain FFO inventory for thirty days are also not being pushed by the regulatory authorities for uplift from local refineries. Huge circular debt piling up at Rs2.42 trillion is the key reason. This is a poor show of planning and coordination, to put it politely.

Higher international prices of crude and liquefied natural gas (LNG) are no doubt a key reason



though. The oil prices are on the decline from the recent peak. The current import exposure of the petroleum sector is about \$22-23bn per annum in the shape of imports of crude, finished products, LNG and liquefied petroleum gas (LPG). There are few low hanging fruits but then vested interest plays a critical role.

It does not require intricate economic models to suggest maximum capacity utilisation of local refining capacity through higher crude imports rather than finished products. The ministries and cabinet committees have been wrangling over a new oil refining policy for almost a year that could have encouraged the upgradation of existing refineries and the setting up of additional refineries.

About 25 per cent lower arrangements than required LNG quantities in a timely manner also has to be taken into account. The private sector has been running from pillar to post for medium to long term terminal and pipeline capacity to arrange its own LNG import quantities but has only met with resistance.

Some savings have, however, been made in providing maximum natural gas — both local and imported — to fertiliser production as it has now been reprioritised at par with export and power sectors. It would get an uninterrupted supply of about 760mmcfcd even in peak winter months to keep all fertilisers up and running. The price differential between local urea and imported one roughly works at Rs1,800 and Rs7,000 per 40kg bag.

Suddenly, the energy ministry is referring to only one business group as the panacea for all energy challenges including those relating to LPG production, virtual pipelines for LNG supplies and facilitation to additional business to business arrangements within the existing LNG terminals. The smaller groups like the compressed natural gas (CNG) sector are being pushed to bow instead of seeking their own imports. In the process, a major Japanese player which might have led to market competition through additional terminal capacity appears to have been forced out at the last moment.

Mr Tarin has also attributed prevailing anxiety in the market to the increase in the discount rate to 8.75pc by the State Bank of Pakistan along with the announcement that monetary policy frequency has been reduced from eight to six weeks and maybe further reduced to a month. Based on this direction along with inflation at 11.5pc, the market anticipated a further increase in the discount rate and expected T-Bill's rate at 10.75pc to go up further, hence the market players increased their pricing.

He put on record that the governor State Bank of Pakistan did not agree that banks were involved in profit-taking in the exchange rate, but he had shared data along with their profitability that would hopefully convince the central bank to take action. ■

Courtesy Dawn

DAM PROGRESS

'Construction work on Mohmand Dam on track'



◆ Khalid Mustafa ◆

The construction work on Mohmand Dam is on track, but the deadline of completing the two diversion tunnels has been extended by three months up to October 2022 in the wake of Covid-19 pandemic. The said tunnels were earlier scheduled to be completed by July 2022.

And the Swat River will continue to flow through tunnels for 3-4 years till the completion of the dam portion. This is the fifth-highest dam in the world being built and once it is erected, it will have a grass storage capacity of 1.293 MAF and live storage of 0.676 MAF.

The Mohmand Dam is a multipurpose project that will yield numerous dividends, including the irrigation of 16,700 acres of new land apart from irrigating the existing 160,000 acres of land and production of 800MW electricity at Rs16 per unit. In addition, 300 million gallons per day water will be provided from the dam to Peshawar. Wapda Chairman Lt General (retd) Muzammil Hussain told this to a group of parliamentarians during a briefing on the site of the project. He said that the first unit of 200MW will come on stream by December 2025. However, the remaining three units of 600MW will be functional in 2026 during flood season.

He said that right now at 13 sites, the construction work was in full swing with double shifts. The irrigation system will also be built and functional by June 2025 with annual benefits of Rs2.23 billion. He also said that cities like Charsadda, Peshawar and Nowshera will be saved from the flood be-

cause of Mohmand Dam, knowing the bitter fact that in 2010 catastrophic flood hit KPK and the annual benefits in terms of flood mitigation have been estimated at Rs1.467 billion. More importantly, the project will also provide Rs2.86 billion units of cheap yet environment-friendly electricity to the national grid every year providing the annual revenue of Rs45.76 billion.

Hussain also highlighted the social and economic benefits for the local dwellers mentioning that an amount of Rs4.5 billion had been earmarked for CBMs in the project area to develop health, education and drinking water facilities. The dam will also provide as many as 6,100 jobs and so far 2,968 local people have been absorbed and out of them, 400 people are being given skills, enabling them to earn more.

After the briefing, the delegates were taken to various sites and shown the pace of ongoing construction work on diversion tunnels. The delegation was also briefed about the construction of spillways. The parliamentarians were of the view that after 50 years' time, a huge project is being built up. They said that seeing is believing.

The parliamentarians, headed by Standing Committee Chairman Junaid Akbar, also asked for more facilities to the local community and agitated the issue of submitting the revised PC-1 of the project, arguing increasing dollar-rupee parity and cost escalation will increase the cost of the project. The Wapda chairman said that when the project was approved, the dollar-rupee parity was at Rs148, which has now increased to Rs175. He said that it was not high time for submitting the revised PC-1 of the project. However, Wapda will submit the revised PC-1 at appropriate time. ■

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Profile of Mari Petroleum Company Limited

Introduction

Mari Petroleum Company Limited (MPCL) is an integrated exploration and production company, which is currently managing and operating Pakistan's largest gas reservoir at Mari Gas Field Daharki in the province of Sindh. With 22% market share, it is the second largest gas producing company in Pakistan that owns the second highest reserves base. The company's cumulative daily production is around 100,000 barrels of oil equivalent.

MPCL plays a pivotal role in ensuring food security in Pakistan as more than 90% urea production in the country is based on MPCL gas supply. It also supplies gas for power generation and domestic consumers. To its credit, MPCL has the unique record of maintaining uninterrupted gas supply to its customers from Mari Field for the last 54 years, without availing even the permitted outages.

Principal Business Activities

MPCL is primarily an exploration and production company in the upstream segment of the petroleum industry. Its principal business activities include oil and gas exploration, drilling, field development, production and sale of hydrocarbons including natural gas, crude oil, condensate and LPG as well as provision of E&P related services on a commercial basis.

Major Brands, Products and Services

MPCL is a major producer of natural gas. It also produces crude oil, condensate and LPG. All the products of the company are generic and are supplied to midstream and downstream customers. The company also provides 2D/3D seismic data acquisition, seismic data processing, drilling and mud logging services.

Major Customers/Markets

The gas produced by MPCL is supplied to fertilizer manufacturers, power generation and gas distribution companies, while crude oil and condensate are supplied to the refineries for further processing. The company currently only caters to local customers with no activity in the export market.

Geographic Presence

MPCL currently holds seven D&P leases and 13 exploration licenses as an operator. It is also a non-operating joint venture partner with leading E&P companies in five D&P leases and eight exploration licenses. Its exploration and production assets are spread across all the four provinces of Pakistan. The company is continuously evaluating farm-in opportunities in overseas exploration as well as producing assets with upside potential and has recently won an offshore block in Abu Dhabi as part of a consortium of Pakistani National E&P Companies.

Certifications and Recognitions

MPCL is an ISO certified company for quality, environment, information security, occupational health & safety, and has achieved advanced level in ISO certification for social responsibility. It is a blue-chip company at the stock exchange with the highest share price in oil & gas sector companies (all streams). It regularly wins awards and accolades from various independent bodies for its financial and operational performance, financial reporting, management, HR, HSE, and CSR practices.

Ownership, Operating Structure and Relationship

MPCL is a public limited company operating in the private sector. The company management is vested in Fauji Foundation. MPCL is listed on Pakistan Stock Exchange with market capitalization of over Rs 200 billion as on August 31, 2021. Major shareholders of the company include Fauji Foundation (40%), Government of Pakistan (18.39%), OGDCL (20%) and General Public (21.61%). All Fauji Foundation group companies are the associated companies of MPCL. ■



Rs135bn payments boost IPPs' share prices

Second biggest beneficiary will be Hub Power Company

—♦— Kazim Alam —♦—

Share prices of the independent power producers (IPPs) soared on 16 November 2021 after the government approved the disbursement of Rs135 billion as part of the tariff renegotiation process aimed at reducing the circular debt.

The approval for the final tranche of payments consisting of 60 percent of the total outstanding dues follows the disbursement of the first instalment amounting to Rs90 billion to the same 20 IPPs back in May.

This will take the total payments under the Feb 28 tariff renegotiation agreement to Rs225 billion. The disbursements are in the form of cash (33pc), sukuk (33pc) and floating Pakistan Investment Bonds or PIBs (33pc).

The share price of Kot Addu Power Company Ltd (Kapco) went up 7.49 per cent on a day-to-day basis to close at Rs30.44. The company is the biggest recipient of outstanding dues disbursed as part of lengthy renegotiations that resulted in reduced tariffs for private power generators.

A 1,638-megawatt power plant that runs on gas, furnace oil and diesel, Kapco will receive Rs59.4 billion or Rs67.48 per share as the final instalment for the settlement of the circular debt in the power generation segment.

The second biggest beneficiary will be the Hub Power Company Ltd (Hubco). The 1,292MW furnace oil-based power generator will receive Rs34.8bn or 26.80 per share as the final instalment. Its share price increased 2.97pc to Rs75.30 on Tuesday.

Of the 20 IPPs receiving funds as part of the circular debt settlement, Kapco and Hubco are the only ones set up before the Private Power Policy of 1994. Six of them were established under that regime while 12 are projects of renewable energy based on wind, solar and bagasse. Furnace-oil based Pakgen Power Ltd, Lalpir Power Ltd and K-Electric Ltd also saw their share prices increase 7.48pc, 4.77pc and 1.79pc, respectively, on Nov 16. Gas-based Altern Energy Ltd is an illiquid stock and has recorded no volume since Nov 8. Shares of

the remaining 14 IPPs that will receive their outstanding dues are not traded on the stock exchange.

According to a research note issued by Arif Habib Ltd, the resolution of the circular debt will be a key trigger for Pakistan State Oil Company Ltd (PSO) because it has to rely on short-term borrowings to meet its working capital requirement. PSO is the main supplier of furnace oil to Hubco.

"We expect PSO to receive 60pc pay-

ment from Hubco, which translates to Rs12.5 billion against the total trade receivables from Hubco of Rs20.8 billion," it said.

The share price of PSO registered an increase of 2.12pc to Rs186.03 on Nov 16. "A reduction in the trade debt amount will improve the liquidity position of the company and allow it to invest in other projects, which will increase the wealth of shareholders." ■

Courtesy Dawn

Govt to invest Rs111bn in power transmission system: NA told

Rs34bn being collected from consumers; this is extortion: Nafisa

—♦— Haseeb Hanif —♦—

Federal Minister for Energy Hammad Azhar has said that the government was planning to invest over Rs111 billion in the power transmission system during the next three years.

In a National Assembly session, chaired by Amjad Khan Niazi, the energy minister said that the transmission line projects would take place in several areas of the country. Azhar told the house that the government had issued directives to both Sui Northern Gas Pipelines Limited and Sui Southern Gas Company Limited to conceive a viable plan to rehabilitate the damaged pipelines within a month. He said the decision had been taken to address gas pressure issues.

"We have not signed power contracts," he said, responding to a question. He added that due to the contracts signed by the previous governments, the capacity payments had reached Rs800 billion. "We have reduced the annual flow of circular debt from Rs450 billion to Rs130 billion."

PPP's Nafisa Shah said that under the current government, the circular debt had increased four times. "Your government has recently increased electricity tariff. Rs34 billion

are being collected from the consumers, this is extortion." However, responding to the criticism, Azhar pointed out that the circular debt had come down from Rs400 billion annually to Rs330 billion.

Later, during the Question Hour, the ministry of law in its written reply stated that during the tenure of the incumbent National Accountability Bureau (NAB) chairman, the anti-graft body received an amount of Rs519 billion directly and indirectly.

Similarly, Rs502 billion was transferred to the government agencies concerned and victims of scams.

Parliamentary Secretary for Law and Justice Maleeka Bokhari told the panel that the incumbent government had introduced legal reforms to ensure the just and expeditious disposal of civil and criminal cases.

"We have introduced legislation including Code of Civil Procedure Amendment Act, Letters of Administration and Succession Certificates Act, Enforcement of Women's Property Rights Act and Legal Aid and Justice Authority Act."

She further said that the law ministry had consulted relevant stakeholders and would soon introduce Criminal Law Reforms Bill to strengthen the criminal justice system. ■

Top OMC in economic mess: PSO's receivables surge to Rs398 billion

—◆— Khalid Mustafa —◆—

The receivables of the Pakistan State Oil (PSO) have soared to a whopping amount of Rs398 billion, the highest ever in the entity's history with a major chunk of Rs192.539 billion from the power sector.

However, the Sui Northern Gas Company owes Rs161.025 billion to the PSO in the head of RLNG and the PIA is required to pay Rs21.979 billion for using jet fuel. The non-recovery of Rs398 billion receivables has triggered the rise in the cash flow situation, resulting in financial miseries for the state-owned entity.

The worsening cash flow situation has made the PSO highly difficult to pay off the amount of Rs124 billion required to open letter of credits (L/Cs) for the Kuwait Petroleum Company and Standby Letter of Credits (SBLC) for import of LNG. This has also made the PSO unable to pay the amount of Rs32 billion of six refineries.

In the power sector, the power generation companies (GENCOs) and the Central Power Purchase Agency (CPPA) were required to pay Rs140.886 billion as of November 15, 2021. The HUBCO owes Rs43.188 billion and the KAPCO Rs8.465 billion to the PSO. The inefficient power sector has to pay a huge amount of Rs74.372 billion in the head of late payment surcharge (LPS) which is not less than a penalty. Owing to the import of RLNG and non-recovery of the cost, the receivables have surged up to Rs161.025 billion which are due to be paid by the SNGPL.

The worsening exchange rate in the head of import of LNG also caused a loss of Rs 6.585 billion. The data disclosed that the receivables from the PIA have amounted to Rs 21.979 billion. The PSO needs to be paid Rs10.161 billion by the government of Pakistan in the head of price differential claims. The entity has absorbed the loss

of Rs5.300 billion in the wake of the exchange rate differential on FE 25 loan. And because of non-payment on time, the late payment surcharge has increased to Rs7.730 billion. The data also tells about the payables of the PSO to six refineries have increased to Rs32.101 billion.

The PSO as of November 15, 2021 is required to pay Rs16.836 billion to the PARCO (Pak Arab Refinery Company), Rs4.931 billion to the PRL (Pakistan Refinery Limited), Rs3.984 billion to the NRL (National Refinery Limited), Rs3.848 billion to the ARL (Attock Refinery Limited), Rs1.100 billion to the BYCO and Rs1.403 billion to the ENAR.

The circular debt on account of perpetual injection of costly RLNG into the domestic sector in the last three years has surged to Rs 104 billion and if this time the government again provides RLNG to the domestic sector in Punjab and KP for three months in the coming winter season, it will alarmingly swell to Rs 190 billion.

"The diversion of RLNG to the domestic sector would be a government decision in the coming winter season, which is why the Petroleum Division is making its mind to ask the Fi-

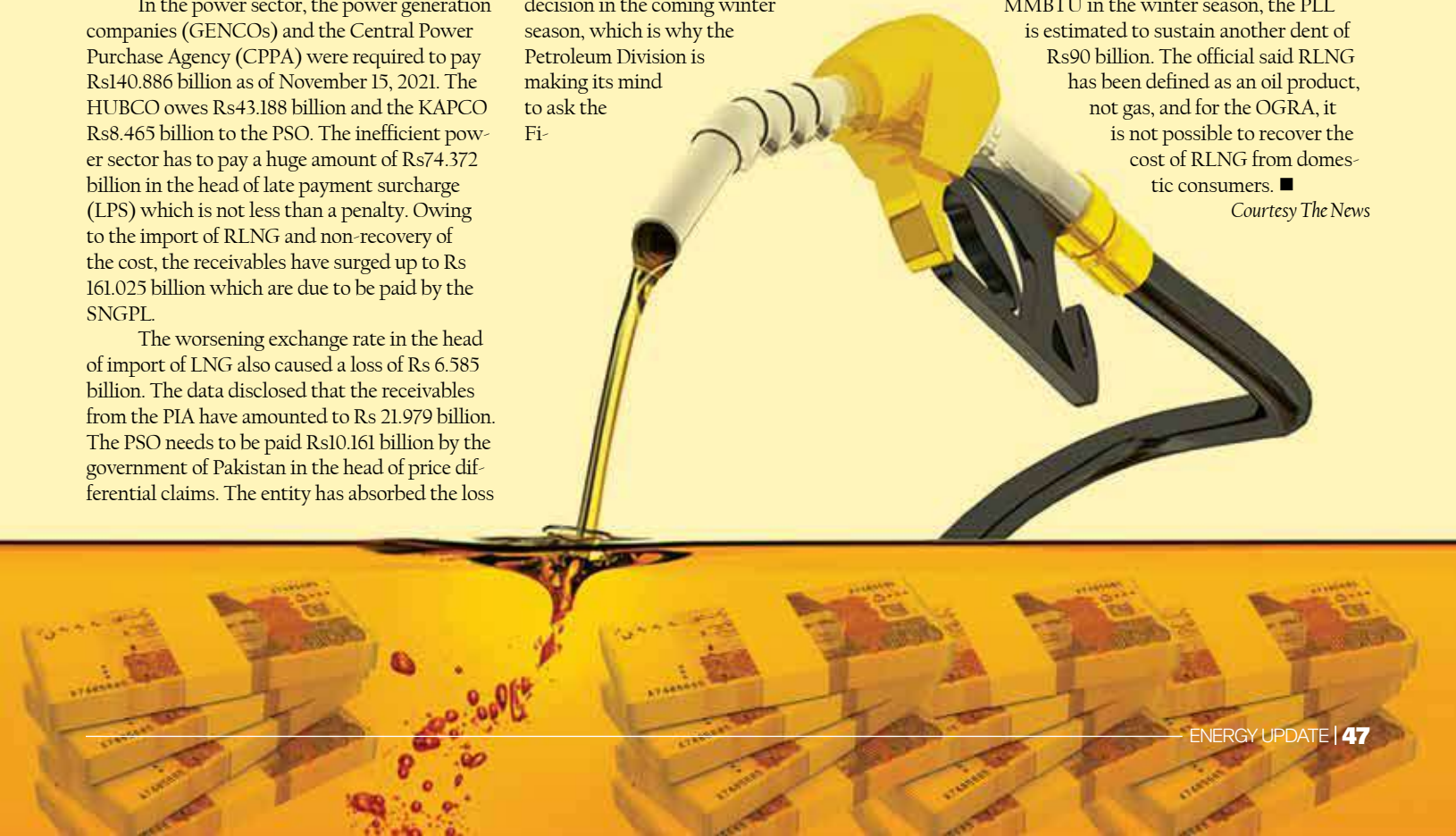
nance Division to provide a relief of Rs 50 billion to the PLL and the PSO.

Otherwise, they will go bankrupt because of the zero recovery of RLNG dues from the domestic sector," says a top official at the Energy Ministry. The diversion of RLNG was started by the government for political considerations in winters of the years 2018-19, 2019-20, 2020-21, causing the buildup of the circular debt of Rs 104 billion.

If the government continues to inject it in the coming winter season, the circular debt in RLNG will worsen and go up to Rs 190 billion. The cost of RLNG has not so far been recovered owing to which the state-owned entities i.e. the Pakistan LNG Limited (PLL) and the Pakistan State Oil (PSO) have started feeling the heat and they are running short of liquidity because of non-recovery of the cost of imported product diverted to the domestic sector.

For the current month of the season, the current RLNG price in the country stands at \$15.78 per MMBTU. And if the price of spot cargo ranges between \$30 and \$35 per MMBTU in the winter season, the PLL is estimated to sustain another dent of Rs90 billion. The official said RLNG has been defined as an oil product, not gas, and for the OGRA, it is not possible to recover the cost of RLNG from domestic consumers. ■

Courtesy The News



Unsung heroes of Matiari-Lahore HVDC project boosts friendship

— EU Report —

The Matiari-Lahore ±660kV high-voltage direct current (HVDC) transmission project not only updates Pakistan's power network and improves people's living standard but also strengthens the China-Pakistan traditional friendship, said Hu Mingui, a Chinese builder of Matiari-Lahore project.

According to a China Economic Net (CEN), Hu is a project manager of Guizhou POWER Transmission and Transformation Co., Ltd (Guizhou POWER), China Southern Power Grid. According to Hu, Guizhou POWER, a sub-contractor of Matiari-Lahore project, is in charge of building 483 towers including tangent and strain towers, and transmission lines covering about 210 kilometers.

Hu told CEN, "The success of this project should be attributed to the sincere cooperation between Chinese and our Pakistani brothers." Hu said that during the nearly two years' construction period, about 80 Chinese workers had stationed at the site, while there were about 700 to 800 Pakistani workers at the site at peak time. Hu recalled that Chinese and Pakistanis had worked to-



gether, overcome unfavorable impacts brought by COVID-19 pandemic, monsoon and high temperature and managed to complete this project. When the COVID-19 pandemic spread in Pakistan, strict prevention and control measures were carried out at the site. "All of Pakistani workers observed these prevention and control measures. There was no one confirmed case at our site. It is very helpful to

our construction," Hu said.

Besides providing anti-pandemic supplies to Pakistani workers, Chinese workers also offer safety education and safety supplies to ensure workers' safety during work. "Chinese brothers not only share with us the advanced construction method, equipment, but also bring safety supplies, like safety belt to us from China. ■

WAPDA executing \$26bn projects: Hussain

The Water and Power Development Authority (Wapda) is executing several mega projects, including the Diamer Bhasha Dam, Dasu Hydropower Project and Mohmand Dam at a total cost of \$26 billion, said Wapda Chairman Muzammil Hussain.

Talking to a delegation of JP Morgan recently, Hussain said that such a huge portfolio of schemes was being built after a gap of almost five decades and it was being done through the adoption of an innovative financing strategy and an optimal capital structure. While giving a rundown of 10 under-construction Wapda projects, the chairman stated that those schemes would enhance water storage capacity by more than 11 million acre feet (MAF) and add another 9,000 megawatts of hydel electricity to the system.

"Wapda possesses unparalleled institutional capacity to identify and implement multi-purpose hydropower projects," he said.

Hussain pointed out that the organization had adopted a multi-pronged strategy, including Green Eurobonds and syndicated loans, for the implementation of its projects, which marked a radical shift from reliance on the government of Pakistan. ■

Courtesy Express Tribune

EPCL joins WEF anti-plastic drive

Engro Polymer & Chemicals (EPCL) has become the first affiliate member from Pakistan to join the World Economic Forum's (WEF) Global Plastic Action Partnership (GPAP), as part of its sustainability efforts to promote the circular economy and contribute to achieving zero plastics waste.

"By leveraging the GPAP platform, EPCL will be able to forge national and international partnerships, learn from global best practices and lead circular plastics initiatives to help overcome the plastic pollution challenge in Pakistan," the company said in a statement.

In May 2021, EPCL had announced its plans to establish a Circular Plastics Institute (CPI), a not-for-profit think-tank, to promote research and development in Pakistan's circular plastics economy. "The CPI is expected to undertake research on municipal solid waste management, with a focus on plastic. It will be capable of advising legislation and policy to help Pakistan achieve its global commitments of a zero-waste future by 2030." Jahangir Piracha, CEO EPCL, said that as a responsible company, EPCL was actively pursuing three sustainability streams including carbon reduction/offsetting, water conservation, and circular plastic. ■

Pakistan to get \$761m ITFC loan for energy imports

The International Islamic Trade Finance Corporation (ITFC), a subsidiary of the Islamic Development Bank, and Pakistan have signed an agreement under which the former would provide \$761.5 million of syndicated loan for commodity financing, particularly oil and gas.

A financing agreement was formally signed by ITFC's Chief Executive Officer Eng Hani Salem Sonbol and Mian Asad Hayaud Din, Secretary Ministry of Economic Affairs (MEA) for their respective sides. The financing would be used for the import of crude oil, refined petroleum products and LNG etc, an announcement said.

The facility has been made effective immediately and ready for utilisation by Pakistan State Oil Company Ltd (PSO), Pak Arab Refinery Ltd (Parco) and Pakistan LNG Ltd (PLL) for import of oil and gas.

This Syndicated Murabaha Financing facility is for a period of one year and is a part

of umbrella Framework Agreement signed with ITFC in June 2021 for a total envelop of \$4.5 billion (\$1.5m annually) for a period of three years.

The facility will be helpful in financing oil and gas import bill and ease pressure on foreign exchange reserves. ITFC has so far arranged \$7 billion for import of oil and LNG from 2008 to 2021.

The \$4.5bn financing signed by two sides in June this year is to be utilised by PSO, Parco and PLL for the import of crude oil, refined petroleum products and LNG during the years 2021-2023.

Within the context of its trade integrated solutions approach, the framework agreement also covered ITFC's support for trade-related technical assistance projects in Pakistan, which will be selected jointly by both parties according to the national economic priorities and development plan of Pakistan.

The agreement also requires identification of other areas of cooperation at country

and regional levels and to enhance and promote trade, trade capacities of relevant state authorities and financial institutions and trade cooperation in the country.

The ITFC had also committed in April 2018 a similar financing line for Pakistan for 2018-2020 term, but utilisation finally could not cross \$3 billion as private refineries were unable to import crude under the facility which was mostly limited to Parco and to some extent to PSO.

Pakistan's oil import bill was \$11.4bn last fiscal year but has been rising in recent months because of the increasing trend in the international oil prices. Pakistan had last year signed a \$1.1bn trade financing facility for the current year which could not be fully utilised due to lower oil international oil prices, depressed demand in Pakistan and limitations of the refineries in availing Arabian crude.

Courtesy Dawn

Karandaaz to fund six green transitional projects

—♦— Mehtab Haider —♦—

Karandaaz Pakistan, funded by UK's Foreign, Commonwealth & Development Office (FCDO), has announced its plans to fund six green transitional projects as part of its annual innovation challenge, says a statement.

With support from FCDO, Karandaaz, this year, invited innovative projects seeking financing to implement plastic waste management and efficient water management solutions. After due diligence, Karandaaz selected Suftech Innovations, Davaam Life, a consortium of 8th Loop and Open Door Design, National Rural Support Program (NRSP), Linked Things, and National University of Medical Sciences (NUMS) as winners to receive funding from the company.

Climate change is a high-priority area for Karandaaz. It has already invested in solar companies. Through this round, Karandaaz will be funding up to PKR 200 million, and it plans to enhance its green portfolio to support both adaptation and mitigation measures to address the climate change concerns in Pakistan.

The six qualifying entities got certificates

of selection by Ms Annabel Gerry, Development Director at FCDO UK, Waqas ul Hasan, CEO Karandaaz and Jaffer Askari, Sr Private Sector Development Adviser, FCDO in Islamabad. Speaking at the event, Ms Gerry said, "The private sector is crucial to fighting climate change. I congratulate these six companies on winning funding to take forward projects on plastic waste and water management."

"The UK and Pakistan are 'Ek Saath' against climate change. At the COP26 climate change conference, the UK pledged over £55 million to help Pakistan fight climate change, promote efficient water usage and unlock climate investment," she added.

In a video message to mark the event, Dr. Shamshad Akhtar, Chairperson Karandaaz said, "Lack of access to finance and poor investor interest explains the lack of private sector engagement in plastic waste management and efficient water management and conservation."

He said financial support is missing for the refinement and customization of products and solutions according to the requirements of specific sectors. He explained that transitioning towards green practices requires a holistic approach; introducing an innovative solution, unlocking financing for the implementation, and scaling up, ultimately creating a demon-

stration effect.

According to a study by the Pakistan Council of Research in Water Resources, about 95% of Pakistan's water is used in agriculture, where current practices disregard its conservation and efficient use. As a result, almost 60% of water is lost during conveyance and application in the field.

Untreated disposal of industrial waste also continues to be a common practice for a number of industries in Pakistan. Similarly, according to the Government of Pakistan, 87,000 tons of solid waste is generated per day, mostly from major metropolitan areas. Plastic production and waste management continue to make significant contributions to greenhouse emissions. Factors such as these will have grave implications for the macroeconomy, the burden of disease, food security, livelihoods, and climate.

Karandaaz Innovation Challenge Fund will not only help set up six such solutions but demonstrate for other private sector players and the financial sector at large that investing in climate-smart green solutions is not only crucial for sustainable development but also makes commercial sense.

Courtesy The News

SPE & PAPG Annual Technical Conference 2021 Islamabad

The 27th Annual Technical Conference of Society of Petroleum Engineers (SPE Pakistan Section) and Pakistan Association of Petroleum Geoscientists (PAPG) was inaugurated at Serena Hotel, Islamabad by the Honorable Federal Minister for Energy of Islamic Republic of Pakistan, Mr Hammad Azhar.

The Chief Guest was greeted by Chairman Conference and Chairman SPE Pakistan Mr Shahid Salim Khan, Vice Chairman Conference and Director SPE Pakistan Dr Fareed Iqbal Siddiqui, Chairman Technical Program and Director SPE Pakistan Dr Saeed Khan Jadoon and Chairman PAPG Mr Iftikhar Rizvi.

Theme of the conference is "Indigenous Resources & Energy Dynamics of Pakistan". Welcome note was delivered by Chairman Conference and Vote of Thanks was presented by Chairman Technical. The Honorable Federal Minister for Energy while addressing the Conference delved into the details of the steps being taken by Government to address the energy requirements of the country.

He explained the steps being taken by the government for timely bidding round of exploration blocks including the offshore blocks. The present Government is making all efforts for better policies to harness the tight gas and shale gas potential of Pakistan.

He said that currently our gas reserves are being depleted and no



major discoveries of oil and gas have been found to replenish the depleting reserves. All E & P companies should make efforts for finding oil and gas reserves in the country. He highlighted that the import of LNG is to fill the gap between supply and demand. ■

IFC partners with Engro Corporation to minimize climate Impacts

— EU Report —

To step up the fight against climate change in Pakistan, IFC is partnering with Engro Corporation to help reduce plastic waste, promote recycling, and boost the company's energy efficiency.

Pakistan is the second largest domestic market for plastics in South Asia after India, and is among the top 10 countries most impacted by climate change. The country produces about 30 million tons of solid waste annually, of which nine percent is plastic waste. The country's Indus river is a major carrier of plastic waste into oceans.

IFC's climate advisory project will help Engro Corporation assess the opportunities for moving towards a circular plastics economy as it develops a \$1.8 billion petrochemical project to produce polypropylene. The circular system would see polypropylene products collected and re-used or recycled and converted into viable products. IFC's team will also assist Engro Corporation in driving sustainability by reducing its carbon and water footprints and adapting to climate-related risks through targeted interventions.

Ghias Khan, President and CEO of Engro Corporation, said: "At Engro, we believe that operating businesses sustainably at a globally competitive level need not be a zero-sum game. Therefore, we are actively partnering with global leaders such as IFC for a circular plastics economy, resource efficiency and carbon footprint reduction, to build a more sustainable future for our coming generations."

The project is the part of IFC's Pakistan Resource Efficiency Program, which aims to improve efficiency, cost-competitiveness,



reliability, and productivity in the manufacturing sector, particularly in energy-intensive industries.

"Climate change is already impacting Pakistan and it's crucial for companies to do everything they can to be efficient in their resource usage," said Hela Cheikhrouhou, IFC's regional vice president for the Middle East, Central Asia, Turkey, Afghanistan, and Pakistan. "Reusing plastics will not only cut greenhouse gas emissions and protect the environment, but will help companies save money and become more competitive internationally."

Engro Corporation has been a strategic IFC client for nearly three decades. IFC has supported Engro's growth from an ammonia-based fertilizer producer to a conglomerate with interests mainly in polyvinyl chloride production, dairy, power generation, liquefied petroleum gas storage and handling, liquefied natural gas regasification, telecom towers and logistics.

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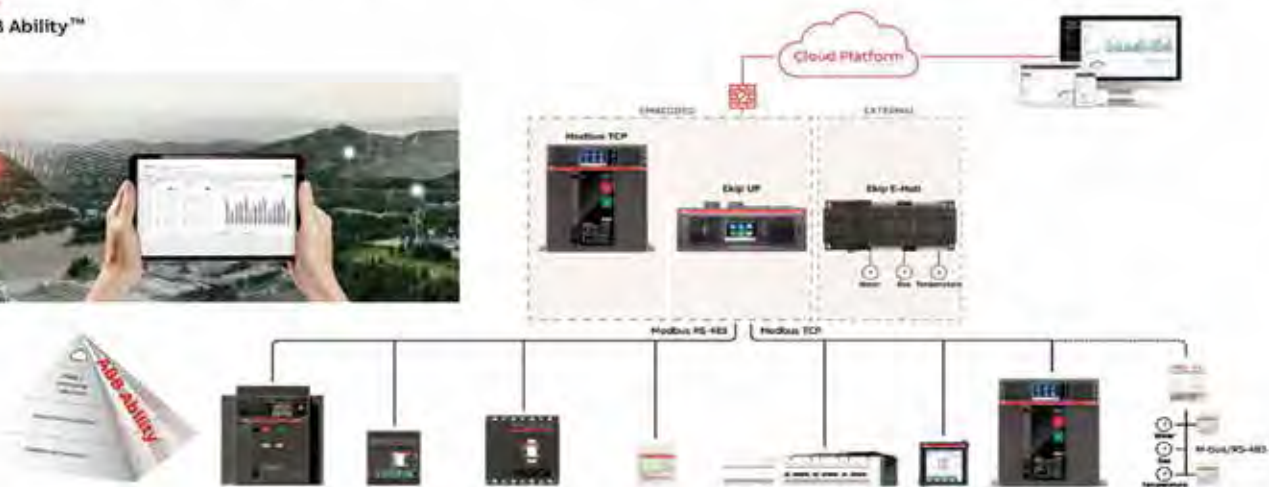


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