

# MONTHLY **Energy** UPDATE

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**Construction of Diamer-Bhasha Dam in doldrums**

**Special Report:  
13th AEEA 2016**

**How green was my city?**

**Pakistan has 51 trillion shale oil reserves**

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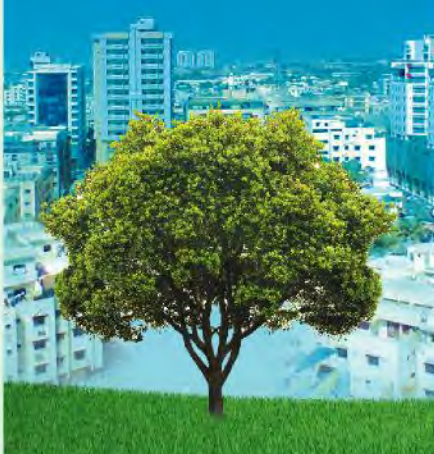
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From the editor's desk...

## CNG load-shedding despite off-season?

Despite improved production of natural gas from existing sources, import of LNG, increased utilisation of LPG, the two gas distribution companies have resorted to shed supply of CNG in the country, causing unnecessary hardships for the commuters, three to four days a week closure of CNG supply by Sui Southern and Sui Northern Gas Companies to the consumers is quite unbearable. This is being done at this time when natural gas consumption remains at the lowest ebb due to hot and humid weather across the country. SSGC's high ups are reluctant to explain proper reason for the frequent shut-down of CNG stations during long summer season.

The situation of SNG supply had been improved when the government commenced LNG import last winter. May be the government's decision to import another 750,000 tonnes of LNG is to improve the gas supply across the country.

Government has issued two international tenders for 750,000 tonnes of liquefied natural gas (LNG) each in the coming month in order to minimise the shortage of natural gas. This act of govt. would definitely improve the supply of CNG to the motorists. This is another effort to ease the crippling energy shortages, with Prime Minister Nawaz Sharif under pressure to end blackouts before the 2018 general election.

The PM for this purpose has established Pakistan LNG, a new state-owned company set up to manage procurement and supply of gas. The firms from Australia, Malaysia, Russia, Qatar, the United States and Azerbaijan are interested in the two tenders

The specifics of the tenders are being finalised, but they will probably be a 5-year and a 15-year offer, as well as a possible spot purchase. According to officials, Pakistan has ploughed billions of dollars into LNG infrastructure, including construction of a second LNG import terminal and pipelines linking Karachi with Lahore in the Punjab region, the nation's industrial heartland.

Pakistan has been earmarked as an up-and-coming demand outlet for the oversupplied LNG market. Qatar, which signed two term supply contracts with Pakistan this year, is the Pakistan's largest LNG supplier. Pakistan is heavily reliant on expensive furnace oil imports to plug energy shortfalls and officials expect the LNG imports to lower the cost of energy in a nation of 190 million people.

Pakistan would also negotiate separate government-to-government LNG deals. An impending glut in global LNG production means Pakistan expects bids by international companies to be far below those offered by trading house Gunvor, which won the last international tender. Gunvor offered a delivered price of 13.37 percent of a barrel of crude oil for the 60-cargo supply tender between 2016 and 2020. It is expected a substantial price decline because of the global supply glut and new production coming on line in the short term.

Consumers in Pakistan too are expecting a downward revision of CNG and LPG prices locally but the unfortunate Pakistani consumers are battling with the shortage crisis at the moment, no one knows when they would be given price cushion of falling prices of all the forms of fuels they consume.

*Naeem Qureshi*

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# Construction of our precious dams Conflicts, Controversies, Conspiracies

## Construction of Diamer-Bhasha Dam in doldrums

**P**erhaps, the Pakistanis are the most unfortunate nation that cannot get even its due and legitimate rights, whether it is in its own jurisdiction or outside. If we look into the detail of our mega-projects or even smaller projects in the public sector are mostly marred by the controversies or conspiracies, most of them home grown rather instigated by our enemies.

Diamer Bhasha Dam, another mega project being built on the Indus River, and stated to be one of the highest dams in the world has also gone into controversies as its construction has been blocked due to conflict over a tiny patch of land. According to the news reports, there is an eight kilometer stretch of land in the Gandlo Nala area of Northern Pakistan claimed by competing tribes.

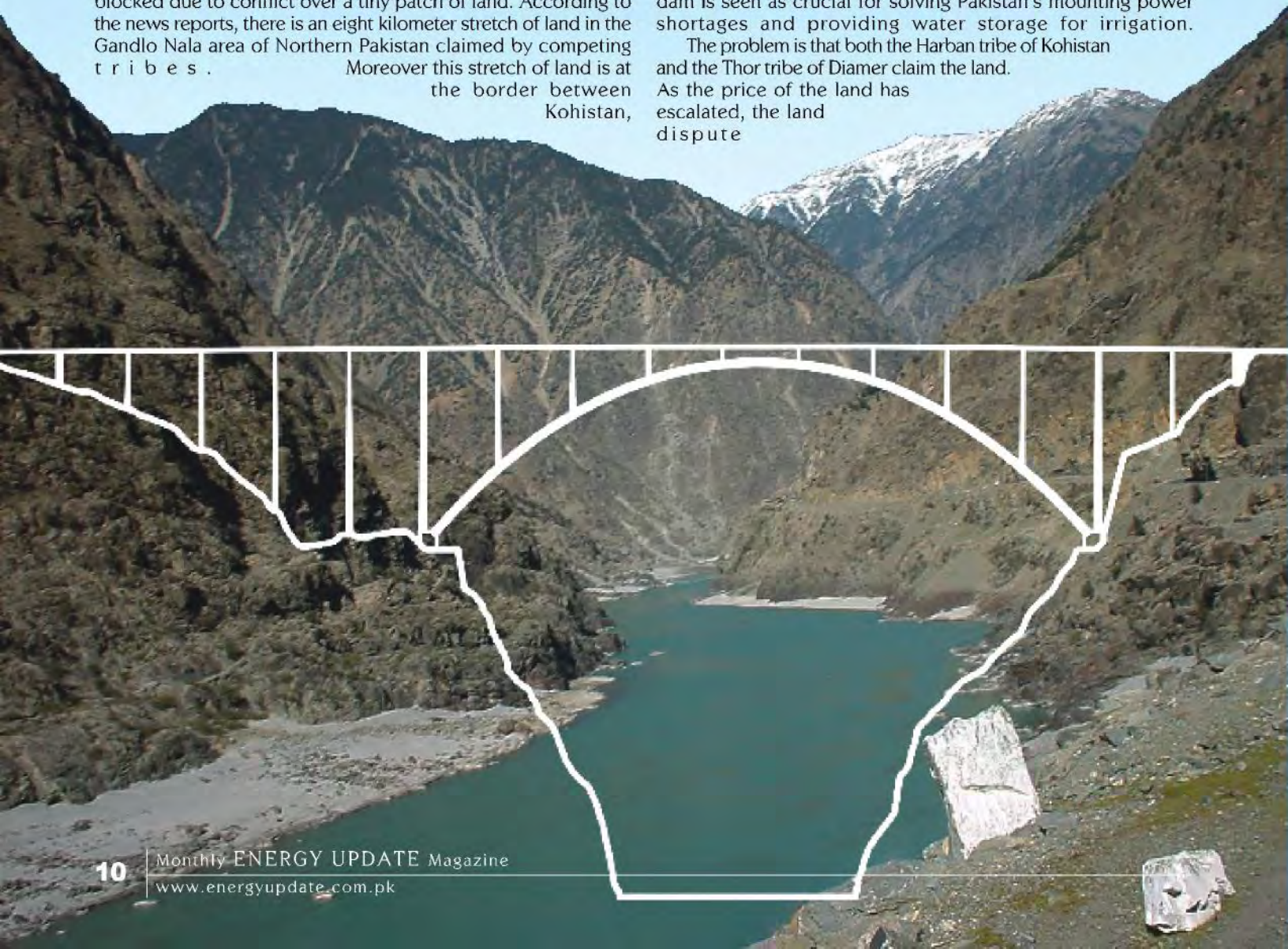
Moreover this stretch of land is at the border between Kohistan,

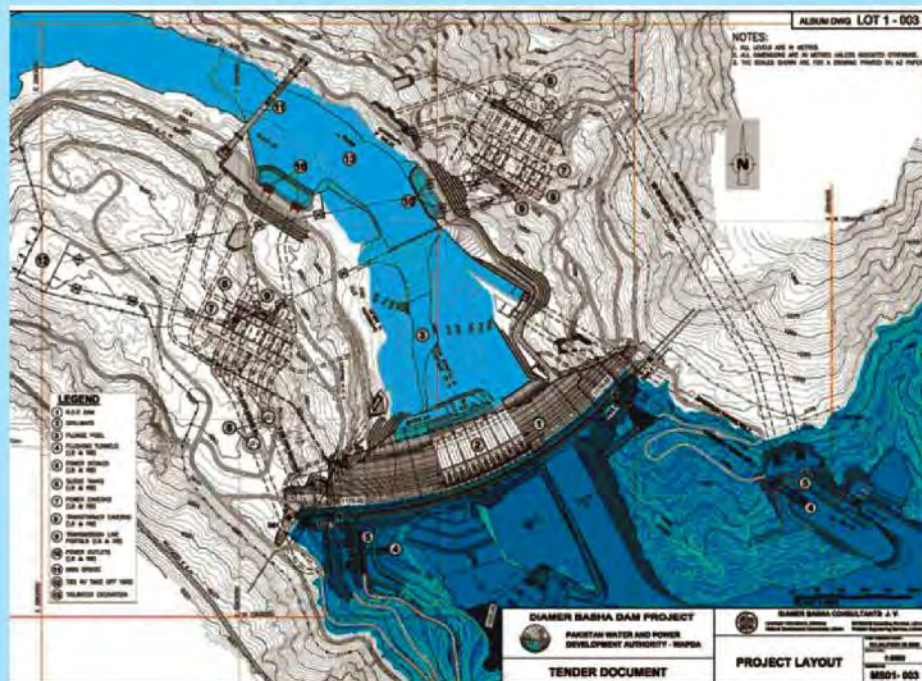
in Khyber Pakhtunkhwa (KP) province, and Diamer, in Gilgit-Baltistan (GB). While the land belongs to the tribes that live there, the governments of KP and GB back rival tribes, adding fuel to the fire. Diamer residents threaten to halt dam construction.

According to officials, the compensation for the patch of land would be more than Rs1 billion (\$10 million). This is part of a massive land acquisition effort that the Pakistan government has been trying for years, costing up to Rs54 billion (\$540 million). Without this land, the dam cannot be built and the 4,500 megawatt dam is seen as crucial for solving Pakistan's mounting power shortages and providing water storage for irrigation.

The problem is that both the Harban tribe of Kohistan and the Thor tribe of Diamer claim the land.

As the price of the land has escalated, the land dispute





and it was decided that both the tribes would receive equal compensation, but now the Harban tribe is going back on their word, so no settlement is possible between us."

Another elder of the Thor tribe, Maulvi Saddiq said, "The Gandlo Nala area belongs to our tribe. We have proof. If anyone attempts to rob us of our rights, then we will fight with all our power."

Not only is the dam in danger, but the construction of the 37 km of the Karakoram Highway has been halted because of the hostility between the two tribes for the last six months. The spokesperson for the Hakas construction company said, "Both tribes are aggressive and they stop the company from constructing the road, and the company is facing heavy losses."

This is an alternate route for the highway. After the construction of the dam nearly 120 kms of the current Karakoram highway will be submerged. Faizullah, the spokesperson for the Gilgit-Baltistan government, blamed the federal government. He said that, "For a long time the GB government has been requesting Islamabad to take notice of this serious matter and resolve it according to the desires of the people, but our requests have remained unattended and now the tribes have become aggressive and it is hard to convince them on any solution that involves give and take."

"The Gandlo Nala area belongs to GB. The disputes and criminal cases from the area are registered in the Diamer Tehsil Chilas courts and police station. The question is not about the ownership of the area; the question is how the government will give the people of Diamer their rights." ■

has sharpened. It spilled over into direct conflict in 2014 when a bloody clash ended up with a number of tribesmen dead, further deepening the ill feeling.

After the clash, the federal government's paramilitary forces took control of the Gandlo Nala area, with the consensus of the KP and GB governments, as well as the local tribes. The government also constituted a commission to decide the fate of the area, but the report has not yet been made public.

"This is a sensitive issue and the government does not want to gain the resentment of any tribe, so efforts are being made to settle the issue with mutual understanding of the tribes. We have been trying to host a jirga (tribal meeting) to settle the issue, but unfortunately these efforts have not yet been successful," a senior official from the federal government involved in the construction said.

He said that the last time a jirga was held to deal with the issue in May this year - it failed because neither tribe was ready to retreat on their claims. The issue is deadlocked. Elders of both tribes are blaming each other for not trying to settle the issue and refusing to compromise.

Asadullah, the leader of the Harban tribe and chairman of the Diamer Basha Dam Action Committee said, "At the jirga it was decided that the Thor tribe would withdraw its ownership claims and the Harban tribe would receive full compensation. In return we would pardon them for the murder of our tribesmen, but the Thor tribe did not fulfil their promise. Therefore we are not giving to give them

a single inch of land, not even to the government for the construction of the dam". "Without resolving the issue in our favour, the dam can only be constructed over our dead bodies. Historically the Gandlo Nala area belongs to the Harban tribe, and we proved it in front of the commission," said Maulvi Abdur Rehman an elder of the Harban tribe.

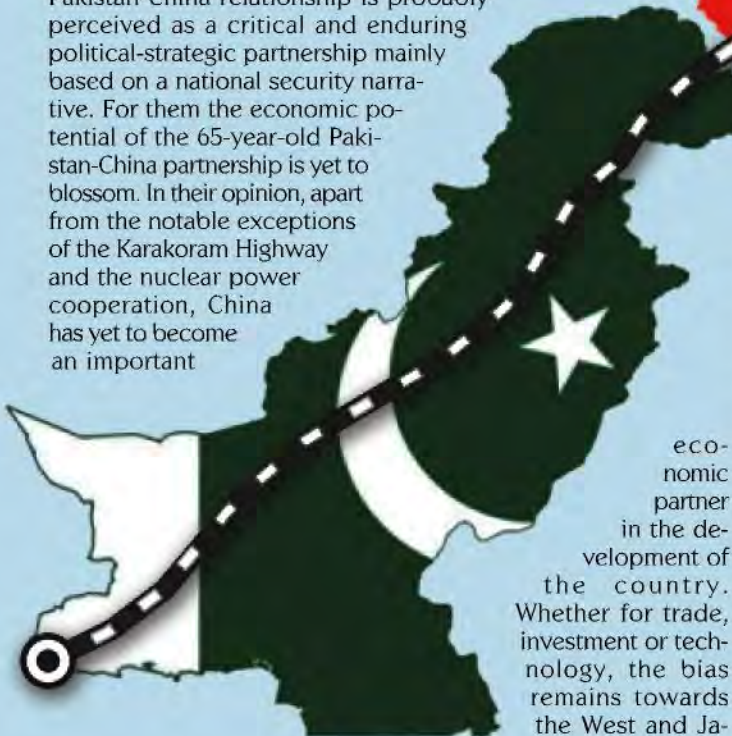
On the other hand, the Thor tribe of Diamer blamed the Harban tribe for not honouring their promises. Mohammad Bashir, official community leader of the Thor tribe strongly denied the claims of the Harban tribal elders. He said, "At the jirga we negotiated with the Harban tribe



# What private sector says about Pak-China Economic Corridor

By Saquib Shirazi

In the midst of the justifiable excitement surrounding China-Pakistan Economic Corridor (CPEC), it is pertinent to assess what the Pakistan-China friendship means to the different stakeholders in the country. For the Ayub era generation, the significance of the Pakistan-China relationship is probably perceived as a critical and enduring political-strategic partnership mainly based on a national security narrative. For them the economic potential of the 65-year-old Pakistan-China partnership is yet to blossom. In their opinion, apart from the notable exceptions of the Karakoram Highway and the nuclear power cooperation, China has yet to become an important



economic partner in the development of the country. Whether for trade, investment or technology, the bias remains towards the West and Japan. And thus far, unlike the West, China is

far from a serious destination for Pakistan's exports.

If the same question is posed to our generation, then the answer is again one of limited economic impact. The lack of engagement between the two country's private sectors can be best illustrated by a dialogue one had as part of a NUST delegation to China. Needless to say, the visit was very well arranged and an eye opener on how diligently the Chinese government and business engage on long term, cross border initiatives. Most of the Pakistani private sector did not have much insight into the close co-ordination of the Chinese government-business entities at the time. Encouraged by the Chinese Government, the frankness with which each side spoke of the mutual opportunities and

limitations was the real learning. A Chinese power firm executive, when privately inquiring about the purpose of our visit, was quite candid in his response on the possibility of Pakistan's private sector business potential with China. One recalls the executive conveying, "Gentlemen, China already has sufficient business partners in Pakistan and frankly, we don't think we need you lot yet".

On inquiring who the partners were, the reply was quite revealing - "Our partners are the armed forces, the central government and the provincial governments. You see, China only needs government partnerships to get its business done in Pakistan. The private sector is not a priority at this time".

In one's opinion, as recently as six years ago, private sector relations between China and Pakistan did not exist. Only unorganised sector trading and two notable investors - Haier and China Mobile - had emerged till then. Working with the Pakistani private sector was still deemed a challenge. The perception was that the market and the entities were either too small or weak. A preference hence was for trading and government related projects only. Even financial availability was limited. The banking cooperation has only recently started to emerge. It is for these reasons that our generation has tended to disregard China as a serious partner for any private sector initiative, until perhaps recently.

Meanwhile, for the common man, China is basically seen as the all weather and reliable anti-India friend. His general perception is that Pakistan needs China and China has always been available to Pakistan. Importantly, and unlike the relationship with the West, the engagement is not perceived as one of 'master-servant' or 'only when needed'. For him, opening of Pakistan's market to Chinese investment is perceived as a win-win for both.



CPEC has, no doubt, arrived. And it is probably the right time for both countries to reap the benefits of the enduring friendship. The promise of USD 45 billion is uniquely ambitious and makes CPEC stand out as a potentially defining moment for the country's economy. If even one fourth of the USD 45 billion is realised it will be more than any other country, barring the USA, has done for Pakistan's economy.

However, today, even with all the complexities in the relationship, the US still remains the dominant economic and defence engagement partner for Pakistan. For Pakistani private sector, the US is still the biggest importer of our goods, especially textiles. Access to the US market, despite the tariffs, is still far in excess of what China has afforded us. As a result, there is in fact a trade surplus of USD 2 billion in Pakistan's favour. In contrast, periodic yarn exports have been the only meaningful Pakistani exports to China in the last decade. True success of the CPEC will be realised when China not only commits to these infrastructure projects, but also opens its own market to our exportable goods. This will reduce reliance on our traditional export markets and capital will be created for our economic development.

The US and the West have historically used (and often compensated) for their adventures in the region. However, with both defence and economic sovereignty becoming an important issue for our people, the strategic relationship with China will need to be upgraded. The CPEC is an important economic initiative, but given Pakistan's turbulent neighbourhood and economic volatility, there has always been a need for a backstop. In the past, Pakistan has had access to the World Bank, the IMF and country specific aid from the US/EU and Japan. However, with China's growing geo-political influence, access to the newly

Whether for trade, investment or technology, the bias remains towards the West and Japan. And thus far, unlike the West, China is far from a serious destination for Pakistan's exports. If the same question is posed to our generation, then the answer is again one of limited economic impact.

minted Asian Infrastructure Investment Bank (AIIB) and China aid, grants will be crucial. Pakistan's negligible exports, FDI, and a large saving and investment gap imply

that the country will require such a commitment from China. With the world's sixth largest population and a rising middle class, a calculated bet on Pakistan by China can prove to be strategically and economically prudent. Absence of such a commitment could well undermine the potential.

The China-Pakistan economic friendship has yet to be fully tested. While CPEC is rightly seen as a potential "game-changer", there is still warranted cynicism and doubt. The "one belt, one road" mission certainly makes theoretical sense; however, the proof will be in its delivery. Even as the Chinese investment in CPEC projects starts, there is concern around excessive returns and a possible balance of payments impact due to projected FX outflows. Institutions like the State Bank and even the Finance Ministry have quietly started expressing concerns on too much Chinese labour and lack of local contents used in projects. The quiet feedback to counterparts in the Chinese government is to urge Chinese entities to not take more out than they are bringing in. The State Bank and the Federal Board of Revenue have even highlighted malpractices such as over invoicing and unprincipled dealings, as being endemic. Measures must be put in place to ensure that the economic relationship is mutually beneficial and sustainable. Examples of delays and poor execution of projects in African nations, which too have seen sizeable Chinese investment in-flows, are abound in the business circles as warning of potential threats.

It is important to note that while maintaining a relationship, the Chinese people think long-term. Opportunists keep only 2-3 year horizons in mind, but strategic partners, joint ventures and infrastructure planners think at least one generation ahead. The opportunists spoil goodwill and image for the sake of short-term profit. Unfortunately, such miscreants currently dominate the business ties between the two coun-





of connectivity between South Asia and East Asia, while Gwadar can be the gateway for Central Asia. In time, one believes Afghanistan will also fall in line with this reality. The Western alignment of the CPEC from Chaman, and Eastern alignment with Peshawar from Jalalabad is but natural. The CPEC will provide the shortest and most cost effective route to the region for China.

As for the present, there are numerous opportunities for Pakistan in the current and future regional scenarios. The country lacks infrastructure and a road network. It sees improvement in these sectors through CPEC. Project finance and project investment is now flowing from China, with power projects a top priority. On the other hand, only 5 percent of Pakistan-China Free Trade Agreement (FTA) has been utilised by Pakistan. The FTA needs to be revisited so its benefits are optimised. There are only six countries in the world with a population of more than 200 million people. Given economic

cycles, every country in the future will no doubt endure downturns and recessions. However, in my opinion, these six countries will undergo the smallest shocks and the quickest rebounds in economic activity. Overtime, with increased education and rising incomes, population dividends will indeed take effect. The larger consumption base of these economies will prove to be a blessing. Therefore, for Pakistan and China, the CPEC is very beneficial for both the countries. China's 1.3 billion people will be linking up with Pakistan, a country with one of the fastest growing populations.

tries. For example, the vast majority of the Chinese goods exported and dumped into Pakistan over the last decade represent cheap quality and under invoicing. The Pakistan Business Council has quoted figures of exports from China to Pakistan as USD11,019 million in 2013. However, during the same period, Pakistan recorded imports of only USD 6,626 million. A FTA must make sense and if it is not mutually beneficial it must be rectified. However, the most alarming aspect is that nobody at the helm in either country is ready to touch and resolve these matters. The blame is equally shared by both the countries' trading communities, who thrive on malpractices and discourage dialogue at the government level. China's image, in the meanwhile, suffers. In Pakistan, its products generally equate to generic or poor quality. The irony is that in the meanwhile, back home, China has climbed the value chain and has itself become a producer of some of the world's best brands like Apple, GE and Mercedes. There is thus the obvious need to check and control such malpractices, which tend to spoil markets, goodwill and employment opportunities for our populace.

In years to come, Pakistan will become the fourth most populous country in the world. Estimates suggest Pakistan's population will peak at 350 million by 2050. In preparation for that, we ourselves need to focus on becoming an educated, developed and a competitive economy, not a mere sidekick to another global power. That is what people expect from closer Pakistan-China strategic ties. Only when such decisive, nation-building actions are taken will the relationship prove to be "higher than the mountains, deeper than the oceans and sweeter than honey." ■

Any true patriot would certainly ask whether China has done enough to also deserve such open access to Pakistan's market. In turn, and to be fair, our Chinese friends also often question whether Pakistan deserves Chinese investment flows given the law and order and the red tape inefficiency at every turn. These are pertinent questions, which need to be addressed by both nations earnestly. We are in uncharted waters and trust needs to be created to deliver the promised win-win. Currently, South Asia remains one of the least integrated regions of the world particularly due to the muddled India-Pakistan relations. As a result, the Bangladesh-Pakistan and the Afghanistan-Pakistan relationship continuously ebbs and flows due to India's interference and sensitivity. Unfortunately, there are no natural friends, only unholy alliance at best, in the South Asia region. Religions and suspicions divide us, making this an insignificant trading region for over 65 years now. For China, Pakistan can become the base country for another region encompassing countries from Pakistan, Iran, Iraq, Central Asia and as far as Turkey.

Historically, this region was home to the Old Persian Empire, the Arab Empire and the Ottoman Empire. And China traded with this vast region using the Silk route. What China is trying to establish with Pakistan thus makes sense. I have little doubt that eventually similar cultures and religion, like in Europe and EU, will become unifiers. The focus on this link is actually a reconnect to the old route that in turn, will be the pathway to an economic bloc that can rival Africa and India in a few decades. CPEC will be a driver

of connectivity between South Asia and East Asia, while Gwadar can be the gateway for Central Asia. In time, one believes Afghanistan will also fall in line with this reality. The Western alignment of the CPEC from Chaman, and Eastern alignment with Peshawar from Jalalabad is but natural. The CPEC will provide the shortest and most cost effective route to the region for China.

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# How green was my city

**Over the decades, Karachi has become a concrete jungle due to poor implementation of the city's development plans. Can the metropolis become a green haven again?**

I have vivid memories of my mother's consternation when we moved to Karachi in the early '60s. Coming to Karachi from lush green Wah Cantt, she found it annoying and tedious to dust the furniture twice a day - Karachi back then was little better than a dust pan; a windy city with billows of dust swirling in its wide open spaces, and into homes.

The newer settlements of the then capital city had more open grounds than parks, like the patches within neighbourhoods, as well as bigger spaces like Nishtar Park or Polo Ground, etc. The neighbourhood parks it did have, too, were more like dusty playgrounds, with a fringe of grassy tract skirting it.

Family outings to parks meant going to the 'older' areas of the city where proper parks had been established by the municipality. Be they the Zoological and Botanical Gardens, then known as the Gandhi Gardens, or the Jehangir Park, Frere Gardens, Jheel Park in PECHS, the park in Clifton just after Do Talwar or further down at Old Clifton, or the grassy terraces alongside the Jehangir Kothari

Parade to name a few. Hill Park and Aziz Bhatti Parks were additions that came much later, when Karachi had already lost its status as the capital.

These and some other patches of green, like the Gutter Bagheecha, complimented the sprawl of the city at that time. They had shady trees, water bodies and grassy tracts, as parks are supposed to have. However, the sudden and burgeoning growth meant that attention needed to be diverted to other sectors, and land became a diminishing commodity, generating its own push and pull dynamics, which slowly saw the encroachment of these parks.

The unbridled increase in population also meant that the balance between the people and green spaces, or tree cover was disturbed, and over the years Karachi became a concrete jungle, with only a smattering of green spaces, which were wholly inadequate. This, of course, I needed to state to just set a context to people who lament at the denuding of Karachi's greenery,





which is taking place, but is only a generation old.

### EACH DOING THEIR PART: HOW CITIZENS HELPED KEEP KARACHI GREEN

Although most parts of Karachi were laid according to a plan, like Nazimabad, North Nazimabad, Federal B Area, etc, attention to tree plantation fell by the wayside as there was not a single master plan that was adhered to. Residents deserve more credit for the tree cover than the civic agencies; they planted fruit trees as well as flowering ones that gave aesthetics to the city, and nurtured them. Most of the older houses that had space still have large trees.

The concretisation of the city also jolted the horticulturists into action who wanted to cover the spaces, and that is when the city witnessed the first of its planned 'mistakes'. Eucalyptus was planted everywhere in the city, as it was a fast growing, shady, 'air purifying' tree that also had commercial value, and could help lower the water table as its roots sought water. They were planted on road sides and medians, along storm drains, as well as in the newly-reclaimed land of the DHA which had a high water table.

No one had anticipated the thirst of its roots, which travelled a long way to seek water, breaking open the water pipes and popping up through the cemented storm drains. On the other hand, the trees planted along the road side in the early '40s and '50s, like the peepal, etc, were now entangling with the overhead wires that came to signify the utilities of the metropolis.

The proverbial fell swoop comes with just a few lines on an official paper with the signature of the competent authority, who ordered the cutting of the 'offending trees'. This somehow seems to have become the order of the day for Karachi, whose green dream fails to materialise due to this 'one step forward, two steps back' approach. Not that the city's citizens took such government decisions lying down; many fought back and succeeded (see The green dreamers).

### A CONCRETE JUNGLE IN THE MAKING

The city's 'development' and concretisation continued, and in mid-2000, the need for a green Karachi led to the massive planting of Conocarpus, a fast growing species that has spread to all parts of Karachi, despite there being clear guidelines against the planting of alien invasive species. It may have increased the

green cover, but certainly not without posing health and environmental hazards. Why a species like Conocarpus was chosen is confusing especially since there are many native and local tree species that are more suitable to the city's environment and weather (see Going native).

This species has been identified as a carrier of allergens that cause respiratory problems. Not only was the species chosen unwisely, it was planted in a manner that it overtook all existing local plants. Monoculture, or planting of only one species, is against all tree plantation protocols, but they were all bypassed so that all one sees around one are Conocarpus, to the disadvantage of the local trees like neem and lignum that had earlier dotted avenues and medians. Monoculture is known to disturb the bird population and that too has been observed in Karachi, with birds not preferring to nest in this tree.

While it did increase the green cover of Karachi, it brought no significant benefit as the tree offers little shade, or a lowering of the temperature due to the type of its leaves. In a coastal city like Karachi, it also posed a hazard to vehicular traffic in strong breeze because of its weak branches; and because of its fast growing nature, it hit the overhead electricity wires at a faster rate, requiring greater maintenance.

One reason could be that despite time, expense and effort spent in the preparation of plans by technical experts, they are sidelined or not fully implemented - horticulturists and plant ecologists were part of the technical committee that advised on the appropriate species for Karachi. Considerable work had been done to draw up a Comprehensive Plan on Forestation, Aesthetic Plantation and Landscaping for Karachi as part of the Karachi Strategic Development Plan 2020 during the time of the City District Government of Karachi. The report charted the planting potential in green belts along roads, rivers, highways, link roads, agricultural fields, blank lands, roundabouts and streets, according to the soil conditions and water availability.

Commericalism and 'development' also often trump the need for green space. Billboards, for instance, are a big business and there are many agencies involved in the entire operation. There are allegations of corruption in the way they operate to the detriment of the environment, and because there is no central control over the agencies, a measure taken in one area usually does not get replicated in the other. Not only do they pose a hazard and destroy the aesthetics of the city, they have contributed to the loss of the tree cover through clandestine cutting where only



How did Karachi go from being a city of green spaces to a soulless metropolis, and what can be done to make it green again?

## Going native

**A list of trees that could be planted in Karachi which are more suitable for the city's environment**

Different species were identified for different areas of Karachi and these are the ones that are being recommended so that native species may find space and provide benefit to the environment. Not all are fast growing, but they have definite long-term ecological benefits. These include:

### Plantation for medians and road sides

#### For Medians

- Bakain
- Dodonea
- Shrub
- Lignum
- Shrub
- Niazzo
- Lignum vitae
- Bougainvillea
- Ornamental (non-native) shrub
- Melia azerarach
- Dodonaea viscosa
- Jasmine or Chambeli
- Jasminum grandiflorum
- Henna
- Lawsonia inermis
- Cultivated shrub
- Ocimum basilicum

#### Road Sides

- Amaltas
- Burh
- Siris
- Imli
- Peepal
- Neem
- Sohanjna
- Gul Mohar

Trees in enclosed, easily monitored and managed spaces like coastal villages a little inland of the beaches, churches, masjids, community centres, large factories and industrial estates, schools with grounds, etc. These could be:

- Barna
- Bakain
- Imli
- Guava
- Ber
- Mango
- Chiku
- Aloe Vera
- Kasuari
- Jungle Jalebi (shade tree)
- Yellow Oleander (flowering shrub)
- Rohida (shade/flowering tree)
- Portia Tree (flowering bush/tree)
- Flame Tree (flowering tree)
- Gulmohur Tree (flowering tree)
- Lal Badam (shade tree, edible seeds)
- Neem
- Badam
- Mulberry
- Jungle Jalebi
- Jaman
- Coconut
- Mangroves
- Kandi (shade tree)
- Coastal she-oak

## FIGHTING BACK

So on to the present time, and once again we see rampant cutting down of a tree cover which is now absolutely paltry, given that Karachi is now a city of over 20 million. This is one issue agitating the citizens of this city because they have come to realise the importance of trees, especially in the aftermath of last year's heatwave when so many lives were lost.

One of the key reasons cited for the devastation was the lack of green cover in a city of concrete, which resulted in the heat becoming trapped, producing the heat island effect. Most of the people who died were those who were exposed to it in open areas because there were just too few trees under whose shade they could have found some respite.

Encroachment of the city's parks means that there were fewer places offering shades. The unusual horticulture practices adopted over the last few years in some of the newer parks also saw them being developed devoid of trees and full of 'sculptured' decorative bushes. This meant that in the intense heat of the day, no one could visit these large parks as there was no shade to be found there, and these were populated only in the evenings when the temperature had already dropped.

While seasonal tree plantation drives were garnering more stakeholder support, the issue of greening of Karachi gained resonance with Karachiites who were really shaken by the devastation wrought by the heatwave. Many citizens groups have been formed to take matters into their own hands, (Mera Karachi Green Group, Voice of Karachi) seeing that the task could not be managed by government agencies alone.

At another level, a successful model of collaboration between the civic agencies

pruning was allowed.

### Photo by White Star

Another issue that is now causing concern is the plan to strip the route of the Green Line of all its trees, almost 19,000 in number! One cannot stop progress, or deny the need for mass transit schemes. Does that mean that the rampant tree cutting we see due to the 'development' schemes and commercial purposes like advertising billboards should not be protested about? No certainly not. To quote an already overused cliché, two wrongs do not make a right. However, it is difficult to shed tears for plants that should not have been planted in the first place, like the Conocarpus. The maximum number of trees facing the axe because of this project belongs to this species.

There is a proper scheme outlined to offset the effects of this massive tree cutting exercise. It calls for planting of five trees as a replacement for one of some species and 10 in place of one for some other species. What the concerned citizens of Karachi need to be watchful of is whether this offset is being carried out. So, often an infrastructure project is initiated with complete disregard for the environmental impact, and by the time its negative effects are perceived and voices raised, it is presented as a fait accompli and

completed.

Stripping Karachi of 19,000 trees will have a huge impact on the urban jungle that this city has become that needs these trees as its carbon sinks. Citizen groups must form monitoring committees that should act as watchdogs or we shall exacerbate the negative effects which will be severely felt when the temperatures are high.



and civil society (Sarsabz-o-Pursakoon Karachi) was put in place last year, which also contributed to the efforts to increase the green cover of Karachi during the regular tree plantation drives during spring and monsoon seasons. This brought diverse stakeholder groups like NGOs, civil society organisation, welfare societies, schools, colleges, mosques, mandirs, churches, community centres, villages as well as corporate bodies on the same table as the commissioner of Karachi and relevant government departments, including the forest department, cantonment boards, etc.

Targets were set and plants were very carefully chosen to make sure only native species were selected. This is a key issue because some years earlier the multi-stakeholder body decided to pay heed to its recommendations as well as those elicited from the plant experts.

There was a two-pronged approach to dealing with the issue at hand; one was through plans for plantation, in accordance with the different ecological zones identified in the city; and the other was through court action to stop tree cutting, especially due to erection of billboards. There is a mafia at work in the city that has been wantonly cutting trees to make space for billboards, and one theory about the removal of the commissioner, Asif Hyder Shah, is that he had taken a firm stand for the implementation of the Supreme Court order for removal of billboards. For the first time an FIR was lodged at his behest from the commissioner's office against the 'developers' who were cutting trees and flouting court orders.

## WHERE THERE'S A WILL, THERE'S A WAY

Here it must also be explained that awareness needs to be created among concerned citizens to discern the difference between cutting and pruning. While the protest against the former is something everyone must do, they should know that a cut tree means that only a stump remains. Some of the trees whose foliage and branches have been cut but are still standing have been pruned, which is a necessary practice to shed them of the biomass and allow for their rejuvenation in the next season.

Being a coastal city, it is encouraging to note that the tree cover of the mangrove forests is being increased. Recently the Pakistan Navy has undertaken the task of planting one million mangroves in collaboration with IUCN-Pakistan. In a country which has a pitifully low forest cover, barely moving beyond 4pc, and the highest rate of deforestation in South Asia,

the growth in the area under mangroves is encouraging. This can be easily seen through the GIS mapping of the plantations by the Sindh Forest Department.

It's true that there are incidents of logging by the coastal communities and the timber mafia, but these are far less than before through community stewardship. This method of stewardship by communities and organisations, wherein they take ownership of the management of trees planted by them during, and after the publicised campaigns, is the only way to the greening of Karachi in a sustained and sustainable manner.

People need to be educated to use all possible methods of urban gardening and by staying mindful of the diminishing resource of water. By choosing the plants wisely, in an eco-friendly manner, they can make Karachi's green dream come true, and contribute to the aesthetics as well as the health of the city.



Here again the rehabilitation of some parks by reed bed methods undertaken by the Pakistan Navy is an example that can be followed at the micro and macro level. They have already rehabilitated the Aziz Bhatti Park in Gulshan, and the Golf Course at Karsaz also is benefitting through grey water harvesting, which is the way to go in a city that will have less and less water in future.

## The green dreamers

Many citizens have fought to ensure green spaces in the city; a look at two of the most prominent ones

A parakeet eating Bitter Almond blossom -Photo by Jonathan Cardy via Wikimedia Commons

Despite the faltering administrative machinations, Karachi prides itself for its citizen activism, and its champions in different fields. The city has Edhi and

Adeeb Rizvi, but its parks and trees also had champions. Two stories deserve mention:

A.K. Khan, also known as 'Baba-i-Baghbani' or father of gardening, was a career horticulturist, and the 2016 Annual Flower Show held by the Horticulture Society of Pakistan was the first one ever held without him as he passed away a few months before that. He had worked with presidents and prime ministers, bureaucrats and politicians, generals, and poets and students to promote horticulture. He was responsible for the establishment of botanical gardens and had written scientific books on the plants of Pakistan.

When the developers, unmindful of the aesthetics or the importance of trees, went on a tree-chopping spree, A.K Khan marched off to the court, filing a case of murder, taking the plea that trees were living things and cutting them was akin to murder. Such was his passion for the trees which he loved as if they were his children.

Like A.K. Khan, the late Ardeshir Cowasjee was also Karachi's champion and conscience at large. When I, just like other agitated citizens, went to him to complain about the rampant tree cutting Cantonment Board had ordered, he first told me a story. He said that many years ago, he had received a similar desperate call that old and shady trees were being chopped down on the road leading to the passport office and Sindh High Court. By the time he was able to get through to then chief justice, Justice Nasir Aslam Zahid, who immediately dispatched his Registrar to put a stop to it, all but one tree had been cut. That sole tree is the one under which, even today, the notary publics and typists sit to deal with their clients.

Cowasjee then drove down that road after a while to check things out, and went up to the solitary notary sitting there and asked him how this tree got saved when all the ones around him had been chopped. That notary replied that he had heard that some 'charya Parsi' (crazy Parsi) had saved it ... and Cowasjee told me that he thumped his chest proudly and told that man "aaounch woh charya Parsi" (I am that crazy Parsi!).

He then wrote a letter to the editor of Dawn, and wrote one to the chief justice of Sindh High Court, the late Justice Sabihuddin Ahmed, to hear me out. Armed with his letter, I went to him, me and my army of two daughters and a fellow environmentalist friend, and was given a patient hearing and advice about the legal way to get the cutting stopped. I still have that letter which I hold as a treasured piece of memorabilia.■

courtesy: Dawn Sunday Magazine

# Delay in anti-pollution project making city vulnerable to environment hazards

Experts are of the view that the release of Karachi's total 472 MGD untreated sewage into the sea following the delay of 'Greater Karachi Sewage Treatment Project' has made the city vulnerable to environment hazards, public health, socio-economic, food quality and security.

The project, also known as S3, is considered as the largest sewerage project in the metropolis to control sea pollution, and would treat 460 million gallon per day (MGD) sewage that will include the construction of new treatment plant as well as the renovation of existing facilities at Site Town and Mauripur Road after completion.

According to Karachi Water and Sewerage Board (KWSB), two main sewer systems Malir and Lyari rivers, receive around 472 million gallon per day (MGD) sewage of raw municipal as well as release of industrial effluents into the sea. However, KWSB which is the execution authority of S3 Project, blame federal government's 'interrupted supply of financial flows' for delaying the project and release on discharge.

"The delay of project has caused serious effects on Karachi's environment. Karachi is facing environmental catastrophe due to these delays," said Misbahud Din Farid, managing director KWSB.

Misbah said the slow progress due to federal government's slow release of funds has doubled the cost of project comparing to its original estimated cost.

He said the revised PC-1 has been submitted to the federal government for approval of Executive Committee of National Economic Council (ECNEC) required for leftover segments of Lyari River portion and starting the construction work at Malir River.

According to KWSB MD, for current financial year's allocation, Sindh government has allocated Rs 1,000 million and the federal government has allocated less than Rs 1,000 million against our demand of Rs 1,500 million.

"We hope that the approval would be granted before December this year so we could start work on the said project. If we get uninterrupted financial flows now onwards, project could be finished till December

2018," he said.

The four-year project was conceived in 2005 and the construction work started in 2007 but halted afterwards till 2012, the KWSB MD said.

Experts said that because of such a huge flow of sewage into sea, pollution, marine life, fish, mangroves, birds nesting on mangroves are affected, besides that it has become health hazardous for areas near coastal belt where sewage is being discharged.

"This is a multi-factor issue. It is difficult to pin point specific health hazards," said Dr Zafar Fatmi, associate professor and head of Research Group Environmental and Occupational Health and Non-Communicable Diseases at the Department of Community Health Sciences, Aga Khan University Karachi.

"We cannot calculate direct outcome but that doesn't mean chronic diseases like cancer are forming," he said.

According to Dr Fatmi, mercury, including other including toxins like heavy metals are accumulated in fish we consume, as this is a direct impact on the human being when coastal life is destroyed.

"It can be catastrophic because of eutrophication and bio-accumulation of heavy metals and other pollutants in marine plants and animals. The completion and implementation on S3 must be ensured," said Muhammad Moazzam Khan, technical adviser on Marine Fisheries for World Wildlife Fund Pakistan

He said that the disposal of untreated sewage has already resulted in destruction of marine biota along Manora Channel and in Gizri Creek whereas some of the areas in these two locations are now without life. ■



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## Shale Oil best substitute for conventional oils



### Pakistan has 51 trillion shale oil reserves near Karachi



**B**ody gas is considered a cheaper substitute than oil in generation of power therefore the country has to import huge quantity of oil to meet local demand and also has to spend precious foreign exchange on its import. Pakistan is a large consumer of natural gas. Its total resource is about 282 trillion cubic feet with reserves of 24 trillion cubic feet and production of almost 4 billion cubic feet per day. During 2012, total production was at 1,559 billion cubic feet that is equivalent to 32 million TOES, shows a growth of 6 percent as compared to last year.

There are 146 non-associated gas fields while 44 associated gas fields operating under 15 companies. It is advised that to cope with the gas crisis Pakistan should use its shale gas reserves that are estimated at 51 trillion cubic feet near Karachi in southern Sindh province. US experience has shown that investment in shale gas can increase production at a faster rate and prices can be brought down from about \$12 per MMBTU in 2008 to below \$2 per MMBTU. Implementing this option requires US technical expertise and significant foreign investment. To increase production of gas from nearly 30 trillion cubic feet of remaining conventional gas reserves also require huge investment. Shale gas and oil shale gas is natural gas that is found trapped within shale formations. It has become an increasingly important source of natural gas in the United States since the start of this century, and interest has spread to tap the potential gas shale in the rest of the world.

Oil shale also known as kerogen shale, is an organic rich fine-grained sedimentary rock containing a solid mixture of organic chemical compounds from which liquid hydrocarbons

called shale oil, crude oil occurring naturally in shale can be produced. Shale oil is a substitute for conventional crude oil; however, extracting shale oil from oil shale is more costly than the production of conventional crude oil both financially and in terms of its environmental impact. Deposits of oil shale are found across the world, including major deposits in the United States. Estimates of global deposits range from 2.8 to 3.3 trillion barrels. Oil shale can also be burned directly in furnaces as a low grade fuel for power generation and district heating or used as a raw material in chemical and construction materials processing. Oil shale gains attention as a potential abundant source of oil, whenever the price of crude oil rises. Estonia and China have well established oil shale industries, and Brazil, Germany, and Russia are also utilizing oil shale. Reserves of shale deposits are found in all world oil producing regions but most of them are too deep to be exploited economically.

Although resources of oil shale found in many countries but only 33 countries can produce them economically. In 2010, the estimates showed that shale resources may be equivalent of more than 5 trillion barrels of oil but about 1 trillion barrels may be technically recoverable. The US deposits constitute 62pc of world resources; together the US, Russia and Brazil account for 86pc of the world's resources in terms of shale oil content. History Oil shale, as a fuel, is being used by human beings since prehistoric times, since it generally burns without any processing. The first UK patent for extracting oil from oil shale was British Crown Patent 303 granted to Becker and Serle in 1684. Modern industrial

mining of oil shale began in 1837 in Autun, France, followed by exploitation in Scotland, Germany, and several other countries. Operations during the 19th century focused on the production of kerosene, lamp oil, and paraffin; these products helped supply the growing demand for lighting that arose during the Industrial Revolution. Fuel oil, lubricating oil and grease, and ammonium sulfate were also produced.

The European oil shale industry expanded rapidly before World War I due to petroleum shortage and the mass production of automobiles and trucks. The Estonian and Chinese oil shale industries grew after World War II but most other countries abandoned their projects due to high processing costs and the availability of cheaper petroleum. Following the 1973 oil crisis, world production of oil shale reached a peak of 46 million ton in 1980 that fell to about 16 million ton in 2000. In 1986, President Ronald Reagan signed a law that abolished the United States' Synthetic Liquid Fuels Program.

At the beginning of the 21st century, the global oil shale industry began to revive. In 2003, an oil shale development program restarted in the US. Authorities introduced a commercial leasing program permitting the extraction of oil shale and oil sands on federal lands in 2005. As of 2008, industry was using oil shale in Brazil, China, and Estonia and to some extent in Germany, and Russia. Several other countries started exploring their reserves or had built experimental production plants. Oil shale serves for oil production in Estonia, Brazil, and China; for power generation in Estonia, China, and Germany; for cement production in Estonia, Germany, and China; and for use in chemical industries in China, Estonia, and Russia. As of 2009, 80 percent of oil shale used globally was extracted in Estonia, mainly due to the power plants. Estonia has an installed capacity of 2,967MW, China 12 MW and Germany 9.9MW. Israel, Romania and Russia run their power plants on oil shale, but have shut them down or switched to other fuels like natural gas. Jordan and Egypt planned to construct power plants fired by oil shale, while Canada and Turkey planned to burn oil shale along with coal for power generation. Oil shale serves as the main fuel for power generation only in Estonia, where the oil shale fired was producing 95pc of country's electrical generation in 2005. According to the World Energy Council, in 2008, the total production of shale oil was 930,000 ton, equal to 17,700 barrels per day of which China produced 375,000 ton, Estonia 355,000 ton and Brazil 200,000 ton. In that year, production of the conventional oil and natural gas was amounted 3.95 billion

ton or 82.12 million barrels per day.

**Extraction and Processing** Most exploitation of oil shale involves mining followed by shipping after which one can burn the shale directly to generate electricity, or undertake further processing. The most common methods of surface mining involve open pit mining and strip mining. These procedures remove most of the overlying material to expose the deposits of oil and becomes practical when the deposits occur near the surface. Underground mining of oil shale, which removes less of the overlying material, employs the room and pillar method. The process of decomposition begins at relatively low temperatures (300 °C or 572 °F), but proceeds more rapidly and more completely at higher temperatures. Hundreds of patents for oil shale retorting technologies exist; however, only a few dozens have undergone testing. As of 2006, only four technologies remained in commercial use. Applications and products Industry can use oil shale as a fuel for thermal power plants, burning it, like coal, to drive steam turbines; some of these plants employ the resulting heat for district heating of homes and businesses. In addition to its use as a fuel, oil shale may also serve in the production of specialty carbon fibers, adsorbent carbons, carbon black, phenols, resins, glues, tanning agents, mastic, road bitumen, cement, bricks, construction and decorative blocks, soil additives, fertilizers, rock wool insulation, glass, and pharmaceutical products.

However, oil shale use for production of these items remains small or only in its experimental stages. Some oil shale yield sulfur, ammonia, alumina, soda ash, uranium, and nahcolite as shale oil extraction by products. Oil shale gas has served as a substitute for natural gas, but as of 2009, producing oil shale gas as a natural gas substitute remained economically infeasible.

The shale oil derived from oil shale does not directly substitute for crude oil in all applications. It may contain higher concentrations of olefins, oxygen, and nitrogen than conventional crude oil. Some shale oils may have higher sulfur or arsenic content. The sulfur content in shale oil from Jordan's oil shale may rise even up to 9.5pc. The higher arsenic content of these materials means that the oil must undergo considerable upgrading before serving as oil refinery feedstock.

Above ground retorting processes tend to yield a lower API gravity shale oil than the in situ processes. Shale oil serves best for producing middle distillates such as kerosene, jet fuel, and diesel fuel. World-wide demand for these middle distillates, particularly for diesel fuels, increased rap-

idly in the 1990s and 2000s. However, appropriate refining processes equivalent to hydro cracking can transform shale oil into a lighter range hydrocarbon or gasoline. Economics According to a survey, the cost of producing a barrel of oil at a surface in the US would range between \$7 to 95 adjusted to 2005 values.

In order to run a profitable operation, the price of crude oil would need to remain above these levels. The analysis also discusses the expectation that processing costs would drop after the establishment of the complex. Some experts compare the proposed American oil shale industry to the oil sands industry of oil per day in late 2007. A 1972 journal compared shale based oil production unfavorable with coal liquefaction as less expensive, generating more oil, and creating fewer environmental impacts than extraction from oil shale. Environmental Impacts mining oil shale involves a number of environmental impacts that include acid drainage induced by the sudden exposure and subsequent oxidation of formerly buried materials, the introduction of metals including mercury into surface water and groundwater, increased erosion, sulfur gas emissions, and air pollution caused by the production of particulates during processing, transport, and support activities. In 2002, about 97pc of air pollution, 86pc of total waste and 23pc of water pollution in Estonia came from the power industry, which uses oil shale as the main resource for its power production. ■

- **Project Manager is a Person who thinks nine women can deliver a baby in One month.**
- **Procurement manager is a Person who thinks it will take 18 months to deliver a Baby.**
- **Operations Head is one who thinks single woman can deliver nine babies in one month if works harder.**
- **Marketing Manager is a person who convinces anyone that he can deliver a baby even if no man and woman are available.**
- **Financial Budget Team thinks they don't need a man or woman: they'll produce a child with zero resources.**
- **Quality Auditor is the person who is never happy with a delivered baby.**
- **HR Manager is a person who thinks that... a Donkey can deliver a Human Baby - if given 9 Months.**
- **Customer is the one who doesn't know why he wants a baby...!!!!**

## Energy crisis prevails

# No hope of light for two more years

**L**oad shedding will end in 2018, i.e. there is no hope of light for more two years. On the other hand government claimed that the total electricity generation rose 8 percent to 10,737 gigawatt hours (GWh) in June over a year, mainly through furnace oil based plants.

The increase in production was due to rise in furnace oil based generation that rose 38 percent to 3,421GWh, and an additional 743GWh of electricity through re-gasified natural gas (RLNG).

However, production of gas based plants declined by 29 percent to 1,924GWh in June over the year. The prices of furnace oil and high speed diesel decreased 31 percent and 13 percent, respectively encouraged power producers to use more fuel than gas.

In the month of June transmission losses were 266GWh, two percent of total

generation. However totals generation cost marginally declined 1.5 percent at Rs4.64 kilowatt per hour.

The decrease was mainly aided by plunging furnace oil and diesel prices, Taurus said. It further said that the actual cost was lower than the reference cost of Rs6.82/KWh, the central power purchasing agency proposed a negative fuel charge adjustment of Rs2.34 per KWh, which was to be added in August electricity bills.

### Power

The Finance Minister said in his budget speech that our main emphasis is on Energy. Energy has been the focus from the start. The country was facing a severe energy crisis since June 2013. Therefore, government formulated short, solid policies to solve this problem on the permanent basis due to which load shedding will considerably be reduced.

Presently, load shedding is being carried out systematically. Implementation of the plan formulated by the Cabinet committee formed by Prime Minister Nawaz Sharif will result in 10,000 MW of additional electricity to be added to the national grid by March 2018. Beyond March 2018 Dasu, Diamer-Bhasha, Karachi Civil Nuclear Energy and many other projects will also be completed, besides coal based projects under China-Pakistan Economic Corridor (CPEC).

In the Budget 2016-17 a number of steps have been announced to solve structural problems of the sector including reduction in system losses, improvement in recoveries, elimination of theft and settlement of inter corporate circular debt. The real focus is on developing additional resources of energy so as to permanently solve energy shortages.

Load shedding will end in 2018, i.e. there is no hope of light for further two years. On the other hand government claimed that the total electricity generation rose 8 percent to 10,737 gigawatt hours (GWh) in June over a year, mainly through furnace oil based plants.



The largest amount of resources has been allocated to add new and economical capacity in the national grid. In the budget a sum of Rs380 billion will be invested in this sector up from Rs287 billion allocated in last year's budget. Of this, Rs130 billion will come from the PSDP this year as compared to Rs112 billion allocated last year.

Large projects, other than Dasu and Diamir-Bhasha, are part of this year's allocation include, Rs61 billion for Neelum Jhelum Hydro Power Project having a capacity of 969 MW; Rs16.5 billion for completion of Tarbela-IV, Extension Hydro Power Project with a capacity of 1410 MW.

Two LNG power plants in Baloki and Haveli Bahadurshah will be allocated Rs60 billion. Combined, the two power plants will produce 2400MW of electricity.

Evacuation of power from wind power projects at Jhampir and Ghoro Wind Clusters; Interconnection of Chashma Nuclear Power Plants III and IV are also included in the plan.

The document indicated that the pipeline projects based on a number of hydel, coal, wind energy and nuclear fuels will solve the energy problem. Moreover, a number of other projects such as two Karachi Nuclear Coastal Power Projects (2200MW) with Chinese assistance; Chashma Civil Nuclear Power project (600MW); Golan Gol Hydro Power Project (106MW). And energy mix will provide cheap electricity to the consumers; while improvement of the transmission and distribution system will reduce the system losses. Steps against electricity theft will also reduce burden on the common citizens.

Focus will be on Energy and trying to solve crisis on permanent basis due to which considerable reduction in load shedding expected. About 10,000MW of additional electricity to be added in the national grid by March 2018.

Dasu, Diamir-Bhasha, Karachi Civil Nuclear Energy and many other projects will also be completed, besides coal based projects under China Pakistan Economic Corridor (CPEC).

Rationalizing of WHT on electricity, Contribution of trading sector to revenues is very low as compared to its share in GDP. Rate of WHT for commercial bills up to Rs20,000 per month is fixed with various slabs. Rate of WHT for commercial bills above Rs20,000 is 10pc that should be raised to 12pc for commercial consumers Business Council suggested.

### The following measures were also proposed:

Concessions of Customs Duty on Local Manufacturing of LED Lights: Customs duty on imports of parts of LED lights is being reduced from 20pc to 5pc. More generic descriptions and classifications were proposed to be included in this list which include items like led bulbs or lights, off-grid portable solar home system etc.

Incentivizing Import of items used in Renewable Sources of Energy Technologies: As per existing laws listed items used in renewable sources of technology are allowed duty free import.

Import of solar panels and related components were exempted from customs duty regardless of local manufacturing of

structures, canals and small storage dams. Main focus will be on the existing projects that can be completed within the next 2 years. In this regard, work is in advanced stages on projects such as Kachhi Canal (DeraBugti and Nasirabad), Naulong Storage Dam (JhalMagsi), extension of Pat Feeder Canal to DeraBugti and ShadiKaur Dam (Gawadar). Recently work on Basool Dam in Gawadar has also started. This year, an amount of Rs300 million has been allocated for further advancing the project of construction of 100 small dams.

In Sindh, projects are advancing gradually include Raineer Canal (Ghotki and Sukkur), extension of Right Bank Outfall Drain from Sehwan to sea, and Darwat Dam.



their substitutes till 30th June 2016. It was proposed that this relaxation be extended till 30th June, 2017.

Exemption to Dumper Trucks for Thar Coal Field: Sales tax on import on dumper trucks for Thar Coal is proposed to be abolished.

### Water

One of the key sectors is the water sector said budget documents where Rs32 billion allocated for projects in various parts of the country. Other than these allocations, a project will be the future lifeline of Pakistan is the Diamir Bhasha Dam, which will store 4.7 MAF of water and generate electricity of 4500 MW. Another important hydropower project is Dasu, which will have the Capacity to generate 2160 MW in phase 1. An allocation of Rs42 billion was made.

Water projects in Balochistan are the second most important focus of water sector investments comprising construction of delay action dams, flood dispersal

In Punjab construction of Papin Dam in Rawalpindi will commence. In Khyber Pakhtunkhwa, other than Dasu, funds will be provided for construction of small dams in district Mansehra, and a sizeable project of Chashma Right Bank Canal, 1st Life Cum Gravity will begin. In FATA funding for Kurram Tangi in North Waziristan, and Gomal Zam Dam in South Waziristan will continue.

Besides, numerous schemes of lining of water courses will be undertaken in Khyber Pakhtunkhwa, Sindh and Punjab to reduce water wastage together with flood protection and drainage schemes all over the country.

### Aerated Waters

The current rate of Federal Excise Duty on aerated waters is 10.5pc, which is lower than the standard rate of FED. In order to generate additional revenues from this growing sector, it was suggested that the rate of FED on aerated water may be increased to 11.5pc. ■

## Pakistani boy seven becomes worlds youngest computer programme

British Pakistani child genius, Muhammad Humza Shahzad, has set a new record by becoming the world's youngest qualified computer programmer at the age of seven.

This is not the first time Humza Shahzad has set a world record. The News had earlier reported that in 2015 Humza, then aged 6, became the youngest MS Office Specialist by passing three latest Microsoft Office exams which includes MS Word 2013, MS PowerPoint 2013 and MS Excel 2013. His recent outstanding professional qualification authorises him to become qualified programmer to pass MS exam "98-361 Software Development Fundamentals". Through this exam, Microsoft validates the proficiency of candidate in the areas like C# language, object oriented Design, web app, windows app, console app, web service, windows service and Databases.

Humza's parents Asim Shahzad and Seemab Asim told The News that computing skills come naturally to their son and they never put him under any pressure to learn. They said they are the "proudest parents" because their son has made a world record. They said they have worked with him to develop his own interest but he takes his own initiatives and comes up with new ideas in routine.



# AMAZING! news

## Google smartphone expected at Oct. 4 event

Google have sent out invitations to an October 4 event, hinting that the Internet titan will show off a new smartphone powered by its An-



droid mobile software. Emailed invitations sent late Monday revealed only the time and place for the gathering in San Francisco, the message topped by blue, red, yellow, and green dots of color. Google fired off a Twitter message with hashtag #madebygoogle and a video of what appeared to be a long rectangular search term box morphing into a silhouette of a smartphone. Industry trackers have been expecting Google in October to show off its own smartphone.

## Hijab emoji designed by Muslim student

Emojis have become a part of everyday life with people often using them instead of words. A 15-year-old Muslim girl living in Germany wants to use emojis to better represent Muslim women. Rayouf



Alhamedhi has sent a proposal to a non-profit which develops emojis to create a series of headscarf emojis. In her proposal the 15-year-old points out that there is no representation for 550 million Muslim women who wear the hijab, while there is an emoji of a man wearing a turban. The proposal for a hijab emoji comes at a time when Islamophobia is on the rise in Europe.

## A marriage with 40,000 guests in Lahore

Lahore has recently witnessed a record breaking marriage. Faisal Saif Khokhar, son of PML (N) MPA Malik Saif ul Malook Khokhar, recently got married and a Valima function was held for him in which 40,000 guests attended the event. The event was a dream for Malik as he wanted his son's valima to be a grand event which everyone would remember and he truly accomplished that. From a decked up horse to "band baaja", from dance to fireworks to scrumptious food, the event left everyone mesmerized by the grandeur. The bridegroom, Faisal, was happy that all those people who have supported them over the years and all their loved ones could be a part of his special day.

## World's highest bridge nears completion in China

Chinese engineers have completed the structure of what is expected to become the world's highest bridge, local authorities said. The Beipanjiang Bridge, in mountainous southwestern China, soars 565 metres (1,854 feet) above a river, the Guizhou provincial transport department said in a statement. As such it overtakes the Si Du River Bridge in the central province of Hubei to become the world's highest bridge, said the statement posted. The two ends of the bridge were linked on Saturday, it added. The 1,341-metre span is expected to open to traffic at the end of this year and will cut road trips from Liupanshui in Guizhou to Xuanwei in neighbouring Yunnan province from around five hours to less than two, state broadcaster China Central Television reported. Several of the world's highest bridges are in China, although the world's tallest bridge -- measured in terms of the height of its own structure, rather than the distance to the ground -- remains France's Millau viaduct at 343 metres tall.





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**COMTEC ENERGY**

## NFEH's Green Karachi Campaign launched

# SEPA says it has made plantation of trees compulsory for new housing schemes in the city



Launching ceremony of Green Karachi Campaign by NFEH held yesterday. Group Photo shows Ex-Director Lion's Club Malik Khuda Buksh, DG SEPA Naeem Mughal, President NFEH M. Naeem Qureshi, Nadeem Arif, Aijaz Ahmed Nizamani, SP City Shehla Qureshi, Engr. Nadeem Ashraf, Ruqiyah Naeem and others.

The Sindh Environmental Protection Agency (SEPA) has made it binding upon builders of new housing societies in the city to plant tree saplings along with construction of housing facilities to get mandatory approval for environmental mitigation plans for upcoming residential estates.

This was stated by Director-General of SEPA Naeem Ahmed Mughal while speaking the other day at the launching of city-wide plantation drive under "Green Karachi" initiative by National Forum for Environment and Health (NFEH) with Support of Korea Green Foundation in the metropolis. Under the "Green Karachi" programme 15,000 trees and plant saplings would be planted in the city till end of September, 2016 in connection with the ongoing monsoon season.

The chief of SEPA said on the occasion that such measures for promotion of greenery had been made compulsory for new housing schemes in order to promote plantation of trees in the city as greenery was fast fading creating environment in Karachi inhospitable for human life.

He said that areas in suburbs of the city including Landhi, Gadap, and Hub Chowki had considerable greenery till a few decades back all plants and trees there were wiped out owing to fast spreading housing facilities.

Aijaz Ahmed Nizamani, chief conservator of Sindh Forest Department, said that his department would provide technical, logistical, resource and material support to any of the non-governmental or private organization willing to do plantation drive in the city on the lines of NFEH.



He said that Forest Department from its own resources could provide 25,000 plant saplings for such a plantation drive in Karachi along with logistical support.

He said that successive plantation drives had led to increase in presence of mangrove plants at coastal belt of Keti Bandar in Thatta as this was one success story on the part of the provincial government to ensure reforestation in the province.

He said that mass media had been doing a great job by highlighting the issue of diminishing mangroves in coastal areas of Karachi but at the same time it should also show to concerned people achievement of the govt in doing reforestation in Keti Bandar area.

Rafiul Haq, a senior plant ecologist, said the world lost 15 billion trees every year as deforestation around the world spread to an area annually which if totaled could match the entire area of Bangladesh. He said that last year the heat wave had caused hundreds of human casualties owing to fast depleting trees and vegetation from the city.

He said that merely conducting plantation drives was not enough as the main challenge was proper upkeep and care of saplings so to make them grow into proper trees giving protection against environmental degradation.

Dr. Sikandar Shoro, MPA & parliamentary secretary for youth affairs Sindh, said that being a lawmaker associated with the ruling political party, he would try his best to create a liaison between concerned non-governmental organizations and provincial Local Govt department for sake of making such plantation drives a success story.



The PPP's MPA said that he would also play his role to persuade other lawmakers to get passed required laws from provincial assembly for promotion of plantation and greenery in the province.

Director Horticulture of Defence Housing Authority Karachi Col (retd) Ghulam Sarwar said that DHA under its recently unveiled initiative to promote greenery would plant 100,000 plants in the upcoming

residential scheme DHA City near Super Highway while 25,000 plants would be planted in the existing main DHA area in Karachi.

Malik Khuda Baksh, noted social figure past Int'l Director Lions Club said the industry of Compressed Natural Gas had been launched in the country some years back to conserve environment getting deteriorated at a fast pace owing to heavy

reliance on petroleum products for transportation needs but in later years the CNG industry had been systematically weakened without considering its benefit for the society.

NFEH President Naeem Qureshi said that some 20 organizations had been cooperating with his NGO for the new plantation drive in the city in connection with current monsoon season. He said that his forum had provided 28,000 plant saplings to concerned community-based organizations, corporate, and industrial establishments, which wanted to take part in various plantation drives conducted in the city.

He said the NFEH in cooperation with Forest Department, IUCN, and WWF, and similar other organizations would conduct a series of workshops to impart training to concerned citizens for proper care and growth of plants and trees. SP Shahla Qureshi, Syed Nusrat Ali, Engr Nadeem Ashraf, Yogi Wajahat, Salman Siddiqui DGM SSGC, Slaem uz zaman Sr VC KATI also spoke on the occasion. ■

## DHA to plant 130,000 saplings

Let's take baby steps, first Defence Housing Authority (DHA), then Karachi and then Pakistan said environmentalist Tofiq Pasha.

"DHA is very happy to announce this campaign in the area, as well as DHA City and the surrounding coastal areas," said DHA administrator Brig Zubair Ahmed at the launch of Green DHA tree plantation campaign on Monday. "We first started this campaign in March 2016 as CSR, with the plantation of 5,000 mangroves. This is a big step that we have taken in the direction of making our environment better," he said. DHA has launched this drive in collaboration with World Wildlife Fund-Pakistan (WWF-P). According to Pasha, as many as 130,000 saplings will be planted through this campaign, which



will include 25,000 trees in DHA, 100,000 in DHA City and 5,000 mangroves. The ones in DHA will be shades and native trees, mainly Kiker and Neem.

"It is a matter of life and death, tree plantation is that important. Humans can't live without trees, whereas trees can live without humans," warned Pasha.

According to him, excessive tree cutting began in the 1980s for the sake of expansion of roads and creating tall buildings. "Look at the plight of Malir, where hundreds of acres of trees, which were heat absorbers, and farmland have been destroyed," he lamented. People have realised their mistake mainly due to last year's heatwave, says Pasha. Twenty-five per cent of the land mass should be under forest cover, he said. However, Karachi's situation is very different and no exact figure is available to ascertain how much is required to cover the land with trees. "This is a moment of excitement with an unprecedented 130,000 trees to be planted this season. Pakistan is taking a real lead in this direction; this is a big thing for us and we look forward to continued partnership with DHA on this platform," said Ali Dehlavi, regional head for WWF-P. ■





A group of award winner with Chief Guest Sindh Transport Minister Nasir Hussain Shah, President NFEH Naeem Qureshi, Gen. Secretary Engr. Nadeem Ashraf, Ruqlyia Naeem, Shamsul Haq Memon, DG EPA Naeem Mughal and others.

## 13th Annual Environment Excellence Awards and Conference SEPA to prosecute municipal agencies in environmental tribunals for causing massive air, water pollution



Minister Transport Nasir Hussain Shah speaking at the event.

The Sindh Environmental Protection Agency (SEPA) has decided as a policy that local government's agencies in the province including KMC, DMCS, and KWSB will be subjected to prosecution in environmental tribunals for penalizing them in accordance with provincial environmental law for their unchecked practices as these municipal bodies have become biggest cause of air and water pollution especially in Karachi.

The SEPA Director-General Naeem Ahmed Mughal told audience of a conference on Wednesday that in future the local government's agencies would be put to prosecution as a matter of policy without giving them any exemption as like cases against other public, private, and industrial

institutions in the province were referred to environmental tribunals for their unsafe practices causing damage to environment.

The chief SEPA was speaking at the conference titled "Making our cities sustainable" organized by National Forum for Environment and Health (NFEH) in connection with its 13th Annual Environmental Excellence Awards. Sindh Transport Minister Syed Nasir Hussain Shah was chief guest on the occasion who gave away awards to 56 companies and organizations for adopting good practices for upkeep of environment.

Mr. Mughal said on that mere issuance of warnings and show-cause notices to local govt agencies would no more provide a workable solution to prevent practices of municipal bodies causing air and water pollution on a massive scale.

He said that owing to unchecked practices of municipal agencies, 450 million gallons of untreated waste water was being

released into Arabian Sea while air pollution had been rapidly increasing owing to absence of any solid and municipal waste management system as district municipal corporations were engaged in burning of domestic waste instead of its safe disposal.

He expressed hope that with elected leadership taking charge of these municipal agencies across the province, proper strategies would be adopted by the local bodies for disposal of domestic and solid waste and treating of sewerage water before releasing it into sea.

He said that S-III plan to treat domestic sewerage water produced in Karachi had been readied while all industrial zones in the city would adopt the system of combined effluent treatment plants so to lessen the instances of marine pollution. He also lamented the constant discharge of industrial waste into fresh water bodies in rest of Sindh causing serious risk to human health.



From L to R: Mirza Ishfaq Baig, Shamsul Haq Memon, Dr. Ejaz Talpur, Naeem Mughal, Hanif Gohar and Nadeem Arif



Saquib Ejaz, Naeem Qureshi, Dr. Samiuzzaman, Umair Jalia Wala, Shahbaz ul Islam and Minister Social Welfare Shamim Mumtaz addressing at the conference.

The SEPA chief quoted a credible study by an international body, which estimated Rs 365 billion as annual loss Pakistan had been suffering owing to the issue of constant environmental degradation as public health sector accounted for having biggest share in such a colossal loss of Rs 01 billion every day to government's exchequer.

Ijaz Ahmed Khilji, an expert of mass transport systems, said that 42 per cent

than a few million people.

Sindh Secretary for Environment and Climate Change Mir Aijaz Hussain Talpur said the Sindh had been actively pleading its case that 220 Megawatts generated by it through alternative source of energy on the land of Jhimpir wind corridor should be evacuated on a preferential basis through transmission lines giving connectivity to national power grid instead of

present Sindh govt of Pakistan Peoples Party was fully committed to resolve public transportation problem of people of Karachi for which BRTS service was being constructed in Karachi. He said that in a coming few days, he would fly to China for signing there the MoU for building Yellow Line as another component of BRTS. The provincial Transport minister claimed that Sindh govt on its part had completed all the prerequisites and formalities regarding revival of KCR in Karachi and now it was up to JICA (Japan International Cooperation Agency) to make progress for building the circular railway service in Karachi. He said the PPP's Chairman Bilawal Bhutto Zardari had directed the provincial authorities concerned to give another chance to JICA to make progress towards revival of KCR as otherwise Sindh govt should go for the option of availing services of a renowned Chinese firm to build circular railway service. He said the Sindh govt was fully committed to the cause of environment mitigation as for this reason the scope of provincial Environment Department had been expanded to include subject of Climate Change and also that the CM himself was holding the additional portfolio of Environment department.

Shamim Mumtaz, Minister Social Welfare Sindh, Shmasul Haq Memon, head of jury of environment awards, Naeem Qureshi of NFEH, Hanif Gohar Chairman Abad, Mirza Ishtiaq Baig, Shahbaz Islam, Umair Jaliawala and others also spoke on the occasion. ■

population of Karachi had been dependent on public transport system but it was unfortunate that passenger buses and other public carriers accounted for only 4.5 per cent of total number of motor vehicles in the city creating situation of serious stress on existing passenger vehicles plying on roads of Karachi.

He said the only solution to such a sorry state of affairs related to heavy volume of vehicular traffic could be reached through building the system of mass transit as the most feasible option to this effect is revival of Karachi Circular Railway (KCR) which along with the proposed Bus Rapid Transit System (BRTS) would massively facilitate commuters in the city.

Mr. Khilji said KCR had the advantage that right of way on land reserved for the project was available to the government along with single-line railway track on which earlier intra-city local train service was used to ply. He said the KCR would be built on dual-track railway line of total 43 Kilometres length as in its peak days 104 trains had been used to ply in KCR service in a single day during its peak period when population of Karachi was not more

waiting for completion of the solar power project in South Punjab. He said the evacuation of electricity generated through wind power for its transmission till national grid was one of the points raised by Sindh chief minister when he had met in the previous day Federal Water and Power minister in Islamabad on energy issues concerning the province.

In his concluding remarks, Sindh Transport Minister Nasir Hussain Shah said the



Team NFEH with Chief Guest



## Winners of 13th Annual Environment Excellence Awards 2016

### Top 10 Award Winners



Archroma Pakistan Limited



Bestway Cement Limited Chakwal



Kot Addu Power Company Limited



National Refinery Limited



Novartis Pharmaceuticals Pakistan



Oil & Gas Development Company Limited



Pak-Arab Refinery Limited



Pfizer Pakistan Limited



Sui Northern Gas Pipelines Limited



Qarshi Industries (Pvt.) Limited

### Tree Plantation Award Winners



Saylani Welfare Truist



GO GREEN DHA Karachi



Asian Food Industries Limited



## Winners of 13th Annual Environment Excellence Awards 2016



Asian Food Industries Ltd.



AVM Chemical Pvt Ltd



Bestway Cement Ltd.



Clariant Chemical Pakistan (Pvt.) Ltd.



Crown Group Of Companies



D.G. Khan Cement Company Ltd



Dawlance (Pvt.) Ltd.



Diamond Jumbolon Board Symbol Industries



Dr. Essa Laboratories & Diagnostic Centre



Ecobags



Engro Fertilizers Zarkhez Plant Karachi



Fauji Fertilizer Bin Qasim Ltd.

## Winners of 13th Annual Environment Excellence Awards 2016



Fauji Oil Terminal & Distribution Company



Feroze1888 Mills Ltd.



Ghani Engineering System



Global Environmental Management Services



Green Crescent Environment Engineering



Hub Power Company



K-Electric Company



KSB Pumps Company Limited



Lotte Chemical Pakistan Ltd.



Lucky Cement Ltd



Martin Dow Ltd.



Nazaria-e-Pakistan Centre

## Winners of 13th Annual Environment Excellence Awards 2016



Novamed Healthcare (Pvt.) Ltd.



OBS Pakistan (Pvt.) Ltd.



Pakcem Ltd



PATEL HOSPITAL



PharmEvo Pvt Ltd



PTV



Rafhan Mazie Products Co. Ltd.



Rainbow Hi Tech Engineering Company



Sui Southern Gas Company Ltd.



Thal Engineering



Thatta Cement Company Ltd.



UCH Power (Pvt.) Ltd.



## Assessing and managing climate change risks in supply chains

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NFEH

NATIONAL FORUM FOR ENVIRONMENT & HEALTH

## SPECIAL REPORT

# 13<sup>th</sup> Annual Environment Excellence Awards 2016

### About NFEH:

National Forum for Environment & Health, commonly known as NFEH, is a purely Non-Governmental, Non-Profit Organization, established on June 05, 1999, with the aim to facilitate, promote and help create environmental, healthcare and educational awareness among the masses in general and youth and children in particular. NFEH is affiliated with the United Nations Environmental Programme (UNEP) and supported by the Ministry of Environment, Govt. of Sindh. It is committed to serve and promote the causes of healthcare and protection of natural environment by creating awareness among all segments of society. NFEH has been successfully organizing various interactive events to meet these objectives. Annual Environment Excellence Awards were instituted twelve years ago and have elicited a very enthusiastic response from the industry. These awards have become the benchmark for the standards that need to be followed.

### Aims & Objectives of Environment Excellence Awards

The Annual Environment Excellence Awards are designed to recognize and promote the organizations which make an outstanding contribution to sustainable development. They aim to highlight policies, practices, processes and products from all sectors of business in the country, which help achieve 'economic and social development without detriment to the environment and natural resources upon the quality of which continued human activity and further development depend.'

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### OUR EXCLUSIVE PARTNERS



## Inspection & verification of award nominees

By Khalid Iqbal, Vice President (Technical), NFEH

The world is changing rapidly so as the National Forum for Environment (NFEH) in order to provide unique and valued-added services in Health and Environment Sectors in Pakistan. The unique brand of "Annual Environment Excellence Award - AEEA" brought best companies of Pakistan at the NFEH's Platform regardless of size, geographic origin and presence in world's map.

The NFEH has always appreciated the feedbacks being received every year from the participating companies and stakeholders and the management of NFEH is keep improving the overall idea of AEEA initiated in year 2004. And with a decade celebration last year in 2013, the NFEH has now fulfilled yet another promise of "Inspection & Verification" under the 'Selection Process' specified in AEEA's Nomination Form.

The idea has been appreciated by many companies by giving the leverage to NFEH's Inspection, Monitoring & Verification (IMV) Team not only in Inspecting the Facility to see the overall effectiveness of EMS & Policy, Competency of staff and Level of awareness among the workers; but also got prompt answers from the Departmental Heads based on their submissions of nomination papers and the questions as specified in the Inspection Form.

The IMV Team visited many facilities, conducted verifications of provided data, received additional documents to fulfill the total inspection and verification requirements before conferring the AEEA Awards and especially for selecting the Top-10 Winners of AEEA-2014.

The IMV process also helped the NFEH to check the conformity of Jury's Independent Reports. The ratings of IMV & Jury's Nominations Results are based on grading from 1-10 and 1-100 respectively. The average ratings results are 80% and 78% respectively. The IMV Team thank to all HSEQ Heads for extending their cooperation in fulfilling the desired tasks based on valuable feedbacks being received by the National Forum for Environment Health. Our journey towards acknowledging, appreciating and cooperating the progressives Environment Promoting Companies are continued and now we look forward to your organization's effective & contributing propagation being as the 'Brand Ambassadors of AEEA' for Greener and Cleaner Environment in Pakistan. We look forward to welcoming you at the unique platform of the 11th Annual Environment Excellence Awards in mid September 2014 at PC Lahore - Pakistan.

## Our Honourable Jury

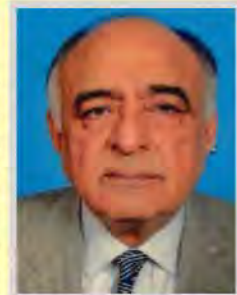
**Syed Nadeem Arif** is a practicing professional in the field of environmental engineering and management systems. He has been engaged in conducting environmental & social impact assessment studies for the last twenty two years in the capacity of project director. He is an experienced trainer and has conducted numerous courses and trainings on ISO 14000 Environmental Management Systems, ISO 9000 Quality Management Systems and OHSAS 18001 Occupational Health & Safety Assessment Scheme. He is also a qualified Environmental Auditor.

Arif has vast experience in defining strategic planning, monetary and Technical matters, scheduling of the projects, preparation of contractual claim documents, report generation, computer based time scheduling and planning, coordination with the clients, negotiations etc. He has extensive experience in implementation of HSE Management Systems and conducting safety audits. He advises on the Occupational Health and Safety aspects of projects and has a good understanding of the applicable Occupational Health and Safety laws. Besides his professional engagement, he is actively in the field of academics and delivered series of lectures on several topics related to Environment, Health & Safety in different seminars, workshops and conferences. Arif is a consultant of various clients on Environmental, Health & Safety Standards and uses his best environmental management during projects to ensure safe working practices. He provides guidance to project managers in conducting internal EHS audits and trainings on relevant environmental topics.



**Shamsul Haq Memon** is well-know

name in the Pakistan's environment sector having valuable contribution to the society and the country with his experience, efforts and activities. He is the most sought-after person for any activities of environment for supervision and guidance. Hence he has been requested to be a member of the jurist panel of Annual Environment Excellence Awards 2011. Memon is academically impressive and professionally sound. He has done his masters in Natural Resource Management & Environment from U.S.A. I have also a masters degree in Biological Sciences from Sindh University Jamshoro. Memon has done his graduation in Forestry from University of Peshawar. In his different roles of services, he served the government as Secretary to Government of Sindh, Forests & Wildlife, Environment & Alternative Energy Departments. During his tenure, he has done marvelous job for pollution-free environment. He is also a former Technical Advisor to Sindh Coastal Development Authority.



AEEA Glimpses 2003-2015

**2014 AEEA Winners**



**2014 AEEA Winners**



**2012 AEEA Winners**



**2013 AEEA Winners**



**2010 AEEA Winners**



**2011 AEEA Winners**



**2009 AEEA Winners**



**2008 AEEA Winners**



**2007 AEEA Winners**



**2006 AEEA Winners**



**2005 AEEA Winners**



**2004 AEEA Winners**



AEEA Glimpses 2003-2015

**NFEH Activities at a Glance**

8th CSR Summit & Awards 2016



4th Annual Public Conference on Women Health



6th Fire & Safety Convention & Awards 2016



7th CNG Conference & Expo 2011





## World Environment Day celebrations



Sui Southern Gas Company (SSGC) and National Forum for Environment and Health (NFEH) came together the other day to mark World Environment Day being celebrated every year on 05 June. This year's theme of global environment day focuses upon fight against illegal trade in wildlife.



A large number of concerned stakeholders from the govt agencies, industry, business, academia, and non-governmental sectors attended the discussion titled "Mission: rehabilitate and save Karachi" organized jointly by National Forum for Environment and Health, SEPA & EMC Pakistan. The moot was organized on the eve of World Environment Day, 2016.



## Solar Home Solutions

## Solar Pumping System



Solar Street Lights

## Solar Water Heater



## Range of Industrial Fans



## Bestway Group

Bestway Cement Limited is part of the Bestway Group of the United Kingdom. Bestway Group was founded by Sir Mohammed Anwar Pervez nearly thirty three years ago on what could be best described as one man's vision and passion. Since then it has translated into a unique and successful group of businesses spread across the globe with the help of committed, professional and hardworking management and staff, together with loyal customers and suppliers. The Group has a well diversified portfolio incorporating within its folds cement manufacturing, global banking, wholesale cash and carry business, a string of retail outlets, real estate investment, ethnic food and beverage import and distribution and milling of rice. Recently the group has embarked upon a large power generation project in Pakistan thus further diversifying its operations and revenue base.

Bestway Group is an example of a dynamic enterprise. Over the last three decades the Group has achieved remarkable success

and positioned itself amongst United Kingdom's top 10 privately owned companies.

Bestway is U.K's second largest cash and carry operator in terms of turnover with group annual turnover in excess of US Dollars 3.6 billion and profits in excess of US Dollars 135 million; the second largest cement producer in Pakistan and joint owner of Pakistan's third largest bank, United Bank Limited. Its rice milling facilities are one of the largest of its kind in the country. The group is the largest overseas Pakistani investor with investments in excess of US Dollars 01 billion and a global workforce of over 22,000 people spread over four continents.

In response to successive governments' efforts to attract foreign investment in the country Bestway Group has invested heavily in Pakistan. In just over a decade Bestway's cement production capacity is set to more than quadruple to over 6.0 million tonnes per annum, making Bestway the second largest cement producer in the country.

### Exports

The Company has been able to maintain its status as a market leader due to superior product quality, effective marketing, customer focus and staff dedication. Prior to the commissioning of Chakwal-I and Mustehkam Cement, Bestway enjoyed more than 08% of the market share of the domestic market. Successful introduction of its brand in Afghanistan and more recently in India, Africa and Middle East has made Bestway one of the largest exporters of cement in Pakistan.

### Bestway Cement Chakwal-I

In February 2004 owing to the growth in market demand, Bestway Group took the strategic decision of expanding its operations through the setting up of a 1.8 million tonnes per annum cement plant near Village Tatal of District Chakwal, Punjab Province, Pakistan. This is the Group's second Greenfield development project at a cost of US\$ 140 million.

The Company started its land acquisition in June 2004 and civil constructions in January 2005. The plant specifications were compiled by Bestway's own engineers selecting the best equipment available. The raw-mill and coal-mill has been supplied by Loesche, fans by Venti, gear boxes by Flender, Switch Gear by ABB, Bucket Elevators by Aumund, Motors, Motor Control Systems and Automation by Siemens of Germany.

In April 2005, the then prime minister Shaukat Aziz performed the groundbreaking ceremony for the plant. Civil works for Bestway Chakwal were initiated in January 2005, the Kiln was fired in May 2006 and the plant went into production in June 2006 which is an industry record. During the planning and construction phase





the company took all the necessary steps to guarantee that the plant and machinery not only met the local and international environmental standards but also exceeded them.

Bestway Cement Chakwal-I has led to the direct and indirect creation of jobs for more than 2,000 jobs - injecting a new lease of life in one of the most economically dispossessed parts of Pakistan.

#### Mustehkam Cement

To further extend its presence in the cement industry, Bestway decided to bid for 85.29% of equity of Mustehkam Cement Limited a 0.6 million tonnes per annum capacity plant, following an offering by the Privatisation Commission, Government of Pakistan. The company's bid of approximately US\$70.0 million was accepted in September 2005. Mustehkam's plant is in close vicinity of our existing operations in Hattar, District Haripur, Khyber Pakhtunkhwa. Though the production of the enterprise had been discontinued in 1999, due to the hard work and dedication of our local staff and management, Mustehkam started production in December 2005 - one month after acquisition.

#### Environment a top Priority

Bestway's plants are environment friendly with emission standards that far didn't exceed prevailing acceptable standards, both local and international. The plants' emission levels are 50 microns whereas the Government of Pakistan's acceptable standards are 300 microns and international standards are 100 microns per cubic meter of air at NTP.

#### Quality Assurance

Bestway Cement is driven by high standards of efficiency and quality. Strict quality control procedures are applied to ensure that these aims are achieved. The best quality control equipment in Pakistan is in use at its plants. Apart from the usual equipment, Bestway's laboratories are equipped with state-of-the-art X-ray Fluorescent Analyzer and Diffractometer technology. Bestway Group was a pioneer in introducing this technology in Pakistan for the first time. By virtue of this equipment, the Company has been able to consistently produce better quality cement than is currently available in the country. Since inception, Bestway has been producing Portland cement of specifications far superior to the Pakistani, Indian, British and American standards. ■



## GUL STUDIO

Guls Studio has made a lot of trend established in the field of Event Management Industry. So we say we are a trend-setter. Out of this, we made a Trend in exhibition industry. Its name is Exhibition Stand Rental Trend. Before this practice the clients made their stall at own, dismantle and then sent to their warehouse. For this process the clients have to face many problems. Now Guls Studio finished such procedure.

Today Guls Studio has the position of Pioneer in Event & Exhibition Industries. Guls Studio has introduced several Rental packages. We have launched Rental Exhibit in the year 2003. By the grace of Almighty Allah Guls Studio furnished 5000 Rental Exhibits to 500 major Clients.

#### Official Stand Builder and Ambiance Designer

Guls Studio has been Official Stand Builder and Official Ambiance Designer for the last 10 years ((from 1999 to 2009) Every 09 out of 10 Exhibition's Official Ambiance Designs &



Customized Stand Builders belongs to Guls Studio. We are very thankful to Almighty Allah for this creditability.

#### Guls Studio Events & Exhibition Stands

Guls Studio has proud to have the honor of every small and large Exhibition in Pakistan. After the Almighty Allah we are thankful to all Exhibition Organizer who trusted and supported us to make their strategic partner, to achieve the position of Guls Studio in the market. Guls Studio 15000 Sketches Turn into Reality:

Guls Studio has so far given the shape of reality to 15000 sketches. So everybody knows we turn sketch into reality as we offer concept design to our clients free of charge.

#### Guls Studio Storage Facility:

At factory Guls Studio stores customized stalls of the 500 Clients. On re-rental the customized design, our Clients participant the exhibition by controlling their budget. ■

## Crown Group of Companies

CRLF was established with the ideology to keep their customers and employees at the top most priority, network is expanded into different countries selling best quality spare parts with the most reasonable prices thank and appreciate the constant support of our brand CRLF and looking forward for providing more better services to you in near future.



### Employees

Employees are assets, to enhance their performance, we ensure to provide better working environment.

### VISION

To emerge as South Asia's biggest auto-parts selling brand and strengthen it.

### MISSION

To provide automotive solutions to consumers who fulfill their demand and needs at affordable prices.

### EXCELLENCE POLICY

- Commitment to provide high quality spare parts
- Maintenance to improve quality
- Customers always a priority
- Providing strong monetary for stakeholders.

### STRATEGIC POLICY

It's our aim to ensure that our customers enjoy the highest level of satisfaction by using CRLF parts.

### Quality

To Maintain and provide highest quality in our products with one year guarantee.

### Local Manufacturing

To manufacture of genuine spare parts ou accessories with extensive supply system in South Asian market.

### Exclusive Shop

Extend the network of CRLF Exclusive shops in South Asia

### Intellectual Property Awards-2014

As Chairman of WTO-Intellectual Property Rights Sub-committee (KCCI) and Advisor of Pakistan State Times, he arranged Pakistan's first "Intellectual Property Seminar & Awards-2014" at Governor House, Sindh. The purpose to organize the event was to create awareness of Intellectual Property Rights in business community of Pakistan. It was attended by Governor Sindh Dr. Ishrat ul Ebad Khan, Federal Minister for Ports and Shipping Kamran Michael, Minister for Commerce & Industries Sindh Rauf Siddiqui, Khawaja Izhar-ul-Hassan, Deputy Parliamentary Leader of MQM in Sindh Assembly, Editor-in-chief & Publisher Pakistan State Time and Senator Abdul Haseeb Khan.

### Peace Hike on Crown Bike -2014

Crown Motors Company (Pvt.) limited and Sindh Boys Scouts Association arranged "Peace Hike". It was inaugurated by Governor Sindh Dr. Ishrat ul Ebad Khan

### National Intellectual Property Convention-2013

A session was held regarding Intellectual Property Rights violations, illegal imports, counterfeiting and misuse of IP rights & regulations, Brands Foundation of Pakistan in strategic collaboration with Federation of Pakistan Chamber of Commerce & Industries and Intellectual Property Organization, It was an awareness convention which attended by many high profile personalities like Mr. Fahan Hanif. ■

## Rufi Pearl City

Rufi Properties today is one of the largest real estate development companies in Pakistan, with its presence in Middle East and North America as well. Rufi brings three generations of trust, reputation and success in over five cities. Ever since its emergence four decades ago, Rufi Properties is admired all over Pakistan for delivering mega housing projects in the sub-continent, Middle East and North America. At Rufi we value and place trust at the apex of our business agenda, it has resulted in a reputation second to none. Trust, quality and value are the key attributes that contributed to the group's success.



### Cornerstone Values

- To cherish and reward trust with unshakeable integrity.
- Transparency and honesty in every facet of business.

Quality interwoven into all we do.  
Timeline given paramount precedence.  
Uniformly exceed what is expected of us.  
Adhere strictly to environmental guidelines.  
Recognize, respect and reward our human resource complement.

### The Corporate Ethic

To vindicate the trust invested in us by carrying our conviction to excel into every aspect of our endeavor. To give openly and without reservation in fair measure as we receive, to strive ever harder to innovate, enhance and improve our offering not merely because the demands of competition dictate it, but to show ourselves always willing and capable to move unbidden beyond our brief. We will respect and honour the trust reposed in us and returns it measure for measure in service and product offering. ■

## Ghani Engineering System

Ghani Engineering System is an authorized company of Designing, Fabrication of Communication Towers, Sub-Stations and their Accessories.

Ghani Engineering System is an engineering teel Fabrication Company to meet the highly specialized needs of the Communication and Power Industries. We are skilled in engineering projects such as design in the projects, involving structures, metal handling and Power Transmissions.

Ghani Engineering System is a Leading Manufacturer of Self Supporting Towers, Guyed Towers, Mono Pole Tower and Roof Top Towers for Communication Field. We also committed to provide Cost-Competitive, Comprehensive products along with an efficient system of delivery. Our Ethics and Practices ensure our Success.

Ghani Engineering System also offer transportation of Heavy Machinery, Design of Tower, Design of Civil works, Tower erection and Painting. We erect and repair towers all over in Pakistan.

### Advantages:

The zeal and dynamism of this emerging company has helped to establish it as a result oriented and most responsive company in the Telecom Marker. The ultimate success of any company lies



in customer satisfaction.

Ghani Engineering System always strive for customer satisfaction by providing 24 X 7 service, competitive prices, maintenance of local spares and qualified professionals.

### SERVICES

Services with Total Customer Satisfaction

Our Range of Services:

We provide the service of carriage of Heavy Equipment Related to Telecommunication on given address of sites.

### Transportation

- " Tower Design (Roof-Top and Ground Based)
- " Preparation of Structural Drawings
- " General Assembly (GA) Drawings
- " Fabrication/shop Drawings
- " Bill of materials
- " Individual Part Drawings
- " Erection Drawings
- " Tower Foundation Design
- " Foundation Design with Construction Drawings
- " Tower erection and Painting anywhere in Pakistan
- " Tower Maintenance anywhere in Pakistan. ■

## Global Environmental Management Services

Global Environmental Management Services is the apex company of GLOBAL ENVIRONMENTAL GROUP OF COMPANIES.

The first company was established in July 1996 as Global Environmental Lab. Soon after, another company was formed as Global Waste Management Services.

Looking at increasing demand the facilities for waste management and environmental monitoring were established in Lahore as well to cater to the needs of Punjab & KP After getting more and more experience and improvements in the field of Environment we merged as one company named "Global Environmental Management Services".

The new entity consists of Global Environmental. which offers services monitoring of emissions and effluents. At the same time, it also handles hazardous waste and ensures its safe and environmental friendly disposal.

GEMS is a consulting service which provides enormous services like Environmental Audits, Initial Environmental Examinations, Environmental Impact Assessments, Baseline studies and Training and Capacity building.



With our broad based experience and excellence in providing environmental services we have expanded our horizon and taken our operation to the Middle East and established office in United Arab Emirates (UAE).

We recognize our staff as being our most important resource. GEMS personnel have professional environmental and social experience extending throughout Pakistan and UAE.

They are all qualified environmental and social scientists with complementary multi-disciplinary skills covering all major biomes of the environment.

As a result we are able to offer accurate, independent and appropriate services to clients and to regulatory bodies.

Through our network of associates and affiliated companies we can also draw together expertise in a wide range of additional disciplines such as archaeology, hydrogeology, hydrology, social sciences, mathematical modeling, GIS and remote sensing, analytical chemistry, eco-tourism etc. to provide a comprehensive suite of environmental services. ■

## Oil & Gas Development Company Ltd.

### Establishment of OGDC

To revive exploration in the energy sector the Government of Pakistan signed a long-term loan Agreement on 04 March 1961 with the USSR, whereby Pakistan received 27 million Rubles to finance equipment and services of Soviet experts for exploration. Pursuant to the Agreement, Oil and Gas Development Company (OGDC) was created under an Ordinance dated 20th September 1961. The Corporation was charged with responsibility to undertake a well thought out and systematic exploratory programme and to plan and promote Pakistan's oil and gas prospects.



### Initial Successes

A number of donor agencies such as the World Bank, Canadian International Development Agency (CIDA) and the Asian Development Bank provided the impetus through assistance for major development projects in the form of loans and grants. OGDC's concerted efforts were very successful as they resulted in a number of major oil and gas discoveries between 1968 and 1982. Toot oil field was discovered in 1968 which paved the way for further exploratory work in the North.

### Transition to a self financing entity

Noting the Company's success, due to major oil and gas discoveries in the eighties, the Government in July 1989, off-loaded the Company from the Federal Budget and allowed it to manage its activities with self generated funds.

### HEALTH, SAFETY, ENVIRONMENT AND QUALITY (HSEQ)

#### HSEQ Brief

As a responsible Corporate Citizen, OGDC attaches greater significance to HSE system with a view to promoting a culture and attitude of compliance for the safety & wellbeing of our manpower, community and the environment. We resolutely believe that responsibility for health, safety, and environment cannot be delegated, it is a shared responsibility across the company.

We believe in good HSE performance that can ultimately contribute to business success. By supplying energy, we fundamentally support economic development and help to improve quality of life of people. Our activities also generate jobs, investment, infrastructure and revenues for governments and local communities. In carrying out all our activities, hence we ensure welfare of the indigenous communities, protection of ecosystems and safety of our workforce. ■



## Pak-Arab Refinery Limited

PAK-ARAB REFINERY LTD. (PARCO), is a Joint Venture between the Government of Pakistan and UAE, through its Abu Dhabi Petroleum Investment Company L.L.C., a subsidiary group of International Petroleum Investment Company.



Chevron's fuel business in Pakistan, TPPL is now the third largest Oil Marketing Company in the country.

PARCO's performance is reflected not only in its technical and financial results, but can also be judged by its other achievements and awards e.g. Company has maintained its AAA and A1+ long and short term credit rating by Pakistan Credit Rating Agency for the eighteenth year running.

PARCO's major business activities are:

Refining, Transportation & Marketing.

PARCO has the most modern refinery in Pakistan having a capacity of 100,000 BPD (representing about 25% of the country's refining capacity), over 2000 kms of cross country pipeline network (including its JV subsidiary Pak-Arab Pipeline Company Limited (PAPCO) with a strategic storage of over one million tons, and a rapidly expanding retail network of TOTAL PARCO (TPPL) - a joint venture with TOTAL of France. With the acquisition of

### ENVIRONMENT FRIENDLY SUPPLY CHAIN

PARCO operates Karachi-Mahmoodkot (KMK) pipeline, Mahmoodkot-Faisalabad-Machike (MFM) pipeline and White Oil Pipeline (WOP). This efficient supply chain eliminates the movement of oil tankers significantly contributing in reduction of air pollution.

### ENVIRONMENTAL STEWARDSHIP

PARCO is a fully IMS CERTIFIED ENERGY Company and amongst the first in Pakistan to simultaneously achieve three international certifications, that is, ISO 9001:2008 (Quality Management System), ISO 14001:2004 (Environmental Management System) and OHSAS 18001:2007 (Occupational Health and Safety).

PARCO's Effluent Treatment Plant has a capacity of 340m<sup>3</sup>/hr. Waste water from the refinery is collected and through skimming, neutralization, dissolved air floatation, aeration, clarification, filtration and drying operations, the effluent water is brought within NEQs limits before discharging into local drainage or reuse for plants. If any parameter is not within NEQS limits then the whole batch of effluent water is diverted back to diversion tank. ■



## OBS Pakistan (Pvt.) Ltd.

OBS is ranked among the top 20 pharmaceutical players amongst 695 companies with a strong presence in Pakistan and Sri Lanka. It is among the very few companies in Pakistan which has specialized in developing strategic business alliances with reputed international firms like Organon, Merck & Co. Inc. USA and Schering Plough by providing a full range of high quality professional services encompassing manufacturing, marketing and sales of pharmaceutical and consumer health products.



professionally trained medical representatives covering more than 20,000 healthcare professionals across the country. Our products are available in over 15,000 pharmacies across Pakistan.

We continuously invest on upgrading our information systems which enable us to scientifically grow our business and help the management to have effective controls and further improve the efficiency of the organization.

In addition to the systems we also strongly believe that people are the most important asset for any organization. We believe in equal employment opportunity and harnessing diversity in our group companies.

### OBS Code of Conduct

Code of Conduct remains the corner stone of how we do things at OBS. We believe in building a sustainable business driven by our core value of Integrity and Ethics as its foundation. Our Code of Conduct is designed to help make sure that our employees understand what is expected of them and provides guidance on business standards and practices. ■

We aim to become the centre of excellence for our partners. The OBS group operates via its five sister concerns OBS Pakistan (formerly Merck Sharp & Dohme of Pakistan), Schering Plough Pakistan, OBS Healthcare (formerly Organon Pakistan), OBS Pharma (Focusing on branded generics), and Aklima Clinical Research. OBS has developed expertise in major health segments like Cardiology, Neuropsychiatry, Anti-Infectives, Gastroenterology, Gynecology, Ophthalmology, Pulmonology, Endocrinology, Vaccines and Bone Disorders.

OBS has a strong presence all over Pakistan with over 250

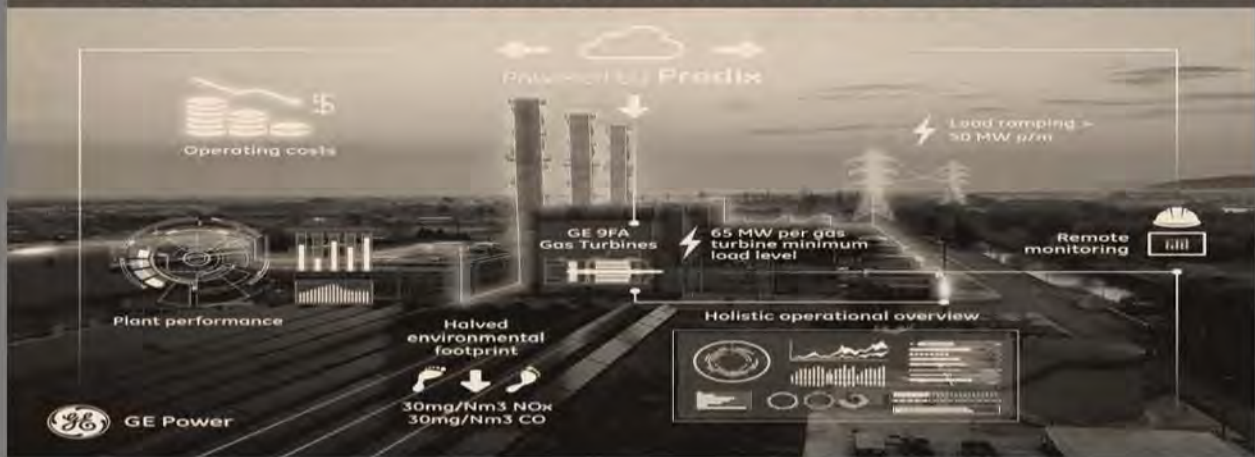




Perkins Generators in Pakistan are being provided by Power Zone Engineering & Services in the major cities like Karachi, Lahore, and Islamabad etc. We founded the company with the aim of providing complete power backup solution at an affordable price. The company's main line of business is manufacturing and Sale of Automatic Power Generators. Power Zone Engineering & Services symbolizes a company dedicated to the provision of innovative Engineering skills, each year witness's further application of the latest technology to its products innovation, reliability and total flexibility. We provide diesel generators and rental generators ranging from 13KVA to 2500KVA with a strong reputation as a supplier of reliable engines, leadership in emissions solutions, and years of experience in generator technologies



### GE Digital Power Plant: Reviving operations at A2A's Chivasso Station





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## Archroma Pakistan Limited

Archroma Pakistan Limited (formerly: Clariant Pakistan Limited) represents Archroma in Pakistan. Archroma was formed in September 2013 from the textile, paper and emulsions businesses of Clariant. Clariant itself was formed in 1995 as a spin off from Sandoz, a chemical company which was established in Basel in 1886. In 1997, Clariant acquired the specialty chemicals business of Hoechst, a German chemical company. Through this direct lineage, Archroma have amassed knowledge and experience of chemistry and industry spanning more than 120 years. Archroma, represents on five continents and more than 35 group companies, employs around 3,000 people, headquartered in Reinach, Switzerland.

Every new innovation the company develops in the present day at Archroma combines its rich tradition of materials excellence and expertise, its market insight, and its commitment to talent management, world class quality standards, high service levels, and the specialty materials and chemicals sector.

Based on the Company's performance Archroma Pakistan (formerly: Clariant Pakistan) has been honored for the 13th consecutive year with prestigious Top 25 Companies Award for the year from 2001 till 2013 by the Karachi Stock Exchange (KSE).



In addition to this the Company has also been awarded:

2005, 2008, 2009, 2010, 2011, 2012, 2013 & 2014 by the National Forum for Environment and Health on following best practices for Environment protection.

Fire & Safety Excellence Award 2011, 2012, 2013 & 2016"

Occupational Safety, Health & Environment Trophy 2009, 2010 and 2015 from EFP & ILO.

Workplace Safety award 2012 (In large industry category, 2nd position) from EFP & ILO.

Certificate of Excellence in Chemicals Sector by Management Association of Pakistan (MAP) for last four years.

The company's quality & environmental management is globally certified to the ISO 9001: (Quality Management System) ISO 14001 (Environment Management System) and OHSAS 18001 (Occupational Health & Safety Assessment System) standards, thus guaranteeing its customers internationally established standards of quality of products and business processes and of environmental protection. ■

## Asian Food Industries Limited

Asian Food Industries (AFI) under the brand name Mayfair has brought joy to millions of consumers since 1969. Mayfair with its premium quality confectionary and biscuit brands brings fond memories to young kids and all who have grown up savoring our candies, bubbles, chews, toffees and biscuits. We enjoy the trust of our consumers in Pakistan and in over 25 countries around the world.

Asian Food Industries Limited was set up with the objective of developing and producing premium quality confectionery & biscuit products.

Corporate Social Responsibility is the continuing commitment by Asian Food Industries to operate ethically and contribute to economic development while improving the quality of life of the workforce and their families as well as of the local community and society at large.

Mayfair will play a leading role in fulfilling future needs of quality foods to discerning consumers nationally and internationally, enabling to generate employment and foreign exchange to build and boost economy at home and be recognized as a responsible Organization.

### Mayfair CSR Program:

Mayfair - Asian Food Industries actively seek to make a positive impact on society through the products it produces. Eager to



ensure that its operations and relationships, through the voluntary contributions the company makes to the community are based on care and sustainability. The company is also committed to make continuous improvements in the management of its environmental impacts and to work towards its longer-term goal of developing a sustainable business.

### Mayfair Environment Excellence and Care program:

Mayfair is actively pursuing Operational excellence programme taking care of areas of Occupational health and safety and environmental care. An energy conservation strategy was formed and implemented since early 2013 in its true spirit that has yielded significant returns in the form of fuel cost and electricity consumption. ■



**Hand in hand, lets save the land**

**Like our page to get  
daily updates about  
Environment & CSR**

**facebook.com/NFEH**

## Attock Refinery Limited (ARL)

Attock Refinery Limited (ARL) was incorporated as a Private Limited Company in November, 1978 to take over the business of the Attock Oil Company Limited (AOC) relating to refining of crude oil and supplying of refined petroleum products. paid-up capital of the Company was Rs 80 million which was subscribed by the holding company i.e. AOC, Government of Pakistan, investment companies and general public. The present paid-up capital of the Company is Rs 852.93 million.



ARL is the pioneer of crude oil refining in the country with its operations dating back to 1922. Backed by a rich experience of more than 90 years of successful operations, ARL's plants have been gradually upgraded / replaced with state-of-the-art hardware to remain competitive and meet new challenges and requirements.

It all began in February 1922, when two small stills of 2,500 barrel per day (bpd) came on stream at Morgah following the first discovery of oil at Khaur where drilling started on January

22, 1915 and at very shallow depth of 223 feet 5,000 barrels of oil flowed. After discovery of oil in Dhulian in 1937, the Refinery was expanded in late thirties and early forties.

There were subsequent discoveries of oil at Meyal and Toot (1968). Reservoir studies during the period 1970-78 further indicated high potential for crude oil production of around 20,000 bpd. In 1981,

the capacity of Refinery was increased by the addition of two distillation units of 20,000 and 5,000 bpd capacity, respectively.

In 1999, ARL commenced JP-1 pipeline dispatches and in 2000, a Captive Power Plant with installed capacity of 7.5 Megawatt was commissioned. Another expansion and up gradation project was completed in 1999 with the installation of a Heavy Crude Unit of 10,000 bpd and a Catalytic Reformer of 5,000 bpd. ARL's current nameplate capacity stands at 43,000 bpd and it possesses the capability to process lightest to heaviest (10-65 API) crudes ■

## Bridge Power Batteries

Bridge Power Batteries by Rainbow Hi-Tech Engineering Company (Pvt) Ltd.

Rainbow Hi-Tech Engineering is the Pakistan's leading manufacturer of car starter batteries heaving One year warranty. In addition to state-of-the-art development and production systems, Rainbow Hi-Tech Engineering Company (Pvt) Ltd. relies on innovative technology centers, which are consistently working to optimize the design and performance of the products.



neutralizes the waste water and removes its lead content in accordance with the applicable environmental standards in Pakistan. At our Rainbow Hi-Tech Engineering Company (Pvt) Ltd. production facility, waste water is discharged to the municipal sewer system after purification.

Rainbow Hi-Tech Engineering (Pvt) Ltd is an entity producing conventional batteries encompassing a skilled and dedicated work force. We are firmly committed to providing quality products that enhance the customer throughout the different regions in a manner consistent with the needs of our customers.

### Environmental Policy

Pursuant to the applicable environmental laws and regulations in Pakistan, we have installed various equipment at all of our production facilities for the removal of lead dust and particles generated during our production process and to minimize the amount of pollutants in the air. The equipment includes ventilation systems, dust absorbing and removing systems, acidic mist and lead fumes purifying machines and fresh air pipelines.

Our production process generates waste water containing lead and sulphuric acid. We have installed waste water treatment facilities at our production facilities. The water treatment facility

Rainbow Hi-Tech Engineering (Pvt) Ltd will surely go beyond serving current needs of our customers with an eye toward the future. We will continue our efforts to produce excellent quality and provide our customers with the best service possible. Presently Rainbow Hi-Tech Engineering (Pvt) Ltd Is one of the leading manufacturers in the country, thus providing customers with the best possible quality with one year of warranty. Our sale proceed continue to be a catalyst for economic growth by maintaining a cost effective, customer oriented and efficient production system. ■

## Tree Plantation Campaign Green Karachi



## Clariant Chemical Pakistan (Pvt.) Ltd.

As one of the world's leading specialty chemical companies, Clariant contributes to value creation with innovative and sustainable solutions for customers from many industries. Our portfolio is designed to meet very specific needs with as much precision as possible. At the same time, our research and development is focused on addressing the key trends of our time.

a leader in colour and additive concentrates and technical compounds for the plastics and textile industry. The business offers an extensive portfolio of products, capabilities and technical expertise.

The Industrial & Consumer Specialties Business produces Chemicals for many markets like Personnel Care, Crop Protection, Industrial & Home Care, Paints & Coating and Aviation. The business not only supply chemicals but also formulation assistance for all the markets.

Oil & Mining Services Business is a leading supplier of chemicals and integrated services to the oil and gas industry. The business adds value throughout the oil and gas life-cycle, from exploration, field development, extraction, processing, transportation and refining, to providing rapid response to client needs.

Pigments Business is a leading global provider of organic



**CLARIANT**

pigments, pigment preparations and dyes used in coatings, printing, plastics, and other specialty applications.

Our broad portfolio includes high-performance pigments to meet the exacting demands of the automotive, architectural and plastics industries as well as colorants used in ink jet and laser printers tailored to individual needs.

Decades of experience and know-how have made our products the industry standard for technical performance and quality. This is supported through our global technical service centers.

Catalysts is a leading global developer and producer of a broad portfolio of catalysts for industrial processes. Innovative catalysts and adsorbents deliver significant and sustainable value to customers by enabling higher production throughput, and lower energy consumption, while reducing hazardous emissions from industrial processes and combustion engines.

Additives include a broad range of products for many applications that help plastics and paints resist heat, light and weather. Other products include halogen-free flame retardants that are used in protective coatings, resins, thermoplastics and polyester fibres. ■

## Dawlance (Pvt.) Ltd.

Dawlance started their operation in 1980 with the production of refrigerators. Today they are the proud manufacturers of Refrigerators, Washing Machines, Vertical Freezers, Chest Freezers, Split Air Conditioners & Microwave Ovens.

Dawlance had 03 production facilities. They had the largest dealership network and Largest after-sales customer service workshops across the country. The working systems of Dawlance are based on the requirements outlined by the International Organization for Standardization ISO 9001:2008 (Quality Management System), ISO 14001:2004 (Environmental Management System) and OHSAS 18001:2007. It includes provision for the prompt detection of discrepancies and for timely, effective, corrective and preventive actions.

Dawlance is not only popular for its reliable and innovative products but it's also popular for its policies, practices, processes that lead to making the environment safe and healthy. Dawlance exercises reliability in all its functions and has been making every effort to protect the natural resources of the environment and in turn making it a better place to live in for all individuals.

Dawlance is not only popular for its reliable and innovative products but it's also popular for its policies, practices, processes that lead to making the environment safe and healthy. Dawlance exercises reliability in all its functions and has been making every effort to protect the natural resources of the environment and in turn making it a better place to live in for all individuals.

### ENVIRONMENTAL POLICY:

We are committed to minimize impact on the environment through pollution prevention, reduction in consumption of natural



**Dawlance**

resource, control emissions, and reduction and recycling of waste. The company manages its product and processes that are not harmful to our surroundings and community by complying to all applicable legal and regulatory requirements.

All Environmental Testing conducted by Dawlance under the guideline of NEQS (National Environmental Quality Standard) provide safe

environment not only to all employees but also the stakeholders. It is indeed heartening to see companies like Dawlance playing their part by contributing to the well being of the environment & society. Dawlance has set an example for all the new & emerging manufacturing companies with regard to compliance with the quality management. ■



**Cleaner Environment  
Greener Pakistan**

## DG Khan Cement Company Ltd.

### VISION STATEMENT

Transform the Company into a modern and dynamic cement manufacturing company

### MISSION STATEMENT

Provide quality products to customers and explore new markets to promote sales of the Company.

Establishment DGKhan Cement Company Limited was established under the management control of State Cement Corporation of Pakistan Limited in 1978 as private limited company. DGKCC started its commercial production in April 1986 with 2000 tons per day (TPD) clinker based on dry process technology.

Acquisition by Nishat Nishat acquired DGKCC in 1992 under the privatization initiative of the government. After privatization the company was listed on Stock Exchanges in September 1992.

The Company is principally engaged in the manufacturing and sale of Cement. The Company is member of All Pakistan Cement Manufacturers Association and Lahore Chamber of Commerce and Industry.

### FUTURE OUTLOOK AND ON GOING PROJECTS

It requires untiring and sincere efforts from government to support the shaky economic situation and may demand tough decisions. But decisions should be in the right direction! Energy being the life line of economy is vital to economic growth of a



country. New ventures need to be explored to generate extra energy at a cheaper rate. High increase in electricity and gas tariffs would increase the cost of business. Middle East, specifically Gaza, Syria and Iraq unrest may cast frustrating impacts on global economy including Pakistan. This unrest may result in Oil price hikes which would be translated into high inflation. It is expected that local demand of cement may increase due to expected government spending on infrastructure projects. Revival activities may result in additional demand of construction material. The company had abandoned establishing a plant in Mozambique due to lack of major infrastructure required to set up a cement plant. However, we still intend to make a venture in Africa. Corporate Social Responsibility The company is operating two schools in DG Khan cement bearing total annual cost of about Rs. 20 million. The company always contribute to rehabilitation activities of any natural disaster effected people.

### Environment Protection

Company has installed Waste Heat Recovery plants at its both sites. At DGK site it is for 10.4MW and at KHP site it is for 8.6MW electricity generation plants. Through these projects company could generate electricity by utilizing exhaust gases emitted to the atmosphere through the stacks of clinker cooler and kiln pre-heater of kilns. ■

## Dr Essa's Lab & Diagnostic Centre

Dr. Essa's Laboratory & Diagnostic Center, founded in 1987, has rapidly achieved its reputation as one of the leading laboratories in Pakistan.

Prof. Dr. Essa M Abdulla, founder and CEO of Dr. Essa's Laboratory & Diagnostic Center, recently received the Eli Lilly Gold Medal 2000, presented by Professor Ata-Ur-Rahman, Federal Minister of Science & Technology, for the most outstanding Microbiologist and Educationist of Pakistan.

Essa Lab specializes in a wide range of testing services available to patients, physicians and hospitals. It pledges to provide its clients with clinical laboratory analyses that meet the required standards of quality and accuracy, using state-of-the-art equipment and methodology, thereby providing trusted and reliable results.

### Our Vision:

Dr. Essa's Laboratory & Diagnostic Centers' vision is to be the benchmark Medical Laboratory

Service provider in all present and future markets. We envision a diagnostic center which not only caters to laboratory medicine, but also provides all Radio-Diagnostic Services like C.T scan, M.R.I and ECG available under one roof.



We plan to be one of a kind Institution of Laboratory & Radio-Diagnostic Sciences, providing not only education, training and research, but also continuing education for all health care professionals.

### Our Mission:

Dr. Essa's Laboratory's mission is to provide the highest quality Medical Laboratory Services for all, with care, expertise and integrity. We strive each day to work hard to maintain our standards of excellence and reliability.

Dr. Essa's Laboratory & Diagnostic Centers' vision is to become a benchmark medical laboratory. In order to become the service provider in all present and future markets. We envision a diagnostic center which not only caters to Laboratory Medicine, but also provides all Radio-Diagnostic Services like C.T scan, M.R.I, ECG etc available under one roof.

Dr. Essa's Laboratory's mission is to provide the highest quality medical laboratory Services for all, with care, expertise and integrity. We strive each day to work hard to maintain our standards of excellence and reliability. ■

## ECO BAGS

Engro-Bags Products is a certified B Corporation. Our mission is to offer thoughtful, ethically and sustainably sourced, durable-reusable bags that allow people to reduce, reuse, recycle and re-imagine the world we live in.

We believe that less can be more. We are passionate about living greener, simpler and more abundant lives.



Our business choices are driven by two age-old sayings... "Leave no trace," and "Do no harm." Our guiding philosophy is our belief that everyone can make their own best effort to live lightly on the earth and live more gently with each other. We believe we can be agents of change and influence culture by generating & extending these conversations and producing goods to support this way of living. ■

## Engro Fertilizers Zarkhez Plant Karachi

Engro Fertilizers Limited is a subsidiary of Engro Corporation and a renowned name in Pakistan's fertilizer industry. It is traded on the stock market under the symbol 'EFERT'. Engro holds a vast, nationwide production and marketing infrastructure and produces leading fertilizer brands optimized for local cultivation needs and demand. Engro is also a leading importer and seller of Phosphate products, which are marketed extensively across Pakistan as phosphatic fertilizers.

The company's extensive market development activities have ensured a sustained pull for its primary and secondary fertilizer products and sellout productions since launch. Engro Fertilizers Limited enjoys loyal customer base across Pakistan owing to its trusted fertilizer brands and continual farmer assistance in training and education.

Engro Fertilizers Limited was incorporated in June 2009, following a decision to demerge fertilizer concern from its parent company Engro Chemical Pakistan Limited. The continual



expansions and diversifications in its enterprises necessitated a broad restructuring in Engro Chemical operations and management. To facilitate better oversight, Engro Chemical Pakistan was converted into a holding company named Engro Corporation, and its fertilizer business was subsequently demerged to a newly formed Engro subsidiary - Engro Fertilizers Limited.

Engro's fertilizer manufacturing facility at Daharki has been experiencing ongoing expansion. This, coupled with distinct dynamics of highly nuanced fertilizer industry warranted an independent and dedicated business entity and approach. Engro Fertilizers is poised to become the leading urea manufacturer in the country following major upgrading of its manufacturing capabilities. ENVEN 1.3-a tremendous expansion in Engro's urea manufacturing facility went into production in November 2010 and looks set to end Pakistan's near-term urea imports, leading to benefits of an expanded local urea base and savings in national exchequer. ■

## Fauji Oil Terminal & Distribution Co. Ltd.

Fauji Oil Terminal and Distribution Company Limited (FOTCO), a joint venture of Fauji Foundation and Infraavest Ltd. of Hong Kong, owns and operates a state of the art marine oil terminal at Port Bin Qasim, Karachi.

FOTCO Terminal has a designed capacity to handle a minimum of 09 million tons of oil per annum at 50 % berth occupancy and comprises a jetty capable of berthing ships up to 75000 DWT, a central loading platform on which three 16-inch diameter marine loading arms are mounted. The terminal is connected to the shore by a 04-kilometer long trestle designed to accommodate six product pipelines. FOTCO terminal, built in accordance with the highest international standards became the first ISO-9002 Certified Marine Oil Terminal in Pakistan in 1998.

The FOTCO O&M team is fully familiar and conversant with the latest and the state of the art technology employed for any modern marine oil and gas terminal worldwide.



Since its inception the terminal is being operated, maintained and managed by local technical and management personnel who have over the years acquired valuable expertise in marine terminal and pipeline operations and maintenance.

The Marine Operations conducted at the Terminal are developed with strict and stringent adherence to all international maritime codes

including OCMIF and SIGTTO Guidelines.

Training is an essential part of the management system, technical expertise and management skills of the dedicated work force operating and maintaining the terminal is consistently monitored for training need analysis and evaluated for effectiveness of training acquired. The technical staff is regularly sent on local and foreign training to keep them updated on safety, security and latest terminal operations and management systems and procedures. The company's financial health is extremely sound and is completely debt free. ■

## Fauji Fertilizer Bin Qasim Limited

The Company started out in 1993 as Fauji Jordan Fertilizer Company, a joint venture of Fauji Foundation, Fauji Fertilizer and Jordan Phosphate Mines Company (JPMC). It planned to produce, for the first time in Pakistan, 1,670 metric tons per day of Granulated Urea and 1,350 metric tons of Di-Ammonia phosphate (DAP). In 2003, after JPMC sold its shares, it was renamed as Fauji Fertilizer Bin Qasim Limited (FFBL). The major share-holders are FFC (51%) and Fauji Foundation (17%).



country's agricultural production and economy by continual improvement and attaining excellence in all areas of its functioning.

The Company's management and all employees are dedicated to practice efficient and environment friendly process for prevention of pollution and strive to exceed local and international standards on Quality, Health, Safety

and Environment.

FFBL plant site is a modern Granular Urea and Di-Ammonia Phosphate (DAP) fertilizer manufacturing complex, built at a cost of US\$ 468 million and located on 350 acres in the Eastern Zone of Bin Qasim, Karachi. Commercial production started on January 1, 2000.

Being the sole producer of DAP and Granular Urea, it is making a significant contribution towards agricultural growth in the country, by meeting around 50% of the demand of DAP and about 10% of Urea in the domestic market.

FFBL is focused on fostering an inspiring and innovative performance culture based on its vision and mission, the code of conduct, ethics, sustained progress and its core values.

Fauji Fertilizer Bin Qasim Limited is committed to support

FFBL duly realizes its responsibility in empowering of the underprivileged communities, employee welfare, safe industrial operations and alignment of company policies and practices in line with globally recognized principles. FFBL remains committed to an environmental policy of collaborating fully with regulatory authorities and local communities to minimize the effects of its activities on the natural and human environments associated with its operations.

In Nov 2010, after approval by the Board, a long-term CSR Program was launched in collaboration with a renowned NGO, Human Development Foundation (HDF). As per MOU the NGO has to implement all program activities in Ghaggar Phattak Bin Qasim Town, Karachi and FFBL to provide funds up to Rs 49.1 million over a period of 5 years. ■

## Feroze1888 Mills Limited

We at Feroze1888, strive towards generating high quality of end products in an environment that poses no risks and threats for investors, customers and employees. For us, it is imperative to provide the best quality products and to constantly work towards product improvement, capacity enhancement and continual new market research to meet customer continual exceeding demands.



of how intense the economic climate is - is in the area of sustainable development in water management. At Feroze1888 we believe that a drop of water we save today will save our future and with this thought we continued to strive for the opportunities in our operations that significantly reduced water consumption by 70%.

We at Feroze1888, foresee a bright future but with competition. Constrained capacity utilization, tough and sluggish local and international markets, continuously rising costs are just a few of the factors that stand to pose hurdles for growth.

It's all about creating an Eco friendly environment in this day and age- We at Feroze1888, bound ourselves to caring for our environment by adopting the most efficient and clean energy generation.

We make every effort to Reduce, Reuse and Recycle waste minimize natural resource consumption & treat any harmful emissions before they are released, to minimize environmental footprint. Our efforts in this area include:

### Water Usage & Disposal

One area that we have paid consistent attention - regardless

### Effluent Treatment plant

We continue to make excellent progress in managing waste water released as a result of processing activities. In order to operate in an environmental friendly way, we have installed Effluent Treatment Plants at our different locations which has enabled us to meet with all regulatory / statutory requirements and NEQS standards.

### Gaseous Emission

Our processes are energy intensive where electricity & steam are two major elements. We have CHP (combined heat & power) systems at all our locations that deliver Heat, Power and Cooling at maximum efficiency. Air emissions are checked at regular interval for suitability to be released to environment. ■



## Green Crescent Environmental Engineering

Green Crescent Environmental Engineering Consultants is an inspiration of His Highness Sheikh Zayed bin Sultan Al Nahyan's (Founder of the UAE) will and vision for a greener and sustainable environment for the country and its people. We are a growing consultancy company for Environmental Compliance that offers inspection, testing, investigation and advice to customers through an unrivalled range of technical expertise and accredited services. We provide environmental consultancy and compliance support in each of the Emirates to meet the specific requirements for each Emirate.



We offer our services in the following six broad areas related to Environment, Health and Safety:

1. Environmental Studies and Assessments
2. Sustainability / Green Building Consultancy
3. Environmental Monitoring and Testing Services
4. Health and Safety Consultancy
5. Waste Management Consultancy
6. Trainings

### Vision & Mission

Green Crescent Environmental Engineering Consultants aims

to be the environmental consultancy of choice for its clients all over the United Arab Emirates and the rest of the GCC countries.

At the same time it is our goal to be the company for which every environmental professional wants to work for and contribute towards our vision in helping clients to develop the professional capacity to prevent and minimize their organization's environmental, health and safety risks liabilities.

Our exceptional team of consultants, engineers and marketers will make this happen by continuing to be innovative, consistent, and ethical while providing quality services to our clients.

### Quality Policy

Green Crescent Environmental Engineering Consultants are in the business of helping our clients succeed. We deliver some of the most challenging projects in the environmental industry.

We work in teams, advocate for clients and solve complex environmental challenges around the world. We have a passion for what we do - for being the best we can be. We're constantly striving to push the "performance" bar higher. ■

## Hub Power Company

Hub power station was the first project to be successfully co-financed by several governments, the World Bank as well as international private sector lenders and investors. It set the standard for the formulation of a private power framework in Pakistan which has elicited numerous responses from international investors. The Hub Power Company is listed on the Karachi, Lahore and Islamabad Stock Exchanges and its Global Depository Receipts are listed on the Luxembourg Stock Exchange. It has over thirteen thousand (13,000) Pakistani and International shareholders.



We are First Major infrastructure project in a developing country. International equity offering and underwriting for a developing country Private sector infrastructure project.

### World Bank financed Infrastructure Project

Stock market floatation of a single power station under construction (380 million US\$).

In 2003 the Board of Hubco decided to do more energy related investments that would add value to its shareholders. With this vision the tag line of Hubco was changed to "Growth through energy" in 2006 and the Board decided to participate in GOP's program for Fast Track Project. Narowal was identified as Project site. The Board approved the 225 MW capacity Narowal Power Plant in 2007 at an estimated cost of Rs. 24.276 bn.

### Narowal Power Plant

The plant achieved its COD on 22 April 2011. The plant entered into an Equipment Supply Contract (ESC) with MAN Diesel & Turbo, Germany and Construction Contract (CC) with MAN Diesel Pakistan (Pvt) Ltd in April 2008 collectively called Engineering, Procurement and Construction (EPC) Contract.

The Owners Engineers were Mott MacDonald, Ireland. The O&M Contractor are TNB Remaco Pakistan (Pvt) Ltd a subsidiary of TNB Repair and Maintenance Sdn. Bhd, Malaysia. Narowal is a combine cycle power plant with net output of 214 MW. It consists of 11 diesel engines of 18 MW net output each plus a steam turbine of 16 MW. The fuel used is High Sulphur Furnace Oil (HSFO) supplied by Bakri Trading Company Pakistan (Pvt) Ltd.

### Laraib Energy Ltd

Continuing with its strategy of "growth through energy" the Board in 2008 decided to acquire 75% stake in Laraib Energy Ltd, a company setting up 84 MW capacity run of the river Hydel power plant on New Bong Escape 8 km downstream of Mangla Dam. With this project achieving its COD by June 2013 Hubco will become the first hydropower IPP in Pakistan. ■

## IN Consult (Pvt.) Limited

TIN Consult (Pvt.) Ltd. was established in 1990 to provide high quality professional services for the planning, design, construction supervision and management services to utilities, public and private sector agencies & organizations. These services were provided through key specialist including Architects, Town Planners, Environmentalist, Geo Technical Expert, Engineers in the fields of Civil, Structure, Road, Public Health, Electrical, Mechanical, Chemical, Process, Contract Experts, Quantity & Civil Surveyors and Allied Specialist including Chartered Accountants, Cost Accountants and Business Administrators. Over the years, IN CONSULT has provided consultancy services to approximately 300 projects of various sizes and nature. The Company has completed assignments for various clients including the Commission of the European Communities, International Bank for Reconstruction and Development (IBRD), United Nations Industrial Development Organization (UNIDO), Norwegian Agency for Development Cooperation (NORAD), United Nation Development Program



(UNDP), United Nations International Drug Control Program (UNDCP), United Nations Office for Project Services (UNOPS), GIZ, Water And Power Development Authority (WAPDA), Pakistan Air Force, Punjab Industrial Development Board, Privatization Commission, Islamabad, Punjab Housing and Physical Planning, Punjab Workers Welfare Board , Export Promotion Bureau, AJK Hydro Board, Infrastructure

Project Development Facilities (IPDF), Sarhad Development Authority (SDA), Sarhad Industrial Development Board (SIDB), Higher Education Commission (HEC) etc. These assignments were carried out within and outside Pakistan. IN Consult has worked on several projects in association with several foreign consultants including KEMA USA, Acres International Canada, Decon Germany, South Pole Carbon Asset Management Ltd., Switzerland, Lewis & Hickey-Ireland, PESB-Malaysia. IN Consult has recently signed an MOU with GIZ for CDM projects under Kyoto Protocol. IN Consult is member of Pakistan German Business Forum. IN Consult is also a member of Asian Lighting Compact (ALC). ■

## K-Electric Limited

K-Electric, formerly known as Karachi Electric Supply Company Limited and commonly referred to as KE is a Pakistani vertically integrated electric company involved in generating, transmitting and distributing power to over 2.5 million customers in Karachi and in the nearby towns of Dhabeji and Gharo in Sindh and Hub, Uthal, Vinder and Bela in Balochistan. It employs over 10,242 people and covers 6,500 square kilometers with industrial, commercial, agricultural and residential areas falling under its network. K-Electric was incorporated on September 13, 1913, under the now repealed Indian Companies Act, 1882 (currently Companies Ordinance, 1984). In 1952, the Government of Pakistan took control of the Company by acquiring majority shareholding of KESC. In 2005, the Government privatized KESC. In 2009, The



Abraaj Capital, a leading private equity firm based in Dubai, bought the power utility for a significant equity stake in the company.

Over the last few years, the company demonstrated a strong ability to bring about a sustainable change. It has pursued a path of visible growth and transformation which has placed it amongst the most dynamic institutions not only in

Pakistan but also in the region. K-Electric has its own generation capacity of 1,652 MW, inclusive of 450 MW that has been added owing to the initiatives of the new management and the company inaugurated an additional 560 MW project in 2012. In addition to their own generation, K-Electric has power purchase agreements with IPPs of 220 MW, with WAPDA / NTDC of 650 MW and with KANUPP of 60 MW respectively. ■

## Kot Addu Power Company Limited

The principal activities of the Company are the ownership, operation and maintenance of the 1600 MW nameplate capacity multi fuel fired power plant (gas, furnace oil and diesel) at Kot Addu, Punjab. The Company sells the electrical energy produced from its power plant to its single customer, the Pakistan Water and Power Development Authority.

The Company's power plant is Pakistan's largest combined cycle power plant. The plant comprises of 10 multi fuel fired gas turbines and 5 steam turbines installed in five phases between 1985 and 1997. These turbines are divided into three Energy Blocks with each Block having a combination of gas and



steam turbines. The plant's combined cycle technology enables it to use the waste heat from the gas turbine exhaust to produce steam in the heat recovery steam generator, which in turn is used to run the steam turbines thereby resulting in fuel cost efficiency and minimum wastage. The power plant is a multi-fuel gas-turbine power plant with the capability of using three different fuels to

generate electricity, namely: gas, light sulphur furnace oil and high speed diesel. It also has the ability to generate electricity for itself in case of a country wide blackout. ■

## KSB Pumps Company Ltd.

### Mission Statement:

We manufacture and market a wide range of standard and engineered pumps and castings of world class quality. Our efforts are directed to have delighted customers in the water, sewage, oil, energy, industry and construction sectors. In line with the Group's strategy, we are committed to develop into a center of excellence in water application pumps and be a strong regional player. We want to market valves, complete system solutions and foundry products including patterns for captive, automotive and other industries. We will develop a world class human resource with highly motivated and empowered employees. The measure of our success is, being a clear market leader, achieving quantum growth and providing attractive returns to stakeholders.

### Values:

Trust has to be earned. It requires a level of credibility, which each of us should seek to achieve and actively develop through



reliability and professionalism in our day - to - day work. The overall interest of the Company has top priority in our work and ranks ahead of departmental and individual interests. What we do therefore should not serve to gain advantage at the expense of others. Integrity and appropriate level of modesty are integral elements of the way we present ourselves. Responsibility means accepting the consequences of one's actions. This especially applies to each and every one of us in our work. And it also applies to our Company in its business and social relations. We have a good command of the techniques and methods we need for our work, and seek to continually acquire further knowledge to improve our effectiveness and efficiency. In the search of solutions to problems we apply due care and act with foresight. We are attentive to others and further our cooperation by showing respect and appreciation. Remaining receptive and open to other people and ideas enables us to learn from each other and develop together. ■

## LOTTE Chemical Pakistan Ltd.

LCPL stands strong as the only world-class manufacturer and supplier of Purified Terephthalic Acid (PTA) in Pakistan with a capacity to deliver 500,000 tonnes of PTA annually through its state-of-the-art plant situated at Port Qasim, Karachi.

PTA is the primary raw material for producing Polyester fiber, Polyester filament yarn, Polyester film and Polyethylene Terephthalate (PET). LCPL holds the foundation of the polyester chain in Pakistan.

For producing PTA we import our feedstock (Paraxylene) from reputable suppliers based in Asia and Middle-East region. Our plant operates under a technology license with IPT (Investa Performance Technologies) which is currently the leading global supplier of PTA technology.

LCPL has also enabled expansive infrastructure development in Port Qasim area including Chemical Jetty, raw water pipeline and production of industrial gasses through third party contracts. This has started a new trend in industrial investments in Pakistan.

Besides enabling significant growth in downstream industries LCPL operations provide significant foreign exchange savings in excess of USD 100 million annually for country.

Our management policies serve as the best business guideline for developing LOTTE Group into a truly global business and reflect principles centered on people and strategy. These management policies present LOTTE's signature essence of success and why and how questions.

Mission: We enrich people's lives by providing superior products and services that our customer love and trust.



### HSE In-Focus

Health, Safety, Environment & Security is the topmost component of our business core values and commitment to subsist by this value brings our employees and contractors together to work as a family. To achieve world class standards, the business has developed its HSE&S management system following the guidelines of internationally recognized systems as well as local legislative requirements. The organization is certified with OHSAS 18001: 2007, ISO 14001: 2004 & ISO 9001:2008.

It is a matter of pride, gratitude, and celebration of success for the organization on achievement of 39 Million Man Hours (MM Hrs) without Lost Time Case (LTC) in June 2012 based on OSHA reporting requirements, 10.25 Million Man Hours (MM Hrs) were contributed by Employees and 28.75 Million Man Hours (MM Hrs) by Supervised & Other Contractors. Lotte Chemical Pakistan has maintained an aggressive audit regime cycles. Training and re-training, effective communication of HSE learning events (near misses). Health of employees is of prime importance to the company. ■



## Lucky Cement Limited

Lucky Cement Limited (LCL) is Pakistan's largest producer and leading exporter of quality cement with the production capacity of 7.75 million tons per annum. The Company is listed on Karachi, Lahore, Islamabad and London Stock Exchanges.

Over the years, the Company has grown substantially and is expanding its business operations with production facilities at strategic locations in Karachi to cater to the southern regions and Pezu, Khyber Pakhtunkhwa to furnish the northern areas of the country. Lucky Cement has a network of over 200 dealers which enables it to dominate the local market. Lucky Cement is also first Pakistani company to export sizeable quantities of loose cement and is the only cement manufacturer to have its own loading and storage terminal at Karachi Port. Lucky Cement is also the only multinational Pakistani cement company, with manufacturing operations in DR Congo and Iraq.

Lucky Cement has an edge over its competitors for being the only company with an effective and state-of-the-art setup for bulk transportation and is catering to more than one-third of the total exports from the country. Lucky Cement produces Ordinary Portland Cement, Sulphate Resistant Cement and Clinker and sells both bagged and loose cement. It is also the largest exporter of Ordinary Portland Cement from Pakistan.



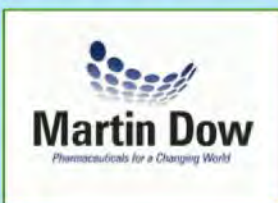
Lucky Cement, pioneering innovation, has invested in a number of pro-environment projects at its plants including waste-heat-recovery plant, tyre-derived-fuel plant (TDF) and refused-derived-fuel to further enhance its green operations. LCL has also joined hands with Government of Pakistan to support President's Forestation Program and plans to plant trees all over the country; specifically, near its plant vicinity. Lucky Cement is always committed to its social and environmental responsibilities and actively participates in community welfare and awareness programs. Lucky Cement strongly supports the causes that lead to an improved and informed society and regularly contributes its share in uplifting health and educational standards of the society at large.

Lucky Cement is an ISO 9001:2008 and 14001:2004 certified company and possesses many other international certifications including: Bureau of Indian Standards, Sri Lankan Standard Institute, Standards Organization of Nigeria, Kenya Bureau of Standards, South African Bureau of Standards. Lucky cement is also privileged to have many awards endorsing its excellence. LCL has been winning the Export Trophy for highest exports from KPK Chamber of Commerce, Brands of the Year award and Annual Environment Excellence Award consistently from the past many years. ■

## Martin Dow Limited

Martin Dow is the bench mark for excellence in pharmaceutical industry, expanding with more than 1000 employees countrywide. Martin Dow has excelled in world class branded generics for half a decade and now growing in emerging markets. We market world-class branded generics which are developed, formulated and manufactured at our cGMP compliant manufacturing facility.

At Martin Dow, desire is the key to unrelenting pursuit of our commitment towards excellence. It was accomplished by the acquisition of the manufacturing facility of Roche Pakistan, with the state of the art technology and highly capable technical team. This acquisition by Martin Dow is a leap towards attainment of our goal to become the next emerging, premium and globally recognized generic brand in the pharmaceutical industry. **Our Mission:** Our highest proof of virtue is that we possess boundless power of excellence directed towards serving humanity. Our corporate values are at par with international standards, covering all socio-ethical, legal and environmental boundaries. We believe in treating every employee with dignity & respect and in creating a culture of continuous learning & development. We firmly believe in establishing a long term & transparent relationship with our business associates by entering into value added ventures which are mutually beneficial. And, we never forget to share the



benefits of our success with the communities and be socially responsible.

**Our Vision:** At Martin Dow, the true worth of our business is measured by the objectives we want to pursue. Henceforth, our Vision: To be amongst top-10 pharmaceutical companies in Pakistan by the year 2015 To have a strong presence into Emerging Pharmaceutical Markets of the World To acquire advanced technologies

### Safety, Health and Environment (SHE) Standards

Safety, Health & Environmental protection are important and enduring issues in today's changing world. Our Safety, Health & Environment (SHE) standards serve as the guiding way of life for all our employees. The acquisition of Roche Pakistan's manufacturing facility and brand licensing by Martin Dow, has incorporated Roche's commitment to SHE standards in its organizational character. Our manufacturing site is fully equipped with facilities to handle waste and minimize environmental contamination. We pay close attention to preventing and reducing pollution, avoiding accidents and conserving resources. We are allies of growth, longevity & healthy living. For us, sustainable development represents a long-term commitment to the needs of current & future generations. ■

## Millac Foods (Pvt.) Limited

We are a progressive food company having the highest quality standards, currently engaged in manufacturing and marketing of dairy products. We believe in adding value to the lives of our consumers and to hire, train and motivate the best human resources.

Pakistan Milkfood Manufacturers Ltd. (PMML) in a small town called Jhang in the country midlands with the family owning a small part of the company.

1970: Pakistan Milkfood Manufacturers Ltd. (PMML) was bought out by the family, and was authorized to use the Horlicks brand name.

1972: The Company launched its own brand "Malticks", after using the Horlicks brand name for two years.

1973: The Company ventured into the imports of high quality fat filled milk powder from Ireland under the brand name Millac, and formed a company by the name of Millac Pakistan (Pvt.) Ltd. Ever since, Millac remains a household name when it comes to milk.

1986: PMML invested in a sweetened condensed milk plant, and launched the brand Comelle. Ever since its inception, Comelle has remained the market leader in its category.

1991: The Company launched the Irish Milk Powder for the bulk market, and branded it Corolac.

1999: Milk Powder manufacturing capacity was enhanced by



investing in a modern, state-of-the-art plant in the vicinity of Manga, Kasur, under the corporate logo of Millac Foods (Pvt.) Ltd.

2000: The brand Nutramil was launched. Nutramil is a high quality milk powder at an affordable price.

2003: In January, Millac 1kg pouch was launched which was a much-needed addition to the Millac product line.

2003: Skimilac, an ace brand in the skimmed milk category was launched.

2004: The Company re-launched Comelle, with the new packaging and plastic lid. Comelle sachet was also added to the existing product line.

2004: Perkup, a tea-whitener was launched to broaden the existing product range.

2005, January : The Company launched Comelle Khalis Desi Ghee, with "Easy Open End" packaging and plastic lid.

2005, May: The much awaited 'Price Fighter' Milk powder, NutraMil was launched successfully.

2005, August: Skimilac 1kg pouch was added in the portfolio with Extensive Merchandising activities.

2005, September : Millac Family was re-launched with a completely new packaging & Extensive ATL & BTL campaigns.

2006: Millac is now an ISO 9001-2000, ISO 14001-2004 & HACCP Certified Company. ■

## Mughal Iron & Steel Industries

Mughal Iron & Steel Industries Limited produces and sells structural steel products in Pakistan and internationally. It offers ferro manganese, ferro chrome, and silicon manganese products; mild carbon billets, spring steels, stainless steel, and alloys steels; and long rolled products, such as bars, deformed bars, re-inforcement bars, and thermax bars, as well as I beams, angle sections, T bars, and C channels.

Over the years Mughal Steel has emerged as a thriving progressive steel enterprise due to its ability to transform itself rapidly to meet the challenges of a highly competitive global economy. Constant modernization, introduction of state-of-the-art technology and being manned by the highly efficient and dynamic team of employees, has enabled the Company to stay ahead in the industry and successfully meet the expectations of all customers.

"To be a leading corporate entity which is recognized both at the industry level and national level, endeavoring to achieve excellence in core business while striving to explore multiple



growth opportunities, remaining ethically and socially responsible and strengthening the growing base of satisfied customers by providing quality and durable steel products."

Mughal Steel is known not only as a producer of Steel, but also as a recycler and a forerunner in material sciences of Pakistan, who is paving new crevices in the metallurgical industry. Our aim is

to ameliorate and accelerate the pace at which the entire iron and steel industry of Pakistan is moving. Over the years Mughal Steel has created thousands of new jobs through a comprehensive program to rebuild its infrastructure and have devoted efforts towards value addition by introducing ever newer and stronger construction as well as alloy products to its customers by expanding and its girth for trained and skilled employment.

Our future endeavors circle around establishing and enhancing capabilities in three areas; technical leadership, good corporate governance and the industry, international branding as an unrivaled producer of steel. ■

## National Refinery Limited

National Refinery Limited ( NRL ) was incorporated on August 19, 1963 as a public limited company. Government of Pakistan took over the management of NRL under the Economic Reforms Order, 1972 under the Ministry of Production, which was exercising control through its shareholding in State Petroleum Refining and Petrochemical Corporation (PERAC).



### Business activities and refinery's overview

NRL is engaged in the manufacturing, production and sale of large range of petroleum products. The refinery complex of the Company comprises of three refineries, consisting of two lube refineries and one fuel refinery. First Lube Refinery commissioned in 1966 with designed capacity of

539,700 tons per annum of Crude Processing and 76,200 tones per annum of Lube Base Oils.

The Government of Pakistan had decided to place the National Refinery Limited under the administrative control of Ministry of Petroleum & Natural Resources in November 1998.

In June 2003 the Government of Pakistan decided to include NRL in its privatization programme. The selling of 51% equity and transfer of management control to a strategic investor had been proposed accordingly, the due diligence process for the privatisation was initiated. After competitive bidding NRL was acquired by Attock Oil Group in July 2005. The Company has been privatised and the management handed over to the new owner (Attock Oil Group) on July 7, 2005.

Second Lube Refinery commissioned in 1985 with designed capacity of 100,000 tons per annum of Lube Base Oils. The Fuel Refinery commissioned in 1977 with designed capacity of 1,500,800 tones per annum of Crude processing and after revamp the designed capacity comes to 2,170,800 tones per annum of Crude processing. The BTX unit was commissioned in 1985 with design capacity of 25,000 tons per annum of BTX.

NRL enjoys a competitive edge, as it is the only refinery producing LBO in Pakistan. ■

## NovaMed Healthcare (Pvt.) Limited

NovaMed Pharmaceuticals is a name of trust, excellence and quality in the pharmaceutical industry of Pakistan. The company strives to serve the humanity in the best possible way by providing them a wide range of innovative and quality medicines.



NovaMed Pharmaceuticals (Pvt) Ltd, was established in 2003 by the three experienced professionals from local and multinational pharmaceutical industry of Pakistan. The manufacturing facility at Lahore, commenced its production in 2006 and in a short span of eight years, NovaMed has made its mark in Pakistan and international pharmaceutical market with its quality products and contract manufacturing services. This has been made possible by the dedicated efforts of our highly qualified team, and clear vision of its leaders. Today NovaMed is among the leading contract manufacturing organizations of Pakistan.

These products are available in Pakistan and some of the export markets. NovaMed has been rated 'A' by the Drug Regulatory Authority of Pakistan for cGMP compliance and is also ISO 9001: 2008 certified.

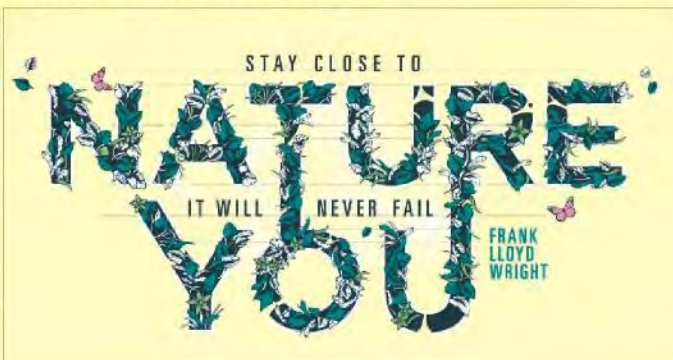
### The Facility:

The manufacturing facility is located on a plot of land measuring four acres, on a highway in the outskirts of Lahore. Covered area is about 50,000 square feet, comprising of Production area, Quality control lab, Raw material and finished goods warehouses, Employee's dining & Recreational area, Maintenance workshop, and Administration block. Production area includes the following

### sections:

- General Tablets
- General Capsules
- Oral Liquid
- Dry Powder Injections
- Liquid Injections
- Psychotropic Tablets
- Cephalosporin (Oral)
- Packaging Area
- Ophthalmic Drops (Under Construction)
- Cream & ointments (Under Construction)

Liquid injectable area also includes In-process lab, Reverse osmosis and Distillation plants. Each section is equipped with sophisticated machinery and latest equipment. All the sections have anti-microbial epoxy flooring that assures protection against infections and contamination. ■



## NOVARTIS Pharmaceuticals Pakistan

**Our Mission and Vision:** Our mission is to discover new ways to improve and extend people's lives. Our vision is to be a trusted leader in changing the practice of medicine.

**Our Values:** Strong values define our culture and help us execute the Novartis strategy in line with our mission and vision.

**Executive Committee:** The Executive Committee of Novartis is the company's senior management and decision-making body.

**Become a Partner:** We collaborate closely with partners who share a common vision and complementary strengths to achieve success.

**Company History:** Novartis was created in 1996 through the merger of Ciba-Geigy and Sandoz and has a rich history spanning over 200 years.

**Our Strategy:** Our strategy is to use science-based innovation to deliver better patient outcomes. We aim to lead in growing areas of healthcare.



**Our Business:** Novartis operates businesses with global scale and strong customer ties, focusing on innovative patented medicines, generics and eye care devices. Novartis Pharmaceuticals commercializes innovative, patented primary care and specialty medicines to enhance health outcomes for patients and health-care providers.

**CSR at Novartis:** Corporate responsibility is endorsed and ingrained at the highest level in our company. It is central to how we run our business. We focus our CR work in two key areas: expanding access to healthcare and doing business responsibly.

**Expanding Access to Healthcare:** Developing new and innovative ways to reach people in lower-income countries is one of our top priorities. To expand access to healthcare, we pursue a variety of approaches - including shared value and zero-profit initiatives, patient assistance programs, as well as philanthropy.

**Doing Business Responsibly:** We recognize that achieving our business goals requires that we operate with high integrity, transparency and environmental sustainability. ■

## Orient Oils (Pvt.) Limited

Orient Energy Group has setup manufacturing and blending facilities for environment friendly New/Fresh/Virgin Transformer/Insulating Oil and Lubricating Oils at Korangi Industrial Area, Karachi, duly backed and supported by Hi-tech SOS Laboratory by launching a private limited Company under the name of Orient Oils (Private) Limited.



maintenance like Scheduled Oil Sampling (SOS) to OESL's O&M. Maintenance services expanded to Electrical Equipments including Transformers with Mobile De-Hydrating Unit.

"LUBE OIL BLENDING PLANT: Orient Energy Systems (Private) Limited also being the authorized dealer/ distributor of GE JENBACHER GAS GENSET in Pakistan, Bangladesh & U. A. E. and other branded

Machines and Equipments are generating sizeable volumes of Gas Engine Oils and other Lubricants which forced OESL to obtain any one or more International brand/brands of Gas Engine Oil duly approved by OEM under franchise arrangement and also come forward for local blending of Lubricants to withstand competition with locally blended International brands.

TRANSFORMER OIL MANUFACTURING PLANT: By virtue of having team of professionals with experience of over 30 years in developing, marketing of indigenous Transformer Oil in Pakistan coupled with an advantage of OESL's strong presence in the power/Energy sector, the establishment of manufacturing/processing unit of Transformer Oil was the first priority beside SOS Laboratory in order to start commercial activities well before the Blending plant came into being. ■

### Mission and Vision

**Mission:** Do not market-product or services but always strive to market benefits and satisfaction to its clients.

**Vision:** Always think beyond the Product & Service being rendered and consider what the consumer is actually buying and his reasoning behind that purchase.

### Company Objectives

Orient Oils (Pvt.) Limited was established and incorporated on 20-01-2011 under company's ordinance 1984, as a Private Limited Company (Limited by shares) with a paid-up capital of Rs. 250 Million with the following objectives;

**LABORATORY (SOS):**To provide service of Oil testing and monitoring with tracking system to back-up after Sales Service/

## Pakcem Limited

PAKCEM Lafarge- A World Leader in Building Materials Lafarge Pakistan, a subsidiary of Lafarge Group, is a world leader of building materials. It is the first and only multinational cement manufacturer in Pakistan.



efficient manner while delivering high quality of cement.

### Our Business- Generating Value for our Clients

Lafarge Pakistan is committed to generating value for our clients, delivering the value creation that our shareholders expect, giving our employees every opportunity to contribute and develop their talents and contributing to building a better world for our communities. We are driven by the needs of our customers, shareholders, local communities and architects. Our value-added solutions encourage creativity whilst leaving a lighter trace on the world.

### Our Contributions to Growing the Cement Industry of Pakistan

Lafarge Pakistan is committed to growing the Cement Industry of Pakistan and contributing to the economic growth of the country.

### Innovation at its Best

At the Pakcem Lafarge we extract resources from the heart of the earth to make materials to bring to the heart of life. Our state-of-the-art cement plant is located in an area which is rich in limestone reserves. Our sophisticated and advanced plant laboratory ensures that the reserves are utilized in the most

### Our Brands:

Lafarge Pakistan's product portfolio includes Ordinary Portland Cement (PAKCEM) and High quality Cement (Stallion). PAKCEM is the first cement in Pakistan to comply with European Standard (EN 197), Indian Standard (IS 12269) and by far exceeds requirements of Pakistani Standard (PS 232). Lafarge Pakistan has celebrated the re launch of PAKCEM brand's new packaging. A new product line for Tile Bonds has recently been launched by Lafarge Pakistan with brand name of Xtremebond.

### Our Leadership in Health & Safety

In its ongoing pursuit to achieve excellence with respect to Health & Safety practices, Lafarge Pakistan signed an MoU with All Pakistan Cement Association. ■

## Pfizer Pakistan Limited

Pfizer Pakistan has been working for the health and well-being of people in Pakistan since 1959. Pfizer Inc. Chief Executive, Mr. John J Powers Jr. laid the foundations for the first plant to be established in the industrial port area of West Wharf on 5th of February, 1959. The first collaboration was with local distributor, Dumex which led to the distribution of Pfizer products as manufacturing fully started in the year 1961.



innovative therapies countrywide and strive to respond effectively to some of the unmet medical needs of patients across the country.

We are committed to delivering novel medicines to fulfill some of the unmet medical needs of patients. The very purpose of our existence is to work with the nation for a healthier Pakistan and build invigorating, empowered communities.

At Pfizer Pakistan, we provide access to safe, innovative and affordable medicines to millions of Pakistanis. Having a portfolio of medicines that prevent, treat and cure diseases across a range of therapeutic areas allows Pfizer Pakistan to enjoy the reputation of being a leading drug maker in the country.

Pfizer's Pakistan affiliate provides livelihoods to thousands of households directly and indirectly and employs over 1000 people. The Pakistan affiliate is also responsible for managing distribution networks in Afghanistan.

We are one of the most diversified companies in the healthcare industry, offering patients a range of treatments in pharmaceuticals, branded generics portfolio for better access, preventive therapies like vaccinations and multivitamins, to therapies for pain

management, cardiovascular and central nervous system diseases to cancer.

We are a leader in human health, primary care, specialty care, vaccines and biologics.

### Business Technology (BT)

BT department provides Information Technology services to our valued IT users, and provide innovative tools and systems to our users to enable them to manage their business processes.

Business Technology Lead: Jawed Rasheed

### Corporate Affairs

Corporate Affairs department works hand in hand with all departments to help the company achieve business objectives through Government Relations, Corporate Affairs and Policy, Philanthropy and Stakeholder Relations, and Corporate Communications. ■

### Pfizer Pakistan at a glance

We promote health and wellness by developing and delivering



## PharmEvo (Pvt.) Limited

PharmEvo (Pvt.) limited, incorporated on October 7th, 1999, is a healthcare company, which is engaged in the creation, development, manufacture and marketing of pharmaceutical products, including over-the-counter (OTC) medicines, medical equipments and infant formulas.

PharmEvo's principal pharmaceutical products include medicines in therapeutic areas: respiratory, anti-virals, central nervous system, cardiovascular, metabolic, anti-bacterials & oncology. The Company operates in following primary areas of business: Pharmaceuticals, Vaccines, medical equipments and infant formula.

PharmEvo partners with following international groups for bringing best quality products to its consumers, Bioton (Poland), Lactalis (France), Omron (Japan) etc.

PharmEvo's products for anti-virals are Tenova (Tenofovir Disoproxil Fumerate). Products for Psychiatry are Klevra (Levetiracetam), EvoKalm (Quetiapine) & Estar (Escitalopram). The Company's products for cardiovascular are, Lowplat plus, ARBI, Telsarta, Ramipace, Tansin, Nuval and Xplendid. Diabetes portfolio includes, Evopride, Inosita & Innogen. Orslim (Orlistat) belongs to Anti-obesity segment.



Our gastroenterology portfolio carries, Zoltar, Fasteso & Actiflor. Antibiotics are, Evofix, EvoTaxime, Evozid, Evorox & Cefipime. In oncology our products are, Trugem, Oncotaxel & Oxalitin. Orthopedic areas include Nise, Spedicam, Anex & Mezrel. Onita, Gouric, Ibandro & Bonedol make up the Osteoporosis & Gout portfolio whereas Eposino is used in Nephrology.

### Social Responsibility:

In pursuance of our commercial objectives we never lost sight of our responsibility to contribute for the betterment of our society and we remain committed to balance environmental stewardship with our corporate goals. PharmEvo is at the forefront of supporting educational activities esp. among doctors as we continuously award merit scholarships to the outperforming students of medicine and dentistry. In addition to that we have also supported various libraries countrywide by donating books, setting up learning resource centers, students counseling services etc.

The Company competes with Top national companies & improves its rating every year as it remains one of the fastest growing companies in Pakistan. ■

## Pierlite Pakistan (Pvt.) Limited

One of the few Australian manufacturers of lighting left in Australia.

With humble beginnings in the 1930's the Gerard family has journeyed through an exciting path in the electrical industry. At present Gerard Lighting's flag ship brand Pierlite has positioned itself as a market leader in Australasia for design, manufacturing and distribution of architectural, industrial - commercial lighting systems and through this experience create an even more exciting path as it develops a dynamic global network.

From the home shores of Australia with sales, customer service and warehouse operations in each capital city, the Pierlite team now expands to New Zealand, East Africa, UK, India, Hong Kong, United Arab Emirates, Indonesia, Pakistan, Mozambique and with it, a strategic vision to continue expanding this global network.

With key local and international supply partners under the guidelines of our ISO9001 quality management system, Pierlite create innovative commercial, industrial and architectural lighting products that deliver our customers professional lighting solutions. At Pierlite we understand the importance of Australian Made and now with our expansive global network we bring to the market the knowledge and experience of being Globally Competitive.

Our journey continues and with the development of innovative products and services together with the encouragement of our key supply partners and continued support of our loyal customers, we at Pierlite see a positive future.



Sustained investment in our local and global networks is critical for our success.

Working in a global market, Pierlite understand the importance of investing in engineering, quality and production facilities for the specific local market requirements, hence our significant and continued investment in our Australian operations and our global technical facilities.

Under the guidelines of our ISO9001 quality assurance management system our investment in our design and engineering teams will play an even more strategic component of our future as the lighting industry face the challenges of creating environmentally responsible lighting solutions with a key focus of reducing green house gas emissions. ■



## Pakistan Tobacco Company

Real business is not just about profits but also how those profits are achieved. Our corporate strategy reflects how our strong commitment to responsibility provides the foundation for our people, growth and productivity' Graeme Amey, CEO/M.D.

Pakistan Tobacco Company is a commercial enterprise and our primary role is to build long term shareholder value by meeting consumers' preferences for high-quality tobacco products. However, we believe that by absorbing and balancing a wider range of expectations, we are best placed to continue building a sustainable



tobacco business.

The principle of Responsible Product Stewardship is the basis on which we meet consumer demand for a legal product that is a cause of serious diseases.

Therefore, our products and brands should be developed, manufactured and marketed in a responsible manner. We also aspire to develop tobacco products with critical mass appeal that will, over time, be recognised by scientific and regulatory authorities as posing substantially reduced risks to health. ■

## Qarshi Industries (Pvt.) Ltd.

Qarshi Industries (Pvt.) Ltd (QIL) is one of the leading and exceptionally rated national companies in its category in Pakistan. There is 2000 plus labor force and more than 200 herbal medicine products, health supplements and revitalizing syrups backed by Qarshi Research & Development (R & D) Laboratories, Lahore and quality guaranteed by Qarshi Research International (QRI) are accessible in the national & international markets.

As our promise to the country, we as a commercial unit implemented an Environmental Policy in 2000 with the steadfastness to assess and modernize it on standard basis. As we strive to make the people healthy, the Qarshi Company is committed to develop and introduce new value for our consumers, our customers and the communities we proudly serve with in country and across the world. We had another year of environmental accomplishment across our business as we continued our record of energy and water conservation, waste management and reduction in greenhouse gas emissions. In 2015, energy conservation measures across the company delivered savings equal to 21 percent of our energy use



in Jami-shirin division, surpassing our annual goal of 10 percent. These measures avoided the consumption of 95844 Kilowatt-hours of electricity and saved Rs.1.82 million in electricity expense as compared to 2014.

We are committed to include renewable electricity resources in our energy consumption in the near future. This will reduce CO2 emissions associated with our energy consumption. Our success in these priorities is directly linked to our system's sustainable business growth. Qarshi Industries is one of the largest and highly rated national companies in Pakistan producing more than 200 herbal medicine products, health supplements and refreshing syrups. All the products produced and marketed are backed by Research & Development Laboratories Lahore and quality assured by Qarshi Research International (QRI) Labs, Hattar.

The Qarshi Industries has evolved into a modern, successful and progressive company since its establishment in 1988, manufacturing and marketing leading brands of natural products and herbal medicines within the country and abroad. ■

## Rafhan Maize Products Co. Ltd.

Rafhan Maize Products Company Limited is a public limited company. It started its operations in 1953 as a pioneer corn refining industry in Pakistan. It has grown into one of the largest agro-based industries in Pakistan over the last 63 years. Rafhan Maize is an affiliate of Ingredion, USA who are one of the world's largest corn refiners. It produces high quality food ingredients and industrial products derived from the wet milling of corn and other starch-based materials. Ingredion has made investment of billions of Rupees to increase the capacity of Rafhan's original plant from 50 tons/day in 1953 to 750 tons/day at present. A second corn wet milling plant having a capacity of 250 tons/day was set up near Jaranwala town Punjab and started in September 2004. Its capacity was gradually expanded to 800 tons/day in 5 phases. A third corn refining plant has been commissioned in Kotri Sindh in October 2012. Its capacity is 300 tons/day. All products of Rafhan Maize have leading market



position and are being used in more than 50 different types of industries in Pakistan as essential raw material from local resources and also in international market. Major consuming industries include textile, paper, corrugation, confectionery, pharmaceutical, chemicals, baking, beverage, ice-cream, processed foods, tobacco, foundry, syrup and squashes, tanning, poultry and cattle feeds, fish feeds and so many other

food and non-food industries. The products of Rafhan Maize are manufactured under the technological support from Ingredion to match the International Standards and are well accepted in the vast export market. The Company has won the preferred supplier status among the customers by focusing on quality, customer service and teamwork approach. Technical Centre at Rafhan Maize is responsible to develop new products to cope with changing requirements of customers and overcome functional problems connected with application of products in different industries. ■

## Roots School System

The Roots school system provides environmental education to seek and achieve the level of competence and citizenship in all students that will enable them to contribute to the achievement of sustainable societies. Through environmental education and , students acquire knowledge, skills and attitudes to enable them to form judgements about sustainable lifestyles and to participate in environmental decision-making. They can also acquire technical skills associated with environmental management. We have set up an Environment Club and this club plays a pivotal role in developing knowledge and skills of students.

This Environmental Education Policy aims to foster students' understanding of the environment as an integrated system, and to develop attitudes and skills which are conducive to the achievement of ecologically sustainable development.

### Students :

- o learn about the environment.
- o develop skills to investigate and solve issues in the environment,
- o acquire attitudes of care and concern for the environment.
- o adopt behaviours and practices which protect the environment, and
- o understand the principles of ecologically sustainable development.
- o Become responsible custodian of valuable natural resources.
- o Recycle, Reduce and Reuse



o Participate in every global and local environmental initiatives such as WWF, UNESCO, Ministry of Environment, Environment Protection Agency etc

### OBJECTIVES OF ENVIRONMENTAL CLUB

Students will develop, knowledge and understandings about the nature and function of ecosystems and how they are interrelated, the impact of people on environments, the role of the community, politics and market forces in environmental decision-making, the principles of ecologically sustainable development and career opportunities associated with the environment. Skills in applying technical expertise within an environmental context, identifying and assessing environmental problems, communicating environmental problems to others, resolving environmental problems, adopting behaviours and practices that protect the environment

### Values and attitudes relating to:

A respect for life on Earth, an appreciation of their cultural heritage, a commitment to act for the environment by supporting long-term, solutions to environmental problems

### ENVIRONMENTAL CLUB MECHANISM

A publication initially developed for Ministry of Environment is being used by Roots School System. The Publication developed for Environment club inculcates values, skills and knowledge about environment.■

## Sui Northern Gas Pipelines Limited

Sui Northern Gas Pipelines Limited (SNGPL) was incorporated as a private limited Company in 1963 and converted into a public limited company in January 1964 under the Companies Act 1913, now Companies Ordinance 1984, and is listed on all the three Stock Exchanges of the Country.

The Company took over the existing Sui-Multan System (217 miles of 16 inch and 80 miles of 10 inch diameter pipelines) from Pakistan Industrial Development Corporation (PIDC) and Dhulian-Rawalpindi- Wah system (82 miles of 6 inch diameter pipeline) from Attock Oil Company Limited. The Company's commercial operations commenced by selling an average of 47 MMCFD gas in two regions viz. Multan and Rawalpindi, serving a total number of 67 consumers.

Sui Northern Gas Pipelines Limited (SNGPL) is the largest integrated gas company serving more than 5.1 million consumers in North Central Pakistan through an extensive network in Punjab, Khyber Pakhtunkhwa and Azad Jammu & Kashmir and is certified against ISO 14001:2004 & OHSAS 18001:2007 Standards. SNGPL's 11 sites have been registered under the &quot;



SMART2 & quot; Program by Pakistan Environmental Protection Agency (PAK-EPA). The Company has over 50 years of experience in operation and maintenance of high-pressure gas transmission and distribution systems. It has also expanded its activities as Engineering, Procurement and Construction (EPC) Contractor to undertake the planning, designing and construction of pipelines, both for itself and other organizations.

SNGPL transmission system extends from Sui in Baluchistan to Peshawar in Khyber Pakhtunkhwa (KPK) comprising over 7,800 KM of Transmission System (Main lines & Loop lines). The distribution activities covering 3200 main towns along with adjoining villages in Punjab & Khyber Pakhtunkhwa are organized through 13 regional offices. Distribution system consists of 100,000 KM of pipeline. SNGPL has over 5.1 million consumers comprising Commercial, Domestic, General Industry, Fertilizer, Power & Cement Sectors. Annual gas sales to the consumers were 597,056 MMCF worth Rs. 216,652 million during Jul 2011 - Jun 2012.■

## Sui Southern Gas Company Limited

Sui Southern Gas Company (SSGC) is Pakistan's premier natural gas utility engaged in the transmission and distribution of gas in the franchise areas of Sindh and Balochistan. The Company operates more than 3,320 km high-pressure transmission and 36,785 km distribution network extending across the two southern provinces of Sindh and Balochistan.



ISO-14001:2004 and OHSAS-18001:2007 standards, SSGC is now moving towards ensuring comprehensive implementation of integrated HSE Management system. The Company has always complied with National Environment Quality Standards (NEQS) and all other National safety and environmental Legislations.

Commencing in 1954 as Sui Gas Transmission Company (SGTC), the Company today caters to over 2.2 million customers comprising 3,863 industrial units including several large power plants and 24,156 commercial customers in 33 districts, 120 tehsils and 1,920 villages across Sindh and Balochistan.

### TECHNOLOGY WITH A HUMAN FACE

With each passing year, SSGC has consolidated its position as an IT-enabled utility through continuous induction of best business practices and state-of-the-art technologies. This IT-enablement has, in turn, helped to serve the customers better.

### METER MANUFACTURING PLANT

Established in 1975 in the premises of SSGC's Head Office, under license of Itron (formerly Actaris)-France in Karachi, the Meter Manufacturing Plant manufactures more than 750,000 meters to its own requirements as well as that of SNGPL.

### HSE-CONSCIOUS COMPANY

Having successfully achieved an accredited certification for

### PROMOTING COGENERATION TO CONSERVE ENERGY

Pursuing the policy of Government of Pakistan for co-generation in Captive Power Plants, the Company launched its Technical Advisory Services (TAS) several years ago to facilitate its captive power customers, in achieving high level of efficiency through use of energy efficient systems. Substantial savings in gas consumption have been achieved by adopting co-generation and combined cycle system in new captive power plants.

### CORPORATE SOCIAL RESPONSIBILITY

As a responsible corporate citizen, SSGC undertakes need assessment throughout its franchise areas, building and supporting education, health, environment and community service projects.

To ensure maximum contribution and sustainability of our initiatives, every effort is made to involve local governments, communities and civil society, organizations in planning and implementation. ■

## Symbol Industries (Pvt.) Limited

A subsidiary of Diamond Group of Industries, Symbol Industries (Pvt.) Ltd was incorporated under the Companies Ordinance, 1984 on 19th May, 2005. The company is serving the nation by saving billions of Mega Watts of energy by producing and marketing state of the art 'Diamond Jumbolon' thermal insulation products in compliance with international standards, first time in Pakistan. Diamond Jumbolon



Board (Extruded Polystyrene) is the thermal insulation material recognized worldwide. Located at Sundar Industrial Estate, Raiwind Road Lahore the plant is the state of the art facility to meet all the thermal insulation needs of the country and have potential for exports also. We are ISO 9001-2008 Certified Company

Management of the company is highly professional and experienced. The directors belong to the business and industrial circles of the country and enjoy a very good reputation. Diamond Jumbolon has offices all over Pakistan and serving the nation with highly motivated and energetic sales and marketing staff.

Energy Conservation through Thermal Insulation of Buildings & Houses. Electricity consumption in Pakistan has been growing at a fast rate of more than 13% annually. As a result, electrical

utilities have not been able to keep up with the fast growth of electricity consumption, which has led to widespread load shedding. The residential sector consumes 40% of the electricity produced. A careful estimate shown that in buildings, we consume 50% of the energy for heating and cooling using heaters and air conditioners. Energy efficient design or energy conservation in general offers a great possibility for significant saving on energy.

### Our Mission Statement

"We are highly committed to produce and provide thermal insulation products, conforming to International Standards enduring all applicable laws and regulations with continued improvement in our products through employees' participation at every level to achieve our customers' satisfaction."

### Company Environmental Policy

Our company policy is to manufacture thermal insulation products which help save energy, whilst at the same time, not causing any kind of environmental pollution. ■

## Thatta Cement Company Limited

Thatta Cement Company Limited was incorporated in 1980 as a public limited company. It was a wholly owned subsidiary of the State Cement Corporation of Pakistan (Pvt.) Limited. The manufacturing facility was commissioned in 1982. The plant based on dry process technology, had a total installed capacity of 1,000 tons per day of clinker. The plant was supplied by M/s. Mitsubishi Corporation, Japan. In the year 2004, Government of Pakistan divested its shareholding from the company through Privatization Commission.

The Company obtained listing on the Karachi Stock Exchange Limited as public limited company in the year 2008. Share of Thatta Cement Company Limited are quoted on Karachi Stock Exchange. Symbol of Company "THCCL" assigned by Karachi



Stock Exchange (www.kse.com.pk)

The plant is located 115 km North East of Karachi at Ghulamullah Road, Makli, District Thatta. The facility is spread over 233 acres of freehold land consisting of factory area, workers' colony, officers' colony, commercial buildings and water reservoirs. Finest quality raw material deposits are available close to the plant. These limestone and clay reserves

are sufficient for about 100 years. In this respect, TCCL has the mining rights for extracting limestone from 2,364 acres, shale/clay from 1,121 acres and silica sand from 1,239 acres of land, respectively. The Company has further acquired mining rights of limestone for a further area of 1,240.02 acres in December 2010. ■

## THAL ENGINEERING

Thal Engineering is the leading automotive parts manufacturer bringing the latest technology to its customers. Established in 1996. Total Covered Area Available: 44,500 M2(11 Acres). Manpower 1000; all Secondary School plus, Investment in Fixed Assets: Rs. 303 M (Excluding land, building & infra - structure), Parent Company: Thal Limited

Certifications: TS 16949 certified, ISO 9001, ISO 14001, ISO 18001. Business Group: Thermal System Business & Electric System Business.

Our Valued Customers are Pak Suzuki Motor Co, Honda Atlas Cars Pakistan, Indus Motor Company, Hinopak Motor Ltd, Sigma



Motor Co Ltd, LR Pak (Pvt.) Ltd (Landireenzo), Al Ghazi Tractors, Alsons Autoparts, Yamaha Motor Pakistan.

Products: Auto Air Conditioning Systems, HVAC, Aluminum Radiators, Cooling Sub Module, Lever Assy Heater Control, Reserve Tank & Newly added Starter & Alternators.

**Electric System Business**

Products: Wire Harness for Automotive - Passenger Cars, Trucks & Buses, Motorcycles & Tractors. Wire Harness for Equipments (CNG kits, White goods, Electrical Switch Panels & Sub Assemblies of Equipment). Battery Cables & Jumper Cables. ■

## Uch Power Plant

Uch Power Plant is a combined cycle power plant, located in Dera Murad Jamali, Nasirabad District, Baluchistan, Pakistan. It has three GE frame 9E gas turbines, three Deltak HRSGs and one GE steam turbine which can generate an output of 560 MW. It is regarded as the best power plant in the region with an production availability of 97% and above. Uch-I Power started its commercial operation in 2000.

The recently completed gas thermal power generation project is to develop a 404 MW gas-fired combined cycle power plant Uch II as an expansion to the existing 596 MW Uch Power Station ("Uch I") owned and operated by Uch Power (Private) Limited.

Prime Minister Nawaz Sharif inaugurated Uch II power plant in Dera Murad Jamali, Balochistan.[1] Uch II is designed to use the supply of indigenous gas in the Uch Gas Field ("UGF"). Uch I is also using the gas from UGF. The Project will be structured as a standalone Independent Power Plant and will be built on the



site of Uch I, using the available vacant land within the Uch I property that was already acquired and fenced and will use some of the existing physical and management infrastructure. In addition to the infrastructure, the Project will benefit from synergies with the existing plant in the form of a shared management team as well as common utilization of O&M resources and administrative staff. Similar

to the operating 586 MW Uch I plant, the Project is expected to be one of the lowest cost producers of power in the country. The Project will be established under a separate project company called Uch-II Power Limited. The Company will be 100% owned by International Power Plc., which is headquartered in London and is one of the world's leading independent power generation companies with over 32,000 MW capacity worldwide. The total project cost is estimated at \$500 million, and the proposed IFC investment is an A-loan for IFC's own account of up to \$100 million. ■

## Wyeth Pakistan Limited

Wyeth Pakistan Limited (the company) is a public limited company incorporated in 1949 in Pakistan.

The company is listed on the Karachi and Lahore Stock exchange.

The Company is engaged in manufacturing and marketing of research based ethical specialties and other pharmaceutical products.

With effect from October 15, 2009 Pfizer Inc. has acquired WYETH LLC, USA. Accordingly Pfizer Inc (USA) has become the ultimate parent (USA) of the company however, Wyeth LLC, USA continues to be the principal shareholder of the company.

**Mission:** Our mission is to apply science and our global resources to improve health and well-being at every stage of life.

**Vision:** "Working together for a healthier World"

**Values:**

**Customer Focus:** We are deeply committed to meeting the needs of our customers, and we constantly focus on customer satisfaction.

**Community:** We play an active role in making every community in which we operate - a better place to live and work knowing that its ongoing vitality has a direct impact on the long term health of the business.

**Respect for People:** We recognize that people are a cornerstone



of our success. We value our diversity as a source of strength and are proud of our history of treating employees with respect and dignity.

**Performance:** We strive for continuous improvement in our performance, measuring results carefully and ensuring that integrity and respect for people are never compromised.

**Collaboration:** We know that to be a successful company we must work together, frequently transcending organizational and geographic boundaries to meet the changing needs of our customers.

**Leadership:** We believe that leaders empower those around them by sharing knowledge and rewarding outstanding individual effort. We are dedicated to providing opportunities for leadership at all levels in our organization.

**Innovation:** Innovation is the key to improving health and sustaining our growth and profitability.

**Quality:** Quality is ingrained in the work of our colleagues and all our values. We are dedicated to the delivery of quality healthcare. Our business practices and processes are designed to achieve quality results that exceed the expectations of all of our stakeholders.

**Integrity:** We demand of ourselves and others the highest ethical standards, and our product and processes will be of the highest quality. ■

## Patel Hospital

Patel Hospital was a dream of our patrons, (Late) Mr. Abdul Ghaffar Abdul Rehman alias Mittho Patel and his wife, (Late) Mrs. Zubeda Abdul Ghaffar, who were renowned social worker and philanthropist of Bantava Memon Community. They wished for a well-reputed Hospital that could attract people from all walks of life. It took around 25 years before their dream turned into reality.

Mr. & Mrs. Mittho Patel used their personal finances to build this hospital with the intention to provide quality health services to all, regardless of cast, creed or colour. They dedicated their entire life to make Patel Hospital a successful living example.

In today's world, where one would want to live for himself, Patel Hospital is an effort of these two people, whose human intention and dedication has blessed so many people who come in contact with this hospital either to obtain services or support. The success of Patel Hospital lies in its enthusiastic, energetic, dedicated and hardworking team; and it is an example for many who would want to join the stream of services for humanity.

Patel Hospital is a not-for-profit organization established to provide State-of-the-Art modern medical & surgical facilities to affording and non-affording patients. The hospital is located in the heart of Karachi in Block-4 of Gulshan-e-Iqbal, just half-an-



hour's drive from Karachi International Airport. 200 bedded Patel Hospital offers a complete range of inpatient and outpatient care through advanced equipment and a team of highly skilled, qualified and dedicated people who share its mission and values.

Patel Hospital has successfully achieved the status of a teaching and tertiary healthcare hospital.

It has been accredited with Pakistan Medical & Dental Council and College of Physicians & Surgeons Pakistan for post-graduate training. Patel Institute of Nursing & Allied Health Science is affiliated with Pakistan Nursing Council for General Nursing Diploma and Sindh Medical Faculty for Technician Certification Courses in different specialties. ■



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## Telenor-Engro automate milk collection network



Strengthening its position further as the country's most preferred digital services provider, Telenor Pakistan has partnered with Engro Corporation to automate the nationwide milk collection network. The project aims to facilitate Pakistan's dairy farmers in collection of payments for their yield by digitizing the traditional manual transactions that are tedious and insecure.

The contract was signed between Irfan Wahab Khan, CEO Telenor Pakistan, and Khalid Siraj Subhani, President & CEO Engro Corp. The automation project will facilitate more than 135,000 farmers at 1,600 Engro milk collection centers across the country by providing cutting-edge digital data collection and payment system.

As part of the project, Telenor Pakistan will provide special software platform installed at all of Engro's Milk collection centers for recording the data. The data will be transmitted to a central server hosted by Telenor through its network after which payments will be released to the farmers easily and securely.

Commenting on the development, Irfan Wahab Khan, CEO Telenor Pakistan, said, "This partnership is yet another step for fulfilling our vision of empowering Pakistan and dairy being a sprawling business in Pakistan needs advancement so that some unnecessary hardship could be removed from the farmers' lives. As a result of this partnership, dairy farmers could focus more on their harvest."

Also sharing his thoughts on the development, Khalid Siraj Subhani, President Engro Corp, said, "This partnership is of paramount importance for Pakistan's dairy industry and showcases our commitment to developing the local industry by introducing technological platforms to the rural communities of Pakistan." ■

## SSGC-IUCN launch mangroves drive along PQA



IUCN, International Union for Conservation of Nature, and Sui Southern Gas Company (SSGC) organized a launch ceremony of the mangroves plantation in the Port Qasim Area of the SSGC LPG-Terminal recently.

SSGC and IUCN Pakistan senior officials participated in the event which also brought in school children from local communities for planting saplings.

The plantation Area.

As part of the project, IUCN Pakistan will also raise awareness of the importance of mangroves among the local communities and private sector companies and engage communities in planting and conserving mangroves ecosystems.

While speaking to the media Mr. Shahbaz Islam, Director Corporate Social Responsibility at SSGC described the plantation initiative as part of SSGC's Corporate Social Responsibility. He said that SSGC "gives due importance to the environment and we will continue similar initiatives in the future as well." Other SSGC officials included Mr. Madani Arafat Siddiqui, Deputy General Manager Incharge (R&D), Mr. Salman A. Siddiqui, Deputy General Manager (CCD), Mr. Muhammad Ali Gohar, Chief Manager (Media Relations), and Mr. Shaheen Imam, Assistant Manager (CSR).

While speaking to media Mr. Tahir Qureshi, IUCN Coastal Ecosystem Expert, said that mangroves in this area are lungs of Karachi that provide oxygen to the habitant of the city. He further said that mangroves are the sanctuaries and breeding grounds of fish, prawns and crabs. "The more mangroves we have the better the possibility of livelihoods for the coastal communities.

Dr. Babar Hussain, NRM Coordinator, briefed the visiting delegates about mangroves and its benefits. ■

## PPL donates equipment to Murshid Hospital

Pakistan Petroleum Limited (PPL) donated equipment worth Rs. 20 million to Murshid Hospital and Health Care Centre (MHHCC), Hub for its various faculties. MD & CEO PPL Syed Wamiq Bokhari handed over the equipment to Medical Director MHHCC Dr. Abdul Sattar Jaffer in the presence of Chairman MHHCC Abdul Razzak Jaffer as well as officials from both organizations at a simple ceremony held on August 19 at the hospital.

Bokhari appreciated MHHCC's efforts for providing quality healthcare to deserving local communities as well as those coming from adjoining remote areas in Balochistan.



He highlighted that being a leading national E&P company, PPL remains committed to serve the nation with a focus on improving quality of life for the underserved not only

through its business but also by implementing viable development initiatives.

PPL has earmarked an annual budget of 1.5 percent pre-tax profit for Corporate Social Responsibility initiatives, with actual spending touching nearly 5 percent in the last financial year. The company has been declared the largest corporate giver in terms of volume of donations for 11 consecutive years by Pakistan Centre for Philanthropy.

Developed with a vision to reach localities in the remote suburbs of Karachi and bordering Balochistan, MHHCC has evolved as the only state-of-the-art facility in the vicinity during the last 25 years. ■

## K-Electric installs new PMT at Kashif Iqbal Thalassaemia care centre

K-Electric, under its Social Investment Programme (SIP), has partnered with Kashif Iqbal Thalassaemia Care Centre (KITCC) for the installation of a dedicated 150 KVA PMT. The newly installed PMT will help meet the growing electricity demand of KITCC and improve its operations.



The utility provided relief for the installation of this dedicated PMT, in addition to providing free electricity to KITCC since 2015. KITCC has been providing treatment to over 23,000 Thalassaemia patients and educating over 65,000 people about the disease annually, since its establishment in 1996.

According to KE spokesperson, "This initiative is a yet another testament of KE's commitment to support humanitarian organizations - enabling them to continue their efforts for underprivileged communities they serve. As a socially responsible organization, K-Electric has always been at the forefront for providing generous and valuable support to different organizations working for social welfare."

KE reaches around 3.5 million lives annually through various SIP initiatives such as facilitating education for the underprivileged; providing free electricity to Karachi's key educational and health institutions; educating thousands of school children through its fire safety and energy conservation programmes while engaging youth through cricket and football platforms including KE-Lyari League. The utility has also received a number of CSR awards - recognizing its commitment towards embedding sustainable thinking into organisational culture and supporting the community in different areas. ■

## Quetta clinches PPL Balochistan Football Cup 2016



The final of PPL Balochistan Football Cup 2016 sponsored by Pakistan Petroleum Limited (PPL) was played between Quetta and Qilla Abdullah (Chaman) at the Ayub Football Stadium, Quetta. Team Quetta emerged as the winner of the tournament. Earlier, Qilla Abdullah (Chaman) faced Loralai and Turbat clashed with Quetta in the semi-finals. Chief Guest, Minister for Sports, Government of Balochistan Mir Mujeeb-ur-Rehman Muhammad Hasani along with other officials and area notables and media personnel were present on the occasion. "The government is focused on ensuring peace and socio-economic uplift for our community and the future generation," said Hasani while appreciating PPL as sponsor of the tournament.

Speaking on the occasion, PPL's Managing Director and Chief Executive Officer, Syed Wamiq Bokhari thanked the local community for their participation, despite the recent tragic event in Quetta, adding that "we plan to make PPL Balochistan Football Cup an annual event which aims to promote peace and prosperity in the province." He acknowledged districts and provincial government of Balochistan, Southern Command and Headquarters 33 Division and the Pakistan Football Association for assistance and effective management of the tournament.

The mega event that commenced recently saw 26 qualifying round matches played between 32 teams of six provincial divisions - Quetta, Kalat, Makran, Sibi, Zhob and Naseerabad. The quarter finals were played between the teams of Qilla Abdullah (Chaman), Harnai, Loralai, Khuzdar, Turbat, Kharan, Quetta and Jaffarabad. ■



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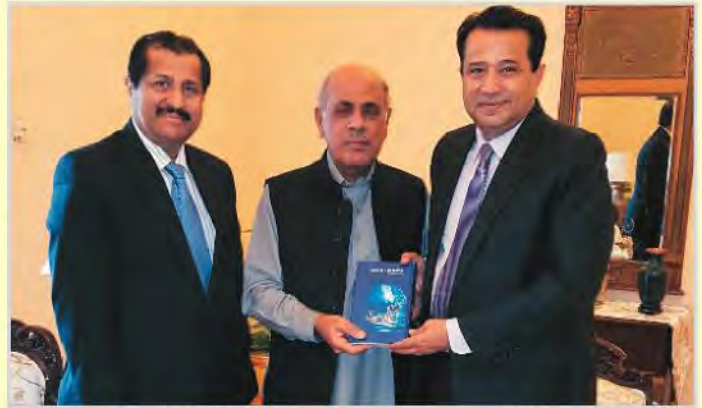
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Commissioner Karachi Ejaz Ahmed Khan presenting a souvenir to Syed Ahmed Shah, President CSR Division NBP. Syed Ahmed Shah, Shazia Rizvi, Ghulam M Khan and others are also seen in the picture.



Presenting my book 'Aaj ki Dunya' to Governor Punjab Malik Muhammad Rafique Rajwana at Governor House Karachi, Dr. Ikhtiar Baig also seen in the picture.



Dr. Ishrat ul Ebad Khan Governor Sindh presenting the Debate Winner Awards to Youth Parliament Members Ms. Umme Farwa, Ms. Inshal Javed, Ms. Fizzah Qamar & Mr. Talha Anwar in the presence of Mr. Rizwan Jaffar Founder Chairman Youth Parliament.



PC Karachi celebrates Independence Day with Athletes of Special Olympics Pakistan attending as guests of Honor. These kids are a pride for Pakistan and are winners from the LA 2015 Games held in USA last year.

## LNG import a game-changer for industry, employment: MD SNGPL

Managing Director Sui Northern Gas Pipeline Limited (SNGPL) Amjad Latif has said LNG import project had proved a game-changer, it has resulted in the revival of local industry and provision of employment opportunities that would take its sales to record 3.2 BCFD by the end of next year.

Addressing the annual dinner of the Officer Association of the SNGPL, the managing director said the company was currently selling 1.8 BCFD. The company has saved Rs4.4 billions by reducing the unaccounted for gas (UFG) to single digit from 11% to 9%, he added.

He said that the financial health of the company had also strengthened as company's share price has doubled in the stock market.

He informed the gathering that the task of laying 1,000 kilometers pipeline from Sawan to Lahore would be completed within stipulated time. Transmission, distribution, construction and sales departments had shown better performance and attributed company's success to the hard work of the employees.

He said that the SNGPL had never laid a pipeline more than the stretch of 200



kilometers and lauded the performance of the employees for helping the company achieve new targets. He said that company's future was bright and maximum facilities would be extended to the employees for their welfare. Amjad Latif said the company was going through a crucial stage when he had assumed the office but he had targeted to elevate the company to top 10 entities of the country. "We are very close to the target," he said with satisfaction. He said no one could impede company's progress if its transmission, distribution, construction and sales departments were performing well.

Amjad Latif said the company was adopting a new marketing vision of the federal government and the Federal Minister Shahid Khaqan Abbasi that would help them to fulfill the new requirements of the market.

The managing director informed that the company was supplying uninterrupted gas to the fertilizer industry, power houses, commercial and domestic consumers as per their demand. Amjad Latif said the number of new applicants including those from housing societies was increasing but hoped that they would bridge the demand-supply gap by end of next year. ■



Piero Berardi director Blend Plant Italian Company and Chairman Swan International Qazi Yasir signing the MoU. Naheed Memon Chairperson Board of Investment, Consul General Italy, Chairman GPCCI Qazi Sajid and others are also seen in the picture



Chief Minister Sindh Syed Murad Ali Shah along with Moroccan Envoy Muhammad Kalakhi & Hon. Consul General of Morocco Ishtiaq Baig cutting the cake of Enthronement of His Majesty King Mohammad VI, also present Siraj Durrani, Speaker Sindh Assembly, Nisar Khoro, CG of USA, Germany, China & others.



SSGC hosted a dinner at a local hotel in the honour of media fraternity



CE TDAP Mr. S.M. Muneer receiving a shield from Mr. Khalid Tawab SVP FPCCI at the seminar at Federation House.



Children of SOS Village and K-Electric employees plant trees to celebrate Pakistan's Independence. K-Electric (KE) has pledged to plant 100,000 trees for a Greener Pakistan.



Naeem Qureshi, President NFEH and Editor Energy Update and Chairman Nazria Pakistan Trust Dr. Murtaza Mughal cutting cake an independence day



Luncheon meeting was hosted by Dr. Mirza Ikhtiar Baig Secretary General UBG (SZ) in honor of Navaid Bukhari Chairman UBG Canada attended by S.M.Muneer, Khalid Tawab, Yasin Malik, Sami Khan, Gulzar Firoz, Mehtab Chawla, Anwar Qureshi & Haseeb Qureshi.



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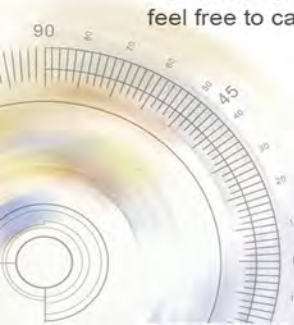
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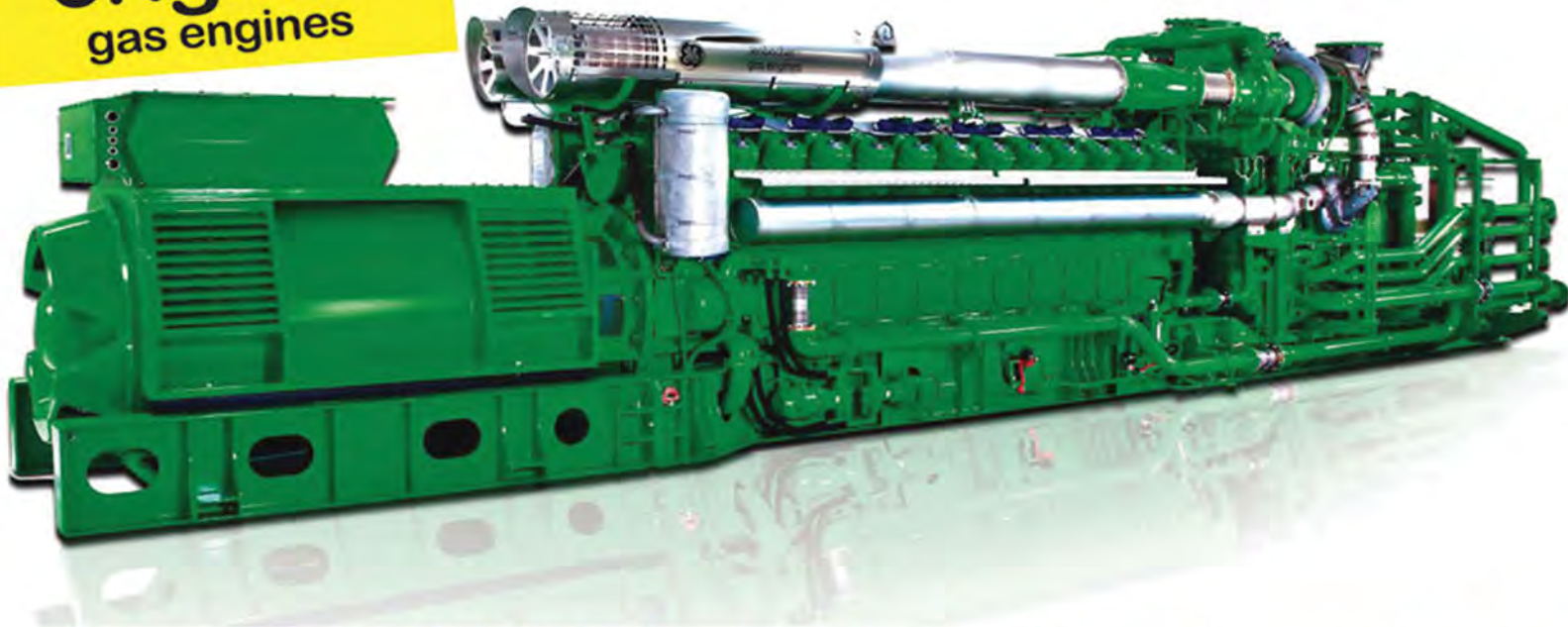
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