

MONTHLY

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ENERGY UPDATE



AT LEAST 1000MW

NEEDS TO BE INSTALLED IN ONE YEAR

FUEL DEMAND RISES

DESPITE SKYROCKETING PRICES

PAKISTAN CAN PRODUCE

92% POWER NEED FROM SOLAR ENERGY

BUDGET SPECIAL:

READING BETWEEN THE LINES

A Visionary Entrepreneur who became
a Pioneer of Solar Energy

Muhammad Zakir Ali

CEO, Inverex Solar Energy



— Mustafa Tahir —

CNERGYICO

accounts for 37% of total oil refining capacity

We are just getting started and have ambitious plans for the future

Rashid Badruddin,
VP Operations, Cnergyico

Mr Rashid Badruddin is Cnergyico Pk Limited's Vice President of Operations and has been associated with the company for 20 years. He graduated from the NED University of Engineering and Technology, Karachi in 1991 with a degree in Mechanical Engineering and has worked at reputable domestic and international engineering firms, such as SEFEC Engineering and JGC Gulf International. With SEFEC, Mr Badruddin worked on PARCO's mid-country oil refinery.

ENERGY UPDATE: You've been associated with Cnergyico for almost two decades. Can you shed a bit of light on the company's journey in this period?

Mr Badruddin: Cnergyico started commercial operations in 2004. The oil refining complex was established in Hub, Balochistan. It used to be a small refinery that could process around 18,000 barrels of crude oil per day to produce petroleum products like petrol and high-speed diesel. Since then, it has seen tremendous growth. Today, the company's installed capacity is 156,000 barrels per day

which makes it the largest oil refinery in Pakistan that can process a wide variety of high-value petroleum products such as jet fuel, LPG, kerosene, and furnace oil in addition to petrol and diesel.

Cnergyico alone accounts for 37% of Pakistan's total oil refining capacity. The company also operates a growing network of 450 retail outlets that are strategically located in all the main cities and highways across the country. On top of it, Cnergyico also owns the country's largest crude oil storage tanks. However, we are just getting started and have ambitious plans for the future.

I have been associated with Cnergyico since the early years and have spent 20 years at the company, witnessing its growth firsthand. The growth was driven by the vision of the company's founders Mr Parvez Abbasi (late) and his son Mr Amir Abbassciy who wanted to reduce the country's reliance on foreign fuels. Amid the expansion, Cnergyico has set numerous milestones, the likes of which we've never seen in the country's energy sector. This includes the relocation of the two oil refining plants from the US and UK to Pakistan. We not only successfully relocated facilities from abroad which in itself is a marvel of engineering but also were able to enhance its capacity.

We have been constantly updating our plant by adding new equipment, such as Distributed Control System and Crude Furnace, to improve its performance. As a result, the refinery has become more efficient. The fact that the refinery has been operating smooth-

ly, without any major equipment failure that could cause a shutdown, for the last several years is a testament to our high standards.

EU: Tell us about Cnergyico's Upgrade-1 project. How is it going to change the company's output?

Badruddin: The oil refiners operate in a dynamic business environment and must constantly upgrade plants to improve productivity, reduce costs, and cut down carbon emissions. As mentioned earlier, we have been adding new equipment that has substantially improved our operational performance and product quality. The installation of the reformer and isomerization units, which allowed us to convert virtually all of our Naphtha into 92 Octane Motor Gasoline, are among some of the largest projects we have completed so far in recent years. But Upgrade-1 is, by far, the single biggest project we have ever undertaken that will not only allow us to expand our capacity but also transform Cnergyico into a deep-conversion refinery.

We are installing 15 new state-of-the-art plants at our oil refining complex, such as the FCC (Fluidized Catalytic Cracking) and their associated units that convert furnace oil into petrol and diesel. This will significantly increase our petrol and diesel production by enabling us to process most of our low-value furnace oil into these high-value fuels. The petrol and diesel production will get further processed to comply with Euro-V standards. Additionally, our overall crude oil processing

capabilities will also increase. Considering the large size of this project, the initial capital outlay will be around \$756 million.

After we finish working on the Up-grade-1 project and the new plants come on-line, diesel and petrol will represent more than 80% of our production while the remainder will be furnace oil and other fuels.

EU: Cnergyico's oil refinery has been running below its nameplate capacity. Why is that and what can be done to improve refinery utilization?

Badrudin: Lately, Cnergyico hasn't been able to run its oil refining complex near the nameplate capacity of 156,000 BPD and plant utilization has been low. The weakness in utilization rate is driven by two factors – limited access to banks' credit lines and the low upliftment of furnace oil.

Currently, the oil refineries in Pakistan meet approximately 60% of the country's diesel and 30% of petrol requirements. The rest has to be imported. These imports then weigh heavily on the country's finances and hurt our economy.

However, if all of the country's refineries, including Cnergyico, were running at maximum capacity, then they would be producing significantly higher volumes of petrol and diesel and would be able to meet a vast majority of the country's demands. This could lessen the burden on imports and Pakistan could save precious foreign exchange of up to \$200 million each month.

In order to improve the refinery utilization, the issues related to furnace oil demand and banks' credit facilities must be addressed. The furnace oil situation could improve if the government dedicates a small percentage of power plants for furnace oil consumption.

As for the credit lines, the banks have given a muted response to the oil industry's requests to increase their credit limits in light of the surge in international oil prices and depreciation of the Pakistani Rupee. The working capital requirements of refineries have shot up but the banks haven't made any noteworthy increase in credit facilities. This hampers the petroleum sector's ability to make



timely purchases of crude oil and is having an adverse effect on refinery throughput. However, if the banks extend support by enhancing credit facilities so they align with the refining sector's requirements, then this issue will also get resolved.

EU: Cnergyico recently received an award from President Arif Alvi for achievements in the arena of health and safety. Tell us more about that and the safety standards at the company?

Badrudin: The safety and well-being of employees, customers, contractors, and the local communities that live near our oil refining complex have always been the number one priority at Cnergyico. The company has a strong and positive safety culture. Our oil refining facilities are fully compliant with the international standards of safety and environment. We have invested heavily to adopt the DuPont Safety System. Our policies are essentially based on the US Occupational Safety and Health Administration's codes while our fire safety protocols are based on the US National Fire Protection Association's guidelines.

The safety values are embedded into our corporate philosophy and all kinds of business practices. Due to our strict adherence to safety protocols, and the fact that it is considered a shared priority by everyone in the company, we have received numerous prestigious awards

from reputable organizations and we have set new milestones for the industry.

For instance, we recently realized 20 million Safe Man Hours at the oil refinery without a Lost Time Injury (LTI) with an outstanding Total Recordable Incident Rate (TRIR) of 0.06. Moreover, as you mentioned, we also recently won an award from the Employer Federation of Pakistan (EFP) for securing the first position in the Occupational Safety Health and Wellbeing (OSHW) category among all oil refiners. We received this award from the honourable President of Pakistan Dr Arif Alvi.

EU: The greenhouse gas emissions have been rising with every passing year, damaging the environment. What steps Cnergyico is taking to fight climate change?

Badrudin: There is no denying the fact that global warming is one of the biggest threats to the world and humanity. Being a responsible corporate citizen, Cnergyico is playing its part in improving the environment. In fact, we have undertaken some of the biggest environmental projects in Pakistan's corporate sector that help us deliver on the United Nations Development Programme's (UNDP) Sustainable Development Goals (SDGs).

Under our award-winning afforestation campaign, we have planted thousands of trees near our refinery in Hub and have supported the development of an urban forest in Karachi. Cnergyico used the Miyawaki Method, developed by the famed Japanese botanist and plant ecology expert Akira Miyawaki, of afforestation through which trees can be grown at a rapid pace.

Pakistan suffers from a low forest cover of 5%, well below the global average of 31%. By planting trees, we seek to play a positive role in enhancing the country's forest cover and making Pakistan greener. Additionally, we are also taking measures to cut down our emissions besides making significant investments to produce more environmentally friendly fuels like petrol and diesel. ■

