

The Complete Energy Magazine

Energy World

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GOIL
gives Ghana
local content
roads at last

Hon. Kwame Osei-Prempeh,
MD, GOIL



Ghana National Gas Company Limited (Ghana Gas) is a limited liability company, duly incorporated under the Companies Act of Ghana 1963 (Act 179). It was established in July 2011, as a wholly owned commercial enterprise of the Government of Ghana.

Ghana Gas' mandate is to build, own and operate infrastructure required for gathering, processing, transporting, and the sale of natural gas resources in Ghana.

In line with this mandate, Ghana Gas has constructed a 150MMScfd Gas Processing facility and interconnecting Pipelines in the Western Region, constituting Phase 1 of the Western Corridor Gas Infrastructure Project.

Currently, Jubilee gas is received and transported through the offshore pipeline (59km), which is interconnected to the Gas Processing Plant (GPP) at Atuabo. Processed Gas is then transported through the 111km onshore pipeline and distribution hubs to VRA and Industrial Gas Customers respectively. Our industrial customers include 2 ceramic companies who utilize the gas for the production of ceramic floor tiles.

On average, gas delivered to power generation customers produces an estimated 600MW of power to the national grid. Additionally, LPG and Condensate produced are sold to the downstream petroleum market, reducing the nation's dependence on imported fuel and savings on foreign currency.

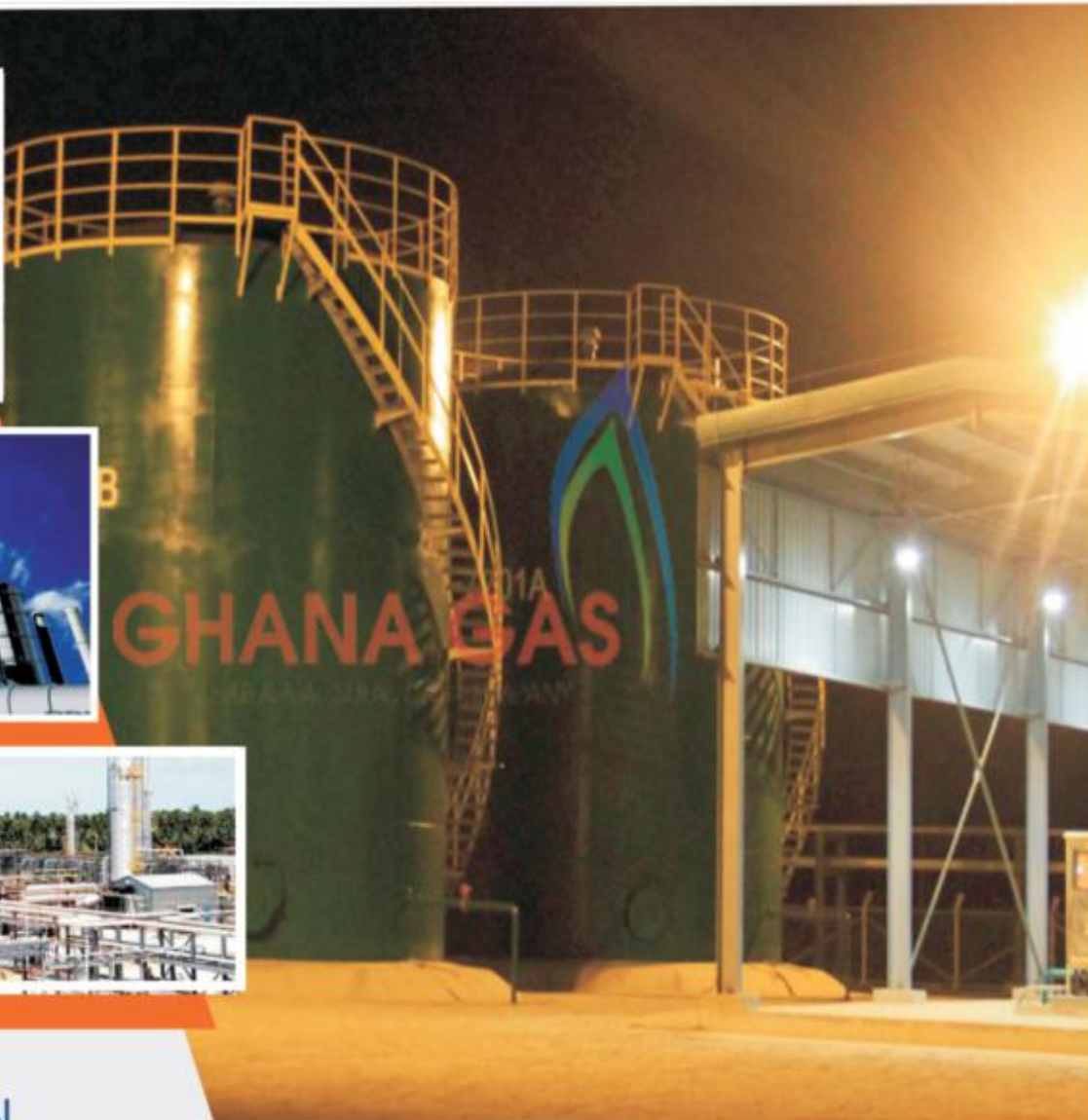
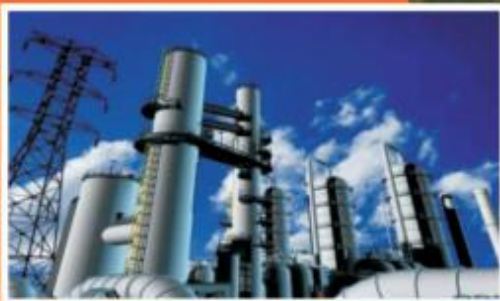
Plans are well advanced to commercialise Isopentane to generate electricity. In addition, a compressor will be installed to increase the existing pipeline capacity to about 405MMScfd of Lean Gas, which will potentially increase power production to over 1500MW.

Ghana Gas is proud to note that the Gas Processing Plant and associated facilities are now fully operated and maintained by an indigenous Ghanaian workforce.



GHANA GAS

GHANA NATIONAL GAS COMPANY



MISSION

To be a trusted and reliable gas services company

VISION

To contribute to Ghana's Gas economic development by providing and operating the infrastructure required for gathering, processing and delivering natural gas resources, in a safe, cost effective, responsible and reliable manner to customers

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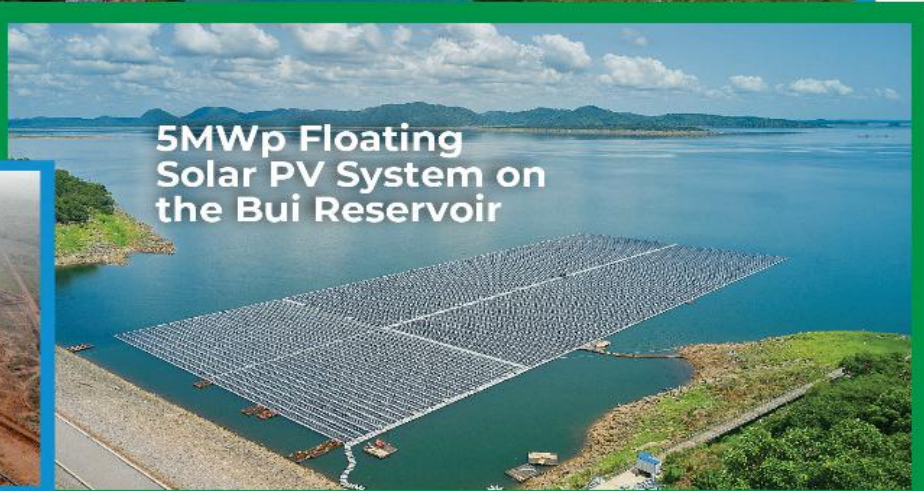
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**Hon. Kwame Osei-Prempeh,
MD, GOIL**



GOIL gives Ghana local content roads at last



GOIL, in partnership with neighbouring Cote d'Ivoire's SMB has delivered to Ghana the first ever bitumen processing plant in West Africa. TOMA IMIRHE examines what this means for Ghana's road construction industry in particular and the country's wider economic fortunes.

For well over a decade now, Ghana Oil Company Limited PLC, better known simply as GOIL, has repeatedly, indeed consistently proved that a state controlled corporation engaged in purely commercial activities can compete favourably with its wholly privately owned and managed counterparts. However, GOIL's outstanding corporate performance holds fundamental lessons for African government's such as Ghana's that for either strategic or financial reasons – or a combination of both - want to retain control over commercial enterprises, the primary one being that even though government would inevitably wish to exercise its right to appoint the top management and have a majority of

representation on the Board of Directors, its appointees should be left more or less to their own devices with regards to the commercial strategies and decisions they adopt.

In the case of GOIL itself, although it has existed as a state controlled enterprise for more than half a century, trying to stand up to competition from multinational downstream oil and gas retailers such as Shell (now operating in Ghana as Vivo) and Mobil, which has since been acquired by Total Energies. Over the past two decades, liberalization of the country's downstream segment has seen added competition from a host of foreign owned and indigenous oil marketing companies too, such as South Africa's

Engen, Nigeria's African Petroleum and Sahara as well as Ghanaian owned firms such as Glory Oil.

Most of the foreign owned companies have focused their operations mainly in urban centres where strong product demand has enabled them to enjoy veritable economies of scale, from sheer sales volumes which has allowed them to quickly recoup their investments in retail sales outlets, while minimizing their product distribution costs. For decades, this gave GOIL major market advantages in rural Ghana, with the company actually enjoying a monopoly in many small towns where the foreign firms declined to invest in. Being a state owned, and therefore indigenous firm which supplied petroleum products in far flung places that otherwise would not have had access to them, GOIL was thus able to thrive by being the only nationwide retailer, and one whose grassroots popularity was unmatched. But the liberalization of the industry during the mid 2000s took much of this advantage away as the licensing of smaller indigenously owned retailers created what were effectively regional suppliers who concentrated on limited geographical presence, but inclusive of

rural points of sale where GOIL had enjoyed a near monopoly for years.

Undeterred by the emergent challenges however, GOIL has reinvented itself over the past two decades, into a modern, multi-faceted energy provider with a bright new image, modernized service stations, IT driven product and service delivery, and a diversified portfolio of products and services that even its multinational competitors have been unable to keep pace with.

In this regard, diversification has played the most pivotal role in raising GOIL's market share, and revenues, even as competition has intensified dramatically. Diversification has enabled it to grow from a single company into a group that is effectively an energy conglomerate. GOIL PLC now has three wholly owned subsidiaries. GoEnergy Limited is chartered to carry on the business of bulk importers, storage, suppliers and bulk distributors, buyers and sellers of petroleum products. GOIL Upstream is an upstream market segment oil and gas company, engaging in exploration and ultimately production, which is also licensed to provide consultancy

and other support services to the West African upstream industry. Then there is Go Financial Services, permitted by its regulations to carry on the business of Electronic Payment and Money Transfer Business and other business activities ancillary to Information Technology. All these are active even as the parent company has revamped its brand offering and the retail stations that serve as its front offices, and has expanded its core product offerings to compete to both the marine bunkering and aviation fuel segments.

But the most pivotal aspect of its aggressive diversification efforts has been its construction, and the commencement of operations, of its bitumen business.

GOIL PLC in partnership with Société Multinationale de Bitumes (SMB), Côte d'Ivoire has inaugurated a Bitumen Terminal and production plant in Tema in the Greater Accra Region

The US\$40 million facility will produce Polymer Modified Bitumen (PMB), Bitumen Emulsions as well as offer laboratory testing for quality of products, storage, and transfer of bitumen.

The first of its kind in the country, the





Hon. Kwame Osei-Prempeh, MD GOIL

landmark project is expected to produce the required volumes and other bituminous products sufficient to the needs of Ghana's road construction sector while drastically reducing the importation of bituminous products into the country. The plant, with a storage capacity of 7,500 tonnes will store and process base bitumen from SMB in Cote d'Ivoire and refine it into polymer-modified bitumen and bitumen emulsions. The main operations of the facility include the transfer of bitumen from Bitumen Tanker vessels at the Oil Jetty at the Tema Harbour to the Terminal and the storage into dedicated tank bitumen AC 10 & AC 20 – different penetration-grade bitumens, commonly used in road construction and asphalt applications.

The plant will also produce Polymer Modified Bitumen (PMB), bitumen emulsions, conduct laboratory testing for the quality of products and will distribute its products through bitumen bulk trucks, bitutainers and drums.

The facility receives the raw bitumen itself from SMB and then processes it. The term bitumen refers to a substance produced through the distillation of crude oil. Bitumen is known for its

waterproofing and adhesive properties and is commonly used in the construction industry, notably for roads and highways. Production occurs through distillation, which removes lighter crude oil components like gasoline and diesel, leaving the heavier bitumen behind. Deposits can also occur naturally at the bottom of ancient lakes, where prehistoric organisms have decayed and been subjected to heat and pressure.

PMB, which is produced by adding polymers to standard bitumen, is known for its superior elasticity, strength, and resistance to cracking, making it ideal for use in high-stress areas such as highways and airport runways. Bitumen emulsions, on the other hand, are used in road maintenance and construction, offering environmentally friendly solutions that reduce the need for high temperatures during application. Emulsions provide an economical and effective way of maintaining roads, sealing surfaces and supporting infrastructure projects. Bitumen Emulsion is Liquefied type of bitumen with low viscosities and can be handled at low temperatures, has low energy

consumption and is environmentally friendly.

Our production process involves the addition of water, acid and an emulsifier to the base bitumen. The mixture then goes through a colloid mill and a heat exchanger to obtain the final product.

To this end the new facility consists of two bitumen storage tanks of 4,000 metric tonnes and 2,000 metric tonnes (MT) respectively; a Blend Stock tank of 450 MT capacity; five Mixing tanks (for PMB); three Letdown tanks of 133 MT each for PMB; and two Emulsion Storage tanks of 133 MT each. Add to these a three km Cargo receipt pipeline connecting the Oil Jetty and the Terminal; Internal pipelines for transfer between tanks and delivery at loading rack in the Terminal; and a well-equipped laboratory for testing quality of all the grades of bitumen and making sure it meets required specifications.

The commencement of operations at the facility in September marks a pivotal turning point for Ghana. PMB possesses a resilient and long lasting feature capable of sustaining and preserving roads for a longer period of time than the regular asphalted roads. PMB, which is produced by adding



Mr. Reginald Daniel Laryea, Board Chairman of GOIL Company Limited

polymers to standard bitumen, is known for its superior elasticity, strength, and resistance to cracking, making it ideal for use in high-stress areas such as highways and airport runways. Bitumen emulsions, on the other hand, are used in road maintenance and construction, offering environmentally friendly solutions that reduce the need for high temperatures during application. Emulsions provide an economical and effective way of maintaining roads, sealing surfaces and supporting infrastructure projects.

Enthuses GOIL's managing director and chief executive officer, Kwame Osei Prempeh: "It is our expectation that the

terminal will produce the required quantities of PMB sufficient to serve the needs of the roads construction sector and to serve as an export product to other countries particularly in the West African sub region."

The commencement of the new bitumen plant counts as a major success for Ghana. Speaking while commissioning the plant in September, President Akufo-Addo indicated that the ability to produce these essential products domestically would not only improve the quality of roads in Ghana but also lower construction costs by reducing the dependence on imported bitumen. He enthused that the plant had

come at a crucial time, as his government continued to make significant investments in expanding the country's road network.

"Since 2017, we have embarked on the most extensive road construction programme in Ghana's history, with over 12,000 kilometres of roads built," he said. "This facility will complement the government's efforts, producing the necessary volumes of polymer modified bitumen and bitumen emulsions to meet the growing demands of our infrastructure sector."

Indeed, going forward, Ghana is now better placed than ever before to engage in the expansion of its still very



Hon. Kwame Osei-Prempeh, MD GOIL

deficient road network, and as it does so GOIL stands to gain heavily financially from the sale of its bitumen products.

"We are sure that once the current economic challenges are fully overcome, the government will be able to construct more roads in the country which will culminate in the increased sale of bitumen" enthuses Reginald Daniel Laryea, GOIL PLC's Chairman. "We also expect that the government would extend the local content requirement to road construction to reduce imports of bitumen, particularly PMB which the company now produces domestically."

Key to Ghana's advantage conferred by the new bitumen plant is not just easier

access to the product; pricing is equally important.

Bitumen is a residual material during the process of refining crude oil into liquefied petroleum gas and gasoline. As such, bitumen prices are heavily dependent on the same set of factors that affect the price of crude. These include demand and supply, and geopolitical stability in crude oil producing nations of the world.

One additional factor that influences bitumen prices is the price spread between heavy and light crude. Bitumen is produced as a byproduct during the distillation process for heavy crude. As such, refiner decisions to

process heavy versus light crude plays are critical for bitumen prices.

The U.S. government is the largest customer for asphalt produced in the country. Not surprisingly, that means economic conditions have a spillover effect on bitumen prices. For example, higher demand for asphalt for roads during an economic boom can result in increased prices. China also plays an important role in determining demand and setting prices for bitumen in recent times because of its heavy investment in scaling its road infrastructure. The steep depreciation of the cedi against the US dollar since 2022 has sharply raised imported bitumen costs and

consequently road construction costs at a time that the ongoing IMF programme has squeezed fiscal expenditures. Just as debilitating is the foreign exchange squeeze itself. Locally processed PMB and bitumen emulsions have ameliorated both constraints significantly.

But government is looking at an even wider, more holistic picture that encompasses the country's energy sector as a whole. The Minister of State at the Ministry of Energy, Herbert Krapa, has indicated that with the plant in place, the petroleum product portfolio is about to open up where existing local refineries could now maximise their configurations to process a wider range of products, including heavier grades to meet the demand and specifications of the plant.

That, he explains, is in line with the national energy strategy to make it more resilient and more adaptable to global market dynamics. Mr Krapa reveals that together with the National Petroleum Authority (NPA), the Ministry has developed a framework to regulate the importation, storage, processing and marketing of bitumen in the country. "This Bitumen Plant is not only an achievement for the road sector, but it also opens up several sectors of our

economy, particularly energy" says Krapa explaining that the Bitumen Plant represents a significant leap forward for the energy sector, enabling existing local refineries to process a broader range of crude oils, including heavier grades. This according to the Minister, aligns with Ghana's National Energy Strategy, which aims to make the energy sector more resilient and adaptable to global market dynamics.

"With this Bitumen Plant, our petroleum product portfolio is about to open up," the Minister asserts, adding that "Existing local refineries can now maximise their configurations to process a wider range of crude oils, including heavier grades, to meet the demand and specifications of this plant. This is in line with our national energy strategy."

But even as GOIL management and the top officials of government itself clap themselves on the back for the successful completion of this vital project, they acknowledge that there is still work to be done. For instance bitumen is still being smuggled into the country, which threatens to dampen the economic gains of the new facility. Just as importantly though are the

environmental considerations.

The Minister of State at the Ministry of Energy, Herbert Krapa, emphasizes sustainability. According to him, being responsible in the carbon emissions has now left the realm of being an option, adding that all the signs of a fast-warming globe are here "and we know; we can't wait any longer to take decisive action."

He insists the plant must be a zero-carbon emission model for others to follow. He says it must contribute directly to efforts to reach net zero in the next few years and it must ensure energy efficiency at all levels.

While commending Goil and SMB for having the highest bitumen standard certification, he also implores them to look more within than without. "Your internal ethical standards are what will make the real difference. Look to those and stick to them," he advises.

Going by GOIL's recent corporate history, the Minister has nothing to worry about in this regard.

Ultimately though, the construction and the commencement of operations of this ground breaking bitumen plant is so much more than just a pivotal watershed facility for Ghana, even with its





prospects for dramatically reducing the country's import bill and the potential to generate export earnings, while improving the quality and durability of the roads that are constructed. Just as important is the lessons the project has taught with regards to international cooperation.

Instructively, the ownership construction and operation of the new plant is the second strategically pivotal partnership between Ghana and its immediate western neighbour, Coted'Ivoire. Just a few years ago, the world's two biggest cocoa producers – who between them account for nearly two-thirds of the entire globe's cocoa output – partnered each other to impose a US\$400 a tonne Living Income Differential (LID) on their production, accruable to their respective cocoa farmers on the basis that they do not get any where their fair share of the monies generated by the global chocolate industry.

Now, the newest partnership stands to ultimately close the door to bitumen imports into first Ghana, and eventually, much of West Africa as a whole.

Indeed, speaking at the commissioning of the plant, Ghana's President Akufo-Addo expressed profound pride in the achievement, emphasising the

significance of regional cooperation. He described the plant as a testament to the power of shared vision and resources within the Economic Community of West African States (ECOWAS).

"This facility is more than just a plant; it symbolises the strong ties between Ghana and Côte d'Ivoire and exemplifies the benefits of regional collaboration," he stated.

Instructively, the ceremony was attended by President Nana Akufo-Addo and His Excellency Robert Beugré Mambé, Prime Minister of Côte d'Ivoire, who represented President Alassane Ouattara.

In his address, His Excellency Robert Beugré Mambé urged GOIL and SMB to do well to maintain their partnership. He pledged the support of the government and people of his country to the joint venture.

Coming at a time that the African Continental Free Trade Agreement has recently created one of the biggest single markets in the world, and private initiatives such as the annual African Prosperity Dialogues have won the support of many sovereign African governments and the African Union itself, this partnership establishes an

African inter-governmental cross-border model for commercial investments that can drive the continent's ongoing economic renaissance forward.

