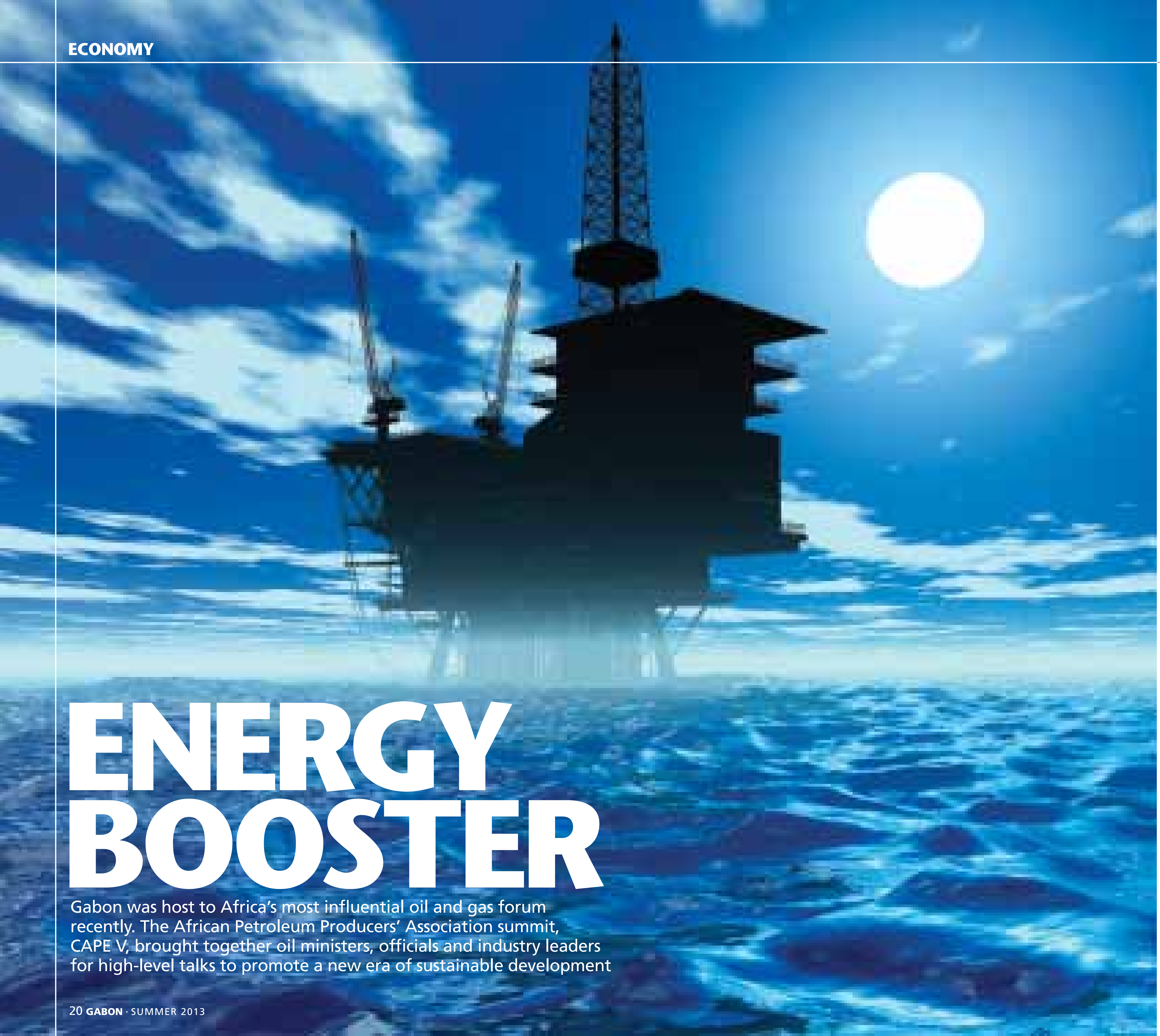


ENERGY BOOSTER

Gabon was host to Africa's most influential oil and gas forum recently. The African Petroleum Producers' Association summit, CAPE V, brought together oil ministers, officials and industry leaders for high-level talks to promote a new era of sustainable development

RARELY do profit-driven oil companies, high-minded officials and critical thinkers get together to strategise. But over three days that is exactly what transpired on a hilltop in Libreville. The latest African Petroleum Producers' Association (APPA) summit, held from March 26 to 28, drew hundreds of delegates and exhibitors from all over Africa to the capital's biggest conference centre, the Cité de la Démocratie.

The theme for the fifth annual African Oil and Gas Congress and Exhibition (CAPE V) was in itself revelatory. The event's title was *Outlook for Hydrocarbons in Africa: Striking a Balance between Production and Sustainable Development.*

APPA was born in 1987 when eight African oil-producing countries met in Lagos, Nigeria, to discuss inter-African co-operation. Now a highly respected vehicle for pan-African policy integration, APPA has grown to a membership of 18 countries – from Algeria to South Africa – which together account for most of Africa's oil and gas reserves and production.

From 2005 to 2010, oil production increased by 4.2 per cent. Figures for 2013 show that APPA countries were responsible for 12 per cent of global oil output and 8 per cent of global natural gas supply.

The Prime Minister of Gabon, Raymond Ndong Sima, opened the summit with a series of thought-provoking questions. Where would capital be sourced to develop upstream exploration and production (E&P) in Africa? he asked. How could countries improve the business climate for FDI? Could tax regimes benefit all sides?

"Today, African oil-producing nations can no longer lift oil without factoring in the environmental impact, the rights of company employees and the welfare of those living in close proximity to production fields. The exchange of information is critical," said the Prime Minister. Much had changed in the industry landscape recently, he added.

The robust investment outlook for APPA member states was also palpable. Exhibitors included service companies such as Baker Hughes and international oil companies (IOCs) the size of Petrobras. Africa has witnessed a growing number of discoveries recently, which, although capital-intensive, can be linked →

CAPE V, the agenda-setting conference held in Libreville, drew a wide audience from across the African oil and gas industry

AFP, PAUL DE ZARDAIN

to the risk-taking approach of small oil independents, whose results often lead to large-scale investment.

Proximity to the buyer markets of Europe and North America was one reason given for the current buoyancy of the African oil and gas scene by Oyewole Babafemi, executive director of the APPA Fund for Technical Co-operation. "But it is the end of civil wars in Angola, Liberia, Sierra Leone and Sudan, together with improved governance, that are driving interest in our resources," he concluded.

Gabon's Minister of Oil, Etienne Ngoubou, said CAPE V was an exceptional business opportunity for companies to share ideas with national governments: "The reason we are meeting here is not only to maximise revenue from natural resources, but to ensure that we forge strategic partnerships across Africa," he said. International summits such as this one, he added, helped to chart future oil strategies and to gauge changes in domestic demand and in environmental legislation across Africa.

Ngoubou also addressed the low level of 'local content' (employment and training of local workforces and development of local supplies and services) in the oil-producing nations of Africa – an issue that came up often during discussion panels at the conference.

The minister spoke of Gabon's objective of reaching 20 per cent of local content: "Progress in the development of petroleum resources cannot continue without taking into account the rights of our workers and of the people living near production areas," he added. "We need to work in an integrated manner. For us, sustainable development is actually a pillar of our economic policy."

Global reserves

For Rolake Akinkugbe, who heads oil and gas research at Ecobank, investment decisions often boil down to three issues: economics, infrastructure and markets. And today, with demand growth high in Asia but tapering in North America and Europe, oil producers in Africa, she stressed, needed to realign their priorities. "The environment of high oil prices is crucial for sub-Saharan producers," she said. "But shale oil discoveries in North America are eventually going to push global prices down. If we factor in the growth in domestic consumption here in Africa, lower prices may not be such a bad thing."

According to the World Bank, the global energy supply of oil stands at 87 million barrels per day (bpd). In 2013, Africa's share in that supply was between 10 and 12 per cent. In addition, the continent was behind 6 per cent of natural gas. New discoveries of petroleum in the Gulf of Guinea and Central and East Africa will increase this market share further.

The question now is what the private sector, governments and organisations such as APPA can do to translate production growth into job creation and industrial advancement locally. This needs to be done while oil prices are high because the external factors will soon close the time window for action.

"In Nigeria, cheaper oil and natural gas will affect our petrochemical plants, our fertiliser factories, kerosene markets, the transportation sector and gas-fired electricity plants. The scale of the impact calls for quick action," said Soala Ariweriokuma of the Nigerian National Petroleum Corporation.

With the US projected to become a net exporter of natural gas in 2025, the investment returns in Africa could be about to diminish. At the same time, gas discoveries are being made in Mozambique and Tanzania. Panellists at CAPE V argued that common infrastructure at a subregional level could ensure long-term value. "In Gabon, production could rise above 260,000 bpd and I see potential for new sub-regional projects. Gabon borders the Republic of Congo and Cameroon. It has the longest coastline, so there's scope for a major pipeline given the country's political stability," said Akinkugbe.

Gabon: the pre-salt basin

Although bituminous sands were observed in Gabon in the 19th century, the first oil well was spudded in 1953. Today, the country is the fourth largest producer in sub-Saharan Africa. Its light sweet crude is prized at US refineries. More importantly, crude exports account for 60 per cent of government revenue.

With its strategic vision of *Emerging Gabon,* the government has infused new political will into the redevelopment of mature fields and offshore exploration. It sees the oil and gas sector as a springboard that can deepen the economic base, which is otherwise dependent on imports of manufactured goods.

Gabon has 3.7 billion barrels of proven oil crude reserves, a 0.2 per cent share of global resources. Natural gas is relatively unexploited. As of 2012, oil crude production stabilised at 247,000 bpd. But the figure was below the peak figure of 371,000 bpd in 1997. Ageing fields and a dearth of exploration projects are behind the decline.

At CAPE V, it was clear, however, that Gabon's maturing onshore oilfields such as Rabi Kounga, Mandji and Gamba, together with high oil prices, have triggered interest among IOCs for new acreage in the deep offshore. The Rabi Kounga field is still churning out 150,000 bpd and has an estimated 440 million barrels of reserves. "Since the Rabi Kounga discovery, Gabon has lived on the optimism generated by the redevelopment schemes of ageing fields," said Ngoubou. "But each year we are making moderate discoveries that allow us to keep production stable. Still, I would have to say that the future for us is in the offshore."

According to the head of Gabon's Directorate General of Hydrocarbons (DGH), Landry Olouchy Essongue, it has long been speculated that the pre-salt basin in Gabon's ultra-deep waters is akin to sedimentary layers found at places such as the Lula field in Brazil's Santos Basin. "Gabon and Brazil are considered analogous basins and identical structures. The 2D and 3D seismic data from CGG and other geophysics firms shows a strong correlation between our pre-salt structures and those of the Santos Basin. We have 43 blocks that fit that geological profile at depths of 1,000 to 4,000 metres," said Olouchy Essongue.

The shift from mature fields to the deep offshore is evident in the commercial strategy of companies such as Total Gabon, →

IN FOCUS

After nearly two years, Gabon Oil Company (GOC) is ready to take stock of its activities. Its CEO, Serge Toulekima, discusses its new role and the challenges ahead

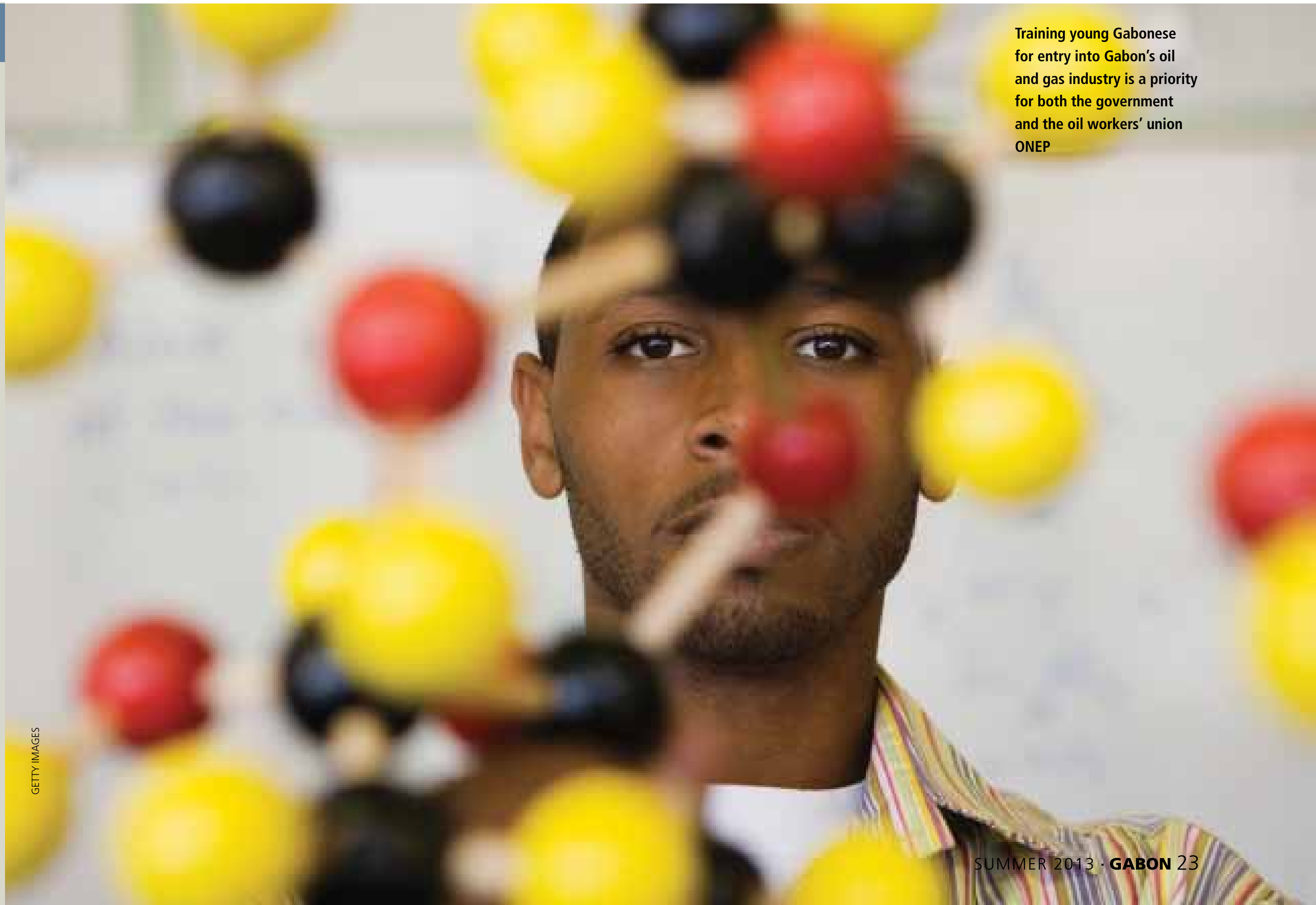
AFTER 18 months of GOC's existence, what issues in the oil industry will you be sharing with President Ali Bongo Ondimba in 2013?
One of the challenges is to reverse the declining oil production. Today, national oil output is around 245,000 barrels per day (bpd), down from a peak of 371,000 bpd in 1997. We need to increase exploration activity, deploy new technology and make full use of local talent. In 2013, we should focus on exploration of the deep-sea acreage and continue to develop this local talent. Our ambition is not just to have Gabonese engineers fulfil domestic market demand, but to become a net exporter of Gabonese talent.

How do you determine local content?
For me, local content is about human capital. Do we have the skills and knowledge to grow into a service-oriented industry similar to what Singapore has achieved? One day, instead of importing from overseas, we would like to have our own navy yards, offshore structures and oilfield equipment to meet both our own domestic and pan-African demand.

What role will the Institut de Pétrole et du Gaz (IPG) in Port-Gentil play?
The IPG model is admirable. But the private sector is ultimately more effective in developing skilled workers and qualified engineers. GOC will be awarding scholarships to the best high school students in the country to study at the best universities in the world. When they graduate, they will return to serve GOC. We will put them through an intensive training program and help turn them into the best engineers and scientists.

As of 2013, what types of challenges do local companies face in the oil industry?
One of the main challenges is how to attract and retain talented engineers and field operators. We need to train more skilled workers, particularly petroleum engineers, geoscientists and facilities engineers. Despite 40 years of oil production in Gabon, the transfer of skills and technology has been very slow. In the past, we have also seen many bright young people leave the country.

In light of the new hydrocarbons investment code in Gabon, do you foresee new conditions for IOCs to make space for GOC's presence in the industry?
It is a competitive world and the GOC should therefore not expect to be given a pass by anyone. We must be able to compete with the IOCs if we are to survive and become one of the best oil companies in Africa. At GOC, we are determined to demonstrate that we can operate the oilfields as well as – if not better – than any international company.



Training young Gabonese for entry into Gabon's oil and gas industry is a priority for both the government and the oil workers' union ONEP

GETTY IMAGES

AFP, SHELL GABON

Opposite page, above: several of the main international companies operating in Gabon are now offering on-the-job training for Gabonese students, and below: workers at a Shell Gabon installation. Above: a Shell Gabon oil terminal: the company started its activities of exploration and production back in 1960

in which Gabon has held a 25 per cent share since 1975. The company's offshore drilling has triggered new interest among IOCs in Gabon's ultra-deep waters, an area spanning 110,000 square kilometres.

"We also should highlight our redevelopment schemes at offshore fields like Anguille in Gabon," said Benoît Chagué, CEO of Total Gabon. "I mention this on purpose because we hope to obtain the same type of results for other mature fields."

In February 2013, the Extractive Industries Transparency Initiative (EITI) delisted Gabon a candidate. The official reason was that the second validation report had been submitted nine weeks after the agreed-upon deadline, reflecting differences over content. Previously, Gabon had disclosed revenues from oil and manganese for the period 2009 to 2010.

Shortly after the announcement, the Ministry of Mines, Petroleum and Hydrocarbons made it known that it would reapply for status as an implementing candidate. It knows that EITI listing is a key determinant for investors. The inclusion of commodities such as artisanal mining of gold and diamonds had made the administration of figures difficult for the authorities, however.

A sustainable approach

In the meantime, the government has laid down new rules to contain gas flaring by 2015. With an estimated 32.6 billion cubic meters of reserves, it has banned the flaring of associated gas since January 2010. But with no LNG (liquefied natural gas) terminals or viable domestic gas market, uptake by industry has been slow.

"In Gabon, we have decided to solve the flaring of associated gas in two ways," said Etienne Lepoukou, the advisor to Gabon's oil minister. "The first is to take into account zero gas flaring at new projects and the second is to reduce the problem at producing fields. Our goal is to reduce flaring by 60 per cent by using 2009 as our base year."

Total Gabon played its part by reiterating at CAPE V its commitment to reduce gas flaring at its installations by the agreed 60 per cent figure. Shell Gabon has already managed to reduce its volume of flared gas by a factor of ten. But more cost-efficient market alternatives will still be needed to avoid wasting resources and increasing emissions.

"All companies operating in Gabon contribute to gas flaring. But three operators are behind 88 per cent of this problem, so we need to focus on them," said Lepoukou. →

IN FOCUS

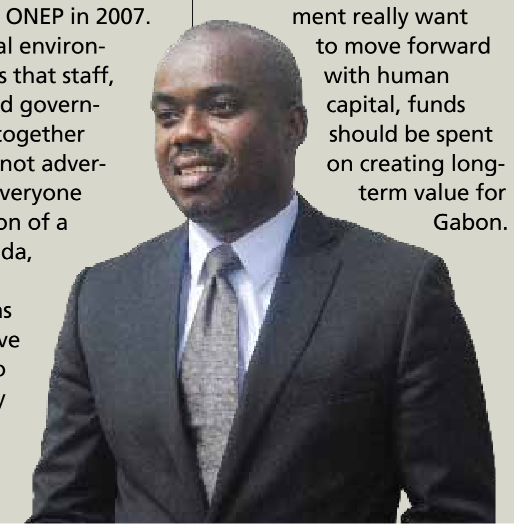
A former engineer at Shell Gabon, Arnauld Engandji served as spokesperson for Gabon's oil workers' union ONEP for six years. Since February 2013, he has been a special advisor to the President

TELL me about your training and early career as a production engineer at Shell Gabon.
I am from the village of Okondja in Haut-Ogooué province. That is where I went to school before moving to Moanda when I was seven. I then studied at the Lycée Léon Mba in Libreville. I didn't set out to become an engineer, but a lawyer. I was good at economics and languages. But I moved into engineering – I studied at the University of Leeds in the UK – because the system forces you into sciences or engineering if you excel academically. I was awarded a Shell scholarship to study fuel and energy engineering.

How did you become a spokesperson for the trade union ONEP and why did you then choose to transition into policymaking?
Let's face it, the oil industry has its own way of doing things and many of them do not comply with what I believed was the law. I began as staff representative at Shell Gabon and was drafted into ONEP in 2007. A good social environment implies that staff, company and government work together as partners, not adversaries. Not everyone had this vision of a shared agenda, so my scope of action was limited. I have moved on to where policy is created because I believe in the President's vision and reforms. I can now tackle broader issues like education or infrastructure. The goal is to serve my country and improve the social environment while preserving profitability for companies.

How would you spur more young people to become actively involved in the oil and gas industry?
I would first look at local needs. Where do we have the highest returns on investment? Where can we create real added value? Then we can adapt training programmes to fit both industry needs and the policies of an 'Emerging Gabon'. Let's focus on jobs that the industry actually needs: drilling engineers, pipeline engineers, rig specialists, project managers and so on.

The Institut de Pétrole et du Gaz in Port-Gentil has been launched to train students in the industry. Will it meet market demand?
It will mostly be training well operators, which is a six-month class. But if the industry and the government really want to move forward with human capital, funds should be spent on creating long-term value for Gabon.



PAUL DE ZARDAIN

Total Gabon is planning to open Gabon's first professional industrial diving school

IN FOCUS

Total Gabon is training local students in oil and gas professions. CEO Benoît Chagué outlines the task ahead for the Institut du Pétrole et du Gaz (IPG) and what could be the country's first industrial diving school

When was the IPG created and where are classes taught?
The IPG was set up in 2011. It is an educational partnership between the Government of Gabon and Total Gabon, along with Eni, Perenco and Shell. The building of the complex is ongoing and classes have been held temporarily at Total Gabon's training centre at Ozangué. When completed, the school in Port-Gentil will have capacity for 60 students. Our plan is to inaugurate it in the second half of 2013 and to have the President and other officials attend the launch.

At CAPE V, you mentioned two recent graduating classes of production operators. Can you describe how they were trained and where they will work?
Since 2011, we've had two groups of of production facilities operators graduate from IPG. The current class has 15 students. After graduation, they usually find work at Total Gabon. We also have a continuing education component based on internships in areas such as geology, economy or maintenance. The third component to IPG is a master's-level programme for specialists.

TOTAL GABON, AFP

With petroleum technology evolving at such a pace, is there a risk that students learn obsolete skills based on traditional school formats?
Schools need to provide the industry fundamentals. Yes, the oil business is all about hands-on training, but this can be met through internships that focus upon geology, economy or equipment. IPG will allow young people to launch their careers. Then they can pursue further academic training still at IPG but also in France, Canada or elsewhere.

What other projects are on Total Gabon's social development policy?
We are holding talks with the Ministry of Petroleum to explore the possibility of training industrial divers here in Gabon. Currently, industrial divers are flown in from France, so this is a way to promote local SMEs. But we will need to determine the size of the future diving school and match it with market demand.

In 2013, Gabon will make public its new hydrocarbons investment code, which promises to relax fiscal margins. Tax take in Gabon has been based on surface area, with royalty terms dating to the 1970s. The new hydrocarbons code will offer more generous terms to incite interest in fields underneath the salt layer. "The hydrocarbons code will be made public shortly. It will not only improve oversight over energy resources, but also give us a much needed competitive edge," said Lepoukou.

The real game changer, however, has been the arrival of the state oil company, Gabon Oil Company (GOC). President Ali Bongo Ondimba announced its creation in March 2010 and signed the official decree in August 2011.

GOC is tasked with managing the industry along the entire value chain. At the time of its announcement, industry watchers and foreign operators were mystified. Would GOC focus solely on the marketing of oil crude? Would it model itself after national oil companies such as Sonangol? Would it elbow out the long-established IOCs?

Local involvement

The truth is more prosaic. In an era marked by Africa's economic ascendancy, GOC has been set up to transform Gabon from an old oil province to an emerging market. As a national oil company, it will participate actively in the industry to ensure that a larger share of revenue stays at home.

In March 2011, the government called for an audit of the petroleum sector. It commissioned a study to gauge the effectiveness of the DGH and decide whether there were overlapping interests with GOC. The study carried out comparative studies of individual contracts to determine their profitability.

"After setting up GOC, we were asked if Gabon was nationalising its oil industry," said Serge Toulekima, the CEO. "The answer was no. Our strategy was simple – to understand the market and fix problems. We also wanted to emphasise sustainable development and promote local content." He said GOC was looking at ways to get young Gabonese actively involved in the industry: "This is not about a few faces here and there. It means getting them trained in areas like well services or well testing. It also means more joint ventures with locals."

GOC will manage assets on behalf of the state. It will oversee the marketing and distribution of petroleum products. It will also launch its own E&P campaigns by signing joint ventures with IOCs. It is widely seen as a vehicle to explain industry activity to government officials and ease policy formulation.

"So far, we've identified three concrete areas of activity for GOC: acquisitions of marginal or expiring fields (less than 10 million barrels of reserves), the development of small fields, and oversight of production sharing contracts that are about to expire," said Toulekima.

The road ahead for GOC includes modernisation of the Gamba oil terminal and the revival of maturing assets. In 2012, there was a flurry of activity as GOC became active in deep-water exploration. In January 2013, it took over the Obangué field, where it plans to raise production above 9,000 bpd.

When President Bongo announced the creation of GOC, he used the opportunity to announce the founding of the country's first training institution for the industry, the Institut du Pétrole et du Gaz (IPG) in Port-Gentil. The school will employ industry specialists to train Gabonese staff in a variety of petrochemical professions. It adds up to fresh talent for the industry and means that, in one swoop, the average age of local employees – currently 48 – could be slashed in half. ■

Paul de Zardain

IN FOCUS

AFP

CGG is a geoscience firm that provides gravity and magnetic images of Gabon's onshore and offshore acreage. Gérald Tuminaro, country manager, describes the results of recent surveys

IN 2010, the geological data of Gabon's offshore acreage was obsolete and CGG's geophysical data had not been processed. How do things look three years later?
Back in 2010 we were still modelling entire kilometres of ultra-deep acreage. There was a lot of speculation, but no concrete evidence. As of 2013, companies like Shell have found enough petroleum reserves to justify the drilling of exploratory wells. The first production wells will come online in 2014.

After so much speculation, how do the pre-salt structures in Gabon's offshore finally compare to those discovered in Brazil's Santos Basin in 2006?
We can't ignore the fact that the geology at a certain depth is similar to the western flank of the Atlantic Ocean in Brazil. I'm not a sceptic, but I need to remain a realist. We are talking about structures that were formed millions of years ago and are located thousands of kilometres away.

Geophysical science will be critical for Gabon to grow its reserves. How is CGG passing on its expertise to young Gabonese interested in the industry?
I know many young Gabonese in France who would like to work here but have a hard time finding jobs. These are engineers that could be trained in geophysics in months. We've offered the government to send their best students to French universities. If they have two or three highly valued candidates, we would be willing to defray the costs.