

## TRAFIGURA IN

# **AFRICA**



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4.1%

13%

Projected population growth up to 2023<sup>2</sup>

20%

Oil demand increase up to 2025<sup>3</sup>

<sup>1</sup> Between 2019 and 2023. Source: IMF 2018 World Economic Outlook

Expected GDP growth up to 2023<sup>1</sup>



<sup>&</sup>lt;sup>2</sup> Between 2018 and 2023. Source: UN 2017 Revision of World Population Prospects

<sup>&</sup>lt;sup>3</sup> Source: IEA 2018 World Energy Outlook.

### Africa and commodities



Africa's economic fortunes are closely linked to developments in commodity markets. Many African countries are rich in natural resources such as oil and gas, copper, cobalt and iron ore, and they earn substantial revenues from their export. The continent's growing cities and industries have an increasing appetite for imports of everything from gasoline, diesel, fuel oil and liquefied petroleum gas to advanced chemicals and construction materials.

One thing that producers and consumers of commodities share is the need for support in ensuring that these materials add value in the market and reach the places where they're needed.

These are the services offered in Africa by the Trafigura Group, one of the world's leading commodities trading and logistics firms. Trafigura sources, stores, transports and delivers a range of raw materials including oil, refined petroleum products, non-ferrous metals and minerals to clients around the world. It invests in industrial and financial assets that support this activity, including mines, warehouses, storage facilities, shipping and transport.

Founded in 1993, Trafigura has been active in Africa for more than 20 years. Working with an unparalleled global network, the company helps African producers and refiners of oil, metals and minerals finance their operations, manage their exports and ultimately connect with their end customers around the world. We help the continent's growing economies meet rising demand for fuel and other materials by providing quality products via cost-effective and efficient supply chains. Trafigura contributes towards the development of new markets for more environmentally friendly fuels, towards new business partnerships providing power, and towards the growing use of renewable energies.

All this requires a substantial and experienced presence on the ground. Trafigura Group employs hundreds of people in key African commodity markets such as the Copperbelt region. Multimodal logistics subsidiary Impala Terminals owns and operates a network of warehouses and transport assets enabling the flow of exports and imports along the most important logistical corridors connecting this producing region with the coasts.

Trafigura's commercial teams are in constant contact with African national oil companies and refiners helping them to finance their activities, hedge against market fluctuations and secure the best prices for their products around the world. Partner company Puma Energy operates multiple fuel storage facilities and retail distribution networks across the continent, as well as supplying the energy needs of the mining industry. We operate in close partnership with many governments in the region, helping them to secure security of supply in sometimes challenging conditions. We make it our mission to trade responsibly and apply the highest standards of governance, transparency and conduct.

This publication sets out in more detail how we go about these tasks, with illustrations and examples from numerous markets across the continent. It shows how, in Africa as elsewhere, Trafigura is growing prosperity by advancing trade.

Jeremy Weir, Executive Chairman and Chief Executive Officer

### UN Sustainable Development Goals (SDGs)

By fulfilling the commitments in our Corporate Responsibility Policy and Business Principles, we contribute to decent work and economic growth (SDG 8). By developing infrastructure and managing logistics routes, we promote inclusive and sustainable industrialisation (SDG 9). Through our efforts to support responsible procurement of commodities, we encourage sustainable production patterns (SDG 12). Our business partnerships help mobilise resources for development (SDG 17).









### Serving the African Copperbelt

#### Overview

The Copperbelt, stretching across central-southern Africa, is the locus of the global non-ferrous metals business. Demand for copper, cobalt and other materials produced in the Democratic Republic of the Congo and Zambia is growing rapidly as urbanisation and electrification continue to spread across the developing world.

This growth is expected to accelerate further as decarbonisation gathers pace and sales of electric vehicles rise – to the benefit of the many people in the region whose livelihoods depend on the resources industry, both in the formal and informal mining sectors. For example, two thirds of global production of cobalt – a vital material for use in lithium-ion batteries that power electric vehicles – originates from the DRC.

In the Copperbelt, digging metals out of the ground in raw form and refining them is only part of the story. Another key task is getting them from mine to market – more particularly from land-locked producing areas to the ocean and to consuming industries in other continents. This is where Trafigura comes in.

Trafigura, one of the world's leading traders of metals and minerals, has been serving the Copperbelt for more than 15 years. Our Group invests in infrastructure and logistical capabilities to move metal from where it's produced to where it's needed, managing every stage of what is by definition a long and complex journey. We provide financial support to producers by extending credit that is repaid with product. We are the largest trading company in the region and the only one to have maintained a constant physical presence in DRC and Zambia, supported by unrivalled infrastructure, as production has grown.

+15 years
Activity in the Copperbelt

900,000<sub>mt</sub>

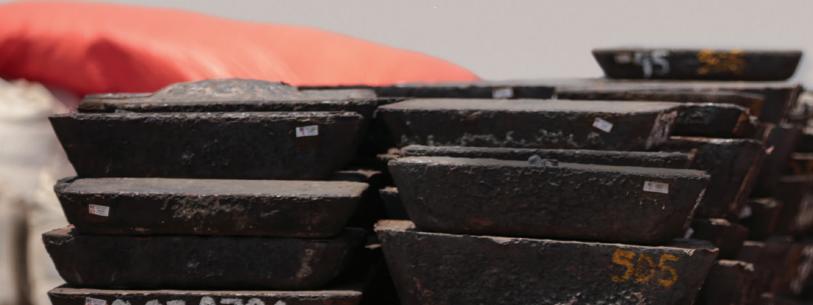
Concentrates and metals transported per year

We now transport some 900,000 metric tonnes per year of metal, including copper, cobalt, zinc in concentrate and refined forms, from production centres such as Lubumbashi and Kolwezi by truck and train along five separate export corridors to the east and west coasts. Using a diversity of transport methods and routes increases service reliability and reduces bottlenecks. An exciting new development is the reopening of the rail line from the DRC border to the Angolan port of Lobito, which promises to cut transport times and costs significantly from the fast-growing production region around Kolwezi. Overall volume is expected to continue to grow in the next few years, and we are investing to ensure that our infrastructure, including warehouse space and rail capacity, keeps pace.

And it's not just about buying and transporting metal: we are also big suppliers of essential fuels and other materials to the region's miners – bringing them in along the same road and rail corridors used for export.

In short, we are the Copperbelt's indispensable partner, enabling the mining industry there to operate, generate revenues and create jobs in the most efficient manner.







#### Mining

In addition to managing the logistics of supply from and to the DRC, Trafigura Group is also an investor and owner in the local mining industry. Our Mawson West mine, north of Lake Mweru, is outside the Copperbelt, employs about 800 people – 75 percent of whom are from the immediate vicinity – in a region with few other sources of wealth. In another demonstration of our Group's logistical capabilities, we transport the mine's 26,000 metric tonnes of annual copper production safely along fragile roads to the lake port of Pweto and across the lake by barge to Zambia and ultimately foreign markets.



26,000mt

Copper production per year at Mawson West



#### Responsible sourcing

Almost two-thirds of the world's cobalt is supplied by mines in the DRC. Between twenty to forty percent of the country's cobalt output is produced by the Artisanal and Small-Scale Mining (ASM) sector. Recognising the large numbers of workers employed in tough and often dangerous conditions in such informal mining, Trafigura is engaged in an initiative to increase transparency and improve management of social and environmental impacts.

In 2018, Trafigura signed a three-year cobalt hydroxide marketing agreement with mining company Chemaf. Chemaf is developing a major copper-cobalt mining concession at Mutoshi where local communities have historically engaged in unregulated ASM activity. Rather than seeking to evict these workers, Chemaf – with Trafigura's support and that of an internationally respected NGO – has set up a pilot project to improve practices on site such that ASM can become formalised and ultimately semi-mechanised.

Workers on site have enlisted in a formal co-operative authorised by the DRC regulatory authorities. They are provided with appropriate safety equipment, work in a regulated environment and sell their product at a rate based on the international market level. The project has already attracted considerable international interest as a demonstration of how it is possible to ameliorate conditions in these challenging circumstances.

To learn more about this project and to read our discussion document on responsible sourcing in the electric vehicle battery supply chain visit:

www.trafigura.com/responsibility





### **Impala Terminals**

Impala Terminals is a Trafigura Group company specialised in providing multimodal logistics solutions for imports, exports and intra-regional supplies. In the Copperbelt, the company has developed a set of logistics corridors that offer customers safe and secure handling of goods and end-to-end solutions for imports as well as exports, giving producers optionality with multiple African ports to choose from, including Durban, Dar es Salaam, Beira and Lobito. It is the only company in the region to offer rail transport to Africa's east, west and south coasts, linking a network of strategically located warehouses at the ports and at the Copperbelt sites of Lubumbashi and Kolwezi (DRC) and Ndola (Zambia).

Rail transport offers important advantages over trucking, including economies of scale, better security, tracking and tracing, and, of course, less harm to the environment and less disturbance to local communities. Impala's rail network is the result of years of painstaking negotiation with regional rail companies and regulators and significant investment in rolling stock and infrastructure.

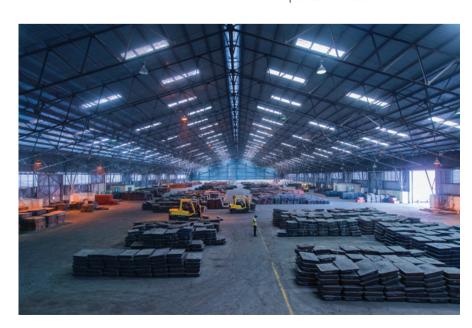
Today, Impala employs up to 350 people in Africa including over 225 at the three inland Copperbelt sites. It has invested heavily in training and equipment to ensure high operating standards.

In Zambia and the DRC, bonded warehousing facilities handle copper cathodes, blister and concentrates, together with cobalt and zinc for customers in the main mining areas of Kolwezi, Lubumbashi and Zambia. These hubs are the collection points for all materials and are responsible for loading and onward despatch to trains. They have recently been developed to receive inbound cargoes such as fuel, chemicals and mining equipment, offering more cost-effective, round-trip solutions for importers and exporters.

As Group policy, Trafigura follows international best practice and strictly complies with regional regulations.
This means Impala takes extra care when assembling each shipment, ensuring all the paperwork is in order, that vehicles are fit for purpose and properly loaded and secured. It then monitors each truck's or train's progress to its final destination and provides security, including for overnight stops while goods are in transit. This is particularly important to assure banks financing the shipments that their interests are being taken care of.

In 2019, Impala is on track to double both export and import volumes to an overall total of 1 million tonnes. It is expanding its warehouse facilities at a new 'mega-site' near Lubumbashi to cope with an expected further increase in volumes.

www.impalaterminals.com



#### DRC - Kolwezi

### 550,000m<sup>2</sup>

Land area

### 6,000m<sup>2</sup>

Covered warehouse bulk/ break-bulk



### Angola - Lobito

Rail siding and container handling Rail and road connectivity

### 3,000m<sup>2</sup>

Land area

#### Lobito rail corridor

In September 2018, in a historic first, Impala delivered an 800-tonne cargo of copper blister from Kolwezi to the Angolan border at Dilolo and then onward to the port of Lobito – the first consignment of copper to make the 1,800 kilometre journey to Angola's Atlantic coast in the 40 years since the country's civil war shut down the line. It has been shipping increasing volumes since. While the volume is still just a tiny fraction of copper exports from the region, the reopening of this centuriesold trade route offers the potential for miners in the rapidly expanding Kolwezi region to export to American and European markets much more quickly and cheaply than available alternatives. The journey from Luau on the Angolan side of the border to Lobito takes 36 hours, compared with the 10 to 12 days required to make the trip from the DRC to Durban.





### DRC - Lubumbashi site 2

550,000m<sup>2</sup>

and area

6,000m<sup>2</sup>

Covered bonded warehouse



### Tanzania - Dar Es Salaam

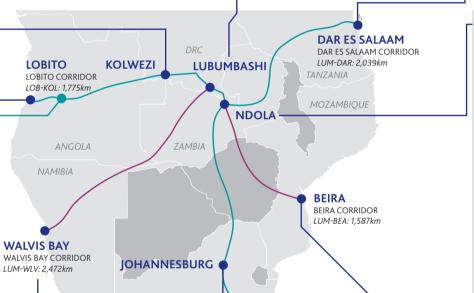
25,000m<sup>2</sup>

Leased land from the Port Authority of Tanzania

12,000m<sup>2</sup>

Covered warehouse





### Zambia - Ndola

55,000m<sup>2</sup>

Land area

9,000m<sup>2</sup>

Covered bonded warehouse



### KEY

Impala Terminals locations

SOUTH AFRICA

Rail and road

- Road

### South Africa – Johannesburg, Durban

60,000m<sup>2</sup>

**DURBAN**DURBAN CORRIDOR

LUM-DUR: 2,127km

Covered warehouses bulk/break-bulk

4,000m<sup>2</sup>

External yard

### Mozambique – Beira

6,000m<sup>2</sup>

Covered warehouses bulk/break-bulk



### Namibia - Walvis Bay

5,000m<sup>2</sup>

Covered warehouse

### Serving Africa's oil producers and refiners

Africa is one of the world's key crude oil producing regions. As a leading crude and refined products trading company, Trafigura makes it a priority to maintain close relationships with important producers and refiners on the continent and with their host governments worldwide.

Our approach is unique. Our commercial teams spend a lot of time in the various countries, in order to develop in-depth understanding of their needs in terms of supply, off-take, price-hedging, logistics and credit. We then work collaboratively to determine how best to put the entire portfolio of Trafigura capabilities at the service of the customer in order to add value to their business.

At the simpler end of the spectrum, we aim to make competitive bids in national supply or off-take tenders. In this we are assisted by our broad regional footprint, our strategy of taking a holistic view of the requirements of multiple countries in sub-regions such as West or East Africa, and our partnership with fuel storage and distribution company Puma Energy, which creates economies of scope and scale.

More complex and deeper relationships include multi-year off-take or supply agreements involving pre-payments amortised by commodity deliveries; swap arrangements in which crude off-take is offset by deliveries of refined products; and co-operation involving local infrastructure investment by Trafigura Group or affiliate companies.

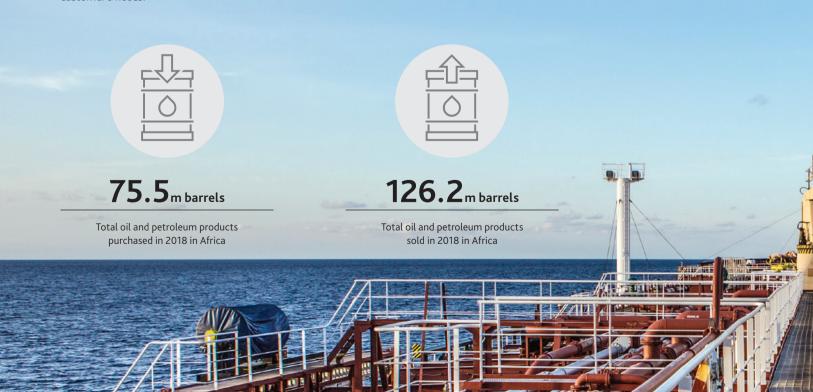
Various examples are set out on the opposite page. But the overarching message is that Trafigura always goes the extra mile to deliver unique, bespoke service packages designed to meet the customer's needs.

#### **Structured Trade Finance**

Credit is an important element of Trafigura's service offering both to oil producers and refiners, in the form of prepayments or pre-export finance arrangements that are amortised by off-take of crude or refined products, generally over a period of up to five years. These arrangements have become increasingly important in Africa as large international banks have retreated from lending to emerging market clients in order to focus on domestic markets.

Traditionally these banks used to arrange prepayment credits to resource producers and refiners and then bring in trading firms to absorb the subsequent commodity offtake. Now fewer banks offer such facilities, but emerging market producers still need credit, especially when their finances come under strain as commodity prices dip. In recent years Trafigura has increasingly offered so-called Structured Trade Finance packages to producers and refiners, syndicating the risk to financial institutions.

A typical arrangement with a crude producer involves an advance amounting to 50 to 90 percent of the estimated value of exports, depending on the tenor of the financial arrangement. It gives access to credit that may not be otherwise available to producers in certain markets, and in a flexible form. Contracts include built-in arrangements to vary delivery volumes as prices fluctuate. In the event of major and sustained market movements, it can be necessary to restructure a prepayment arrangement as occurred recently in the case of the Republic of the Congo's national oil company SNPC.





### Nigeria

Nigeria, as the continent's largest economy with rapidly growing needs for fuel, power and infrastructure, is a top priority for Trafigura. We are a leading participant in the Nigerian National Petroleum Corporation's (NNPC) crudefor-gasoline swap programme, which supplies the lion's share of Nigeria's gasoline imports. In the 2017 calendar year, this generated offtake of 1.8 million barrels of crude oil, in exchange for delivery of 1.8 million barrels of gasoline. We are also important off-takers of Nigerian condensate, liquefied natural gas (LNG), liquefied petroleum gas, naphtha and fuel oil.

Separately, we are actively engaged in the development of Nigeria's refining sector, through discussions both with NNPC and with the planned Dangote refinery, and always looking for opportunities to develop captive power supply projects for industrial plants. In addition, Puma Energy has invested significantly in a Nigerian bitumen storage and distribution business which is well placed to benefit from future infrastructure development.



### **Ivory Coast**

This has long been an important market for Trafigura, and we have strong relationships both with the refining company *Société Ivoirienne de Raffinage* (SIR) and the national oil company Petroci. We have backed prepayments to SIR for refined products of more than USD300 million, which helped finance an upgrade of the refinery and improve operational cash flows. We also backed pre-export facilities for crude to Petroci amounting to circa USD160 million.



### Republic of the Congo (Congo Brazzaville)

The national oil company Société Nationale des Pétroles du Congo (SNPC) has been a major provider of crude off-take to Trafigura over the years and a recipient of more than USD1 billion in prepayment credit. Following the fall in oil prices from 2014, we entered into debt restructuring negotiations with SNPC which resulted in a debt rescheduling agreement that will be signed late 2019. The process underlined the strength of our partnership.





#### **Angola**

Trafigura has a long-standing relationship with the national oil company Sonangol. We are currently the biggest supplier of gasoil to the country, while Puma Energy, operating in Angola as Pumangol, provides high-quality fuels through the country's second largest retail fuel distribution network. It also built a state-of-the-art terminal for fuel imports linked to the world's largest Conventional Buoy Mooring (CBM) system in Luanda Bay.



## The Extractive Industries Transparency Initiative (EITI)

In 2014, Trafigura became the first independent commodities trading company to declare support for the Extractive Industries Transparency Initiative (EITI), a standard for promoting open

and accountable management of natural resources that counts 24 African countries as members. By publishing our payments to state-owned enterprises in EITI countries where we do business, we provide useful information on a matter of global public interest. We have also been part of an EITI-mandated working group to help implementing countries increase transparency about revenues received from commodity sales. Ghana and Nigeria are among countries that are making active efforts to improve disclosures in this regard.

For more information on our payments to governments, please visit: https://www.trafigura.com/responsibility/eiti/

### Puma Energy: a Trafigura investment in Africa



Trafigura is a 48.3 percent shareholder in Puma Energy, the largest independent storage and downstream company in Sub-Saharan Africa. Puma Energy began its African operations in Congo Brazzaville in 2002 and since then has expanded its footprint, both organically and through acquisitions, to its current presence in 20 African countries.

Downstream, Puma Energy sources and supplies a wide range of oil products, including fuel oil, gasoline, jet fuel, LPG, aviation fuel, bitumen and lubricants. Its midstream activities support these operations.

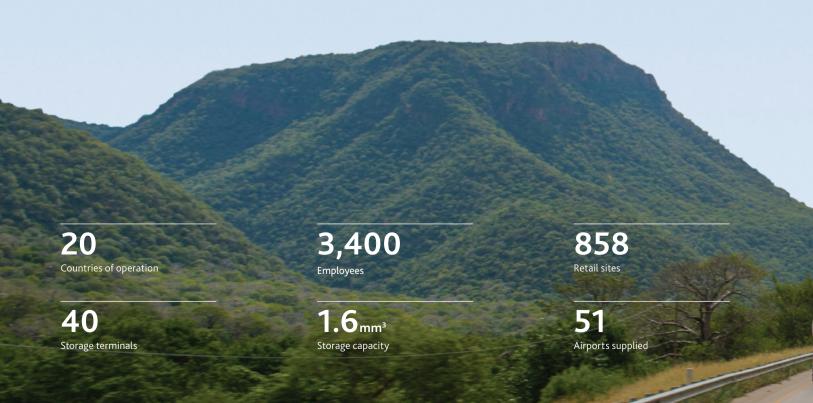
Puma Energy is an important partner for Trafigura as it integrates fuel supply structures and invests in infrastructure. In the past four years alone, Puma Energy has invested over USD1.2 billion across Africa, upgrading storage and retail facilities to provide a secure supply of high-quality products.

With its headquarters in Johannesburg, Puma Energy employs over 3,400 employees in Africa, and has more than 40 terminals with over 1.6mm³ of storage capacity as well as 850 retail sites. Puma Energy also supplies 51 airports in the region with high-quality aviation fuels, 12 of which came onstream in 2018.

Apart from Trafigura, Puma's business customers include many of the world's leading mining companies and major players in power generation, construction, transport and other sectors where security of fuel and lubricant supply is a top priority. Its bitumen operations are also helping to pave thousands of kilometres of new roads across the region.

Puma Energy continues to grow operations both organically and through acquisition incorporating new businesses into its portfolio. From 2008 to 2010, the Company acquired BP's fuels and marketing businesses in Namibia, Botswana, Zambia, Malawi and Tanzania, launched in Mozambique, began work on two now-completed distribution terminals in the Democratic Republic of Congo and adapted its brand in the Angolan market.

www.pumaenergy.com





### Puma Energy in Ghana: An integrated supply chain through investments in infrastructure

Ghana is one of Africa's leading oil and gas producers and a key market for Puma Energy.

Puma Energy first invested in Ghana in 2006 through CBM/ SPM (Conventional Buoy Mooring/Single Point Mooring) systems in a build-operate-transfer agreement. Operation and maintenance of the system, which imports over 80 percent of the nation's fuel, was officially handed over to the government in February 2017.

In 2016, Puma Energy officially entered the Ghanaian downstream retail market and has been steadily since, now operating 83 retail sites.

Since 2015, Puma has constructed four state-of-the-art storage terminals in Accra, Tema and Takoradi with a combined storage capacity of 178,700m<sup>3</sup>. These investments have significantly improved security of supply and had a significant impact on Ghana's potential for trade and economic growth.

At Tema, this includes a 100,000m<sup>3</sup> multi-product storage terminal that includes an LPG bottling plant with 8,000m<sup>3</sup> of storage.

In a further move to increase the storage for jet fuel in the country by an additional 30 days, Puma Energy has built two terminals. At Accra a 10,000m³ jet fuel storage facility supplies Kotoka International Airport with 60 percent of its aviation fuel and a 16,000m³ jet fuel storage depot at the port of Tema.

Elsewhere in the country, Puma Energy's Takoradi terminal was developed to primarily serve the Ghanaian mining industry. The 32,000m³ facility is the only depot of its kind for the storage of gasoline in this key area of growth and development, and has reduced the need for delivery trucks to drive 135km from Accra to Takoradi. The improved infrastructure is another example of how Puma Energy contributes to the development of a safe and professional oil and gas distribution system.



### Puma Energy's growing presence in Mozambique

In November 2015, Puma Energy inaugurated two new storage terminals in Mozambique. The bitumen and fuel terminals in Matola have raised Puma Energy's total capacity in Mozambique to 276,600m<sup>3</sup> – the company's second largest storage capacity in Africa.

Focusing on integrated midstream and downstream operations, Puma Energy's model is to link local demand with international supply, through investment in infrastructure. Mozambique's strategic location is ideally situated to answer the supply requirements of South Africa and the sub-Saharan region.

Together with its storage terminals in Beira and bitumen terminal in Matola, completed in May 2012 and June 2014 respectively, the strategic significance of the 115,000m³ fuel terminal reaches well beyond Mozambique's borders. While the bitumen terminal means that Mozambique is no longer dependent on imports from neighbouring countries, the fuel terminal creates a channel for the cost-effective and secure supply of fuel to the Southern African Development Community (SADC) sub-region.

The Matola Fuel Terminal comprises 11 storage tanks, with 115,000m³ of storage capacity, and this new infrastructure represents a catalyst for economic growth in the country. The massive investments that these state-of-the-art terminals are a clear indication of the company's confidence in the sustainable growth of Mozambique.

178,700<sub>m<sup>3</sup></sub>

Total storage capacity in Mozambique



### Case studies: Fuelling African energy demand

#### West African bunker fuel

With the lively movements of ships plying the ports of West Africa comes a strong demand for supplies of fuel to power them – bunker fuel as it is known in the trade. This is one of the more physically challenging businesses in the region, involving complex logistics and the need for extreme operational flexibility. It's another of Africa's opportunities that Trafigura has risen to in recent times, achieving rapid growth in regional market share with a dedicated bunkering team serving all the key commercial centres in the region from Conakry to Cape Town.

The key challenge for bunkering in the region is that physical supply has to take place offshore via ship-to-ship (STF) transfer. Trafigura has an offshore floating storage aboard a Suezmax tanker moored off Lomé, the capital of Togo. It supplies ships with a fleet of ten chartered vessels that operate rather like a chain of mobile gas stations, going where the ship-owners need them and supplying vessels ranging from oil drilling rigs to tankers, bulk freighters, container ships and fishing vessels.

Such is the operation's success that it now forms part of a new joint venture between Trafigura and two of the world's largest ship-owners to create a leading global supplier of marine fuels.



150,000<sub>mt</sub>

West African bunker fuel moved per month



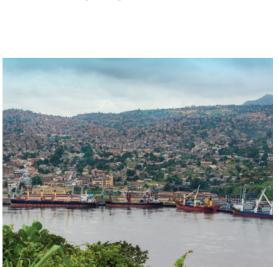
### Supplying gasoline to DRC along the Congo River

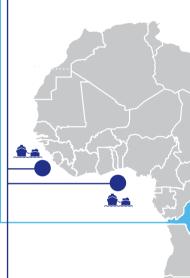
One of the trickier logistical challenges Africa has to offer is that of bringing gasoline to the land-locked markets of the western Democratic Republic of the Congo, including the capital Kinshasa, one of the continent's fastest-growing urban centres. Uniquely, Trafigura meets this challenge by shipping gasoline up the Congo River from ocean ports on the coast of northern Angola.

It's an approach that requires long-term investment in infrastructure, flexibility, attention to detail and a deep understanding of the region as a whole as well as the linkages between its different parts. Our presence along the coast enables us to supply multiple countries on one voyage by a 40,000-tonne Medium Range tanker, thus generating efficiencies and cost-savings. For DRC, gasoline cargoes are discharged at Banana or Pointe Noire, then sent in smaller vessels up-river.

The key river-side asset at our disposal is the 26,000m³ SPSA Terminal at Matadi, the entry point to the western DRC. This terminal, built at a cost of USD50 million by our partner company Puma Energy, is the only functioning logistical facility in the region and is in turn connected by pipeline to Kinshasa. From there supplies can also be barged across to Brazzaville on the opposite bank of the Congo, and onward by barge or truck to the remote Central African Republic.

Supplying by barge is much more secure and traceable than using trucks, also enabling tax collection and combating smuggling. Thus the wider regional economy can benefit from growing demand for fuel.







Trafigura prides itself on placing security of supply to its customers at the heart of its operations, even in the most financially challenged markets. Zimbabwe is a case in point. Trafigura has a significant share of the market to supply fuel to the land-locked country, working with our partner company Puma Energy which has its own retail network.

Together we have kept the pumps in operation throughout Zimbabwe's eventful recent history and recurrent balance of payments problems. Key to this feat is our investment in a complex logistical chain stretching from storage tanks in-country back through a 500km pipeline across Mozambique to the Indian Ocean port of Beira, where Trafigura uses Puma Energy's first-class storage assets – one of the few facilities in the city to have been unaffected by Tropical Cyclone Idai in March 2019.

But an additional important feature is Trafigura's willingness to go the extra mile to honour its supply contracts, and to work with customers including the government to offer them tailor-made solutions, such as longer payment terms, additional supplies via alternative routes or special arrangements to create buffer stocks against expected supply shortages. Whatever happens, the customer comes first.



 $500 \, \text{km}$ 

Pipeline to Beira

### Meeting changing needs in Egypt and the Horn of Africa

Major structural changes have been underway in the energy markets of Egypt and north-eastern Africa in recent years, as new sources of supply and demand open up. Thanks to its logistical and financing capabilities and to its access to global commodity flows, Trafigura has been able to play an important and innovative role in the region.

We helped Egypt navigate rapid changes in its energy supply and demand position at a time of financial strain. In 2015, Egypt faced a significant need to import Liquefied Natural Gas (LNG) as its domestic gas reserves became depleted. Working with a new delivery system known as a Floating Storage and Regasification Unit (FSRU), Trafigura won the first major tender to supply Egypt with LNG at competitive prices. With the FSRU a specially converted ship enabling a buyer without established infrastructure to access LNG supplies quickly and at relatively low cost – Trafigura helped the client, Egyptian General Petroleum Corporation, to make the shift at speed, supplying more than 100 cargoes of LNG. More recently, substantial new gas finds have enabled Egypt to resume its traditional role as an exporter of gas, and here too, Trafigura became a substantial off-taker of Egyptian production.

In logistically-challenged Sudan, Trafigura has become the leading importer of diesel, fuel oil, gasoline and liquefied petroleum gas (LPG), having built an important storage position in Port Sudan. Keeping products in these tanks enables us to unload material in bulk at the port – reducing shipping demurrage fees – and sell smaller quantities at competitive prices as the market requires. Our on-the-ground experience gives us the confidence to manage risk and ensure reliable supplies even during recent times of civil disruption. We are constantly on the alert for emerging opportunities as other regional markets open up.







# Developing new markets and assisting Africa's energy transition

Africa's energy and raw materials are changing. As a leading global commodities player, Trafigura sees creating the basis for future development as key parts of its mission – by rapidly opening up markets for new, more environmentally-friendly fuels, by facilitating urgently needed new methods of supplying markets such as trading of power, and by introducing the latest technologies to generate renewable energy.

As African countries move to reduce permitted sulphur content in fuels, Trafigura is supplying the higher-quality imported materials the market needs. We are working to develop, connect and supply power projects as more integrated regional markets emerge. And we are pioneering investment in renewables such as solar power.

The transition towards a lower-carbon economy is coming to Africa, and Trafigura is playing its part.

#### LPG in West Africa

Liquefied petroleum gas (LPG) has become an important 'transition fuel' for Africa, notably in meeting basic needs such as cooking. It is cheaper than alternatives such as kerosene. It is cleaner than burning traditional fuels such as wood, and can be supplied without building costly new infrastructure. LPG is also increasingly used in power generation, and again is a lot cleaner than heavy fuel oil.

Trafigura has become a leading supplier of LPG to West Africa, thanks to our leading position in exporting the abundant and cost-competitive new supplies coming out of the shale fields of the US and to the logistical network we have created in co-operation with partner company Puma Energy.

We bring LPG to the region on large specialised vessels before breaking cargoes into smaller volumes that can be delivered into local ports. Keeping reserves of product on an offshore logistical platform enables us to make supplies available to countries which do not have adequate storage capacity and to react quickly to any shortages. And the cost savings achieved by efficient handling at scale can be passed on to our customers.



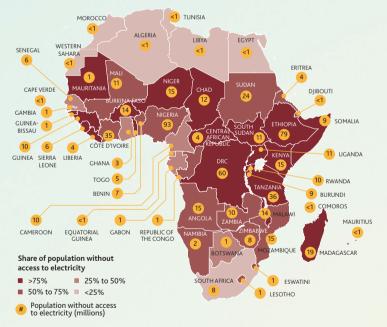
### Helping meet Africa's power needs

Boosting supplies of electric power is critical to economic growth. In Africa, lack of access to electric power is a major constraint. But across the continent, numerous projects are underway which, once completed, will help to address the power deficit in individual countries but also, by linking national power grids, create more efficient regional electricity markets, or 'pools'.

Trafigura is a leading supplier of fuels to African power generating utilities, and is working with national authorities on many of the more important projects that may require debt or equity finance as well as long-term fuel supplies.

In Ghana, for example, we have invested in an efficient new combined-cycle 107 megawatt power plant designed to run on natural gas. In Mozambique, we are working with Afrochine to develop a 120 MW plant at the port of Beira that will help address power shortages in Zimbabwe. In both Benin and Togo, we have partnered with power generation companies to provide LPG for power. Both projects are expected to come online in the course of 2020.

We expect growth to accelerate as regional power trading in the region takes off, for example in the Southern African and West African Power Pools.





### Impact investing for clean energy with PASH

Trafigura holds a majority shareholding in Pan-African Soleil Holdings Inc. (PASH), one of Africa's most significant impact investors in the clean energy sector. Leveraging the latest in innovation in technology, PASH develops, finances, builds, operates and maintains power assets globally.

As an impact investor, PASH works beyond its bottom line to enhance the social and environmental impacts of its projects. This involves addressing basic services including housing, healthcare, education and quality of employment.

Developing bespoke power solutions for the commercial and industrial (C&I) customers is its main focus. However, they increasingly develop utility scale projects for governments around the world.

PASH has a highly experienced management and technical team with extensive development and execution expertise, including involvement in over £100 billion in energy and infrastructure transactions on every continent.

### Investing in the largest solar farm in West Africa

PASH has acquired a 50 percent stake in a Malian solar farm set to become the largest in West Africa and one of the largest in Sub-Saharan Africa, with an installed capacity of 50 MW.

The solar farm will provide more than 91,702 households in Mali with green electricity, saving more than 51,700 metric tonnes of carbon emissions per year. Importantly, the project will also create many local jobs for the Malian people along with the other social benefits that PASH is known for as an impact investor.

The build, own, operate and transfer concession was signed in 2015 on a 30-year basis with a 28-year power purchase agreement with national power company, Energie du Mali. It is the first utility-scale renewable project in Mali.





50<sub>MW</sub>

91,702

Solar farm

Households provided with power



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