

# Building a gas and oil industry

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Formed in 1969, the primary role of the Tanzania Petroleum Development Corporation was to oversee the operations of Italian player AGIP, then the only concession holder working in the country. But following the discovery of the Songo Songo Gas field three decades ago, TPDC has become a major player in the African energy scene.

To date, one of TPDC's major achievements has been the commercialisation of the Songo Songo gas field thanks to a 225-km natural gas pipeline and associated power plant. The pipeline connects the reserves to the power plant located farther north. Tanzania has historically depended on hydroelectricity and fuel oil for its power generation, so the switch to natural gas is important from both an economic and environmental standpoint.

For many years, Tanzania debated how to best use its natural gas resources. But as the country developed and began to outgrow its existing hydroelectric resources, it became clear that Tanzania's electric utility, Tanzania Electric Supply Company (TANESCO), needed thermal capacity to balance its weather-affected hydroelectric capacity. The thermal capacity that TANESCO added used imported oil that needed to be paid for in hard currency.

It became clear to the government and the World Bank that the country's own natural gas reserves could be developed and substituted for the expensive, imported oil.

## An unprecedented project

The Songo Songo scheme was unprecedented. It was effectively three separate projects – a gas field development project, a project-financed pipeline, and the upgrading and privatization of a power facility. It needed to be undertaken in a political and financial environment where no single project, let alone the complexities of combining three projects, had ever been done.

The project's commercial operations, which began in July 2004, have saved the country valuable foreign exchange that it has been able to put to better use in other areas of the economy.

Since it came on line, the project has been feeding natural gas to around twenty major industries in Dar es Salaam, as an alternative to the common hydro-

electric power grid, and has proved a success.

## International companies' growing role

Fast becoming a new frontier in the hunt for oil and gas, TPDC continues to invite energy explorers to bid for blocks.

As a result, Tanzania has attracted growing interest from international oil companies, but it is still under-explored: relatively few exploration and development wells have been drilled. The biggest discoveries to date have been the Songo Songo and the Mnazi Bay gas fields. New seismic data and interpretation indicates the Mnazi Bay Gas Field to be more than double the size of original estimates, covering some 75 square kilometres in aerial extent versus the original estimate of 34 square kilometres.

Aminex's subsidiary Ndovu Resources Ltd. holds the exploration rights to Nyuni, a licence area offshore the Rufiji River delta of Tanzania, acquired by Aminex as a consequence of the acquisition of Tancoil NL in February 2002. Nyuni-1 was drilled to a depth of 3,895 metres and was the first offshore exploration well in Tanzania for many years.

Aminex has spent several years building an acreage on the East African margin where it now has a unique position, created well ahead of the current high level of industry interest in the region.

In 2006, TPDC and Ophir signed PSAs for Block 3 and Block 4, offshore Tanzania. Ophir has a 100 per cent interest in each block. The PSAs add to the Tanzania Block 1 PSA that was signed by Ophir in late October 2005.

Artumas Group Inc operates the Mnazi Bay Concession. The Mnazi Bay exploration and production concession covers a 756 square kilometres area in southeastern Tanzania. In 2004, Artumas acquired the rights to the Mnazi Bay concession. The company committed to provide a gas-to-power energy solution for the Mtwara/Lindi region to replace their existing unreliable, ageing system. This has become known as the Mtwara Energy Project.

Tullow Oil plc has a farm-in deal with Ndovu Resources Limited, a subsidiary of Aminex plc, which involves the company earning a 50 per cent interest in two licences in the Tanzanian portion of the Ruvuma Basin. The licences are adjacent to the Mnazi Bay gas field, discovered in the 1980s and currently under ►

## Tanzania's oil and gas reserves have attracted growing international attention

development. The area was last explored in the 1980s and prior to recent activity less than 1,400 kilometres of 2D seismic had been recorded.

Petrodel was invited by the Tanzania Petroleum Development Corporation (TPDC) in June 2006 to negotiate a PSA for the 9,418 square kilometres Latham/Kimbiji block. The Latham/Kimbiji PSA has been divided into two areas of Latham and Kimbiji under two exploration licences.

Signed in September of that year, the Tanga Production Sharing Agreement covers an area of about 7,063 square kilometres. Both agreements are for the duration of eleven years in total, divided into three exploration periods of 4 years initially, followed by a first extension of 4 years and a final period of three years.

In April 2007, Dominion Petroleum sealed a four-year Production Sharing Agreement with the Tanzanian Petroleum Development Corporation and the Tanzanian government for Block 7.

Block 7 covers 8,500 square kilometres in water depths of between 100 metres to 3,000 metres.

Dominion has also commenced preparation of the site for the Mihambia-1 well to be drilled in the second half of 2008. Construction of an access road to the site is almost complete.

As regards upstream activities, BP has been in Tanzania since 1900. In 1970 the Government of Tanzania bought a 50 per cent interest in what was then a partnership between Shell and BP. Twelve years

later, in March 1982, BP bought out Shell's interest establishing BP Tanzania.

Today, the company's business activities are fuel, lubricants, liquefied petroleum gas (LPG), solar equipment, and specialities like brake fluids and coolant. It also imports, stores, distributes and markets fuel, automotive and industrial lubricants as well as a newly introduced range of detergents and specialty products. Equally important, it is now one of the largest aviation fuel suppliers with about 92 per cent market share.

As Tanzania's road network improves and is extended, traffic will pick up with a resulting increased demand for petrol. Gapco has the country's leading network of petrol station, with a 42 per cent share.

The company is expanding in the south of the country in Mtwara and in the north in Tanga and is poised to push out further to meet greater demand for petroleum products as the economy's growth increases.

GAPCO was set up to purchase the assets of oil majors exiting the region. In the mid-90s it bought the shares of Esso Standard in Tanzania and Uganda, as the parent Exxon Corporation pulled back from East Africa. Now it works throughout the land-locked Great Lakes region, serving Rwanda and Burundi, the Congo, Zambia and Malawi.

In 1998, GAPCO purchased the assets of Italy's Agip in Sudan, and is on the lookout for more opportunities throughout the continent. **F**

| Company             | Country   | Area/Block                                   |
|---------------------|-----------|--|
| Antrim Resources    | Canada    | Zanzibar/Pemba                               |
| Artumas Group       | Canada    | Mnazi Bay                                    |
| Dominion Oil & Gas  | UK        | Mandawa, Kisangire, Selous, Deep Sea Block 7 |
| Dodsall Resources   | UAE       | Ruvu   |
| Key Petroleum       | Australia | West SongoSongo                              |
| Mauriel ET Prom     | France    | Bigwa & Mafia Channel                        |
| Ndovu Resources     | Australia | Nyuni, Ruvuma                                |
| Ophir Energy        | Australia | Deep Sea Block 1, 3, 4                       |
| Pan-African Energy  | UK        | SongoSongo                                   |
| Petrobras           | Brazil    | Deep Sea Blocks 5,6, 8                       |
| Petrodel Resources  | UK        | Tanga, Kimbiji, Latham                       |
| RAK-GAS Company     | UAE       | East Pande                                   |
| Shell International | Holland   | Deep Sea 9,10, 11                            |
| Statoil Hydro ASA   | Norway    | Deep Sea 2                                   |
| Tullow Oil          | UK        | North Lake Tanganyika                        |