New Gas in lower-income Africa is not all about the big export possibilities[1]

Alan Roe

There has been great excitement in recent years about the huge oil and gas finds, offshore and on-shore in a number of lower and lower middle income countries such as Mozambique, Tanzania, Uganda, and more recently Kenya. The scale of the potential reserves and so future production levels and even government revenues associated with these finds is substantial relative to the size of these economies. The prospective levels of new foreign direct investment (FDI) to develop the fields would dwarf almost any previous investment in those same countries. For example, in Tanzania the prospective investment in off-shore gas by just one company – BG Group[2] – could be some 5 times higher in some future years than the annual FDI flows seen in the past. But of course, the excitement over all this has been dampened significantly by the sharp decline in world oil and gas prices during the past 2-3 years: this has already caused significant delays and will inevitably cause some investment plans to be moth-balled.

However, the news in this new environment of softer prices is not entirely bad. The Tanzanian example shows that even the smaller volumes of new on-shore and near shore gas are capable of delivering significant macroeconomic and social benefits. Many of the huge off-shore projects require huge scale and for this reason require also that a high percentage of total through-put be sold on world export markets (LNG to China for example in the case of Tanzania). However, in Tanzania the new on-shore and near shore finds in Mnazi Bay (south of Dar es Salaam) are already having a major impact on Tanzania's capacity to generate electric power and on its macro-economy.

Specifically, as early as August 2015, the availability of new gas from this source had resulted in the delivery of some initial gas through the new high capacity pipeline from Mnazi Bay that was financed on soft commercial terms by the China Exim Bank.[3] This gas can have a very significant impact on both the availability and the delivery-costs of electric power in Tanzania. In the *Big Results Now* programme—the centre piece of recent Tanzanian planning—it is anticipated that it will be possible to provide electricity to five million more Tanzanians by 2030, thereby alleviating to a degree the shockingly low rate of access to electricity that currently exists.[4] This achievement will depend on many factors including the completion of a major programme of new power stations at Kinyerezi near Dar es Salaam. Generating capacity currently—before the new Kinyerezi plants come on stream—is some 1,200 MW. However, the four phases of the planned expansion will increase this capacity to more than 2,200 MW which for gas–fired technologies would require a total gas feed stock of some 220 mmscfs/d. The new deliveries at Mnazi Bay plus some early-stage expansion from

---

[1] This blog is based on a longer paper namely Alan R Roe, *Tanzania—from mining to oil and gas,* WIDER Working Paper # XXX, 2016.

[2] Since February 2016, the former BG Group has been part of Royal Dutch Shell

[3] Full use of this pipeline may need to await the delivery of some domestic gas from the off-shore BG/Ophir/Statoil fields that are unlikely to be available until around 2021.

[4] The domestic energy situation in Tanzania is currently very poor. Power supply is not widely available and even where available is unreliable; most of the country is not connected to the grid; and less than 20 per cent of the population have access to electricity.

the older Songo Songo fields would seem likely to provide at least 90 per cent of this requirement, and in the very near term future.

That is extremely good news for the Tanzanian economy in several different ways. First, it means that TANESCO—the national energy supply company—should quite soon be able to decrease its dependence on expensive imported feed stocks of diesel, and also reduce its use of aging and unreliable hydro plants. Second, the commercial operator (Wentworth) has stated that its gas sales agreement with TPDC[5] means that it will deliver gas at Mtwara at US$3.07 per million cubic feet (mcf)[6] meaning that TPDC should be able to supply to TANESCO at US$5 per mcf (Wentworth 2014[7]). This in turn should enable TANESCO to produce and supply power at a price per kwh which is around half the price that is currently necessitated by the use of expensive imported diesel. Third, as well as hopefully lowering prices for some consumers, this would also reduce import bills. A spokesperson for the Ministry of Energy has said that this change of feedstock could save the country some US$1 billion per annum in import costs. Finally, it should also enable there to be a large reduction in the massive fiscal subsidy paid to TANESCO: a subsidy justified by the company's inability to set prices to fully cover its currently excessive costs. This subsidy payment amounted to Tsh 399 billion in 2013/14 which compares to total government revenues in the same year of Tsh 10,182 billion: i.e. the energy subsidy was nearly 4 per cent of that total (IMF 2015).[8]

[5] Now the national oil and gas company

[6] This figure excludes the pipeline transmission costs and is also subject to an inflation adjustment based on the US price level.

[7] Wentworth Resources Limited (2014). 'Corporate Presentation to Shareholders'. October 2014. Available at: www.wentworthresources.com/pdf/2014-10-01-Wentworth-Corporate-Presentation.pdf (accessed on 15 April 2016).

[8] IMF (2015). 'United Republic of Tanzania: Second Review under the Policy Support Instrument'. IMF Country Report 15/181, July. Washington, DC. That same report projected a payment of zero in 2014/15 but in reality the savings may be delayed to the 2015/16 financial year.