

Ghana Looks To Open Up Northern Sector: Focus On Rail Sector

Two concessions are under negotiation for privately-funded extensions to open up the north of the country, but Ghana Railways Corp is struggling to operate its residual freight and passenger services. Refurbishment of the Accra - Tema line reflects a welcome government commitment to restore the network to good order.

Last year, the government announced ambitious plans to rehabilitate the principal routes in the national rail network and build lengthy extensions to serve the north of the country. Driving these ambitious expansion plans are recent political changes, West African regional transport considerations, and a wish to open up the undeveloped and poverty-stricken hinterland. Despite the signing of various accords and financing agreements, there seems little evidence of work on the extensions getting underway. Nevertheless, there does appear to be a firm commitment to restore the existing network, with funding going into a number of small projects. Transport Minister Christopher Ameyaw-Akumfi pledged that the government would leave 'no stone unturned' in its efforts to revitalise rail services throughout the country.

A recent eight-week strike caused by the non-payment of salaries forced all traffic onto the roads, at considerable cost and substantially increased damage to the road network. Following the strike, President Kufuor announced that the government was allocating US\$90m towards railway rehabilitation, including funds from the Canadian International Development Agency. A 795km rail link to provide a connection with Burkina Faso is still seen as a priority.

Nevertheless, the harsh reality is that Ghana's existing railways are in a very run-down condition, in common with those of many other African countries. Since independence in 1957, the network has suffered badly from a lack of maintenance and investment. It has been allowed to atrophy to the point where 60% of the route length has not seen regular operations for the past decade, and Ghana Railways Corp is struggling to provide any services at all on the remaining lines, despite strong demand from its customers.

Network History & Overview

The current rail network only serves the main traffic corridors in the seaboard third of the country, although this is the main area of economic activity. The first lines were built to support and develop mining interests following the discovery of gold in the Ashanti region, 200 km inland from the coast. The need to move construction equipment inwards and minerals out led to the construction of an initial 66km route from Sekondi to Tarkwa in 1898 to 1901. Construction north of Tarkwa proved easier and the following 200km to the country's second city of Kumasi was completed by 1903. After gold was discovered at Prestea, a 29km branch from Tarkwa was opened in 1908.

Work began in 1909 on a 304km line to link the capital Accra with Kumasi, but this was not completed until 1923. Rather than minerals, this line was predicated on the development of cocoa, rubber and timber traffic. Its opening also completed a very circuitous through route between Accra and Sekondi. With the very basic port facilities at Sekondi proving inadequate to handle growing mineral exports, a new deep-water port was opened in 1928 at Takoradi, 6.5 km to the southwest. All railway operations were transferred to the new terminus apart from the extensive workshops which remain near Sekondi.

Subsequent additions included the 157km Central Provinces line opened in 1923 from Huni Valley to serve further mineral deposits at Kade, and the important 73km branch from Dunkwa to serve bauxite mines at Awaso, prompted by heavy demand for aluminium to build aircraft during World War II. In 1953 an 82km link was opened between the Kade branch and the Accra - Kumasi line at Kotoku, shortening the Accra-Takoradi journey by 268km. The following year saw the completion of a 23km branch from Achimota Junction, north of Accra, to the port at Tema, which is now becoming increasingly important.

For administrative purposes the railway is divided into three sectors:

- Western Line: Takoradi - Kumasi and branches to Awaso and Prestea;
- Central Line: Huni Valley - Kotoku and the Kade branch;
- Eastern Line: Accra - Kumasi and the branch to Tema.

The railway is built to 1,067 mm gauge, with a maximum axleload of 16 tonnes. The first line between Takoradi and Dunkwa was built very cheaply and is plagued by severe curvature north of Tarkwa, although some consideration has been given to re-alignment to ease operations. All lines are single-track except for a 30km double-track section between Takoradi and Manso. Semaphore signalling was originally installed, but is now only operational on the double-track section.

Solar-powered colour-light signalling, funded by the World Bank, replaced the mechanical equipment on the Western Line, but the cost of spares soon became prohibitive and the system has now been abandoned. The safety of train operations is a major concern for GRC, because of the lack of secure signalling, but also the very poor condition of the track and the mineral wagons which convey the bulk of present freight traffic. These vehicles are in continual service, and require a much higher standard of maintenance than they currently receive. Derailments are frequent, caused by bad track or poorly-maintained vacuum brakes and running gear.

Freight services on the Western Line are the primary reason for the railway's continued existence, with an average of 8 loaded trains a day carrying mineral exports to Takoradi harbour. Of these, 2 carry bauxite from Awaso [236 km],

and 6 haul manganese ore from Nsuta [60km]. In addition, an occasional freight train operates to move bagged cocoa beans in vans, or timber logs on bolster wagons as required.

Flows of mineral traffic fluctuate because of varying rates of production, and the availability of storage and shipping capacity at Takoradi. Maximum train loads are around 770 tonnes net. Both the bauxite and manganese mining companies are reported to be keen to increase their output but are limited by GRC's restricted capacity in its current run-down condition.

The current composition of the main line locomotive fleet. A maximum of 21 locos are needed for daily operations when both mines are working at full output, and the maintenance department sometimes struggles to provide sufficient working locos. Availability of the GM and Henschel fleets averages 78%, but the availability of the Alstom locos is much lower, due to the high cost of obtaining spares.

Use of the Alstom locos, which have a higher axleload, is limited to the manganese trains as the track north of Nsuta is in poor condition. For the same reason the bauxite traffic on the Awaso branch is often tripped in smaller loads as far as Dunkwa, where rakes are coupled to form a longer train for the line-haul down to Takoradi. Much of the operational freight rolling stock is quite modern, having been purchased second-hand from South Africa. The bauxite wagons and bogie vans are equipped with self-steering bogies. Both minerals are top-loaded at the mines and discharged by tippler at the port. However, there is a serious shortage of ballast wagons which GRC needs to support its track renewals programme.

On the Eastern Line, the primary focus is passenger traffic in and out of the capital. Two pairs of trains each day operate over the 40 km section between Accra and Nsawam. Three locos and two sets of nine or 10 inter-city coaches are allocated to work on the Eastern Line. Using the same rolling stock, GRC operates another pair of trains on the Tema branch as far as Asoprochrona [19 km], and these are due to be extended to Tema shortly. Although the Tema branch was opened in 1954, services were interrupted in 1995 by construction of a new road under-bridge to improve access to the port: train services have only very recently been restored. The whole branch has however been rehabilitated with track renewal in many places largely financed by OPEC funds. Prior to the interruption of services there was a firm proposal to extend the rail line to Akosombo, the river port at the south end of the great Lake Volta. The object of the rail extension was to create a low-cost transport corridor to improve access to the northern provinces. This scheme is again being examined, although the low water levels of the lake may prove a problem.

GRC also has a pair of 4-car diesel multiple-units on order from China Northern, which are now under construction at Tangshan for delivery in January 2009. These are expected to be cheaper to operate on suburban services, and capable of more intensive utilisation than the loco-hauled fleet. The line between Nsawam and Kumasi has been out of use for 10 years, and no freight services are currently operated anywhere on the Eastern Line.

However, with GRC is keen to tap the current rapid growth of traffic through the port of Tema, as soon as the branch is fully operational again. Plans exist to handle petroleum traffic from the rail-connected Tema refinery to Kumasi, and proposals are being developed to introduce container trains linking Tema with the so-called Inland Dry Port intermodal terminal now under construction at Boankra near Kumasi. If this is successful, container trains could also be introduced between Boankra and Takoradi on the Western Line.

The Central Line is currently only being used for occasional rolling stock transfers between Accra and the workshops at Sekondi.

Following the world trend to rehabilitate moribund railways through private-sector concessions, several attempts have been made in recent years to hand over the Ghana Railways network to a private operator. In the late 1990s Ircon International of India was brought in to assist GRC with a rehabilitation programme funded by the World Bank, with a view to subsequent concessioning. There were several expressions of interest, and in 2004 a consortium led by Spoornet was selected as preferred bidder, although this was not brought to a successful conclusion.

In August 2007 the government announced that a consortium led by Dubai-based Kampac Oil Co with China National Machinery Import & Export Corp had been selected for a US\$1.6bn BOT concession to modernise and extend the Western Line, whilst local firm Peatrack was to lead a US\$1.4bn concession for the Eastern Line. German infrastructure specialist Rail One signed an agreement with Kampac in Berlin in December for the supply of 2 million concrete sleepers for the Western Railway upgrading and expansion project. In both cases, substantial northern extensions are envisaged. There are four main objectives behind this strategy:

- opening up further mineral deposits in central and northern Ghana;
- improving transport links to stimulate agricultural development, especially fruit growing;
- reducing poverty in the deprived interior regions;
- developing flows of transit traffic between the Ghanaian ports and land-locked countries such as Burkina Faso and Mali, thereby increasing Ghana's influence in the region.

Neither of the concessions has yet reached financial close, but the long-term objectives are clear. Meanwhile, the first priority must be to restore the GRC network to a satisfactory operating condition, and there are clear signs that the government is prepared to provide the necessary support. Both Tema and Takoradi ports are set for significant expansion, and the stable political situation in Ghana has

already encouraged development of transit traffic flows to the interior land-locked countries of West Africa. There is a clear window of opportunity here, but it is likely to be lost if GRC is not quickly restored to efficient operation to enable these significant expansion plans to materialise.