Private funding drives rail renaissance

A series of PPP concessions is helping to finance much-needed investment in both main line and urban railway development, Prolversión Executive Director Javier Illescas tells Chris Jackson.

Next year, bids are to be invited for a concession to modernise the 129 km Huancayo – Huancavelica Railway, high in the Peruvian Andes, and operate through passenger and freight services to the capital Lima and the main port in Callao.

This is the first main line railway project now being developed by the national government’s investment agency Prolversión, which has previously taken responsibility for the development of the Lima metro network (RG 11.12 p54). Executive Director Javier Illescas says the Ministry of Transport & Communications is currently undertaking a study into the future shape of Peru’s railway industry, with a view to developing a master plan.

Prolversión was established to promote the development of private investment in public works and services, on behalf of the national government and regional authorities, using both PPPs and other private financing initiatives in line with national economic policies. Officially attached to the Ministry of Economy & Finances, four other ministries are represented on its Governing Council: Housing, Construction & Sanitation, Transport & Communications; Energy & Mining; and Agriculture & Irrigation. Although the agency is not responsible for all infrastructure projects, it arranges funding for the biggest schemes and provides technical assistance for others.

Thus, Illescas explains, he is responsible to the Ministry of Housing for property development schemes, hotels and tourism, to the Ministry of Agriculture for land use and to the Ministry of Transport for connectivity, as examples. While this enables Prolversión to offer a degree of co-ordination between different aspects of national economic policy, he emphasises that in the case of the development of a full railway master
Railway development strategy

ProInversión's Railway Consultant, Jose Zarate, points out that the agency is not directly involved with the existing main line railways, where the former state-owned routes were privatised by the government in 1999 through the award of a 30-year operating concessions. The Central Railway running inland from Callao and Lima is operated by the Ferrocarril Centro Andina consortium led by Railroad Development Corp, while the Southern Railway from Matarami and Arica to Puno and Cusco is run by the PeruRail subsidiary of Orient Express Hotels, along with the narrow-gauge Cusco – Qillabamba line serving Machu Picchu.

Zarate says both railways are now performing well in terms of safety and operational performance. 'Before 1999 the state-owned operator was suffering from more than 100 derailments a year, but this has now been reduced to six or eight, while the tonnage being handled has doubled.' However, he emphasises that both railways need modernisation to support Peru's future economic growth, given that they have a very small share of a market dominated by road transport. 'The government needs to rethink its long-term transport strategy, and it must aim at building a national railway network as the backbone of the transport network, cutting logistics costs and making exports more competitive,' he explains.

Line 2 leads metro expansion

ProInversión's biggest rail project to date has been to relaunch the Lima metro, where construction began in the 1980s but stalled with the first line partially completed. A US$410m contract for the second phase of Line 1 was awarded in March 2010, and regular services have been running on the 22 km route between Villa El Salvador and Miguel Grau since January 2012. The line is operated and maintained by the Ten Lima – Línea 1 consortium of Graña y Montero and Ferrovías under a 30-year contract awarded by ProInversión in March 2011. A 12.4 km northern extension from Avenida Grau to Bayovar in the district of San Juan de Lurigancho was expected to open in July.

On March 28, ProInversión awarded a US$9bn concession to the Nuevo Metro de Lima consortium to design, finance, build, operate and maintain the 27 km Line 2, which will run from Ate in the east to Callao on the Pacific coast, serving 27 stations (RG 5.14 p14). Design and construction is expected to take five years and cost US$4.7bn, followed by 30 years of operations and maintenance worth US$4.3bn.

The project also includes an 8 km branch from Avenida Fauckett to Avenida Néstor Gambeeta with eight stations, which will serve the international airport north of Callao; this branch is expected to form the first stage of the future Line 4.

The consortium comprises ACS Group subsidiaries Dragados (25% as leader and Iridium Concesiones de Infraestructura, FCC subsidiary Vialia Sociedad Gestora de Concesiones de Infraestructura (19%), Italian companies Salini-Impregilo (19%), Ansaldo STS (15%) and AnsaldoBreda (12%), and local construction company Cosapi (10%). Metro de Madrid will act as advisor.

Illescas says ProInversión will shortly launch studies for Line 3, and then Line 4, with the aim of awarding a contract for the construction and operation of Line 3 by mid-2016.

 Whereas the partially-elevated Line 1 is equipped with CBTC for attended ATO, Illescas says Line 2 will be fully underground and designed for driverless operation. 'The future lines will follow the same model,' he says, explaining that 'we don't want different technologies; it is a matter of efficiency'. Building the lines completely underground will also 'help to minimise disturbance to the public' during the construction phase, 'and ensure the projects are delivered in a shorter time', he suggests.

Although Line 2 will be built and operated by a different concessionaire, Illescas says the intention is to develop an integrated network. Thus the traffic and revenue arrangements are clearly set out in the PPP agreement. The Ministry of Transport & Communications will set the fares, not the concessionaires, and there will be fully integrated ticketing between both metro lines and the city's bus services. 'One of the government's objectives is to improve accessibility for low-income areas', he explains. In order to make the metro more sustainable, 'it will be protected under a competition in a corridor extending 400 m each side of the line.'

'Demand risk is in the hands of the government, which makes the project suitable for the concessionaire,' Illescas explains. The concessionaires will recoup their investment through availability payments, and some state funding has been allocated to deal with the financial impact of any major disruption.

'The capacity of Line 2 will be three times bigger than Line 1,' he explains. 'Whereas Line 1 is now carrying around 200,000 passengers a day, Line 2 is expected to handle 660,000 at start-up and grow to more than a million.'

In fact, he says, Line 2 is being designed to carry more than 1.2 million passengers/day, with stations and depots

-Photo: Madi Alvarez

A northern extension of Lima metro Line 1 was expected to open during July.
designed for a fleet of seven-car trains. 'We will start operations with 35 six-car trainsets, but at the end of the 30 years there will be 86 seven-car trains. There are trigger points in the concession for investment in additional trains as the demand grows.'

New trains to Huancavelica

Although the two principal main line networks were concessioned in 1999, the Huancayo – Huancavelica Railway remained under state control for another decade. Authorised in 1908 but not completed until 1926-33, this 129 km line was built from a connection with the Central Railway at Huancayo to serve one of the poorest regions in Peru.

In 2006 the Ministry of Transport & Communications awarded a contract for Ferrocarril Central Andino to convert the 914 mm gauge line to 1435 mm gauge (RG 6.06 p306). Costed at US$22.2m, and primarily funded by the government through a US$14.9m loan from the Andean Development Corp, the regauging work was finally completed in the third quarter of 2011.

The conversion was intended to improve rail connections to Huancavelica. However, Illascas admits that the low-cost project did not include any changes to the major structures, which have continued to hamper operations on the former narrow-gauge route, and the current condition of the infrastructure does not allow the awarding of a concession to operate an 'appropriate' level of services.

The upgrading project will see the tunnels enlarged and the bridges renewed or refurbished, while the alignment will be improved on some critical sections. The track will be renewed, and drainage works undertaken on the entire route. New signalling and communications will be provided, together with level crossing protection. The stations will be refurbished and a new fleet of DMUs and diesel-electric locos provided.

Illascas says 'we are doing everything in order to deliver a project that stands the test of the next 100 years. In the near future we hope to see regular passenger trains operating over the Ferrocarril Central Andino main line and through the future 26 km Transandean Tunnel.'

Because the route across the Andes is constrained by sharp curves and steep gradients, ProInversión is investigating the possibility of using state-of-the-art passenger trainsets to the latest crashworthiness standards, with good acceleration and braking characteristics to cut journey time. The agency plans to award a 30-year concession covering the upgrading work and the acquisition and operation of new trainsets, requiring a total investment of around US$300m.

The future operator will be able to run over the Central Railway because the existing concession was structured on an open access model. FCCA has separate operating and infrastructure companies, with a transparent track access charging regime enabling other operators to run trains on its network.

Connecting the south

As well as the Huancayo – Huancavelica upgrading, ProInversión is pressing ahead with several other railway investment schemes.

Following the submission of bids on June 27, the agency awarded a contract on July 18 to Spanish consultancy IDOM Ingeniería y Consultoría Sucesal del Peru to undertake studies into reopening the 60 km cross-border railway that connects the southern city of Tacna with the port of Arica in Chile. This 1435 mm gauge line has been out of service since May 2012 due to the poor condition of the track and the lack of passenger rolling stock.

According to ProInversión, the studies will include an assessment of the demand for restoring passenger services between Tacna and Arica, as well as the potential for urban services within Tacna itself. Freight studies will include work to determine the potential for modal shift from road as well as identifying potential traffic for export via the port of Arica.

Meanwhile, ProInversión is evaluating an unsolicited proposal for the construction of a north – south coastal railway connecting the northern city of Piura with Ica, around 250 km south of the capital. Illascas says this is 'an interesting project', which could encourage both connectivity and economic development, but it requires a proper study of the potential demand, as 'at 1,300 km it would be very expensive to build.' The agency is also evaluating an unsolicited proposal for the construction of a 15 km light rail line in Arequipa, the country's second largest city.