PROJECT INFORMATION DOCUMENT (PID)
CONCEPT STAGE

Report No.: PIDC1786

<table>
<thead>
<tr>
<th>Project Name</th>
<th>YinXi Railway (P127869)</th>
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<tr>
<td>Region</td>
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</tr>
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<td>Country</td>
<td>China</td>
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<tr>
<td>Sector(s)</td>
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</tr>
<tr>
<td>Theme(s)</td>
<td>Regional integration (100%)</td>
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<td>Lending Instrument</td>
<td>Investment Project Financing</td>
</tr>
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<td>Project ID</td>
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<td>Borrower(s)</td>
<td>People's Republic of China</td>
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<td>Implementing Agency</td>
<td>China Railway Corporation</td>
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<td>Environmental Category</td>
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<td>Date PID Prepared/Updated</td>
<td>11-Oct-2013</td>
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<td>Estimated Date of Appraisal Completion</td>
<td>30-Jun-2014</td>
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<td>Estimated Date of Board Approval</td>
<td>25-Nov-2014</td>
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<td>Concept Review Decision</td>
<td>Track II - The review did authorize the preparation to continue</td>
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I. Introduction and Context

Country Context

Despite China’s remarkable economic and social development over the past three decades, China remains a country faced with growing economic, environmental, and social imbalances. While coastal regions have expanded rapidly, a number of provinces in central, western and northeast China have lagged behind. This is the case for relatively remote provinces like Gansu, which had a gross regional product (GRP) per capita of only US$263 per month in 2011 (third lowest among Chinese provinces at 55 percent of the national average) or Ningxia and Shaanxi (16th/15th respectively in terms of GRP per capita).

To reduce the current imbalances, boost employment and relieve poverty, China’s 12th Five Year Plan (FYP) (2011-2015) seeks to accelerate the process of industrialization and urbanization in lagging regions by accelerating their integration in the rest of the economy. China has made investment in transport infrastructure and improved connectivity a centerpiece of this strategy. Total investments in interurban transport have rapidly increased from 4.4 trillion RMB in the 10th FYP to
an estimated 11 trillion RMB in the 12th FYP. The 12th FYP aims at connecting 90 percent of towns and cities with more than 200,000 people to national highways, while continuing the expansion of its rail network, in particular towards poorer regions in China like the western, central and northeast regions.

Within transport, the proportion of investments directed to the rail sector has also increased. In the 11th FYP, the government set forth a policy to promote railway development, in recognition of the lower cost, higher energy efficiency and lower carbon emissions of rail transport compared to road and air transport. Railway infrastructure investments reached unprecedented levels at an average of RMB 587 billion per annum from 2009 to 2012. Rail investment represents about 25 to 30 percent of transport investments under the 12th FYP.

**Sectoral and Institutional Context**

Government policies and railway management actions over the last decades have transformed the railway sector into a vital element of China’s national transport system, facilitating China’s economic growth. On a relatively small railway network of just over 93,200 route-km in 2011, the China Railways Corporation (CRC) carries the highest volume of passenger traffic and freight traffic of any railway in the world, with a total of 3.9 trillion traffic unit-km in 2012. Between 2000 and 2012, rail traffic grew rapidly, with both passenger and freight traffic growing by slightly over 6.5 percent per annum over the period, although there was a small contraction in freight traffic in 2012. Even so, railways lost some of its market share, mostly to road transport, driven by the rapid expansion of the highway and expressway network combined with capacity constraints on the rail network.

The railway sector as a whole in China currently faces three key challenges. The first is to improve the capacity and quality of infrastructure and services in a railway network that is already the busiest, by a wide margin, of any railway in the world. The second is to adapt the railway industry to become more commercially responsive to the market economy. The third is to secure diversified sources of financing to implement investments planned as part of the Mid to Long Term Railway Network Plan (MLRNP) (2004-2020), at a time when the sector has already accumulated a considerable level of debt.

To address these challenges, China announced in 2013 a series of institutional, commercial and financing reforms for the railway sector. In March 2013, the National People’s Congress announced that the former Ministry of Railway (MOR) was being replaced by a three-pronged governance structure, with the separation of policy making and regulation from railway operations through the creation of CRC. In June 2013, CRC announced a reform of its freight operations, aiming to become a full-service logistics provider and increase rail’s market share. Finally, in August 2013, the State Council issued an opinion on the reform of railway investment and financing, opening the path for more diversified source of financing, pricing reform, a subsidy scheme, integrated land use development around stations, improved return on assets and accelerated project implementation through close coordination among ministries. The overall thrust of the reform is closely aligned with international good practices.

In terms of railway infrastructure development, China seeks to address the network gaps that arose after a long period of under-investment prior to 2004. Its strategy is embodied in the Government’s MLRNP to 2020, adopted in 2004 and updated in 2008. The MLRNP supports the development of a high-quality coherent network fostering economic development and economic integration, mindful
of other transport modes. It includes the expansion of a rapid passenger network including building
dedicated passenger high-speed rail lines, upgrading the existing network, upgrading high-capacity
coal transport corridors as well as expanding the network to more remote regions to spread the
benefits of development. In many cases, the MLRNP enables the progressive separation of freight
traffic, which will use the existing conventional network, from passenger traffic, which will
increasingly use the new high-speed network. In other cases, where circumstances warrant, new
mixed traffic lines with 200kmph maximum speeds will share their additional capacity between
freight and passengers.

The proposed project would support the objectives of the MLRNP by better connecting people in
the remote areas of Ningxia and Gansu to Xi’an and supporting their economic integration.
Currently travel by bus on the existing road requires 13.5 hours, and by car about 9.5 hours. There is
no direct railway line between Yinchuan and Xi’an and no railway connecting Qingyang in Gansu
province to these cities. The existing rail route through the Baolan, Baozhong, and Longhai railway
lines is 809 km long and heavily congested, while the air distance between Yinchuan and Xi’an is
only around 500km.

The proposed project would also support the ongoing resource and industrial development in these
relatively poor provinces by providing much needed transport capacity for freight. The area
southeast of Yinchuan and south of Qingyang along the proposed railway line is rich in coal
deposits, as well as natural gas and oil reserves. Much of the coal will be consumed in the coal-
based chemical industry and power plants to be constructed in Ningxia province. But there will also
be a significant volume of coal, particularly in the Qingyang district, which will require outward
transportation, together with containerized freight from the eastern provinces to Yinchuan.

Relationship to CAS
The Bank’s Country Partnership Strategy (2013-2016) for China is aligned with the country’s 12th
FYP, and focuses on two strategic themes: supporting greener growth and promoting more inclusive
development. This project supports both of these.

In terms of green growth, railways have among the lowest negative externalities of all intercity
transport modes. Upgrading passenger services in the Yinchuan-Xi’an corridor will allow railways
to increase their share of travel over time, limiting the growth in airline and road-based transport
that generate higher levels of local air pollution and greenhouse gas emissions, as well as accidents
in the case of road transport.

Improving inter-urban transport connectivity is also a high priority for reducing rural-urban and
regional disparities. The new railway line will help create a step change in connectivity between
Yinchuan, Qingyang and Xi’an metropolitan area. Over time, the line will help to spread the
opportunities for and benefits from development from richer areas of China, widening the pool of
firms, labor, service and products within the reach of the region’s residents. In particular, it will
facilitate the industrialization of the area around Qingyang, a city currently with a low GRP of US
$3,300 per capita.

II. Proposed Development Objective(s)
Proposed Development Objective(s) (From PCN)
The proposed development objective is to improve direct rail connectivity for passengers and
businesses located along the corridor between Yinchuan in Ningxia Hui Autonomous Region and Xi’an in Shaanxi Province, through Gansu Province.

**Key Results (From PCN)**

The project will improve the regional transport infrastructure and facilitate the transport of freight by rail rather than road. The proposed freight and passenger railway line between Yinchuan and Xi’an through Qingyang will reduce the rail travel distance by 200km. Passengers will have a direct link between Yinchuan and Xi’an with a journey time of 4.2 hours compared with the current 15.1 hours by rail or 13.5 hours by bus, and at Xi’an will be able to access the Chinese high-speed railway network. The new line will serve several resource and industrial sites, avoiding the transport of bulk freight by road with its related social and environmental consequences. The line will also facilitate the long distance rail transport of containers from eastern China to Yinchuan via Xi’an. The prefeasibility study estimates that 19 million people are located along the alignment.

The assessment of the achievement of the project development objective will be carried out through the measurement of outcome indicators comparing the level and quality of connectivity with the project compared to the levels that would have occurred if only current infrastructure was available along the corridor.

Indicators may include the estimated reduction in the following parameters comparing the without project and with project scenario: (i) travel time for passengers between Yinchuan and Xi’an; (ii) generalized travel cost for passenger and transport cost for freight; (iii) number of passengers and freight volume; (iv) number of pairs of trains; and (v) level of greenhouse gas emissions. For each of these indicators a substantial reduction would be expected as part of the project. A large part of the urban and rural population in Gansu is in the national bottom 40% in terms of net annual income. More information will be sought as part of the social assessment.

The project is expected to contribute to poverty reduction and shared prosperity primarily through its support to the industrialization process of Gansu and Ningxia, through direct job opportunities during the construction of the line and through improved mobility, as shown in a recent social monitoring report from ADB on the Ganzhou-Longyan rail line. The project will seek to monitor such impact through the social monitoring taking place in the external monitoring report on resettlement.

**III. Preliminary Description**

**Concept Description**

The proposed project will support the construction of a new double-track electrified railway line and related railway stations for providing both passenger and freight services. The new line will form an important link in the railway network serving Ningxia, Gansu and Shaanxi Provinces and China’s western region. It is part of the rapid rail network under the MTLRN plan.

A project pre-feasibility study has been carried out which includes a review of various alternatives for the type of line and for alignments. The description is based on the pre-feasibility study. The overall alignment seeks to connect areas of higher population density (about 19 million people along the corridor) and those offering good economic development potential. The current recommended alignment was chosen to avoid areas with poor geology, environmentally and culturally sensitive locations, water bodies, wetlands, natural reserves, wild life and wild plant
areas. Measures are planned to protect the ecological environment and ensure soil and water conservation, in order to control the water and soil loss, along with land restoration. The currently recommended alignment seeks to minimize the need for cultivated land acquisition, the impact on built-up areas and the need for resettlement.

The proposed railway will provide a direct link from Yinchuan to Xi’an, and serve the Wuzhong area in Ningxia, the Qingyang area in Gansu and the Xianyang area in Shaanxi. The line will include 29 stations (with 21 handling passengers), spaced on average every 27 km allowing for good accessibility along the entire line for people and goods. The total distance from Yinchuan to Xi’an (for passengers) and Xinfengzhen (freight terminal east of Xi’an) is estimated as 609 km and 650 km respectively. The line will comprise:

a. 534 km of double track between Yinchuan and Qian County, mostly new construction except for duplication of existing lines between Yinchuan South and Yongning (30 km) and Ning County South to Yadian station (6 km); this will carry both passenger as well as freight trains.

b. 92 km of double track and 16 km of single track between Qian County and Hezhai stations to be used by freight trains.

The line will be designed with a maximum speed of 160 kph for locomotive hauled passenger trains and 200 kph for EMU trains. The maximum speed for freight trains would be 120 kph. It will be built for an axle load of 23 tons, with clearances suitable for single stack container trains. At least three spurs connecting to coal mines are proposed at Tianshuibao, Huanxian and Hesheng.

The line will have 232 bridges with a cumulative length of about 191 km and 29 tunnels with a cumulative length of 101 km; about 45 percent of the railway will thus be on bridges or in tunnels, a level consistent with recently supported World Bank projects. The longest tunnel (Yongshouliang) is expected to be 18.9 km long, while the longest bridge, between Dulicun and Hezhai on the freight track, will be 10.5 km long. Some of the above parameters may change during the Feasibility Study and Preliminary Engineering for the project.

The project cost is estimated to be RMB 57 billion (US$ 9.2 billion) at an average of about RMB 88.8 million (US$14.3 million) per main line kilometer, a relatively high cost for a mixed-use line due to the mountainous terrain. Construction is expected to commence in early 2015 with a construction period of about 66 months. Like the last five China Railways projects, the Bank loan is expected to finance goods and equipment, probably consisting of signalling, electrification, bridge beams, concrete sleepers and track fittings. In addition the project may finance technical assistance components.

IV. Safeguard Policies that might apply

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VI. Contact point

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