JORDAN NATIONAL RAILWAY PROJECT

The Government of the
HASHEMITE KINGDOM
of **JORDAN**

Represented by
The Ministry of Transport
August 2011

GENERAL INFORMATION

A National Railway Network

Jordan will be developing a modern, reliable freight railway network linking the nation's key cities (the national capital, Amman, and major industrial cities such as Mafraq and Zarqa), the country's gateway port (the Port of Aqaba), and the largest phosphate mine (Shidiya Mine). The network will also connect with the railways of Saudi Arabia and Syria (and onward to Turkey and Europe in the future) as well as important markets in Iraq.

Network Length: 897 km

Project Structure:

A dual structure, comprising:

- Infrastructure company (InfraCo). A state-owned entity, Jordan Railway Corporation (JRC), will finance, build, own and manage the railway network (infrastructure).

- Railway operating company (OpCo). A private sector company/consortium will be selected to operate and maintain the railway (operating concession). The selected private sector operator will be expected to purchase and maintain its own rolling stock.

PROJECT VALUE

- Infrastructure of USD 2.96 billion (over a 4-yr construction period)

- Rolling Stock of USD 550 million (1st year of operation)

TRAFFIC PROJECTIONS

2020	29 million tonnes (10,000 M tonne-km)
2030	40 million tonnes (14,000 M tonne-km)
2040	55 million tonnes (20,000 M tonne-km)

BUSINESS OPPORTUNITIES

Detailed Design and Construction

The Government of Jordan will be seeking qualified engineering firm(s) to design and build the railway network. The railway infrastructure will be financed, built, owned and managed by JRC, a state-owned company. Preliminary Design has been completed.

Railway Operation (Operating Concession)

The Government of Jordan will be seeking a private sector partner to operate and maintain the new National Railway Network. Under a PPP structure, the operator (OpCo) will purchase, own, and maintain its own rolling stock, in addition to operating and maintaining the railway network.

Under an operating concession contract, the OpCo will lease the rights to operate the railway from JRC for a minimum period of 30 years (exact concession period is to be determined).

Participation in InfraCo (JRC) Ownership

The Government of Jordan will consider the option of introducing participation in the ownership of JRC. Participation could come from regional governments and/or private sector investors.

Real Estate Development

Real estate development projects will also be introduced at key areas along the railway alignment.

PROJECT DETAILS

OVERVIEW

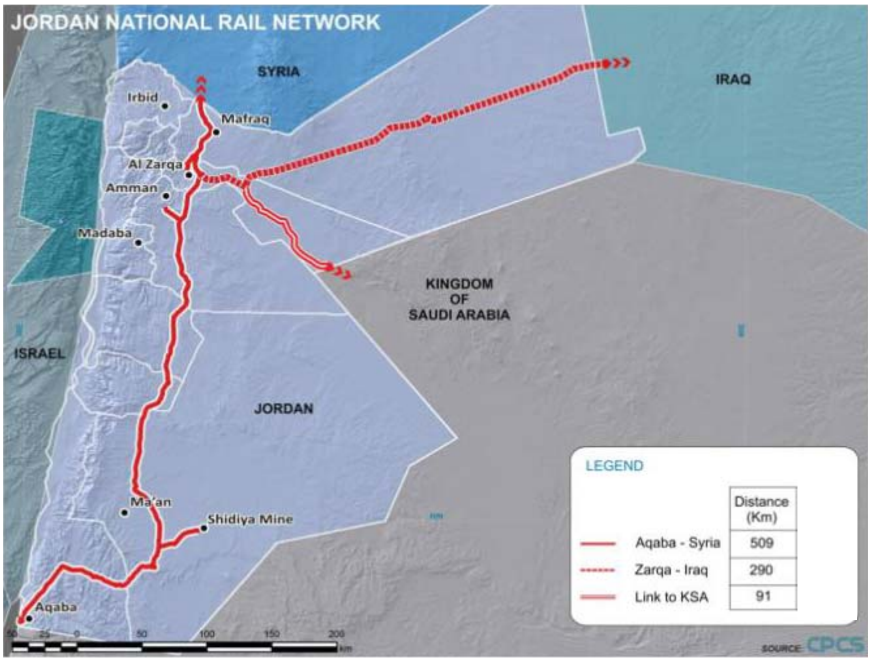
The Jordan National Railway will be an 897-km, standard gauge freight[1] railway network, connecting the national capital of Amman, main industrial cities and logistics centres of Jordan, and the nation's gateway port, Aqaba. The network will also link Jordan with neighbouring countries, as well as creating a bridge between GCC countries and Europe. By 2020, the railway is expected to carry 29 million tonnes of freight – and by 2040, 55 million tonnes[2]. The OpCo is expected to yield an attractive financial return for investors over a 30-year concession period.

RAILWAY NETWORK

Aqaba-Syria Link (North-South Line)
This is the main rail line, connecting Jordan's gateway port, the Port of Aqaba, with the national capital of Amman, as well as with one of the country's main industrial cities, Zarqa. The North-South Line further extends to the north of Amman to connect with Syria's railway network. A rail link to the country's largest phosphate mine, Shidiya Mine, will also be also built. The length of the North-South Line is 509 km, and the total cost of the infrastructure is expected to be USD 2.43 billion.

Zarqa-Iraq Link
This link will extend from Zarqa to the Jordan/Iraq border. The 290 km link is expected to cost USD 410 million.

Link to the Kingdom of Saudi Arabia
This link will complete the bridge between Saudi Arabia and Syria and will be an important component of a rail transport corridor between GCC countries and Europe. The link in Jordan is estimated to be 91 km at a cost of USD 120 million.



[1] With provision for future passenger service.
[2] Recent estimates. Metric tonnes.

Infrastructure Capital Expenditure – Preliminary Design Estimates[3]

Cost (in M JD)	Sub-Totals
Mainline Earthworks *	642.5
Mainline Trackwork	401.7
Mainline Slope Protection and Ground Treatment *	79.1
Railway Viaducts	249.1
Railway Tunnels *	390.3
Mainline Drainage Structures *	57.3
Crossing Roads Bridges and Underpasses	61.5
Crossing Roads – Roadwork *	20.6
Crossing Roads – Drainage Structures *	0.4
Terminals *	53.2
Depots *	28.6
Signalling and Telecommunications *	72.3
Construction Cost	**2,056.7**
Contingency 5% of items marked with (*)	**67.2**
Total CAPEX (in M JD)	**2,123.9**
Total CAPEX (in M USD)	**2,973.5**
Total Network Length (Km)	**897**

VALUE PROPOSITION AND POSITIONING

Key Driving Forces:

- Strategic Location between GCC countries and Europe.
- Modern service provided by private-sector rail operator, building on strategic investments in port sector.
- High quality, reliable infrastructure.
- Liberalization and mobility of goods and services.
- Reduction in freight logistics transport costs.
- Jordan’s participation in regional and international railway bodies.
- Harmonization with European standards.

KEY RAIL MARKETS/TRAFFIC PROJECTIONS[4]

The new railway network will target customers with local, regional and international operations, including major European markets, Iraq, Syria, Saudi Arabia, and other GCC countries. The railway is expected to handle import and export flows as well as transit flows. Key import flows consist of containers, refined oil products and grains/cereals, while the main export commodities will include phosphate and phosphoric acid. Jordan’s Aqaba port is a key gateway for Iraq-destined traffic, and the railway is expected to carry substantial transit traffic destined for Iraq.

---

[3] There is an alternative alignment being considered. The alternative alignment, if selected, would reduce the total capital expenditure by approximately USD 200 million.

[4] Recent estimates. Rail revenues to be collected by OpCo, lease payments paid to JRC.

Traffic /Revenue Projections

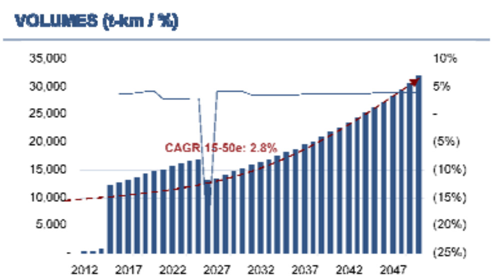
RAIL TRAFFIC PROJECTIONS		2020	2030	2040
Strong Take-or-Pay Candidates				
Oil / Oil Products	M Tonnes*	8.9	11.9	16.0
	M tkm	3,514	4,722	6,346
	M USD (Revenue)	185	250	335
Phosphate / Sulphur / Phosphoric Acid	M Tonnes	5.9	5.9	5.9
	M tkm	779	779	779
	M USD (Revenue)	45	45	45
Grains (JSSGC**-traded via Aqaba)	M Tonnes	1.0	1.2	1.3
	M tkm	449	520	571
	M USD (Revenue)	17	20	21
Other Key Traffic Flows (<100% Capture Rate)				
Containers	M Tonnes	10.0	17.1	26.6
	M tkm	4,085	6,924	10,413
	M USD (Revenue)	215	360	540
Cement / Cement Feedstock	M Tonnes	1.5	1.9	2.4
	M tkm	313	397	499
	M USD (Revenue)	15	20	25
Other	M Tonnes	1.2	1.7	2.7
	M tkm	666	979	1,636
	M USD (Revenue)	30	43	71
TOTAL	**M tonnes**	**28.5**	**39.8**	**55.0**
	M tkm	**9,806**	**14,322**	**20,245**
	M USD (Revenue)	**507**	**738**	**1037**

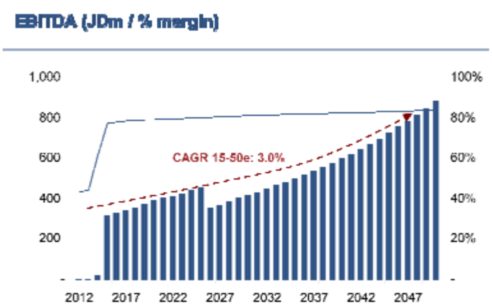
*Metrictonnes.
** Jordan Silos and Supply General Company.

STRONG FINANCIAL BENEFITS

A fully-implemented national rail network best leverages the opportunity for linkage/integration with KSA/GCC, capture traffic to Iraq, and carries the strongest financial benefits:

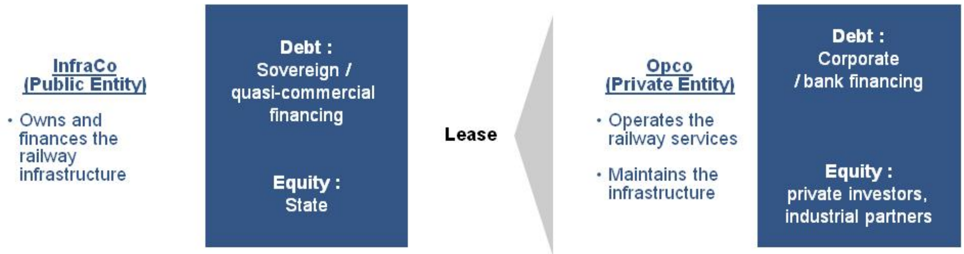
- Total estimated rail revenue of approximately USD 507 million in 2020, doubling to USD 1.04 billion by 2040.
- Overall Project rate of return in excess of 10%.
- OpCo financial internal rate of return commercially attractive over life of concession period (minimum 15% ROE).
- Estimated EBITDA margin of approximately 80%.





PROJECT STRUCTURE

The resulting financial analysis leads to project implementation through a "dual structure" (baseline option) as presented below.



Infrastructure Company (InfraCo):

- A state-owned infrastructure company, already established as the Jordanian Railway Corporation (JRC), which will finance at lower public borrowing rates and own the infrastructure.

- JRC is 100% owned by the Government of Jordan. Its Board of Directors comprises key officials of the Government, including the Minister of Transport as the Chairman.

- JRC will benefit from the following revenue streams:
  - fees paid by the OpCo.
  - revenue generated from real estate developments.
  - financial support from the Government of Jordan as needed/agreed to.

The Government of Jordan will also consider the option of introducing participation in the ownership of InfraCo (JRC). Participation could come from regional governments and/or private sector investors. This could have the added benefit of further encouraging regional integration elements of the project. It could also encourage private sector ownership and contribution to the construction of the network.

Operating Company (OpCo):

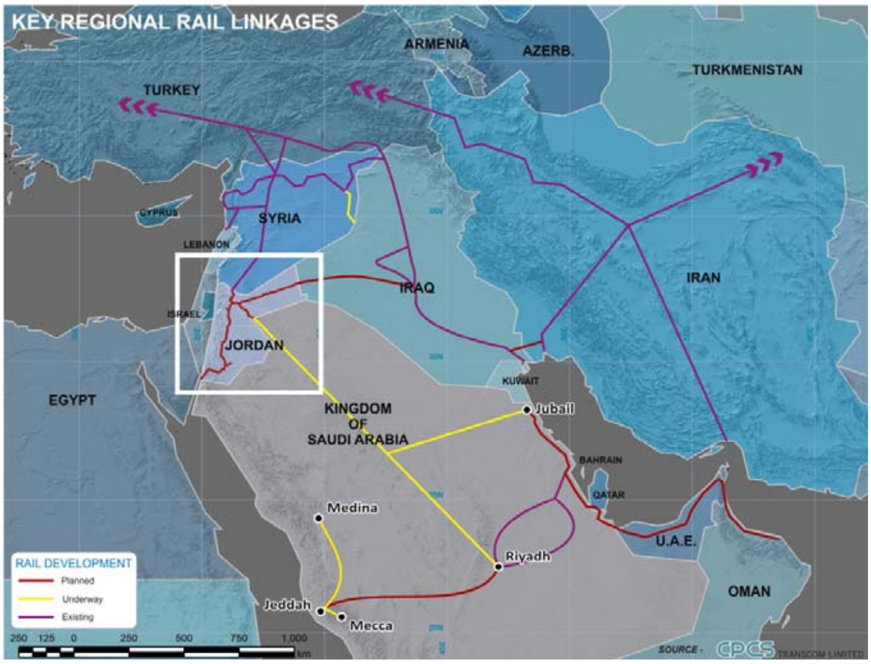
A private operating company will run the railway, generate and collect the revenue directly from shippers/clients, and pay fees to JRC for use of the infrastructure. OpCo will have exclusive right to operate rail service, at least over initial period. To ensure seamless transition from the Aqaba Railway Corporation to the OpCo (the private sector operator for the new railway network), the Aqaba Railway Corporation (ARC) will be included in the OpCo. ARC currently serves the Jordan Phosphate Mining Company (JPMC), carrying about 40% of JPMC's production, or just over 2 million tonnes of phosphate in 2009.

REGIONAL INTEGRATION AND ECONOMIC BENEFITS

The new railway network will realize substantial benefits for the entire region. Expected benefits include:

- Economic rate of return of 16%, Economic Net Present Value of USD 4.65 billion, and Benefit /Cost ratio of 2.55.
- Reduction in logistics and transportation costs in the region.
- Improvement in the viability of neighbouring countries' railway networks via higher utilization and increased traffic.
- Stimulation of the region's infrastructure projects, creating new employment opportunities.
- Improvement in security and safety by decreasing accident rates of freight transport in the region.
- Opening up of the option for the development of potential passenger railways in the region.

With Jordan's future accession to the GCC, the physical transport network linking key cities of the GCC countries will strongly contribute to the region's focus on integration and mutual cooperation.



STRENGTHENED LEGAL AND REGULATORY ENVIRONMENT

A number of key pieces of legislation have already been approved to lay the groundwork for this important project:

- Land Transport Regulatory Commission Law (new)
- Railways Law (new)
- Jordanian Railways Corporation Law (new)

JRC has been established as the public entity that will own the fixed rail infrastructure.

REAL ESTATE DEVELOPMENT[5]

Real estate development projects will be introduced in three key locations – Amman, Mafraq, and Aqaba – along with this railway project.

- Amman (Land Port Development) – expected investment of USD 100 million.
- Mafraq (Land Port Development) – expected investment of USD 135 million.
- Aqaba (Hospitality and Services Facility Development) – expected investment of USD 575 million.

PROJECT SCHEDULE

The construction phase of the railway network is expected to start in 2012, with an initial phase to secure phosphate traffic currently being carried by ARC, to be followed by a 4-year construction period to implement the national rail network, including north-south line and links to neighbouring countries.

The selection of the operating concessionaire (private-sector operator for the new railway) is expected to commence in 2012.

[5] Recent estimates.

Advisors:

CPCS BNP PARIBAS IB LAW CHADBOURNE & PARKE LLP dar al-handasah shair and partners

For inquiries, please email: **JordanRailway@cpcstrans.com**