

Korea National Railway Building Green Rail Network

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At a Glance for Korea National Railway





General Information

- State-owned Agency established in 2004
- Annual Budget : USD 8 billion ('23)
- Credit Rating : Domestic AAA, Moody's Aa2

National Railway Network

'03 Total Length 3,374km

23 Total Length 4,304km

'03 Double Track Rate **22%**

23 Double Track Rate **70.04%**

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'03 Electrified Rate 33%

'23 Electrified Rate 79.9%

KNR Business Area



- ✓ KNR's has 7 key business areas including working with the MOLIT on railway network planning
- ✓ KNR has comprehensive knowledge and experience in railway project management throughout all stages



4th National Rail Network Plan

- KGID Cairo
- ✓ Performance goals by 2030 are total length 5,340km(from 4,304km) and modal share 16.5%(from 11.5%)
- ✓ Key activities are expansion of eco-friendly railways, speed upgrading and Alleviating traffic congestion by GTX



High speed rail Construction

KGID

Cairo

- ✓ KNR constructed the three HSRs over 300 km/h and total 657 km in length in Korea as of today
- ✓ Suseo HSR line opened in 2016 to provide HSR services to southern districts of Seoul



Speed Enhancement in Existing Railway



- ✓ 10 lines covering 1,462 km upgraded to 200-250km/h
- ✓ EMU-260 rolling stocks are operating on the Upgraded lines



Great Train eXpress



- ✓ GTX is high-speed commuter rail network and public-private partnership Project
- \checkmark GTX enable commuting within the capital region in and around 30 minutes





- 21 lines totaling 1,112 km of urban rail in operation in the capital region
- **Current** Avg. distance between stations: 1 to 1.5 km
 - Average speed: 25 km/h
 - Takes up to 2 hours for some commuters



- Ease traffic congestion for people in the capital region (over 25 million)
 - More convenient commuter transport modes
- Deep underground tunnel at min. depth of 40 m
 - High speed regional (commuter) rail
- SpeedMax. speed: 180 km/hAvg. speed : Min. 80km/h
- Benefits Enable commuting within the capital region in and around 30 minutes

5 major technological Innovations

KGID

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Overseas Projects



- ✓ KNR has been participating in railway projects in other countries, beginning with project in China
- Project range from technical consulting, to construction supervision, detail design, feasibility study, and training





China HSR Project •Supervision (5 Projects) •Consulting (7 Projects)



Malaysia MRT Project
PMC for Communication System
Length : 51 km



USA California HSR Project

Consulting :Presino~Bakersfield
Length : 200 km



Nepal Railway Project

F/S: Mbalam~Kribi
Length: 583.4 km



India HSR Project Ind • Consulting : Detail Design of HSR • Length : 527km

- F/S: Asuncion~Ypacarai

· Length : 44 km



Indonesia Jakarta LRT 1st Phase Project SR • EPC Procurement : Systems & RS

· Length: 5.8km



Paraguay Railway Project India Lucknow MRT Project

GC: General Consulting
 Length: 23.8 km

COLUMN STREET



Conclusion



Building the path to a better future and a better world with new railways

- With a history of 120 years, Korea opened its first high-speed rail in 2004 becoming the fifth country in the world to do so.
- Has acquired technological self-reliance since then and today construct HSRs and upgrade speed of existing lines using Korean technologies
- Through continuous localization efforts, we have developed Korean high-speed rail vehicles, track systems, and LTE-based Korean train control systems
- Korea's experience could be a good example for the development of national network plan and transport system