

Hyderabad Metro Project on Track Ensuring Economies



Hyderabad Metro Rail is a completely elevated Metro Rail project, with several innovative technical features ensuring better economies of the elevated system. It is being developed as a unique project with emphasis on inter-modal integration, Non-Motorised Transport (NMT) facilities, a good feeder bus service and pedestrian facilities for last mile connectivity. It is the world's largest Metro Rail project being executed on PPP mode, with minimum burden on the tax payers. The first stretch of 8 km (Stage-I) will be opened for passenger traffic by March, 2015, said **Mr.N.V.S.Reddy**, Managing Director – Hyderabad Metro Rail Ltd., in an interview with **S.K.Khanna**.

Congratulations for moving fast on your Metrorail project. Kindly enlighten our readers on the current status of Hyderabad metro project including phases ready for operation and stages for which construction and engineering work is in progress.

Thanks. Phase-I of the Hyderabad Metro Rail project covers 3 corridors

spanning over 72 km. Corridor-I: Miyapur-LB Nagar 29 Kms; Stations: 27; Corridor-II: JBS-Falaknuma 15 Kms; Stations: 16; Corridor-III: Nagole-Shilparamam 28 Kms; Stations: 23. This is the world's largest mass transit system being implemented on the public private partnership (PPP) mode. Though the entire 72 km is covered in Phase-I,

yet for construction convenience it is divided into 6 stages and works are going on in full swing in 5 stages.

What is the total length it would cover when hits the final phase and the targeted deadlines for the completion of the entire project?

Phase-I of the project covers 72 km. The project began in June 2012 and the entire project is scheduled to be completed by June 2017. The first stretch of 8 km (Stage-I) will be opened for passenger traffic by March, 2015.

What is the estimated cost of this project and funding arrangement arrived at?

The project cost per se is ₹14,132 crore, out of which ₹1,458 (10%) is being given by Govt. of India as one time capital grant under the Viability Gap Funding (VGF) scheme. The remaining ₹12,674 crore is being financed with 20% Equity [₹2,768 crore and 70% of debt (₹9,906 crore)]. This ₹12,674 crore is being entirely raised by the Concessionaire M/s.L&T Metro Rail (Hyderabad) Ltd on their own. They are also spending another ₹2,243 crore for development of 6 million sqft of property in the 1st phase, whose lease rentals will cross subsidize the losses from passenger operations. Government of Andhra Pradesh is spending an additional ₹1,980 crore (which does not form part of project cost as per VGF guidelines) for land acquisition, R&R, utility shifting, etc.



What are the important design and construction features of the project negotiating difficult terrains and crowded areas? What would be the underground and elevated portions of the metro corridors?

It is a completely elevated Metro Rail project. We have not gone underground due to the tough rocky terrain conditions of Hyderabad city, energy efficiency, cost considerations and better economics of the elevated system. We are able to negotiate the difficult terrain and crowded spaces with better engineering solutions and fine tuning of the alignment. The construction method is PSC

segmental method and 70% of the construction is through pre-casting. The station design is unique as it is a cantilever type station based on central piers with spine and wings. This avoids portal structures and tunnel effect over the road at Metro stations.

Is there any plan to go in for monorail system as feeder services to compliment the metro system in the city?

We will achieve inter-modal integration through feeder buses ("merry-go-round" system) in the traffic catchment areas (residential colonies & commercial centres); inter-linkage

with main rail stations and bus depots; skywalk connectivity from elevated stations to nearby commercial, educational, office complexes (Bangkok model); bicycle stations and tracks; and other pedestrian facilities for last mile connectivity.

What about the various important construction and engineering agencies associated with the project?

The following are the construction & engineering agencies associated with the project:

- Civil Structures - L&T construction
- O&M operator - Keolis, France
- Rolling stock - Hyundai Rotem, South Korea
- Power - L&T Construction
- OETS - L&T Construction
- Signalling & TC - Thales, Canada (French Company)
- Communication - Thales, Portugal (French Company)
- Track Construction - L&T Construction
- AFC (Automatic Fare Collection) - Samsung, South Korea

Additional Information

- Making use of latecomer advantage, we have studied different Metro Rail systems in the world and are avoiding their mistakes, while adopting their good practises at the same time.





- Hyderabad Metro Rail is being developed as a unique project with emphasis on inter-modal integration, Non-Motorised Transport (NMT) facilities, a good feeder bus service and pedestrian facilities for last mile connectivity. This is not a simple urban transportation project. We are viewing it as an opportunity to redesign an Indian city as a people-friendly green city by weaving several innovative features into it.
- The financial model for the Hyderabad Metro Rail project is unique. It is the world's largest Metro Rail project being executed in PPP mode, with minimum burden on the tax payer. The 90% of the project cost is financed by the private sector partner and 10% is being financed by Govt. of India. The state government is bearing the cost of land acquisition, R&R, utility shifting, etc. As per our revenue model, 55% of the revenues will come from passenger fares while 40% will be from property development at Metro stations and depots and 5% from advertisements, parking charges, etc. Without increasing the land requirement for the project (269 acres of land requirement was identified by DMRC which prepared DPRs for our project which was originally envisaged as a government project), we have allowed the private sector Concessionaire to go for commercial exploitation of air space at/over the Metro Rail facilities through engineering innovation. The private sector Concessionaire cannot sell the property so developed but can enjoy the lease rentals from property development during the Concession Period.
- The Concession Period for the Hyderabad Metro Rail is 35 years (including 5 years of construction), it is extendable by another 25 years, if the Concessionaire fulfils all the conditions of Concession Agreement.
- We have ringfenced the Project with a well drafted and bankable Concession Agreement. The private sector Concessionaire is fairly protected from political and bureaucratic interference with several features like pre-fixed tariff, pre-defined price escalation formula, strict penalties for both the government and the Concessionaire if their respective obligations are not fulfilled, etc. Hyderabad Metro Rail Ltd., a fully owned Government PSU acts as the single window agency to coordinate with all government departments and agencies and to facilitate the required permissions from different government departments/agencies. It plays a very pro-active role in a business like fashion to facilitate speedy execution of the Project.