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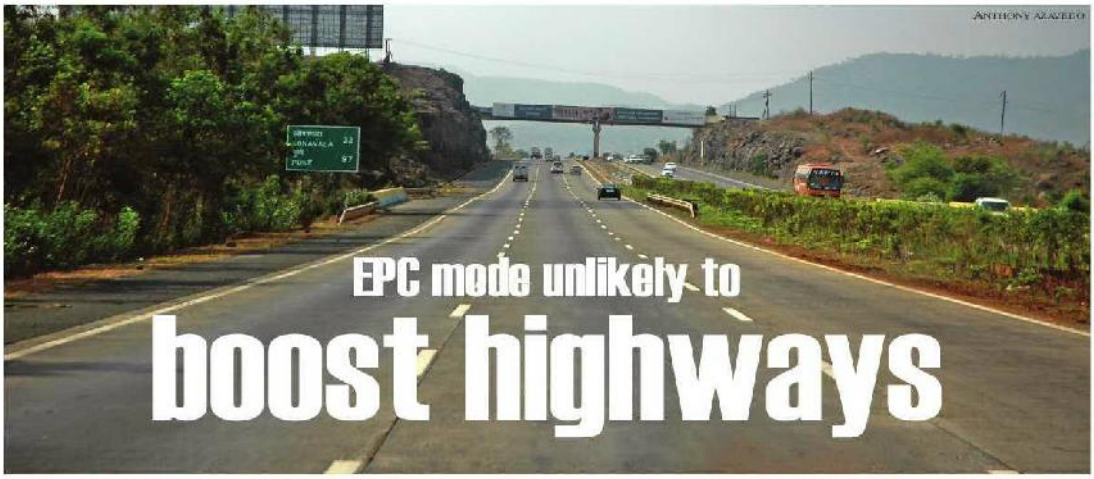


# EPC mode unlikely to boost highways

DEBDEEP CHAKRABORTY

The decision of the Ministry of Road Transport and Highways to adopt the EPC mode for building 20,000 km two-lane national highways during the 12th Plan may fail to yield the desired results in the current state of the economy.

India, at present, faces a grave economic crisis due to low growth, high inflation, high fiscal deficit, and highest-ever trade and current account deficit. No doubt, the slowing down of the global economy has had a significant impact on India but the present economic adversity is largely attributable to domestic factors such as excessive monetary tightening, delays and uncertainty over key economic legislations, project delays on account of stalled environmental clearances and land acquisition hurdles, pause in reforms, and lack of willingness to take decisions in the government.

"The decision of the MoRTH to adopt the EPC mode raises the question as to where the funds are going to come from in the prevailing economic scenario," a source associated with the road sector told *Projectmonitor*.

"On one hand, the government is trying to cut costs by imposing various restrictive measures, and on the other, it adopts the EPC mode for construction of national highways. In case of PPP projects, even when viability gap funding is sought, the concessionaire meets minimum 60 per cent of the cost. At present, MoRTH is relying heavily on EPC mode to meet its targets but this may not be feasible in the long run because of various constraints. The focus, instead, should be on both modes, PPP as well as EPC, for boosting the highway sector," he added.

The EPC mode is different from the conventional item rate contract. Unlike in item rate contract, which is prone to excessive time and cost overruns, the EPC mode assigns the responsibility of investigation, design and construction to contractors for a lump sum price awarded through competitive bidding with provision for index-based price variation.

In a bid to ensure smooth implementation of national highway projects in EPC mode, MoRTH, of late, has initiated a number of measures. Included among them is the decision to conduct review meetings for national highway works in respective states. Earlier, the review meetings with officials of state PWDs were held in New Delhi. Under the new initiative, a month-wise schedule for holding the review meetings, starting from June 12th, 2013, has been worked out for the current year. The concerned chief engineers are required to convene review meetings for national highways and Central Road Fund works in states under their jurisdiction in accordance with the schedule.

Plans have also been drawn to organise training programmes covering the EPC mode of construction for state PWD officials, concerned officials in NHAI and MoRTH, consultants and contractors.

## ENGINEERING LEGENDS OF INDIA

## Dr. Ashish Verma

Dr. Ashish Verma, a PhD from IIT Bombay, has a keen interest in the field of research in transportation sector, in particular sustainable transportation planning, public transport planning and management, modelling and optimisation of transportation systems, application of geo-informatics in transportation, driver behaviour and road safety, intelligent transportation system and traffic management. He has authored more than 60 research publications in the area of sustainable transportation and road safety for reputed international journals and conferences.

Currently, Dr. Verma is Assistant Professor, Transportation Engineering at Department of Civil Engineering and Centre for Infrastructure, Sustainable Transportation and Urban Planning (CiSTUP), Indian Institute of Science, Bengaluru. Before joining IISc, he served in IIT Guwahati and MMRDA. He is also editorial board member of leading international journals of American Society of Civil Engineers and others and has been guest editor of special issues of several leading journals.

As mentioned, Dr. Verma has been involved in many national and international funded research projects related to sustainable transportation and road safety. One of his recent projects, funded by the Institute for Mobility Research (ifmo), BMW Group, Munich, is a comparative study of present and future mobility patterns in BRIC (Brazil, Russia, India and China) countries and their comparison with historical mobility patterns in OECD countries, including USA, Germany, Japan and Australia.

Through another sponsored research project, Dr. Verma developed a multimodal public transport trip planner for Bengaluru, named 'Maargamitra,' which means 'a friend for guiding the path'. The trip planner can be accessed by anyone at the link www.planyourtrip.civil.iisc.emet.in. He has also been involved with the Ministry of Urban Development and Institute of Urban Transport in developing training modules and imparting training to officials of urban local bodies under the World Bank-GEF-UNDP assisted Sustainable Urban Transport Project.

Dr. Verma is also the founding president of Transportation Research Group of India, a registered society with the mission to aid India's overall growth through focused transportation research, education and policies. He also played a key role in starting new M-Tech programmes in transportation engineering at IIT Guwahati and IISc Bangalore.



# Timelines proposed for civil construction works

A committee constituted by the Ministry of Road Transport and Highways has proposed timelines for completion of civil construction works on national highways awarded on EPC mode.

In November last year, the MoRTH issued instructions that all national highway projects, projects under Special Accelerated Road Development Programme - North-East and projects in Left Wing Extremism affected areas for widening to two-lane standards with or without paved shoulders, as well as strengthening projects, new bypasses and standalone bridge and flyover projects would be awarded on EPC mode only.

The objective behind the shift to EPC mode is to ensure implementation of projects to specified standards, avoid cost and time over runs and transfer the construction risks to the private sector.


In a letter dated July 16, 2013, addressed to all states, NHAI and the Border Roads Organisation, the MoRTH said that the timelines proposed by the committee were for reference only and implementing agencies in consultation with the project chief engineers could fix time limit for individual works keeping in view the committee's guidelines, project specific requirements and provisions of the contract agreement. During rainy season, an allowance of two months in case of plain areas and three months for difficult areas has been provided. The compatibility of the timelines needs to be assessed considering the provisions and output of machineries in accordance with the relevant clauses in the MoRTH standard data book for such activities.

— Debdeep Chakraborty

**TIMELINES FOR COMPLETION OF CIVIL CONSTRUCTION WORKS ON NATIONAL HIGHWAYS AWARDED ON EPC MODE**

| Activity | Time required for completion of civil work | | | Time for mobilisation |
|---|---|---|---|---|
| Periodic Renewal | 3 days/km up to a max. limit of 3 months | | | 45 days for plain areas |
| Improvement of Riding Quality Programme | 6 days/km up to a max. limit of 6 months | | | 60 days for difficult areas |
| Strengthening (with bituminous layer) | 12 days/km up to a max. limit of 12 months | | | 60 days for plain areas |
| Widening and Strengthening | 18 days/km up to a max. limit of 18 months | | | 75 days for difficult areas |
| Minor Bridges (stand alone) with Approaches | 1. < 30 m.<br>2. > 30 m. | For plain areas<br>12 months<br>18 months | For difficult areas<br>18 months<br>24 months | 2 months for plain areas<br>3 months for difficult areas |
| Major Bridges (stand alone) with Approaches | 1. 60 - 100 m.<br>2. > 100 m. | For plain areas<br>24 months<br>30 months | For difficult areas<br>30 months<br>36 months | 3 months for plain areas<br>4 months for difficult areas |
| Difficult areas include LWE areas, North-East areas and hilly areas | | | | |
| Source: Ministry of Road Transport and Highways | | | | |