



POSITION PAPER ON
THE ROADS SECTOR
IN INDIA

July 2009

Department of Economic Affairs
Ministry of Finance
Government of India

EXISTING SCENARIO

Road network in India aggregates to about 3.3 million kilometre. This extensive road network, the second largest in the world, caters to about 65 per cent of the freight traffic and 87 per cent of the passenger traffic. National Highways constitute about 66,590 kilometres which is only 2 percent of the total network. However, it caters to nearly 40% of the total road traffic. Out of the total length of National Highways, 17 percent is four-laned, 53 percent is two-laned and 30 percent single laned.

The composition of the road network in India is depicted in **Table 1**

Table 1: India's Road Network

	<i>Length(In km)</i>
Expressways	200
National Highways	66,590
State Highways	1,31,899
Major District Roads	4,67,763
Rural and Other Roads	26,50,000
Total Length	3.3 million km (approx.)

Source: www.nhai.org/roadnetwork.htm (as on 25.06.2009)

This seemingly large road network, however, is inadequate to meet the accessibility and mobility requirements of a country of India's size and population.

Addition of road length to National Highways during various plan periods is shown in Appendix 1. This has been due to implementation of the National Highways Development Project. The progress, however, was slowed down during the Tenth Plan period. The project is implemented by the National Highways Authority of India (NHAI).

POLICY FRAMEWORK

1. The Government of India launched major initiatives to upgrade and strengthen National Highways. In 2001, the National Highways Authority of India (NHAI) kick-started the highway capacity development programme to connect four metropolitan cities, New Delhi, Mumbai, Chennai, and Kolkata. Since then the National Highways Development Program (NHDP) has expanded in scope and coverage as the economy has grown. Presently, NHDP is divided in seven phases. These are:

Phase I and II: 4/6 laning of about 14,330 km of National Highways, at a total estimated cost of Rs 65,000 crore (at 2004 prices). This comprises the Golden Quadrilateral (GQ), North South Corridor and East West Corridor.

Phase III: Upgradation of 12,109 km of National Highways on a Built-Operate-Transfer (BoT) basis at an estimated cost of Rs 80,626 crore.

Phase IV: Two laning with paved shoulders for 5,000 km of National Highways at an estimated cost of Rs 6,950 crore.

Phase V: Six-laning of 6,500 km of National Highways comprising 5,700 km of GQ and balance 800 km of other sections of National Highways at a cost of Rs 41,210 crore.

Phase VI: Construction of 1000 km of Expressway with full access control on new alignments at a cost of Rs 16,680 crore.

Phase VII: Construction of ring roads, grade separated intersections, flyovers, elevated highways, Rail Over Bridges (ROBs), underpass and service roads at a cost of Rs 16,680 crore.

2. At present, NHDP is being implemented in four phases – Phase I, II, III, and V, comprising 33,455 km. Till the end of June 2009, 30 per cent (10,511 km) of a total of 33,455 km has been completed. Nearly 98 per cent work under GQ is complete (5,846 km) and North-South and East-West Corridors are expected to be completed by December 2009.

Table 2
NHDP & Other NHAI Projects
(Status: 31st July, 2009)

	NHDP Phase I - GQ, NS - EW corridors, Port connectivity & others	NHDP Phase II – 4/6 laning North South-East West Corridors, Others	NHDP Phase III A- Upgradation, 4/6 laning	NHDP Phase III B- Upgradation, 4/6 laning	NHDP Phase IV – 2-laning with paved shoulders	NHDP Phase V- 6-laning of GQ and High Density corridor	NHDP Phase VI - Expressways	NHDP Phase VII – Ring roads, Bypasses and flyovers and other structures
Total Length (km)	7,498	6,647	4,815	7,294	20,000	6,500	1,000	700
Approved Cost / (Expenditure till 31.07.2009) in Rs crore	30,300 (35,657)	34,339 (32,327)	33,069	47,557	27,800	41,210 (1,643)	16,680	16,680
Completed (km)	7,227	3,451	937	-	-	131		
Under Implementation (km)	265	2,444	2155	-		899		19
Contracts to be awarded (No.)	6	752	1,723	7,294		5,470		681
Likely date of completion	99% of GQ will be completed by Mar 2010	December 2010	December 2013	December 2013	December 2015 as per Financing Plan	December 2012	December 2015	December 2014

Source: Ministry of Road Transport and Highways

4. “Special Accelerated Road Development Programme in the North-eastern region (SARDP-NE) aims at improving the road connectivity to state capitals, district headquarters and remote places of NE region. It envisages two-four laning of about 5,174 km of National Highways and two laning/improvement of about 4,589 km of state roads. This would provide connectivity to 85 district headquarters to National Highways/State Roads.”¹ The programme is to be implemented under Phase A, Phase B and Arunachal Pradesh Package for Roads and Highways.

Phase A includes improving 2,616 km of roads consisting of 2,029 km of National Highways and 590 km of State Roads at an estimated cost of Rs. 16,286 crore. Projects covering length of 1,065 km at a cost of Rs. 3,378 crore are in progress. The likely target date of completion for this Phase is 2012-2013.

Phase B involves two-laning of 4,825 km of National Highways and two-laning/

¹ *Economic Survey 2008-09, Government of India. pp 240.*

improvements of state roads at an estimated cost of Rs. 21,094 crore. Phase B has been approved only for Detailed Project Report (DPR) preparation and investment decision is yet to be taken by the Government. The likely target date of completion for this Phase is 2015-16.

Arunachal Pradesh Package for Roads and Highways comprises 2319 km of roads at an estimated cost of Rs. 12,513 crore. The likely target date of completion is 2014-15.

The details of approval as well as the performance in the previous years of the SARDP-NE are as given in Table 3.

Table 3
SARDP-NE: Progress

Year	Allocation (Rs. crore)	Length Approved (km)	Approved Cost (Rs. Crore)	Expenditure (Rs. Crore)	Length Completed (km)
2006-07	550	501	1275	449	Preliminary
2007-08	700	240	543	650	180
2008-09	1000	314	1403	623	270
2009-10	1200	10	157	-	-
Total		1065	3378	1772	450

Source: Outcome Budget 2009-10, Ministry of Road Transport and Highways, Government of India, pp 37.

Central Road Fund

The Government of India, under the Central Road Fund Act, 2000 created a non-lapsable dedicated fund for NHDP by levying cess on High-Speed Diesel and Petrol. Initially, cess @ Re.1/liter on petrol was levied under Finance Act (No.2), 1998 and on high speed diesel under Finance Act, 1999. Subsequently, this was increased by Re. 0.50 (that is, to Rs.1.5/liter on petrol and high speed diesel oil) as per Finance Bill, 2003. The distribution of Cess of Rs.1.50 per liter is as under:-

- 50% of the Cess collected from Diesel is for rural roads.
- Balance 50% Cess from Diesel and the entire Cess on Petrol is earmarked for:
 - o 57.5% for National Highways;
 - o 12.5% for road under or over bridges and safety works at unmanned railway crossings; and
 - o 30% for development and maintenance of State Roads.

An additional cess of Re.0.5/Liter levied on diesel and petrol from April 01, 2005

onwards is to be exclusively earmarked for National Highways.

“From commencement of the CRF Scheme in 2000, a total of 5993 number of works amounting to Rs. 14945.64 crore have been sanctioned till March 2009.”²

5. Thirteen projects other than those under NHDP and port connectivity have been completed up to June 30, 2009 by NHAI. Similarly, seven projects of port connectivity have been completed up to June 30, 2009.
6. “The Eleventh Five Year Plan has projected an investment requirement of Rs. 41,347 crore (at 2006-07 prices) in rural roads. During the first two years of the Eleventh Five Year Plan, an expenditure of Rs. 25,781 crore has been incurred on rural roads under the Pradhan Mantri Gram Sadak Yojana (PMGSY). Additionally, there are roads built by Public Works Department (PWD) and Panchayati Raj institutions in the rural areas (Table 4).”³

Table 4
Construction of Rural Roads under PMGSY

Year	Length of road works completed (km)	Expenditure (Rs. Crore)
2005-06	22891	4100.4
2006-07	30710	7304.3
2007-08	41231	10618.7
2008-09	52405	15162.0

Source: Economic Survey 2008-09, Government of India. pp 241.

7. “The main source of finance of NHAI for the implementation of various phase of NHDP is the fuel cess. The present rate of cess is Rs.2.00 per litre on both petrol and diesel, a part of which is allocated to NHAI to fund implementation of NHDP (refer table in point 6 above). During 2008-09, an amount of Rs. 9,329.85 crore has been provided for the National Highways and for State roads out of the same.”⁴ “The fund allocated from the cess is leveraged by NHAI to borrow additional funds from the domestic market. The Government of India has also taken various loans from World Bank (US\$1,965 million), Asian Development Bank (US\$1,605 million) and Japan Bank for International Cooperation (Yen 32,060 million) for financing projects under NHDP. These multilateral loans have been passed on to NHAI by the Government partly in the form of grant and partly as loan. NHAI also negotiated a direct loan of US \$165 million from ADB for one of its projects. The funds provided to NHAI including

² Outcome Budget 2009-10, Ministry of Road Transport and Highways, Government of India, pp 24.

³ Economic Survey 2008-09, Government of India. pp 240-241.

⁴ Economic Survey 2008-09, Government of India. pp 240.

the borrowings from the market are utilized for the projects and for servicing and repayment of borrowings from domestic market (Table 5).”⁵

Table 5
Financial Structure of NHAI

(Rs. Crore)

Year	Cess Funds	External Assistance		Borrowings	Budgetary Support
		Grant	Loan		
2005-06	3,269.74	2,400	500	1,289	700
2006-07	6,407.45	1,582.50	395.50	1,500	110
2007-08	6,541.45	1,788.80	447.20	305.18	265
2008-09	6,972.47	1,515.00	379.00	1,096.26	159

Source: *Economic Survey 2008-09, Government of India. pp 240.*

10. “The expansion of the road network, carrying 87 per cent for passenger movement and 61 per cent for freight movement in 2004-05, has necessitated appropriate changes in related laws and regulations. Some of the important changes include;
- The Carriage by Road Act, gazetted in October 2007, will replace the Carriers Act, 1865 that governs the rights and liabilities of the common carriers. This is expected to make the transport system transparent, facilitate modernization of systems of transportation trade through registration of common carriers and provide scope for apportionment of liability between common carrier and consignor. A working group has been constituted to frame rules under the Act.
 - The Motor Vehicles Act, (MV), 1988, amended thrice since, has been the principal instrument for regulating motor vehicles. In response to suggestions received from quarters, a proposal for amendment of the MV Act was approved by the Union Cabinet and a Bill was introduced in the Rajya Sabha on May 15, 2007. The Bill was referred to the Department-related Parliamentary Standing Committee for examination. The Committee submitted its report in April 2008 which has already been examined.
 - The Rules for accreditation of bus body builders, notified in March 2007, to bring in uniformity in bus body design and to enhance safety and comfort to passengers, came into effect from March 23, 2008. Bus body builders would be accredited through the system of Zonal and National Level Accreditation Board and only

⁵ *Economic Survey 2008-09, Government of India. pp 240.*

such approved builders would undertake bus body building, under laid down specifications. Efforts are being made to operationalize the zonal/national accreditation system. Similarly, the Department is also in the process of finalizing the truck body code.

- Keeping in view the financial position of various States and the enormous unmet demand for public transport, the Central Government proposes to assist States through the viability gap funding to improve public transport, subject to certain reforms to be undertaken by the State Governments. A scheme in this regard has been finalized and got approved by Planning Commission.
- Road transport is primarily a State subject. However, due to heterogeneous approach by various State authorities, the sector has not achieved the growth commensurate with its potential. A Committee was constituted under the Chairmanship of Shri D. Thangaraj to finalize a policy for road transport sector. The Committee submitted its report on 27.3.2008, inter alia, recommending a National Road Transport Policy. The Union Cabinet will now be approached for approval of the policy document.
- In February 2007, the Committee on Road Safety and Traffic Management recommended for the creation of a National Road Safety and Traffic Management Board, a National Road Safety Fund through earmarking one per cent of the cess on petrol and diesel and a National Road Safety Policy. In March 2008, the Committee of Secretaries agreed in principle to creation of the Board. In December 2008, the Expenditure Finance Committee (EFC) also recommended for a statutory Board and the Road Safety Fund. The Union Cabinet would now be approached for creation of the Board and the National Road Safety Fund and for seeking approval on the National Road Safety Policy. The proposed policy envisages focused and effective measures to address road safety issues.
- An ambitious scheme has been launched for the creation of National Register and State Registers of Driving Licenses (DL) and Registration Certificates (RC) of motor vehicles and interlinking of the Regional Transport Registering Authorities/State Transport Authorities with an estimated cost Rs. 148 Crore during the Eleventh Five Year Plan. This will enable creation of a national database on driving licenses, registration certificates of motor vehicles and related information, with secured access. Such data can be accessed at the check posts to

ensure whether taxes have been paid and documents of vehicles are in order.”⁶

INVESTMENT DURING THE TENTH FIVE YEAR PLAN

11. Anticipated investment in the road sector during the Tenth Five Year Plan (2002-03 to 2006-07) has been Rs. 144,892 crore. Year-wise investment details segregated into investment by Centre, States and private is shown in Table 6. It emerges that the private investment has been about 5 per cent of total anticipated investment during the Tenth Five Year Plan.

Table 6
Anticipated Public and Private Investment in Roads and Bridges during the Tenth Plan
(Rs. crore)

Year	2002-03 (Actual)	2003-04 (Actual)	2004-05 (Actual)	2005-06 (RE)	2006-07 (RE)	Total X Plan(Anticipated)
Centre	15,869	8,761	8,442	17,509	20,953	71,534
States	9,724	9,693	11,321	16,083	19,534	66,354
Private (NHDP)	1,013	2,111	1,616	686	1,578	7,004
Total	26,605	20,564	21,379	34,278	42,065	144,892

Source: “Projections of Investment in Infrastructure during the Eleventh Plan” published by the Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, and August 2008. pp 24. [RE: Revised Estimates]

12. Actual expenditure on Roads by Centre during 2005-06, 2006-07 and 2007-08 as per the Office of the Chief Controller of Accounts, Ministry of Road Transport and Highways is shown in Table 7.

Table 7
Actual expenditure on Roads by Centre

Year	Actual Expenditure (Rs. Crore)		Total Actual Expenditure (Rs. Crore)
	Plan	Non-Plan	
2005-06 (Xth Plan)	15276.10	1863.84	17139.94
2006-07 (Xth Plan)	20815.27	1908.19	22723.46
2007-08 (XIth Plan)	21969.19	2265.41	24234.60

Source: Office of the Chief Controller of Accounts, Ministry of Road Transport and Highways

13. “Investment in roads sector during the Eleventh Plan is projected at Rs. 3,14,152 crore, which is 2.2 times the Tenth Plan investment.”⁷ “The detailed distribution across National Highways (NH) under the NHDP and other NH, State roads (highways,

⁶ *Economic Survey 2008-09, Government of India. pp 241-242.*

⁷ “Projections of Investment in Infrastructure during the Eleventh Plan” published by the Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, August 2008, pp 24.

major district roads and other roads), rural roads and the roads of the North East is depicted in Table 8. Approximately, Rs. 1,45,853 crore is projected to be invested in National Highways, Rs. 1,26,952 crore in State roads, Rs. 36,582 crore in rural roads, and Rs. 4,765 crore in roads in the North-East.”⁸

Table 8
Detailed Projections on Investment in Roads and Bridges during the Eleventh Plan
(Rs. crore at 2006-07 prices)

	2007-08	2008-09	2009-10	2010-11	2011-12	Total XI Plan
National Highways	23,271	24,698	27,118	32,510	38,257	145,853
NHDP Public	10,077	10,513	11,038	12,282	15,233	59,143
Other NH (Public)	1,181	1,273	1,371	1,473	1,572	6,869
NHDP Private	12,012	12,911	14,709	18,755	21,452	79,840
State Roads*	21,491	22,431	23,817	26,998	32,215	126,952
Public	17,534	18,150	18,889	20,613	24,815	100,000
Private	3,957	4,281	4,928	6,385	7,401	26,952
Rural Roads: Bharat Nirman	6,341	6,851	7,276	7,784	8,330	36,582
North East Roads: SARDP	719	809	989	1,079	1,169	4,765
Total (Rs. crore)	51,822	54,789	59,200	68,371	79,971	314,152

Source: “Projections of Investment in Infrastructure during the Eleventh Plan” published by the Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, August 2008. pp 26 (Highways, major District Roads, Others)*

PPP FRAMEWORK AND INITIATIVES

14. Historically, road infrastructure has been provided by the State. The enormous investment requirement, long gestation period and uncertainty of returns were mainly responsible for the lack of interest by the private sector. The presence of significant externalities also warranted the dominant role of the State in providing basic road infrastructure. In the allocation of budgetary resources, therefore, the development of road infrastructure is still given priority. However, the resource requirements for maintenance and expansion have far exceeded the capacity of the budget, making a strong case for private sector participation. Resource constraints, however, are not the only reason for encouraging private sector participation in the development of road infrastructure. A number of benefits accrue as a result of private sector participation in the development of road infrastructure. The most palpable benefit is the expansion of road network. In addition, private sector participation is expected to help upgrade the technology, improve the quality and lower the costs.

⁸ “Projections of Investment in Infrastructure during the Eleventh Plan” published by the Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, August 2008, pp 24.

15. The total estimated investment in road projects is of around Rs. 314,152 crore during the Eleventh Five Year Plan period and 34 percent (Rs. 106,792 crore) of this estimated investment is to be the private investment. Given that the private participation during the Tenth Plan was less than 5% this is certainly a challenging task. Table 9 indicates the break-up of public and private investment.

Table 9
Projected Public and Private Investment in Roads and Bridges during the Eleventh Plan
(Rs. crore at 2006-07 prices)

Year	2007-08	2008-09	2009-10	2010-11	2011-12	Total XI Plan
Centre	30,330	32,357	35,382	41,373	47,756	187,199
Public	18,318	19,446	20,673	22,618	26,304	107,359
Private	12,012	12,911	14,709	18,755	21,452	79,840
States	21,491	22,431	23,817	26,998	32,216	126,952
Public	17,534	18,150	18,889	20,613	24,815	100,000
Private	3,957	4,281	4,928	6,385	7,401	26,952
Total	51,822	54,789	59,200	68,371	79,971	314,152
Public	35,852	37,596	39,562	43,231	51,118	207,359
Private	15,970	17,193	19,638	25,140	28,852	106,792

. *Source: "Projections of Investment in Infrastructure during the Eleventh Plan" published by the Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, August 2008. pp 25.*

16. PPP initiative in the Roads Sector has been largely on the BOT basis. The policy framework for toll-based BOT projects was approved in 1997. In 2005 it was decided that all future programmes/projects under NHDP would be awarded only on BOT basis. Contracts based on BOT model are inherently considered superior to the traditional Engineering Procurement and Construction (EPC) contracts as BOT projects ensure higher quality of construction and maintenance of roads and completion of projects without cost and time overrun. NHDP Phase-III and onwards, all contracts for provision of road services are contemplated to be awarded only on BOT basis (either based on Toll or Annuity or a suitable Toll/Annuity hybrid), with EPC awards being made in specified exceptional cases only. NHAI funds are also leveraged by the setting up of Special Purpose Vehicles (SPVs). The SPVs borrow funds and repay through toll revenues in the future. This model is also being tried in some projects.

17. The phase-wise outlays under different modes of delivery, namely, construction contracts (CC), toll-based BOT and annuity-based BOT are indicated in Table 10, entailing a total estimated cost of Rs. 220,000 crore (in January 2006) on concessions/contracts to be awarded by 2012.

Table 10
Phase-Wise Outlays Under Different Modes of Delivery

NHDP Phase	Item	CC	BOT (Toll)	BOT (Annuity)	Total
NHDP-I (Balance Work)	Length (in km.)	1,711	20	7	1,738
	Cost (in Rs. Cr.)	8,145	581	85	8,811
NHDP-II (Balance Work)	Length (in km.)	4,569	1,237	930**	6,736
	Cost (in Rs. Cr.)	29,493	8,065	6,064	43,623
NHDP-III	Length (in km.)	-	10,000	-	10,000
	Cost (in Rs. Cr.)	-	65,197	-	65,197
NHDP-IV	Length (in km.)	-	5,000	15,000**	20,000
	Cost (in Rs. Cr.)	-	6,950	20,850	27,800
NHDP-V	Length (in km.)	-	6,500	-	6,500
	Cost (in Rs. Cr.)	-	41,210	-	41,210
NHDP-VI	Length (in km.)	-	1,000	-	1,000
	Cost (in Rs. Cr.)	-	16,680	-	16,680
NHDP-VII	Length (in km.)	-	-	-	*
	Cost (in Rs. Cr.)	2,594	9,638	4,448**	16,680
Total	Length (in km.)	2,280	23,757	15,937	45,974*
	Cost (in Rs. Cr.)	40,232	1,48,321	31,447	220,000

* Length to be covered under NHDP-VII is yet to be finalised.

** To be determined based on budgetary resources and the tolling policy for two-lane highways.

Source: Report of the Core Group on "Financing of the National Highway Development Programme" published by the Secretariat for the Committee on Infrastructure, Planning Commission, Government of India, Yojana Bhawan, Parliament Street, New Delhi, Table 6, pp 10.

18. The central as well as a few state governments have successfully harnessed private sector partnership in road development. The government is now convinced of the merits of partnering with the private sector. Projects are offered on BOT basis to private agencies. After the concession period, which can range up to 30 years, road is to be transferred back to the Government/public sector by the concessionaire. Also, to attract the private sector to projects that are not commercially viable but considered essential, the government has established a Viability Gap Funding (VGF) mechanism to provide a grant of up to 40% of the project cost. Box I, Box II and Box III describe some PPP initiatives.

Box I: Public-Private Partnerships in the Roads Sector

As per the Database compiled by the Department of Economic Affairs, Ministry of Finance, Government of India, there are 262 road projects in PPP mode - 82 road projects entailing collective project cost of Rs. 31,335 crore mostly contracted by NHAI (Centre) and 180 road projects entailing collective project cost of Rs. 49,457 crore contracted by various State Governments.

Across states and central agencies, the leading users of PPPs by number of projects have been Rajasthan, Andhra Pradesh, Karnataka and Tamil Nadu, with 37, 36, 28 and 26 awarded projects, respectively, all in the roads sector, and the National Highways Authority of India (NHAI), with about 77 projects.

Source: <http://www.pppindiadatabase.com/Screens/frmReportView.aspx> as viewed on July 12, 2009

Box II: Rajasthan - PPP Enabling Policy and Acts for the Roads Sector

Rajasthan was the first State to announce a State Road Policy in 1994 to facilitate the entry of private sector in the roads sector. A Model Concession Agreement was put in place for inviting private sector to develop roads on Build, Operate and Transfer (BOT) basis.

Rajasthan Road Development Act was enacted and launched in 2002 to encourage a greater level of participation of private sector in the development of the road sector. The Act provides formal framework to mainstream PPP modalities in the Roads sector

State Road Development Fund Act, 2004 enacted under which non-lapsable State Road Fund (SRF) created by levy of 50 paise cess on petrol / diesel. SRF is being leveraged to take up large / mega State Highways project.

Box III: PPP Roads Projects in Madhya Pradesh

Madhya Pradesh had awarded sixteen State roads projects, up to March 31, 2008, entailing total cost of Rs. 2363.28 crore and 2145 km, out of which eleven projects are completed and operational. During 2008-09, two State roads projects envisaging project cost of Rs. 454.56 crore have been awarded. These are Indore-Dewas Road and Bhopal By-pass Road. Presently, another six roads project on BOT basis is on anvil.

Madhya Pradesh has constituted a State Level Committee (SLC) under the chairmanship of the Chief Secretary for all infrastructure projects being undertaken in PPP mode. All PPP Projects requiring VGF require approval of SLC.

19. Mainstreaming of PPP in the Roads Sector has been significant as shown below:

- Requisite model documents, namely, Request for Qualification, Request for Proposal, Manuals for Specifications & Standards, Model Concession Agreements (for National Highways, State Highways and Operations and Maintenance of Highways), etc. have been standardized.
- Bidding procedures are systematic.
- Availability of certain financial schemes/guidelines – Viability Gap Funding Scheme and India Infrastructure Finance Company Limited (IIFC) for funding/financing infrastructure development and India Infrastructure Project Development Fund (IIPDF) for project development - though not specific to only the roads sector. Institutional arrangements for operation of these schemes/guidelines have been put in place.

20. Roads sector have elicited maximum attention and optimism among private players for PPP. “The government has outlined some policy initiatives in order to attract private investments in road infrastructure projects.”⁹ Some of these initiatives are:

- Government will carry out all preparatory work including land acquisition and utility removal. Right of way (ROW) to be made available to concessionaires free from all encumbrances.
- Viability Gap Funding in form of capital grant up to 40% of project cost to enhance viability on a case to case basis
- Income tax exemptions under Section 80 IA of the Income Tax Act of India
- Concession period allowed up to 30 years
- Arbitration and Conciliation Act 1996 based on UNICITRAL provisions.
- In BOT projects entrepreneurs are allowed to collect and retain tolls
- Duty-free import of specified modern high capacity equipment for highway construction.
- 100% Foreign Direct Investment (FDI) under the automatic route is permitted for all road development projects
- The National Highways Fee (Determination of Rates and Collection) Rules, 2008 to establish uniformity in fee rate for public funded and private investments projects. The main features are:
 - The fee rate would be same for public funded and private funded projects.
 - User fee (60% of that chargeable for 4 lanes) is chargeable on National Highways on two-lane with paved shoulder if average investment of up-gradation exceeds Rs 1 Cr per km.
 - The fee rate would be partially linked to WPI to the extent of 40% and increase of 3% without compounding.
 - Major structures such as bridges, bypasses, tunnels costing Rs 50 Cr or more would have separate fee and would become part of the total chargeable fee.

⁹ *India Infrastructure Report 2008: Business Models of the Future*, 3iNetwork, Oxford University Press, New Delhi, 2008, pp107.

- The average distance between two toll plazas would be 60 kms and a toll plaza would not be located within a distance of 10 kms from the municipal or local town limit.
- PPP Appraisal Committee (PPPAC) was set up by the Government. The Committee enshrines an independent appraisal process. Once cleared by the Committee, the projects are to be put up to the Competent Authority for final approval.
- An increment in the overseas borrowing amount of infrastructure sectors, to US\$ 500 million from US\$ 100 million.
- Offering cheaper loans for highway projects that will speed-up the projects under separate phases of the NHDP.

These initiatives are already fetching results and the response from the private sector has been encouraging.

21. For the first time, NHAI is offering nine stretches of roads covering over 1,400 km on operation, maintenance and transfer (OMT) basis. NHAI has come up with two schemes. Under the first, for financially viable projects, the highest bidder — who offers highest toll revenue and highest annual increase in it — would get the rights to collect toll and maintain the stretch. The second scheme, for financially unviable projects, the bidder who demands least maintenance grant (the same as viability gap funding, where the tolling revenue is not enough to match the expenditure incurred on maintenance), wins the right to maintain the stretch.

Currently, the maintenance of government-funded highways is done by sub-contractors on a cash basis. They are paid from toll collected by agents hired by the NHAI. Government-funded highways are roads where the toll is collected by the authority. The NHAI collects toll on roads built on an annuity basis. Bidding processes are at different stages in respect of these nine stretches

CONSTRAINTS

22. In the backdrop of tangible steps taken by the Government to mainstream PPP in the Roads Sectors, constraints to PPP initiative in the roads sector are perceived to be few and far between at least at the central level. As the PPP practices in the Roads Sector

have evolved, constraints have been resolved by the Government. Some of the constraints which prevail are:

Capacity of the Construction Industry. PPP mode of road project delivery helps in redistribution of risks, but the actual delivery of the road works still depends on the capacity of the construction industry, which needs to be strengthened, qualitatively and quantitatively, in spite of the noticeable capacity building in delivering road works in recent past.

Absence of an Independent Body/Regulator. There is need for a fair and independent body, more in the form of a road authority/user board rather than an exclusive economic regulator (similar to telecom, energy and insurance sectors) to act as a quasi-regulator. In the absence of any independent oversight/control mechanism, the toll rates may be set without reference to the economic benefits and costs arising through externalities and social considerations.

Need for Long Term Funds. Given the need for long term funds for BOT contracts, availability of funds might become an issue, particularly so with the prevailing global financial slowdown. Some other related constraints are:

- Delay in financial closures on account of banks/financial institutions not taking up the project on account of risks on revenues as projected by the concessionaires;
- High cost of debt service and inability of concessionaires to raise cheap long term debt;
- Poor domestic bond market for long term debt instruments;
- No scientific risk allocation methodology between public and private sector and scientific project structuring of PPP projects especially in the road sector. This is being done in other countries as part of their Value for Money (VfM) exercise.

Unified Construction Law. A unified construction law with the requisite legal framework governing all aspects of construction would strengthen the dispute resolution mechanism reducing the burden on the courts and the ensuing delays by satisfactory resolution of cases. In 2000, the Government of India notified construction as an approved activity under industrial concern but stopped short of declaring the sector as a full fledged industry. This has limited the sector's opportunity to be brought under industrial regulations and better access to market finance.

Land Acquisition. Land acquisition procedures and compensation demanded for transfer of Government land hinder the implementation of PPP projects in Roads Sector.

Examples

- Compensation demanded for transfer of Govt. land for NHDP projects
- Punjab package NS-36 & NS-38: Some stretches (Lamin, Madhopur and Pathankot) of land is also to be transferred by State Government. A lot of correspondence to the Secretary of concerned departments but no action is being taken by State Govt. department
- Solatium of 30% and 12% interest is demanded by some states like West Bengal – not as per NH Act
 - It has been now clarified that Competent Authority may include solatium and interest while computing award.

Source: Ministry of Road Transport and Highways

Environment and Forest Clearances. Delay in getting the forest clearance/wildlife clearance is another constraint. Additional conditions and demands for compensatory afforestation, dedicated strip for plantation, staff quarters, etc. have resulted in delays in implementation of projects.

Examples of Pending Environment and Forest Clearances

- o Proposal for diversion of 55.85 hec of forest land in Sendhwa Teshil is lying with Govt of MP since May'2009 for onward submission to MoEF , New Delhi.
- o For Lakhanadon - Nagpur section of NH-7 in MP
- o For Pench Tiger Reserve in Seoni District in MP was not accepted by National Board of Wild Life. The matter is pending with CEC.
- o For Dhule - M.P border of NH3 in Maharastra.
- o For Khalghat to MP/Maharastra Border NH-3
- o Wild life clearance in Jawahar Game Reserve
- o Trees are yet to be cut on NH-24 on account of non clearance by Central Wild Life Sanctuary Board

Source: Ministry of Road Transport and Highways

Clearance of Railway for Rail Over Bridges. Securing approvals from the Railways has caused delay in implementation of some projects.

Examples of Pending Clearances with Ministry of Railways

- NS-36- Revised/ modified drawings of RUB are pending at DRM Office Firozpur. Concerned official contracted no. of items and a rep of contractor was also sent to the said office. No response is received from the Railway Authorities.
- NS-37-The design drawing and method statement for the construction of the RUB has been submitted to HQ Northern Railway on 29.4.08 and the Project Manager M/s ITD Cementation has been requested to peruse the matter with the railways. The approval is still awaited
- Approval of revised GAD of RUB at Km 2.01 of Jammu Bypass is pending at Chief Bridge Engineer, Baroda House Railways, New Delhi.

Source: Ministry of Road Transport and Highways

Shifting of Utilities. In many projects implementation has been affected due to delays in shifting of utilities of different types such as electric lines, water pipelines, sewer lines, telecommunication lines, etc.

Examples of Delays in the Shifting of Utilities

4-Lane NH Connectivity to ICTT at Vallarpadam in Cochin ,Kerala

Demand of Kerala Water Authority (KWA) for signing of MoU: NHAI is meeting the cost of shifting of water lines of KWA and getting the work execute contractor under the supervision of KWA .**KWA is insisting for signing of MoU box culvert for one existing pipeline crossing and 600m dia. pipes across the at 500m intervals to facilitate their future pipelines crossings.** It was conveyed through D.O letter dated 09.07.08 from chairman, NHAI to chief secretary, Govt. of Kerala (GoK) that NHAI cannot meet these additional demands. While NHAI is allowing the pipelines in NH RoW after shifting, meeting the cost of shifting and paying 5% supervision charges, it is unreasonable for KWA to insist for signing of an agreement containing above additional demands.

Source: Ministry of Road Transport and Highways

Law and Order situation: Several road projects in India especially in militant affected areas like North east. J&K and other sensitive areas are impacted by deteriorating law and order situation.

Law and Order instances impacting projects

- Attacks on NHAI contractors, railway employee and others killing more than 100 persons since October 2006
- NHAI has approved for deployment of 2 CRPF companies and engagement of 1,000 ex-service men for security of East-West corridor projects

Source: Ministry of Road Transport and Highways

From the Perspective of Project Developers.

- Issues with model concession agreement: restriction on increase in toll rates may limit returns from BOT projects;
- Clauses in the MCA that limit concession periods if actual traffic is more than estimated traffic for a specified period. This means that the private sector may not be able to earn more than requisite profits stipulated in MCA;
- Land acquisition and obtaining encumbrance-free land;
- Ineffective dispute resolution process; role of Independent Engineer imprecise and weak;
- Issues with Detailed Project Report (DPR) quality and changes in DPRs;
- Availability of adequate road construction materials; price escalation not fully compensated; and,
- Constraints in availability of skilled personnel and semi-skilled/unskilled labour.

Apart from the above, the “resource constraints, limited absorptive capacity of certain States, inadequate institutional and implementing capacities, availability/capacity of local contracting and consulting services, and availability of raw materials and human resources are some of the important supply side constraints.”¹⁰ “Constraints leading to delay in progress of the Roads Sector comprise delay in land acquisition,

¹⁰ *Eleventh Five Year Plan (2007-2012): Agriculture, Rural Development, Industry, Services and Physical Infrastructure, Volume III, Planning Commission, Government of India. Oxford University Press, New Delhi, 2008. pp 298.*

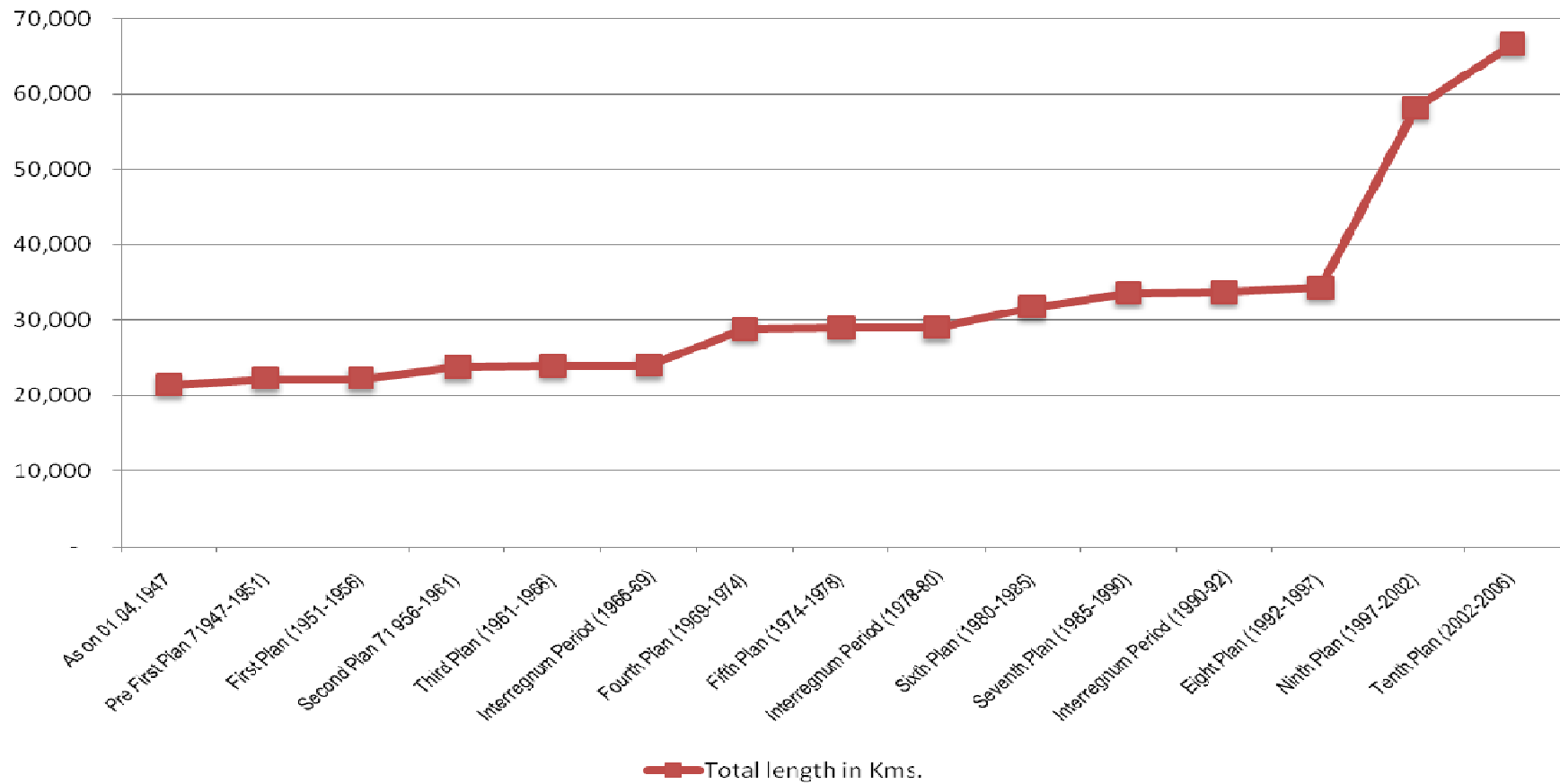
environmental clearances, road overbridge clearances, law and order problems, rehabilitation and settlement issues,”¹¹ etc.

RECOMMENDATION AND THE WAY FORWARD

- Effective addressal of the constraints above is the desirable way forward;
- Capacity building of the roads construction “industry” – technical, technological, financial and implementation. Sector-specific Training Institutions/Centres, duty/tax reliefs/waivers in road construction equipment, and deepening of financial market are some measures;
- Implementation of the recommendations by the Deepak Parekh Committee with respect to deepening of the Domestic Bond Market to facilitate takers for long term infrastructure bonds;
- Using refinance role of IIFCL more effectively to refinance banks and Institutions involved in PPP lending;
- Provide priority sector status to infrastructure lending, within the 40% required lending currently attributed to agriculture and small scale sector. This will free money from banks / financial institutions to infrastructure especially the road sector;
- Facilitate securitization and take out financing of infrastructure loans;
- Government may participate as a credit enhancer by (a) providing low cost credit guarantee to banks, and (b) provide credit enhancement of infrastructure bonds to attract insurance / pension funds;
- Permit domestic mutual funds to launch direct infrastructure funds, so that they may be directly able to invest into PPP projects;
- Commence upon the VfM exercise on selected road projects so as to improve the methodology of risk assessment, allocation and eventual risk mitigation especially in road sector PPP projects;
- Liberalize investment guidelines for insurance companies and provident funds so that they may be able to invest into high quality SPVs in road sector.

¹¹ *Outcome Budget 2009-10, Ministry of Road Transport and Highways, Government of India, pp 18.*

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