



INFRASTRUCTURE
Building for Growth



Government of India

Second Report of the **High Level Committee on Financing Infrastructure**

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Second Report of the High Level Committee on Financing Infrastructure

Context

1.1 The rapid growth of the economy in the past two decades has placed increasing stress on physical infrastructure such as electricity, railways, roads, ports, airports, irrigation, water supply and sanitation, all of which already suffer from a substantial deficit in terms of capacities as well as efficiencies. The objective of inclusive growth averaging 7 - 9 per cent per year can be achieved only if this infrastructure deficit is overcome and adequate investment takes place in support of higher growth for an improved quality of life, both for urban as well as rural communities.

1.2 The Eleventh Plan, therefore, envisaged an increase in investment in physical infrastructure from a level of about 5 per cent of GDP witnessed during the Tenth Plan to about 7.6 per cent of GDP during the Eleventh Plan. This was estimated to require an investment of Rs. 20,56,150 crore during the Eleventh Plan, at 2006-07 prices. As against these projections, the actual investment during the Eleventh Plan aggregated Rs. 19,00,063 crore comprising 7 per cent of GDP over the Plan period.

1.3 In his inaugural speech at the Conference on Building Infrastructure held in New Delhi on March 23, 2010, the Prime Minister had observed that investment in infrastructure will need to expand from about \$500 billion during the Eleventh Plan to about US \$ 1 trillion during the Twelfth Plan period. He, therefore, urged the Finance Ministry and the Planning Commission to draw up a plan of action for achieving this level of investment. Further, the Approach Paper for the Twelfth Plan (2012-

17) stated that the total investment in infrastructure would have to be over Rs. 45 lakh crore during the Twelfth Plan period. In the Union Budget for 2012-13, the Finance Minister stated that during the Twelfth Plan period, investment in infrastructure will have to go up to Rs. 50 lakh crore, with half of this expected from the private sector.

1.4 It was recognised that financing investment of this order would require a review of some of the existing policies as well as adoption of innovative ways of financing. In this backdrop, the Central Government set up the High Level Committee on Financing Infrastructure to make recommendations relating to policy initiatives that would enable the requisite flow of investment in infrastructure during the Twelfth Five Year Plan. The terms of reference of the Committee are as follows:

- (i) To assess the investment required to be made by the Central and State Governments, Public Sector Undertakings (PSUs) and the private sector in the ten major physical infrastructure sectors during the Twelfth Five Year Plan;
- (ii) To identify areas and activities to be financed by the government, PSUs and the private sector respectively;
- (iii) To suggest ways to enable the requisite flows of private investment in infrastructure including the creation of a supportive investor-friendly environment;
- (iv) To make recommendations on the role government could play in developing capital markets for intermediating long-

- term savings for investments in infrastructure projects, including fostering appropriate institutional arrangements;
- (v) To examine the role of international capital flows in infrastructure financing and development, assess the nature of projects likely to receive such capital, and consider how such financing can be obtained, in a sustainable manner;
- (vi) To identify any regulatory/legal impediments constraining private investment in infrastructure, and make specific recommendations to facilitate their removal.
- (vii) Deputy Governor, RBI
- (viii) Chairman, State Bank of India
- (ix) Chairman, Life Insurance Corporation of India
- (x) Chairman, Power Finance Corporation
- (xi) Managing Director, ICICI Bank
- (xii) Executive Chairman, IDFC
- (xiii) Shri Uday Kotak, Kotak Mahindra Bank
- (xiv) Shri G.M. Rao, Chairman, GMR Group
- (xv) Shri Sanjay Reddy, Managing Director, GVK Group
- (xvi) Country Head, Goldman Sachs
- (xvii) Shri Madhav Dhar, Managing Partner, Traxis Partners

1.5 The constitution of the Committee is as follows:

Chairman

- (i) Shri Deepak Parekh (in honorary capacity, with status of Minister of State)

Member Convener

- (ii) Shri Gajendra Haldea, Adviser to Deputy Chairman, Planning Commission

Members

- (iii) Secretary, D/o Economic Affairs
- (iv) Secretary, D/o Financial Services
- (v) Chairman, Insurance Regulatory and Development Authority
- (vi) Chairperson, Pension Fund Regulatory and Development Authority

Special Invitees

- (xviii) Chairman, Railway Board
- (xix) Secretary, M/o Power
- (xx) Secretary, M/o Road Transport and Highways
- (xxi) Secretary, M/o Urban Development
- (xxii) Secretary, M/o Petroleum & Natural Gas
- (xxiii) Secretary, D/o Telecommunications
- (xiv) Secretary, M/o Water Resources
- (xxv) Chief Economic Adviser, M/o Finance
- (xxvi) Chairman, SEBI
- (xxvii) CSI & Secretary, M/o Statistics and Programme Implementation

The Committee engaged Mckinsey & Company to undertake research and assist the Committee in its deliberations¹.

¹The Committee acknowledges and appreciates the support provided by Mckinsey & Company. Their team included Alok Kshirsagar (Team Leader), Shirish Sankhe, Vipul Tuli, Vijay Sarma, Ankit Gupta, Suhail Sameer, Pankaj Vatsa, Priyanka Kamra, Abhinav Singh, Swati Dayani and Riti Mohapatra who provided research and other valuable inputs in preparation of this Report.

1.6 The Committee made several recommendations to the Government on tax-related matters. Some of the recommendations accepted by the Government include reduction in withholding tax and continuation and increase in tax-free infrastructure bonds during 2012-13 and 2013-14. The Committee presented its first Interim Report to the Government on October 3, 2012, of which many recommendations have been implemented or are under implementation. On the suggestion made by the Committee, the Reserve Bank of India amended its prudential norms on Advances to Infrastructure Sector. Under the new norms, loans granted to infrastructure projects will be classified as secured to the extent of assured termination payments by the project authority. This is expected to reduce the cost of loans to such projects.

1.7 The Committee has since deliberated on the causes that have slowed down the pace of investment as well as impacted the outlook of infrastructure financing. The Committee noted that the policy environment has become increasingly difficult on account of various factors such as inadequate allocation of fuel to power stations, delays in environment and forest clearances, issues in land acquisition, constraints in bank lending, economic slowdown and delays in decision-making, which are the principal causes of decline in investment in infrastructure, especially during the last two years. The Committee noted that if the above constraints are not addressed urgently, they would lead to a widening of the infrastructure deficit with serious

repercussions for the economy in the years to come.

1.8 The Committee also noted that despite the slow down, the investment sentiment is positive and the flow of investment can be accelerated significantly if the policy environment is improved expeditiously. The Committee, therefore, decided to submit its Second Report to the Government suggesting an agenda for action with a view to identifying some of the pressing concerns that need to be addressed for revival of investment in infrastructure. In this backdrop the Committee also reviewed its earlier projections of investment in infrastructure during the Twelfth Plan and revised its projections as in Part II of this Report.

1.9 Part III of the Report contains overarching recommendations.

1.10 Part IV of the Report contains recommendations on financing of infrastructure for addressing the issues relating to shrinking of equity and debt flows in PPP projects.

1.11 Part V of the Report contains sectoral recommendations of the Committee for reviving investment in different sectors of infrastructure.

Investment in Infrastructure

2.1 Background

2.1.1 India's average investment in infrastructure was 4.7 percent of GDP during 1992-2010 compared to an average of 7.3 percent across China, Indonesia and Vietnam (Figure 1). India ranks 85 out of 144 countries, as per the World Economic Forum Global Competitiveness Report 2014, in terms of infrastructure quality with 'inadequate supply of infrastructure' listed as the most problematic factor in doing business.

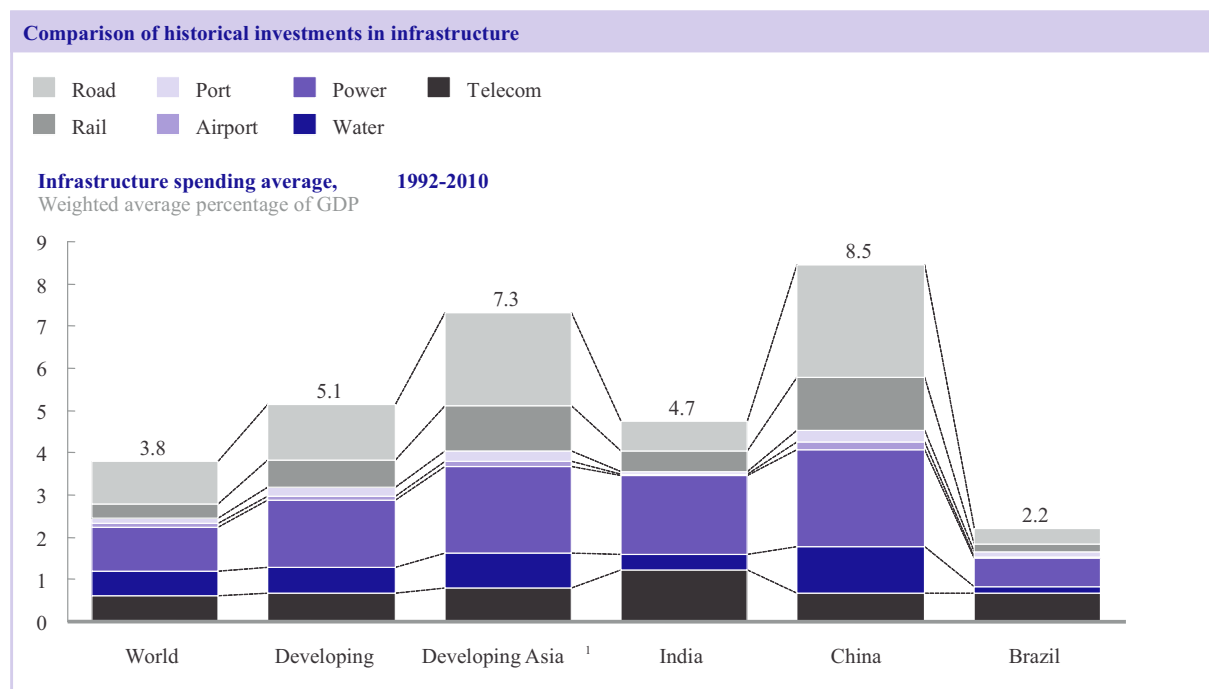
2.1.2 India also lags other countries in project implementation. Data from government and industry suggest that on average, projects suffer from 20 to 25 per cent time and cost

over-runs, while in some sectors this is as high as 50 per cent. Furthermore, infrastructure projects are fraught with disputes that cause inordinate delays due to slow resolution processes. Arbitration awards are almost invariably appealed against, resulting in long drawn-out disputes that often last 3 to 10 years.

2.2 Review of Investment during the Twelfth Plan

2.2.1 In its Interim Report of August 2012, the Committee had projected an investment of Rs. 51.46 lakh crore (at constant 2011-12 prices) in infrastructure during the Twelfth Five Year Plan.

Figure 1: India's investment in infrastructure is lower than other developing countries



2.2.2 Subsequent to the Interim Report, the Twelfth Five Year Plan projected an investment of Rs. 55.74 lakh crore (at current prices) in infrastructure during the Plan period. However, the latest available data for 2012-13 and 2013-14 suggests that the Twelfth Plan projections may be difficult to achieve.

2.2.3 When the Interim Report was submitted, the investment figures for the year 2011-12 were provisional. The actual figures for 2011-12 are now available. The investment figures for the first year of the Twelfth Plan 2012-13 are also available. As against the earlier projections of Rs. 7,47,976 crore (at 2011-12 prices), the investment during 2012-13 is now anticipated at Rs. 4,93,725 crore (at 2011-12 prices), which is about 66 per cent of the projected investment. Sectorwise details of

projected and anticipated investments during 2012-13 are shown in Table 1. The pace of investment has not picked up even during 2013-14 and several bottlenecks and barriers have continued to persist.

2.2.4 In view of the above, it is unlikely that the Twelfth Plan projections made earlier would materialise. It is thus felt that the investment projections contained in the Interim Report need to be revised based on actual investment in the Central sector during 2012-13 and revised estimates (RE) of 2013-14. For the State sector, revised estimates (RE) for 2012-13 and budgeted estimates (BE) of 2013-14 have been compiled.

2.2.5 The Committee noted that the anticipated investment in infrastructure during

Table 1: Projected and Anticipated Investments in Infrastructure in 2012-13

(Rs. crore at 2011-12 prices)

Sectors	Target	Investment (Anticipated)	Achievement (%)
Electricity	2,45,901	1,64,891	67.1
Renewable Energy	33,413	24,368	72.9
Roads & Bridges	1,42,154	1,02,492	72.1
Telecommunications	1,05,192	32,912	31.3
Railways	60,364	47,935	79.4
MRTS	12,633	12,128	96.0
Irrigation (incl. Watershed)	71,867	54,441	75.8
Water Supply & Sanitation	34,145	27,537	80.6
Ports (incl. ILW)	18,600	12,046	64.8
Airports	7,177	4,698	65.5
Storage	5,735	5,285	92.2
Oil & Gas Pipelines	11,979	4,991	41.7
Total	7,47,976	4,93,725	66.0

2012-13 has reached a level lower than 2008-09 while investment during 2013-14 is not expected to rise substantially, thus leading to a loss of investment momentum during the initial two years of the Plan. It will take some time to make up for these two years and bring back the investment to a high growth path.

2.3 Revised Projections of Investment for the Twelfth Plan

2.3.1 In view of the above, the Committee has revised its Interim Report projections for the Twelfth Plan which are shown in Table 2 below.

Table 2: Revised Projections of Investment in Infrastructure

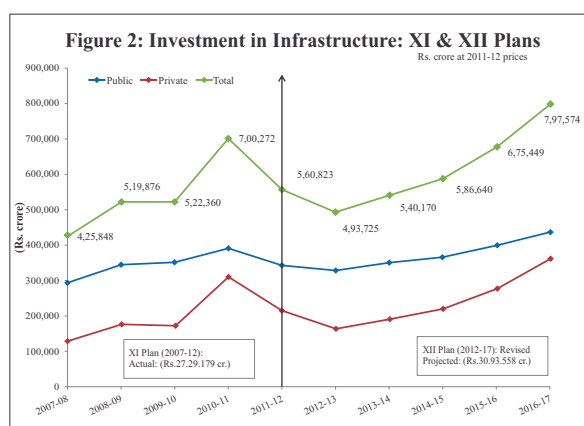
(Rs. crore at 2011-12 prices)

Sectors	Total Eleventh Plan	Twelfth Plan Projections					Total 12th Plan
		2012-13 (Likely Exp.)	2013-14 (Likely Exp.)	2014-15	2015-16	2016-17	
Electricity	7,90,481	1,64,891	1,70,276	1,77,112	1,90,703	2,05,481	9,08,463
Centre	2,48,601	53,801	56,297	57,945	61,515	65,305	2,94,864
States	2,05,060	41,180	44,070	44,736	46,644	48,633	2,25,263
Private	3,36,820	69,909	69,909	74,431	82,544	91,542	3,88,336
Renewable Energy	1,02,004	24,368	25,416	30,504	39,398	50,941	1,70,628
Centre	11,335	2,780	2,983	3,451	4,252	5,239	18,705
States	1,083	1,159	1,240	1,338	1,509	1,702	6,947
Private	89,586	20,430	21,193	25,716	33,638	44,000	1,44,976
Roads & Bridges	5,26,794	1,02,492	1,01,662	1,10,019	1,25,182	1,43,243	5,82,598
Centre	2,24,065	27,820	25,015	24,330	23,984	23,643	1,24,792
States	1,96,677	48,473	49,539	56,252	67,716	81,516	3,03,496
Private	1,06,051	26,199	27,107	29,437	33,482	38,084	1,54,310
Telecommunications	4,38,787	32,912	54,789	62,919	77,199	95,189	3,23,008
Centre	93,021	3,579	4,978	4,595	4,225	3,884	21,261
Private	3,45,766	29,333	49,811	58,324	72,975	91,305	3,01,747
Railways	2,31,935	47,935	56,227	61,632	74,000	1,00,021	3,39,816
Centre	2,21,353	46,956	55,247	58,625	64,738	71,488	2,97,054
Private	10,582	980	980	3,007	9,262	28,533	42,762
MRTS	49,184	12,128	18,073	20,393	24,901	31,372	1,06,866
Centre	24,944	4,754	9,878	10,377	11,311	12,329	48,649
States	17,197	4,215	4,375	4,596	5,009	5,461	23,655
Private	7,042	3,159	3,820	5,420	8,580	13,582	34,563
Irrigation (incl. Watershed)	2,66,375	54,441	54,976	56,931	60,973	65,388	2,92,708
Centre	16,325	3,173	2,708	3,132	3,860	4,756	17,628
States	2,50,051	51,268	52,268	53,798	57,113	60,632	2,75,080

Sectors	Total Eleventh Plan	Twelfth Plan Projections					Total 12th Plan
		2012-13 (Likely Exp.)	2013-14 (Likely Exp.)	2014-15	2015-16	2016-17	
Water Supply & Sanitation	1,36,021	27,537	26,535	28,235	31,439	35,321	1,49,068
Centre	53,563	12,105	10,406	11,079	12,287	13,627	59,504
States	82,288	15,213	15,734	16,529	18,017	19,639	85,132
Private	169	219	395	627	1,135	2,055	4,431
Ports (incl. ILW)	55,347	12,046	14,370	17,265	22,429	29,313	95,424
Centre	6,872	1,793	3,066	3,286	3,676	4,111	15,933
States	3,667	744	744	792	878	974	4,131
Private	44,808	9,509	10,560	13,187	17,875	24,228	75,360
Airports	41,299	4,698	4,824	5,836	7,752	10,518	33,629
Centre	13,833	1,678	1,703	1,729	1,803	1,879	8,791
States	1,340	-	100	100	100	100	400
Private	26,126	3,021	3,021	4,007	5,850	8,539	24,438
Storage	20,465	5,285	5,397	6,693	9,271	13,302	39,948
Centre	6,866	1,566	1,570	1,683	1,882	2,105	8,807
States	2,411	1,266	1,374	1,443	1,573	1,715	7,371
Private	11,188	2,453	2,453	3,567	5,816	9,482	23,771
Oil & Gas Pipelines	70,487	4,991	7,627	9,100	12,201	17,484	51,403
Centre	37,492	2,918	5,113	5,588	6,409	7,351	27,379
States	4,795	775	1,217	1,304	1,458	1,631	6,385
Private	28,200	1,297	1,297	2,208	4,333	8,502	17,638
Total	27,29,179	4,93,725	5,40,170	5,86,640	6,75,449	7,97,574	30,93,558
Centre	9,58,271	1,62,923	1,78,964	1,85,820	1,99,941	2,15,718	9,43,366
States	7,64,570	1,64,293	1,70,660	1,80,887	2,00,018	2,22,003	9,37,861
Private	10,06,338	1,66,509	1,90,546	2,19,932	2,75,490	3,59,853	12,12,331
Total	27,29,179	4,93,725	5,40,170	5,86,640	6,75,449	7,97,574	30,93,558
Public	17,22,841	3,27,215	3,49,624	3,66,707	3,99,959	4,37,721	18,81,227
Private	10,06,338	1,66,509	1,90,546	2,19,932	2,75,490	3,59,853	12,12,331
GDPmp	3,89,84,064	96,54,148	1,01,27,201	1,07,34,833	1,14,32,597	1,22,32,879	5,41,81,659
Investment as % of GDPmp	7.00	5.11	5.33	5.46	5.91	6.52	5.71

Note: The real GDP growth rates of 6 per cent, 6.5 per cent and 7 per cent have been assumed for the years 2014-15, 2015-16 and 2016-17 respectively.

2.3.2 As shown in Table 2 above, the total investment during the Twelfth Plan is now projected at Rs. 30,93,558 crore as compared to Rs. 27,29,179 crore achieved during the Eleventh Plan at 2011-12 prices. The revised share of public investment is projected to decrease to 60.81 per cent in the Twelfth Plan from a level of 63.13 per cent achieved in the Eleventh Plan. The share of private investment is projected to increase to 39.19 per cent of the total investment compared to 36.87 per cent achieved in the Eleventh Plan. The trend of investment in infrastructure during Eleventh and Twelfth Plans is depicted in Figure 2 below.



2.3.3 As per revised projections, investment in infrastructure as a percentage of GDP is expected to reach 6.52 per cent of GDP in the terminal year (2016-17) of the Twelfth Plan. The average investment for the Twelfth Plan as a whole is likely to be about 5.71 per cent of GDP as compared to 7 per cent during the Eleventh Plan.

2.4 Assumptions underlying the Revised Projections

2.4.1 The assumptions underlying the revised Investment Projections are as follows:

2.4.2 The Central investment figures for 2012-13 (Actual) and 2013-14 (RE) were compiled from the Union Budget 2014-15. The States investment figures for 2012-13 (RE) and 2013-14 (BE) were taken from States' Budget proposals for 2013-14. It has been noted during the previous years that there is usually a difference between estimates (Revised and Budgeted) and the actual investment. In view of this, the ratios of actual investment to revised estimates (RE) and actual investment to Budgeted Estimates (BE) were calculated for the year 2011-12 (States) and 2012-13 (Central). These ratios have been applied to 2012-13 (RE) and 2013-14 (BE) to arrive at the likely States' investment in 2012-13 and 2013-14. For arriving at the likely Central investment during 2013-14, the ratio of actual to RE observed in 2012-13 has been used. In case of Telecom sector, only a 10 per cent decline in the revised estimates of 2013-14 has been assumed to arrive at likely investment.

2.4.3 For making the revised projections for the public sector during the remaining 3 years (2014-17) of the Plan, it is assumed that investment during 2014-15 will grow only by three fourth of the growth rates used in the Twelfth Five Year Plan. This is in line with the expected 6 per cent growth for the year 2014-15 as compared to 8 per cent growth rate assumed in the Twelfth Plan. For the remaining two years of the Plan (2015-17), the growth rates assumed

in the Twelfth Five Year Plan have been applied. This is based on the assumption that the investment in infrastructure will regain its momentum during the remaining period of the Plan.

2.4.4 The projections of private investment for 2012-13 were collected from the respective Central Ministries. The figures for electricity were provided by the Central Electricity Authority. Figures for private investment in states' roads and non-major ports were collected from the respective states. The estimates for 2013-14 have been projected by applying the actual CAGR of the last two years to the 2012-13 investment figures. In case the CAGR of last two years was negative, the investment in 2013-14 has been taken at the same level as in 2012-13.

2.4.5 For making the revised projections for private sector investment during the remaining 3 years (2014-17) of the Plan, it has been assumed that the investment during 2014-15 will grow only by three fourths of the growth rates assumed for the Twelfth Five Year Plan. For the remaining two years of the Plan, the actual growth rate assumed for the Twelfth Five Year Plan has been applied on investment estimates of 2014-15. This is based on the assumption that investment in infrastructure will regain its growth momentum during the remaining period of the Plan. On the back of mega plans for private participation in the railway sector, given the low base of investment, it is assumed that private investment in this sector will grow rapidly during the remaining 3 years (2014-17) of the Plan so as to reach an aggregate of Rs. 42,762 crore.

2.5 Sectoral Projections

2.5.1 The detailed sectoral projections on the basis of above assumptions are discussed below:

Electricity

2.6 Given the power shortages and the increasing demand for electricity, the total investment in the sector is projected at Rs. 9,08,463 crore during the Twelfth Plan, compared to Rs. 7,90,481 crore during the Eleventh Plan. The public and private sector investments are projected at Rs. 5,20,127 crore and Rs. 3,88,336 crore respectively. The Central and States' investment is expected to grow at a compound average growth rate (CAGR) of about 5 per cent during 2013-17. Due to the fuel supply constraints and delays in land acquisition during the last two years, the sector did not see any significant progress in award of new projects. In this backdrop, private investment in 2013-14 is expected to remain almost at the same level as in 2012-13. However, growth is expected to pick up and the sector is expected to grow at a CAGR of about 7 per cent during 2014-17 as coal supply is expected to improve since most of the Fuel Supply Agreements for upcoming power stations have been signed and project developers have also started importing coal. Further, the Ministry of Power has also notified new Standard Bidding Documents to enable private investment in power generation projects on a sustainable basis.

Renewable Energy

2.7 The total investment is projected at Rs. 1,70,628 crore during the Twelfth Plan,

compared to Rs. 1,02,004 crore during the Eleventh Plan. The public and private sector investments are projected at Rs. 25,652 crore and Rs. 1,44,976 crore respectively. The Central and States' investments are expected to grow at a CAGR of about 17 per cent and 10 per cent respectively, while private investment is expected to grow at a CAGR of about 21 per cent during 2013-17. Private sector contribution is expected to grow rapidly, driven by the expected launch of the first National Wind Energy Mission (NWEM) in 2014 and solar energy projects under the Jawaharlal Nehru National Solar Mission which has targeted deploying 20,000 MW of grid connected solar power by 2022.

Roads & Bridges

2.8 The total investment is projected at Rs. 5,82,598 crore during the Twelfth Plan, of which the Central and States' investments would be Rs. 1,24,792 crore and Rs. 3,03,496 crore respectively, accounting for about 74 per cent of the total investment. The private sector is projected to account for 26 per cent or Rs. 1,54,310 crore of the total investment. The Central investment is expected to decline at a CAGR of about 4 per cent during 2013-17 as most of the work under PMGSY is completed. The States' investment is expected to grow at a CAGR of about 14 per cent during 2013-17 on account of the renewed emphasis in the states to allocate more budgetary resources for state roads. Private investment is expected to grow at a CAGR of about 10 per cent during 2013-17.

Telecommunications

2.9 Investment in telecom is projected at Rs. 3,23,008 crore during the Twelfth Plan as compared to Rs. 4,38,787 crore during the Eleventh Plan. Public sector investment is projected to increase at a CAGR of about 2 per cent as BSNL and MTNL have no major expansion plans, whereas private investment is projected to reach a level of Rs. 3,01,747 crore compared to Rs. 3,45,766 crore in the Eleventh Plan.

Railways

2.10 The total investment is projected at Rs. 3,39,816 crore during the Twelfth Plan as compared to Rs. 2,31,935 crore during the Eleventh Plan. Contributing to about 87 per cent of the total investment, the public sector investment is projected at Rs. 2,97,054 crore, while private investment is projected at Rs. 42,762 crore during the Twelfth Plan. Public sector investment is expected to grow at a CAGR of 11 per cent.

MRTS

2.11 The total investment is projected at Rs. 1,06,866 crore during the Twelfth Plan as compared to Rs. 49,184 crore during the Eleventh Plan. The Central and States' investments are projected at Rs. 48,649 crore and Rs. 23,655 crore, assuming CAGRs of about 27 per cent and 7 per cent respectively. Private sector investment is expected to grow at a CAGR of 44 per cent during 2013-17 to reach a level of Rs. 34,563 crore during the Twelfth Plan which is expected to be driven by various metro

rail projects in cities like Hyderabad, Mumbai and Gurgaon.

Irrigation (incl. Watershed)

2.12 The total investment is projected at Rs. 2,92,708 crore during the Twelfth Plan as compared to Rs. 2,66,375 crore during the Eleventh Plan. The Central and States' investments are expected to reach Rs. 17,628 crore and Rs. 2,75,080 crore respectively during the Twelfth Plan. Private investment in irrigation infrastructure has remained negligible as no serious efforts have been made so far to attract private participation.

Water Supply & Sanitation

2.13 The total investment is projected at Rs. 1,49,068 crore during the Twelfth Plan as compared to Rs. 1,36,021 crore during the Eleventh Plan. Accounting for almost 97 per cent of the total investment, Central and States' investments are projected at Rs. 59,504 crore and Rs. 85,132 crore respectively. Private sector investment in the sector is projected at a modest Rs. 4,431 crore.

Ports (incl. Inland Waterways)

2.14 The total investment is projected to double to Rs. 95,424 crore during the Twelfth Plan as compared to Rs. 55,347 crore realised during the Eleventh Plan. Of the total investment, Rs. 15,933 crore, Rs. 4,131 crore, and Rs. 75,360 crore are to be contributed by the Centre, States, and private sector respectively. In ports, investments by the Central and State sectors are expected to grow at CAGRs of about 23 per cent and 7 per cent respectively during 2013-17. The

private investment is expected to grow at a CAGR of about 26 per cent during 2013-17 as most of the projects are expected to be implemented by the private sector.

Airports

2.15 The total investment is projected at Rs. 33,629 crore during the Twelfth Plan, of which Rs. 9,191 crore and Rs. 24,438 crore are expected to come from the public and private sectors, respectively. Private investment is projected to grow at a CAGR of about 30 per cent during 2013-17. The rise in private investment is expected as a few greenfield airports and 6 airports for O&M may be awarded soon to the private sector.

Storage

2.16 The total investment is projected at Rs. 39,948 crore during the Twelfth Plan, of which Rs. 16,177 crore and Rs. 23,771 crore are expected from the public sector and private sector respectively. The centre, states' and private sector investment are expected to grow at CAGRs of 8 per cent, 8 per cent and 40 per cent respectively during 2013-17.

Oil & Gas Pipelines

2.17 The total investment is projected at Rs. 51,403 crore during the Twelfth Plan, of which Rs. 33,764 crore and Rs. 17,638 crore are expected from the public sector and private sector respectively. The central, states' and private sector investments are expected to grow at CAGRs of about 26 per cent, 20 per cent and 60 per cent respectively during 2013-17.

Overarching Recommendations

3.1 Infrastructure Development Council

3.1.1 For giving a sustained push to investment in infrastructure, a reorientation of programmes and policies is vital for time-bound delivery of world-class infrastructure such as high-speed rail, redevelopment of railways stations, development of new railway freight corridors, modernisation of railway rolling stock, development of new expressways, augmentation of existing highways, rural telephony, rural broadband access, reform and revitalisation of the generation, transmission and distribution segments of the power sector, production and supply of fuel, modernisation of existing ports, etc. These are complex challenges that require inter-disciplinary and inter-ministerial dialogue to arrive at feasible and sustainable outcomes based on resolution of conflicts and building a broad consensus within a reasonable timeframe.

3.1.2 Further, a large number of infrastructure projects are stuck or delayed across various stages of award, construction and operation. For example, debt constraints, fuel supply challenges for power plants, environmental clearances, land acquisition, etc., have held up a large number of projects, which can achieve commissioning within the short-term if these constraints are suitably addressed.

3.1.3 In view of the above, the Committee recommends the constitution of an Infrastructure Development Council, under the chairmanship of the Prime Minister and including the Ministers of Finance and infrastructure Ministries and Deputy Chairman, Planning Commission to guide policy formulation with a

view to creating an enabling environment for attracting domestic and foreign investment and for overseeing programme implementation. This would help in ensuring a coordinated and wholesome approval to policy formulation in addition to speedy implementation of programmes, policies and projects.

3.1.4 The proposed Council may be assisted by an Empowered Sub-committee and a dedicated secretariat for detailed deliberations and for servicing the Council.

3.2 Dispute Resolution Mechanism

3.2.1 The Committee identified the absence of a credible dispute resolution mechanism as one of the foremost reasons that deters serious investors in many cases while increasing the cost of projects across sectors. While delays in court proceedings are endemic, lack of institutional arbitration also leads to long delays and excessive costs. This dampens the entire investment climate and raises the cost of doing business in infrastructure sectors.

3.2.2 In the past, dedicated tribunals have been set up to fast-track dispute resolution, especially in areas where pendency was large. These tribunals have brought about a significant improvement, though there is scope of further improvement. A quick survey suggests that compared to Mumbai High Court, the Debt Recovery Tribunals were able to reduce the time taken to issue summons from an average of 15 months to about 4.5 months. Similarly, the time taken to settle motor accident claims has been reduced from an average of about 36 months to just one month.

3.2.3 The Committee recommends the introduction of a legislative enactment for creation of an arbitral architecture dedicated to resolution of disputes in an economical and time-bound manner. Disputes arising out of all public contracts dealing with infrastructure projects should be dealt with by these dedicated arbitral tribunals with appeal lying only with the Supreme Court on points of law. This would build confidence among investors and reduce the cost of doing business in infrastructure.

3.3 Regulatory Reforms

3.3.1 Experience with regulation across sectors has been mixed while regulatory laws and practices vary widely from one sector to the other. For example, there is an elaborate system of regulation in respect of electricity tariffs. However, regulation of electricity distribution companies and their financial health has not succeeded so far. On the other hand, the role of Tariff Authority for Major Ports is confined to tariff-setting whereas ports in developed countries as well as ports in the State sector in India do not have any tariff regulation. The selection of regulators and their terms of appointment also vary from sector to sector. Moreover, regulators are neither accountable to the Government nor to the Parliament, which is not the case in developed countries where they are accountable to one or the other.

3.3.2 Though there has been considerable debate about the need for regulatory reforms across sectors, no tangible steps have been taken so far in this direction. The Committee, therefore, recommends a thorough review and reform of

the regulatory laws and practices, especially with a view to addressing the role, functions and powers of regulatory commissions, the manner of selection of regulators, and the accountability of regulatory commissions.

3.4 Non-compliance by Government agencies

3.4.1 By its very definition, PPP projects imply a partnership between public entities and private sector participants. Each party must, therefore, discharge its obligations to enable the project to move forward as anticipated. The experience so far suggests that in a large number of cases, the project authorities do not discharge their obligations in time and thus impose additional time and costs on the private sector participants. Moreover, the public entities do not even agree to pay the small amounts of damages specified in the concession agreements. Several instances of this nature can be observed especially in National Highways projects.

3.4.2 The Committee felt that if government agencies continue to be in default of their contractual obligations, the existing projects could turn into NPAs, new investors may shy away and where they agree to bid for new projects, they would seek a risk premium to cover for potential defaults by the government agencies. In effect, this tends to vitiate the entire enabling environment for private participation in infrastructure projects. The Committee also observed that although a detailed framework for monitoring the compliance of contractual obligations by the respective Ministries was in place, it was mostly being followed in its breach.

3.4.3 The Committee, therefore, recommends that the Government may take urgent action to ensure that project authorities honour their respective contracts and discharge their respective obligations in order to enable the private participants to deliver the agreed outcomes. Such monitoring should also include similar oversight for ensuring compliance by the private sector participants.

3.5 Land Acquisition

3.5.1 The Right to Fair Compensation and Transparency in Land Acquisition, Rehabilitation and Resettlement Act, 2013 provides for a differential treatment in respect of acquisition of land for infrastructure projects. While such an arrangement would cover national highways, railways, electricity, etc., a similar treatment would not be available for infrastructure projects in sectors such as airports, ports and state highways. The Committee recommends that the Act may be reviewed and suitably amended to cover land acquisition for all infrastructure projects.

3.5.2 The said Act lays down fairly lengthy and complex processes for resettlement and rehabilitation of project affected persons. The Committee recommends a review and modification of these provisions in order to ensure expeditious commencement of the construction of infrastructure projects. In particular, these processes should be significantly reduced and simplified in respect of linear projects such as railways, highways, etc., where displacement is normally of a comparatively smaller proportion.

Recommendations on Financing of Infrastructure

4.1 Shrinking of Equity and Debt

4.1.1 One of the principal reasons for the slowdown in investment has been the shrinking of equity and debt flows in PPP projects. This has arisen on account of several reasons which need to be addressed at an institutional level in order to restore the requisite investment flows in PPP projects. Some of the issues as well as the recommendations of the Committee relating to financing of infrastructure projects are broadly described below.

4.2 Funding of Equity

4.2.1 Fresh inflows of equity in the infrastructure sectors have slowed down significantly over the past few years leading to over-leveraged balance sheets constraining several domestic players from making further investments. As a result, private sector investment in infrastructure has been significantly lower as compared to the projections for the 12th Plan period.

4.2.2 International markets, on the other hand, are flush with liquidity and have a strong appetite for investment in infrastructure assets, which can provide stable long-term risk adjusted returns. International strategic and financial investors seem to be keenly observing the policy related developments in key infrastructure sectors like roads, ports, airports, telecom and power. They could provide significant resources if the regulatory and other constraints are substantially

resolved. The Committee, therefore, recommends proactive action by various Ministries not only to open up and welcome the flow of Foreign Direct Investment (FDI) in infrastructure projects but also to engage with potential investors to assure them a level playing field and international best practices.

4.2.3 The Committee also recommends that Foreign Venture Capital Investors dedicated to infrastructure should be allowed to invest in Core Investment Companies (CICs). Currently SEBI (FVCI) Regulations 2000 (governing funds incorporated outside India) restrict investments by funds incorporated outside India from making investments into NBFCs (which by default also includes CICs).

Catalytic role of IIFCL

4.2.4 The Committee recommends that while the markets may take time to pick up, IIFCL's scheme for providing subordinate debt to meet a part of equity needs of infrastructure projects could accelerate investments across sectors as explained below.

4.2.5 The Committee noted that the role of IIFCL in providing subordinated debt has not been leveraged so far. Under the extant rules, upto 10% of the project costs can be supported by IIFCL in the form of subordinated debt that normally functions as quasi-equity. Given the need for large equity funding during the 12th Plan, this window of IIFCL may be activated and fully leveraged. IIFCL should provide subordinated debt for

upto 10% of the approved project costs with a moratorium of at least 12 years on repayment of principal. Approval of subordinated debt may not be linked to the debt exposure of the lead bank or any other financial institution, but its disbursement should be preceded by the borrower's equity contribution equal to at least 20% of the project cost. Further, it may need to be ensured that in the event of termination of the agreement, the subordinated debt should be covered by a guarantee of compulsory buyout of the project by the respective project authority. IIFCL should be free to set its interest rate to address the risk perception in respect of individual projects.

4.2.6 The Committee recommends that IIFCL should be asked to publicise this scheme widely and to play an active promotional role in providing subordinated debt for PPP projects so as to restore the pace of investment.

Reinforcing the enabling environment

4.2.7 The Committee recognises that the Government has a limited role in providing equity funding. However, equity flows are largely influenced by the enabling policy and regulatory environment created by the Government. The Committee, therefore, recommends that the Government should take expeditious action on the reform measures suggested in this report and in other fora, in order to create an environment that would attract larger flows of equity funding in infrastructure projects.

4.3 Refinancing of Debt

4.3.1 Banks are currently the dominant source of debt capital to the infrastructure sector. Commercial banks are typically deficient in long-term liabilities that are a pre-requisite for financing infrastructure projects. The international practice, therefore, is to provide bank finance for the medium term and thereafter undertake refinancing for a longer tenure from other sources. This practice ensures that the commercial banks, which are well suited for undertaking appraisals as well as for bearing the project implementation risks, are able to finance the construction as well as the initial operation period, while risk-averse long-term funds such as insurance and pension funds can then step in and refinance the bank loans on a long-term basis. The Committee recommends that the Department of Financial Services, in consultation with the Reserve Bank, should issue guidelines that would ensure debt financing on the above lines. This may include risk based rates implying a higher interest rate during the construction period and a lower rate during the operation period. This should also include easy mobility of debt in terms of re-financing by other financing institutions including the Infrastructure Debt Funds.

Role of IDFs

4.3.2 The Government and the Reserve Bank of India have already created the enabling framework for setting up infrastructure debt funds (IDFs) to undertake refinancing of projects loans. A few such funds have since

been established as NBFCs and their role needs to be enhanced in order to expand debt resources for infrastructure projects. It is observed that the commercial banks seem reluctant to allow refinancing of their existing debt even though they continue to face asset-liability mismatches on account of these loans.

4.3.3 Since IDFs would raise resources from the market without a sovereign guarantee *albeit* with some credit enhancement by the Government, IIFCL may discontinue its scheme for take-out finance which solely relies on funds raised against sovereign guarantees. In case IIFCL wishes to engage in refinancing of project debt, it should also set up an IDF under the extant RBI regulations and raise funds from the market at par with other IDFs. This would restrict the exposure of the Government on account of sovereign guarantees currently being extended to IIFCL for raising loans to finance its take-out initiative.

Insurance, Pension and Provident funds

4.3.4 The Committee recommends that a larger proportion of insurance and pension funds, including EPFO funds should be channelized to finance infrastructure projects, especially through IDFs. The requisite policy and regulatory changes may be made by the Government as well as by the respective regulators to ensure such enhanced flows of long-term debt into IDFs.

4.3.5 The Committee further recommends that the investment guidelines of IRDA in respect of infrastructure should be modified to

allow for automatic approval of investments in Infrastructure Debt Funds and infrastructure companies rated AA and above, instead of case by case approvals. In addition, the allocation for infrastructure and housing should be increased to 10 per cent each as against the combined 15 per cent as at present.

4.3.6 The Committee also recommends that the investment limit for provident funds to invest in corporate bonds should be increased from the current ceiling of 10 per cent to about 20 per cent, with 10 per cent reserved for infrastructure finance, and such investments should also be allowed in AA grade instruments.

Risk based interest rates

4.3.7 The Committee further recommends that the Reserve Bank of India may encourage banks to calibrate their interest rates to the risk assessment at different stages of the project cycle. In particular, the interest rates charged during the construction period should be comparatively higher in line with international best practices and the same should be reduced after the construction risk is over. Such an arrangement would not only provide greater risk cover to the banks, it will also rationalise and promote the refinancing and bond market, thus reducing the overall cost of project debt.

Pre-payment of Bank loans

4.3.8 The Committee also recommends that instead of leaving this matter to be determined

at the level of individual projects where the bargaining strength of a concessionaire to deal with public sector banks may be rather limited, an institutional mechanism may be set up under the chairmanship of Secretary, Department of Financial Services to ensure the roll-out of refinancing by IDFs. This will reduce the cost of debt for infrastructure companies and also release the lending space with the commercial banks, thus enabling them to lend to new projects. If necessary, the banks may be permitted to charge a reasonable pre-payment fee of say, 0.5 per cent for allowing project sponsors to migrate to IDFs for refinancing their projects.

4.4 Restructuring of NPAs

4.4.1 Some of the reasons that have led to bank loans becoming NPAs include lack of fuel supply for power stations, delays in land acquisition, lengthy and complex procedures for environment and forest clearances and other requisite actions by projects authorities, besides delays or mismanagement on the part of concessionaires.

4.4.2 In a large number of cases, the reasons for delay were beyond the control of the project sponsors. However, according to the extant rules, defaults in debt service relating to infrastructure projects, for whatever reason, are subjected to the same treatment as any other industrial or commercial project. The Committee noted that while the residual value of NPAs in industrial projects becomes more uncertain when defaults persist, in the case of

infrastructure projects their revenue streams and viability normally improve as the projects move forward. Moreover, part of the problem also arises from the fact that while the viability of an infrastructure project should be determined with reference to its concession period ranging between 20 to 40 years, the Banks expect the entire debt to be repaid within 12 to 15 years and declare the asset as an NPA if defaults occur during the initial years of the project.

4.4.3 The Committee, therefore, recommends that RBI and the Department of Financial Services should closely examine the special characteristics of infrastructure lending and establish a separate set of rules for recognising NPAs in infrastructure.

4.5 Restructuring of Debt Service

4.5.1 Banks typically lend for 12 to 15 years during which period they try to recover the principal with interest. An infrastructure project with a life and revenue stream extending beyond 20 years typically generates a small surplus in the initial years and a larger surplus over time. As such, the capacity of the project sponsor to repay its debt increases during the latter part of the concession period.

4.5.2 The Committee recommends that repayment of principal in respect of infrastructure projects may be structured in a manner that is substantially back-loaded. Loans or bonds with bullet payments may also be encouraged so as to enable the project

sponsors to discharge their obligation to make bullet payments by raising funds through refinancing. Multiple bullet payments could also be structured in order to avoid bunching of repayment obligations.

4.6 Reinventing IIFCL for a larger role

4.6.1 The Committee noted that the IIFCL was set up to provide financial assistance which commercial banks and NBFCs are not able to provide. For this purpose, it enjoys exceptional support of the government in the form of sovereign guarantees and regulatory exemptions. It, therefore, follows that before engaging in any lending operation, it must satisfy itself that the same cannot be undertaken by commercial banks or NBFCs and that the sovereign exposure is justified in each lending operation because it adds value that commercial banks or NBFCs cannot provide. By adhering to this principle, it will be able to act as the much needed catalyst for accelerating the flow of additional resources to finance infrastructure projects.

Focus on Guarantee operations

4.6.2 The Committee recommends that the IIFCL should substitute its direct lending operations by guarantee operations that would enable the flow of non-Bank long-term credit for infrastructure projects, especially long-term insurance and pension funds that are crucial for financing infrastructure projects. In cases where IIFCL undertakes direct lending, it should lend for tenures of 20 years or more

since commercial banks are able to lend only for tenures upto 15 years and IIFCL has no value addition to offer in such cases. Where a project does not require such long tenure debt, it should rely on commercial banks.

Provision of callable capital

4.6.3 The Committee also recommends that IIFCL should function under the regulatory oversight of RBI based on prudential norms and market principles. Instead of continuing to borrow solely on the strength of sovereign guarantees, it should start raising funds on the strength of its balance sheet. To provide additional equity to meet the capital adequacy norms, the Government should provide callable capital equal to twice the subscribed equity and reserves of IIFCL. This would eliminate budgetary funding for the next several years.

Subordinated Debt

4.6.4 As recommended in paragraphs 4.2.4 to 4.2.6 above, IIFCL should provide subordinated debt for upto 10% of the approved project costs in accordance with its extant scheme of financing for PPP projects. Such debt should carry a moratorium of at least 12 years on repayment of principal.

4.6.5 The Committee felt that the present exposure limit of 20% of approved project costs may remain unchanged for project-specific exposure of IIFCL. While upto 10% of project costs may be provided as

subordinated debt, the remaining may be provided in the form of guarantees for long-term bonds. During the transition, IIFCL may continue to provide direct loans of upto 10% of approved costs until March 31, 2015 and gradually shift to non-fund based support in a phased manner spread over two years.

Reorientation of the key personnel in IIFCL

4.6.6 The Committee felt that the full potential of IIFCL is yet to be realised in several ways. For example, IIFCL could have provided significant support to infrastructure projects in the form of subordinated debt which would have reduced the requirement of equity funding. Further, IIFCL could have undertaken a much larger volume of refinancing, especially under the Infrastructure Debt Funds through the NBFC route.

4.6.7 The Committee also felt that the spirit and purpose underlying the creation of IIFCL has been realised only partially. One of the reasons for this shortfall is the nature of personnel employed in IIFCL. The Committee felt that most of the personnel are restricted to banking background with inadequate exposure to development finance or financing of infrastructure projects. The Committee recommends that a few key personnel with the right background and orientation may be recruited for giving a push to the areas that have remained neglected so far. Moreover, through appropriate training, workshops, etc., the approach and mind-set prevailing within IIFCL may also need to be suitably reoriented.

4.7 Development of Bond financing

4.7.1 To promote off-shore inflows of long-term debt, FIIs have been allowed to invest in bonds issued by infrastructure companies. However, FII investments have been very slow, mainly for want of investment grade instruments. If credit enhancement could be provided for bonds issued by infrastructure companies, it should be possible to accelerate the flow of foreign debt in financing infrastructure projects.

Catalytic role of IIFCL

4.7.2 The Committee felt that if IIFCL can provide guarantees for specified infrastructure bonds, it would enable such bonds to be rated as 'investment grade'. Such bonds should be able to attract insurance and pension funds, household savings and foreign debt. This initiative would also help in deepening the bond market which in turn should enable infrastructure companies to raise funds against bonds carrying a comparatively lower rating.

4.7.3 Presently, IIFCL lends for upto 20% of the approved project cost. Instead of extending plain vanilla loans as at present, IIFCL should use the same exposure for guaranteeing the bonds of infrastructure companies in order to raise their credit rating to 'AA' or 'AAA'. Such bonds should be able to attract large investible pools of funding which presently stay away on account of a high risk perception relating to bonds. This initiative should help enhance the flow of credit to supplement bank financing

which is facing a growing stress in terms of exposure and head room.

4.7.4 The above approach to credit enhancement would lead to several advantages such as:

- (a) **Increasing the flow of long tenure funding:** Infrastructure companies will be enabled to issue long tenure bonds guaranteed by IIFCL, thus enhancing the flow of long-term debt for infrastructure projects.
- (b) **Supplementing bank finance:** Since bank finance is coming under increasing pressure, expansion of the bond market would help bridge the emerging debt gap in infrastructure financing.
- (c) **Deepening the bond market:** Availability of investment grade paper would expand the much-needed bond market at a rapid pace.
- (d) **FII investment:** With the availability of high-rated paper, the FIIs would also be attracted to make larger investments in infrastructure bonds.

4.7.5 Issuance of tax-free bonds for Rs. 30,000 crore during 2011-12 established the feasibility and credibility of raising infrastructure finance through bonds. The Committee had, therefore, recommended that the issuance of tax-free bonds may be doubled in 2012-13. In his budget speech for 2012-13, the Finance Minister had announced tax-free bonds of Rs. 60,000 crore which have also spilled over to 2013-14. The bond route, in different forms, needs to be expanded rapidly

to support the investment in infrastructure. Reinvention of IIFCL as a bond guarantee institution would lend great support to the Government's vision of infrastructure development.

4.8 Framework for Limited Recourse lending

4.8.1 In the developed countries, infrastructure projects are normally financed on the basis of limited recourse for recovery of debt. While much of the normal lending by banks is based on collateral securities, strength of the balance sheet of borrowers and personal guarantees of project sponsors, this practice is not followed for capital-intensive infrastructure projects where such security/ guarantees would not be available to cover the large quantum of project debt. The revenue streams of such projects, therefore, constitute the principal security for debt, and the banks lend primarily on the strength of such security. This practice of limited recourse financing of infrastructure projects has also been adopted in India and the banks have extended very large volumes of debt on this basis.

Strengthening the appraisal processes

4.8.2 Limited recourse financing evidently implies a higher level of risk for the lending institutions. As such, approval of such loans in the developed countries is typically preceded by a high degree of due diligence for assessing the project risks as well as the revenue streams, as compared to other loans which rely on recourse to tangible collateral

security. Since infrastructure lending is a comparatively recent phenomenon in India, the banks are yet to build the requisite capacity for appraisal of infrastructure projects with a view to mitigating their risks and ensuring the security of their debt by means of assured revenue streams and termination payments. Moreover, banks in India have also continued to lend on the strength of group exposure, credibility of the sponsor and other similar factors while paying inadequate attention to the viability of the project itself.

4.8.3 For limited recourse lending to infrastructure projects in a manner that is sustainable, it is necessary for banks to strengthen their capacity and deploy the requisite skills for appraisal and approval of such projects. The appraisal process would have to ensure that the (a) project sponsors have an adequate financial stake; (b) the capital costs are reasonable; and (c) the revenue potential of the project is assessed on a realistic basis. This aspect deserves urgent attention in order to ensure a continued flow of debt to infrastructure sectors while rationalising the risks of the lenders.

4.8.4 The Committee recommends that the Department of Financial Services may, in consultation with the Indian Banks' Association and leading banks, lay down guidelines for appraisal of projects based on limited recourse / non-recourse lending and introduce arrangements for capacity building with a view to ensuring a sound system of appraisal and approval of infrastructure projects. This is necessary for minimising bad

debts and for ensuring a continued flow of loans for infrastructure projects.

4.9 Review of current restrictions on group exposure

4.9.1 Banks currently observe various types of limits and restrictions in order to manage their exposure to individual groups of companies. While group exposure is normally relevant for project lending, it is not really applicable in case of limited recourse financing because the balance sheet of the concerned group cannot be accessed as a security for such loans. Moreover, enforcing of group limits would imply that most Indian companies may soon reach their respective exposure limits, thus restricting the participation of domestic companies and also reducing the competition offered by such companies.

4.9.2 The Committee recommends that group exposure limits may be done away with by the Reserve Bank of India insofar as it relates to projects financed on limited/ non-recourse basis. The elimination of group exposure must, of course, be accompanied by a more stringent process of project appraisal and approval, which is consistent with international best practices.

4.10 Long-term Finance

4.10.1 The current practice of financing large infrastructure projects based on revenue streams spread over 25 to 40 years, but with project debt having a tenure of 10 to 15 years, is unsustainable because it increases user

charges, enhances default risk of lenders and reduces the project value for investors. In the absence of long-term lending, it will become increasingly difficult to finance the growing requirements of infrastructure in the years to come. Some of the measures that can help alleviate this problem include a change in the regulatory regime to enable banks to provide long-term loans with floating interest rates and with an option to roll-over the debt at pre-determined intervals; expanding the nature and scope of refinancing; and creation of a dedicated bond market for infrastructure. The Committee recommends that the financial regulators viz. RBI, SEBI, IRDA and PFRDA should evolve a regulatory regime that would provide the enabling environment for long-term debt for infrastructure projects.

4.11 External Commercial Borrowings (ECB)

4.11.1 Besides concerted measures for attracting FDI, the Committee recommends that the Ministry of Finance may liberalise the current norms for accessing external commercial borrowings with a view to allowing refinancing of upto 25 per cent of project costs through automatic route, but only for projects that are not NPAs. In case of ports and international airports, this limit could be enhanced to 50 per cent since they also receive forex earnings. ECB exceeding the said limits may require case by case approval.

4.11.2 Under the extant guidelines of RBI, refinancing through ECB is not permitted after the expiry of three years from COD. It is

noteworthy that the ability of infrastructure companies to borrow, based on their credit rating, continues to improve as the project stabilises post construction period. As a result, companies can secure ECB at lower interest rates upon expiry of a sufficient period after COD. They should, therefore, be permitted to raise ECB at the time of their choice. Such an arrangement would not only be beneficial to the project companies, it would also help in lowering the overall cost of ECB to the economy. The Committee, therefore, recommends that there should be no time limit for raising ECB by infrastructure companies.

4.11.3 The Committee further recommends that the Ministry of Finance may encourage further issuance of Rupee denominated bonds by multi-lateral institutions and Infrastructure Debt Funds for financing infrastructure projects, subject to an overall annual cap. The tenor of such bonds may also be increased from 5 years to 10 years.

4.12 Restructuring of Bank loans

4.12.1 Under the extant norms of RBI, any restructuring of infrastructure loans requires provisioning by the concerned banks. It is well-known that on account of their asset-liability mismatch, banks tend to provide loans for a much shorter tenure as compared to the requirements of the project. For example, banks normally lend for a tenure of 12 to 15 years even if the concession period of a PPP project is 30 years. It is impractical to expect that all debt should be or can be repaid by the project sponsor in such a short period, as it

would be inconsistent with a credible financing plan for such a project. Indeed, in some of the cases, problems associated with timely debt service may arise on account of unrealistic debt service obligations that unduly compress the repayment period.

4.12.2 In view of the above, the Committee recommends that any restructuring or refinancing of loans for infrastructure projects should not require provisioning by banks so long as debt service is evenly spread out in a manner that all debt is repaid at least three years prior to completion of the concession period. Such an arrangement would bring the much needed relief to PPP projects.

4.13 Tax free Bonds

4.13.1 Various Government undertakings were allowed to issue tax free bonds of Rs. 30,000 crore, Rs. 60,000 crore and Rs. 50,000 crore in the years 2011-12, 2012-13 and 2013-14 respectively in order to give a boost to investment in infrastructure. Given the proposed doubling of investment during the Twelfth Five Year Plan, there is a strong case for extending and expanding this facility.

4.13.2 The Committee recommends that the limit for issuance of such bonds during the financial year 2014-15 be increased to Rs. 1,00,000 crore with the rider that tax exemption would be restricted to half the tax due. While enabling the mobilisation of Rs. 1,00,000 crore, this proposal would restrict the tax sacrifice to the level of previous years. The Committee further recommends that in

addition to the existing issuers, all Infrastructure Finance Companies (IFCs) and IDFs should also be allowed to issue such tax free bonds. Extending this facility to IFCs and IDFs would enable these entities to on-lend cost effective funds to infrastructure projects.

Sectoral Recommendations for Reviving Investment

5.1 Introduction

5.1.1 The Committee noted that investments in infrastructure have fallen significantly short of the Twelfth Plan projections for the first two years. This slowdown can be attributed largely to delays in implementation of existing projects coupled with and slow award of new projects. The Twelfth Plan has also projected that 48 per cent of infrastructure investment would be financed by the private sector. However, key sectors such as power, telecom and roads have been witnessing considerable slowdown during the past two years. The Committee, therefore, deliberated on various sectoral constraints that have slowed down the pace of investment and impacted the outlook of infrastructure financing.

5.1.2 The Committee felt that the enabling environment for private participation in infrastructure needs to be improved significantly in order to mobilise the requisite levels of investment. Cross sectoral impediments such as delays in land acquisition and environmental clearances, taxation related issues and regulatory uncertainties need to be addressed urgently. The proposal to introduce regulatory reforms through an over-arching legislation also needs to be implemented.

5.1.3 The Committee has identified a number of sector-specific concerns constraining investment in infrastructure, especially private investment, and made some key recommendations for expeditious action with a view to reviving investment. These are explained below.

5.2 POWER

Context

5.2.1 The Power sector presents the most complex of all challenges facing the economy. On an average, Discoms make a loss of about one rupee on every unit of power supplied by them to consumers. As a result, they buy less and impose power cuts to cut their losses. Part of their losses also arises from a high level of pilferage and technical losses. In a distorted market, they also end up buying bulk power at comparatively high prices. While all these factors increase their cost to serve, consumer resistance and political considerations prevent the regulators from increasing tariffs to economic levels. The Central Government, therefore, had to provide two large bail-outs to the Discoms over the past decade. However, the situation continues to be unsustainable and requires structural reforms.

Introduction of Open Access and competition

5.2.2 The Electricity Act requires bulk consumers (above 1 MW) to buy electricity at market-determined prices as their tariffs cannot be regulated any longer. The Ministry of Power has already written to all the State Governments, Regulatory Commissions etc., asking them to abide by the law which mandates that tariffs for bulk consumers cannot be regulated by SERCs. As such, the SERCs should only fix the wheeling charge and open access surcharge in accordance with the Tariff Policy notified by the Central Government.

5.2.3 The Committee recommends the 75 per cent of the Centre's discretionary allocation comprising 15 per cent of CPSUs' generating capacity may be made available for direct sale by CPSUs to open access consumers. This will not only introduce competition, it will also help in attracting the much needed private investment in power generation as producers will be able to sell directly to bulk consumers in a competitive market as against their present reliance on financially unviable Discoms.

5.2.4 The Committee believes that with open access in place, generating companies will be able to produce more electricity at market prices and sell directly to bulk consumers at mutually negotiated prices. This would enable the generating companies to utilise their capacity while bulk consumers will be able to get uninterrupted power supply. This arrangement would also augment the earnings of Discoms through wheeling charges and open access surcharge. The Committee, therefore, recommends the introduction of open access at the earliest.

Revisiting the tariff structure

5.2.5 The Committee recommends that consumer tariffs be rationalised and graded according to capacity to pay. The smaller households may be charged a lower tariff and their supplies can be earmarked from depreciated power stations which are currently supplying electricity to Discoms at comparatively low tariffs. At the other end of

the spectrum, high income households, commercial consumers and industries should be gradually moved to market-based pricing where these consumers may be enabled to choose from among competing supplies of electricity. The Committee believes that unless the market structure is changed by moving from monopoly supplies to competitive supplies of electricity, which is consistent with the prevailing industry structure in developed countries, the power sector may continue to be unsustainable.

Public Private Participation (PPP) in distribution

5.2.6 The distribution segment is approaching a financial collapse with the current level of losses at about Rs. 1 per unit which results in a financial loss for every unit of power sold. If this situation continues, private investment in generation will shy away as the procuring utilities would be seen as lacking in creditworthiness.

5.2.7 Given the deteriorating financial health of Discoms, there is need to attract private investment for augmenting and modernising the distribution systems and also for operating them efficiently on commercial lines. The inter-ministerial Task Force on Public Private Partnership in the Distribution of Electricity has already recommended a framework for PPP in the distribution segment. The Committee recommends that this framework should be adopted by the States for cities and larger towns in the first instance. The Central

Government may provide Viability Gap Funding and other support for this purpose.

5.2.8 The Committee noted that tariff reforms were critical for the sustainability of the power sector as a whole. The figure 3 below brings out the present status.

Debt relief for stranded projects

5.2.9 Large volumes of private investment are under stress because of short supply of coal and gas. As a result, power producers have not

been able to commission their projects and commence power supply in accordance with their agreements with various distribution utilities. This has not only led to a slowing down of loan disbursements to projects under implementation, it has also led to defaults in debt service by many developers because of their inability to generate the requisite revenue streams for want of fuel. As a result, a large number of power projects are likely to become non-performing assets (NPAs), if some relief is not provided by way of restructuring or re-scheduling of their loans.

Figure 3: Losses of Discoms due to cost- revenue mismatch



1 Without accounting for subsidy

SOURCE: Mckinsey analysis, Data from PFC reports 2013

5.2.10 To review the present status and suggest suitable measures for restructuring of debt in order to restore the health of power projects and also minimise NPAs, the Committee recommends the constitution of a high level Task Force under the chairmanship of Deputy Governor, Reserve Bank of India and comprising representatives of Ministries of Finance, Power, Coal, Petroleum & Natural Gas and leading financial institutions to suggest measures for restoring the health of these projects through suitable relief in debt service obligations.

Utilisation of idle capacity

5.2.11 A large number of Power Purchase Agreements (PPAs) were signed assuming that the requisite coal supply would be available either from Coal India or through captive mines. However, the projected coal supply has significantly fallen short of the level at which these power stations would be financially viable. In such a situation, the fixed charges payable in respect of the idle capacity need to be apportioned in an equitable manner so that the project developers do not face bankruptcy and at the same time the distribution utilities are not compelled to bear any undue burden. A part of the problem would be addressed if such idle capacity can be utilised for power generation based on imported coal. However, this will mean an extra burden on the producers as well as the distribution utilities. A balanced and equitable sharing of risks and costs needs to be arrived at so as to increase power generation, maintain the viability of

power companies and minimize the burden on distribution utilities.

5.2.12 The Committee recommends that a Task Force under the chairmanship of Secretary, Power and consisting of Secretaries of the Ministries of Coal, Finance and Planning Commission may be constituted to make recommendations for dealing with idle capacity arising out of inadequate coal supply. Based on these recommendations, the respective State Governments could be advised to take further necessary action at their level.

Re-allocation of scarce gas supplies

5.2.13 Declining gas output has stranded about 17,000 MW of gas-based power plants. As a result, the project developers are finding it difficult to service their debt and several projects may soon become NPAs. Given the high cost of imported gas, it does not seem feasible to run these plants on imported gas either. As such, the rational approach would be to allocate scarce gas only for generation of power during peak hours. Further, these power stations should also be allowed to generate additional power from imported gas and sell such power to open access consumers for some of whom the opportunity cost may be higher. This would also save on power generation based on subsidised diesel.

5.2.14 Given the continued shortage of gas, the Committee recommends that the scarce gas resources should be allocated only for

generation of electricity during peak hours. This would imply some reduction in the allocation of existing power stations which would need to be suitably compensated by an increase in the price of peak power. The Committee noted that any re-allocation would be possible only if it is fair and equitable. The Committee, therefore, recommends that a Task Force under the chairmanship of Secretary, Power and consisting of Secretaries of the Ministries of Petroleum & Natural Gas, Finance and Planning Commission may be constituted to make recommendations for re-allocation of gas with an equitable sharing of costs.

5.3 COAL SUPPLY

Operationalise PPP in Coal Mining

5.3.1 With the addition of ~65 GW of incremental coal based capacity in Twelfth Plan, a short fall of 100-120 MTPA of coal is expected. It is important to recognise that imported coal is not an affordable option in the medium term. It is also unsustainable from the perspective of managing the current account deficit. As a result, significant share of current generation capacity is expected to remain idle. The Committee had, therefore, recommended the adoption of PPP in coal mining as Coal India Limited (CIL) alone cannot meet this mammoth challenge. The Government had constituted an Inter-Ministerial Group (IMG) for finalising a Model Concession Agreement (MCA) for enabling PPP in coal mining. The IMG has

since finalised the MCA after extensive consultations with experts and stakeholders. Under this model, the coal mine as well the coal will remain in the ownership of the public sector, while the private partner will receive a mining charge on the coal mined. The sale of such coal will be undertaken by the public entity which grants the PPP concession.

5.3.2 In order to introduce healthy competition and to eliminate incumbent resistance from CIL, the Committee recommends setting up of a new public sector undertaking (PSU) to award and manage the PPP concessions. The new company should be allocated mines which either have all the required clearances or are in an advanced stage of getting such clearances. Existing mines of CIL, which are yet to be explored, may also be transferred to the new company. This arrangement can ramp up coal production quite rapidly and bring the much needed relief to the economy. Though an independent company for handling PPP projects would constitute an optimal arrangement, the next best option could be the creation of a separate subsidiary of CIL which should be dedicated solely for development and award of PPP projects. A time-bound programme may also be established for award of PPP projects which may be conducted on the lines of auction of oil blocks.

Turn-key implementation of critical railway lines

5.3.3 The three potential coalfields Talchar and Ib Valley in Odisha, North Karanpura in Jharkhand and Mand-Raigarh in Chhattisgarh envisage major coal production during the Twelfth Plan and beyond. Accordingly, three critical railway line projects namely Tori-Shivpuri-Kathautia in Jharkhand, Bhupdeopur-Korba-Dharamjai in Chhattisgarh and Barpali-Jharsuguda in Odisha have been taken up for implantation. On completion, these railway lines can help transport about 300 MT of coal annually to meet the coal demand in the country. Ministry of Railways need to expedite the implementation of these railway lines to facilitate evacuation of coal to power plants. The Committee recommends that the aforesaid projects be implemented expeditiously on a turn-key basis so as to ensure their speedy completion without any cost and time over-runs.

5.4 HIGHWAYS

Manage aggressive bidding

5.4.1 Aggressive and in some cases unwarranted bidding on the part of developers for the bidding for the projects of NHAI has led to several difficulties and delays. It has also led to demands for renegotiation of projects, including rescheduling of payments by the respective concessionaires. In order to contain these practices, NHAI should adopt strict qualification criteria and shortlist 6 bidders. One of the principal reasons that has

led to aggressive bidding is the pre-qualification of a large number of bidders for each project. The international best practice is to prequalify and shortlist 3 to 5 bidders for the final stage of bidding. This is necessary because the final round of bidding for PPP/EPC (turnkey) projects requires significant investment in time and resources for submission of competitive bids. In USA, a Federal law prescribes a ceiling of 5 shortlisted bidders for the final round of bidding in such projects.

5.4.2 In order to ensure keen competition and credible bids, the Committee recommends that the practice of shortlisting of bidders which was initially adopted in the PPP model framework, but was later put in abeyance, may be restored, especially for the highway sector.

Expedite roll-out of PPP projects

5.4.3 The award of projects by NHAI has fallen significantly short of targets during the past two years. During the year 2013-14, NHAI has awarded just 1215 km consisting of two PPP projects against a target of 9,000 km. In the previous year also, only 1,116 km were awarded against a target of 9,500 km. The Committee recommends that NHAI should draw up a month-wise plan to award 5,000 km in 2014-15 and 10,000 km in 2015-16. This will be possible only if NHAI is able to undertake a sustained roll-out of projects which are financially viable and bankable, given the expected toll revenues. The programme of award should be placed in public domain and progress should be updated every month.

Undertake low-cost projects through EPC contracts

5.4.4 The Committee recommends that all two-lane road projects having low traffic density and which are not viable on BOT (Toll) mode, may be executed through EPC contracts with comparatively modest specifications. The Committee recommends that EPC contracts for 5,000 km of road projects may be awarded in 2014-15.

Operationalise the Expressway programme

5.4.5 During the Eleventh Plan, no progress could be made against a target of 1,000 km of expressways. The Committee recommends that the expressway programme may be rolled out expeditiously and the long-awaited Expressway Authority of India may be constituted to provide an impetus to the Expressway programme.

Revision of Total Project Cost

5.4.6 As per extant provisions of the MCA, the Total Project Cost may be revised based on variation in the Wholesale Price Index (WPI) beyond the specified threshold. However in the recent years, the weighted average inflation in key commodities (bitumen, steel, labour) used in highway construction has been much higher than the WPI. The Committee recommends that keeping in view the principle of cost neutralization as embodied in the MCA, the TPC may be revised based on a formula that

captures inflation of key cost drivers of road construction.

Restructuring of NHAI

5.4.7 The scheme for restructuring of NHAI was approved by the Union Cabinet in 2005. This scheme has been implemented only partially. In particular, the Committee noted that though the reliance of NHAI on PPP projects has increased very significantly, the requisite structure and staff has not been created. Under the restructuring plan, NHAI was expected to create a separate position of Member (PPP) who was to be responsible for the entire PPP policy as well as the planning, structuring and management of PPP projects. Member (PPP) was not appointed for over five years. When appointed, he has been given the same work as other members of NHAI whose jurisdiction is primarily determined on geographical lines rather than functional lines. Similarly, the Cabinet-approved restructuring required the appointment of a Member (Technical) whose role was mainly to act as the repository of technical knowledge and be responsible for R&D, technical manuals, standards and specifications that guide design and safety. This is necessary to ensure modernisation and upgradation of technology in the building and operation of highways. The Committee recommends that restructuring of NHAI should be fully compliant with the approved structure, especially in respect of the two positions of Members referred to above.

5.5 RAILWAYS

Turnaround of Indian Railways

5.5.1 Indian Railways is facing serious problems such as inadequate investment, diminishing efficiency, falling safety standards and declining share in freight and passenger traffic. Given the critical importance of Railways, the Committee recommends urgent measures for a turnaround of Railways which are briefly explained below.

Restructuring of the Railway Board

5.5.2 While restructuring and modernisation has brought welcome changes in several infrastructure sectors, the organisational structure of the Railway Board has retained its archaic form which is not conducive to efficient commercial operations. Being a monopoly, the Railway Board has so far stalled several basic reforms such as private participation and commercial accounting. The Committee recommends restructuring of the Railway Board on commercial lines to enable investments and growth in the railways which otherwise seems sluggish. The Committee also recommends creation of a post of Member (PPP) in railways board who would be responsible for project conceptualisation, development and processing of all PPP projects to facilitate their speedy sanction by the Government and award of concessions.

Private investment through PPP

5.5.3 The Railways has been unable to attract private investment which constitutes about 5 per cent of its total investment. For want of investment, railways are continuing to deteriorate. The Committee, therefore, recommends the following PPP initiatives to mobilise large volumes of investment in the Indian Railways:

- (i) Modernisation of Railway stations,
- (ii) Elevated suburban corridors in Mumbai,
- (iii) Development of new freight corridors,
- (iv) Development of logistics parks,
- (v) Port connectivity projects, and
- (vi) Manufacturing of diesel and electric engines, coaches and wagons.

Financing of viable projects by IRFC

5.5.4 While all other infrastructure sectors are financed substantially through market borrowings, the IRFC has somehow limited its mandate to leasing of rolling stock to the Railways whereas it should serve the broader objectives for which it was created. Some of the projects that should qualify for IRFC financing include viable electrification and signaling schemes, railway lines etc. The Committee recommends that Railway Ministry should formulate viable project proposals and award them on a turnkey basis to be financed by IRFC.

5.6 URBAN INFRASTRUCTURE

Additional VGF under JNNURM

5.6.1 The projected investments in urban infrastructure suggest a very wide gap between the investment needed and the likely availability of resources. Part of this gap is being bridged by the JNNURM, but the investments thereunder are largely confined to budgetary allocations. Though JNNURM emphasises the need for harnessing private investment for financing urban infrastructure projects, the Government has not yet spelt out any mechanism or scheme under which private investment can be incentivised.

5.6.2 The only financial incentive currently being provided for PPP projects in urban infrastructure is a capital grant of upto 20 per cent of the capital cost under the ongoing Viability Gap Funding (VGF) Scheme. However, the State Governments and local bodies seeking Central grants under JNNURM are able to get a greater quantum of resources for their cash contracts as compared to the VGF grants provided for PPP projects. As a result of this dichotomy, very few PPP projects have been undertaken in the urban infrastructure sector. The Committee felt that it should be possible to attract significant volumes of private investment in PPP projects for urban infrastructure such as metro rail, water supply, solid waste management, sanitation, multi-level parking, group housing for EWS, etc. However, in view of the present capacity to pay user charges, most of these

projects would require significantly higher proportion of capital grants.

5.6.3 In light of the above, the Committee recommends that all projects which are approved for VGF grants under the extant VGF Scheme should also be eligible for a matching grant of 20 per cent under the JNNURM. This would imply that the Central Government would provide up to 40 per cent of capital grant for financing PPP projects in urban infrastructure. Alternatively, the entire 40 per cent VGF could be funded out of JNNURM. In addition, the State Governments may be required to provide capital grants or subordinated interest-free debt of up to 20 per cent of project cost for further improving the viability and bankability of such PPP projects. The aforesaid assistance would, of course, be determined by competitive bidding as per existing practice.

5.6.4 The Committee recommends that the above policy framework may be announced by the Government and followed up by creation of the requisite regulatory and contractual framework for accelerating the pace of private participation in urban infrastructure, especially for sub-sectors like water supply, sewerage, solid waste management and MRTS.

Attract more private investment in MRTS

5.6.5 Since metro rail projects are capital intensive, it would not be possible to take up more projects in future with the limited public funds available for this purpose. The success

of PPP mode in attracting private capital has already been demonstrated in the Hyderabad and Mumbai MRTS projects though some difficulties seem to have arisen in implementation of both these projects. While recognising the challenges in attracting private investment in MRTS, the Committee recommends that besides enhancing public investment in MRTS rail projects, the forthcoming metro rail projects should preferably be taken up through the PPP mode, with adequate cross-subsidisation from real estate so that the available budgetary resources can be better leveraged for a larger MRTS programme. The Committee also recommends that a VGF grant of 20 per cent of the total project cost should be provided out of JNNURM funds (in addition to the 20 per cent presently available under the extant VGF scheme) to improve the financial viability of PPP projects in this sector.

Private investment in water supply

5.6.6 Investments in this sector have remained inadequate owing to the limitations of budgetary resources. There is a need to encourage private participation in upgrading and modernising urban water supply and sanitation. However, the States and local authorities have been reluctant to adopt the PPP approach, nor are they able to rationalise the user charges and ensure supply of quality drinking water. While recognising the challenges as well as the sensitivities involved in private participation in delivery of drinking water, the Committee recommends that PPP should be made an integral part of the strategy

for water supply and sanitation projects under the JNNURM. The Committee also recommends that a VGF grant of 20 per cent of the total project cost should be provided out of JNNURM funds (in addition to the 20 per cent presently available under the extant VGF scheme) to improve the financial viability of PPP projects in this sector. This will not only attract the much needed investment, it will also improve the quality of drinking water supply and sanitation and improve O&M of infrastructure.

5.7 IRRIGATION

Private participation in irrigation

5.7.1 The Committee noted that no serious efforts have been made to attract private participation in the irrigation sector in India. The model of USA where about 98 per cent of the dams have been built by the private sector could be explored in India through some pilot projects. Since part of the water from these dams would be allocated for industrial and urban purposes, user charges could be calibrated to improve viability. The Government could also provide the requisite grants to bridge the gap in financial viability of such projects.

5.7.2 Sprinkler and drip irrigation improve water use efficiency very significantly. Development of clusters of sprinkler/drip irrigation could be undertaken through PPP to provide a boost to growth in food production and farmers' income. The Committee, therefore, recommends the adoption of PPP mode for financing medium and micro irrigation schemes.

5.8 PORTS

Expedite award of projects

5.8.1 As against the target of 512 MMT, capacity addition in major ports during the Eleventh Plan was only 185 MMT. The non-major ports in the state sector performed relatively better by adding 257 MMT against the target of 347 MMT. The poor performance of major ports was due to award of only 20 PPP projects against a target of 49 projects during the Eleventh Plan. The Committee recommends that the Ministry of Shipping should expedite the award of PPP projects during the Twelfth Plan and the quarter-wise programme may be implemented and monitored effectively. The Central Government should also encourage the establishment of new private sector ports with the help of State Governments.

Deregulation of tariffs

5.8.2 The existing method of fixing tariffs by TAMP is contrary to international best practice and leads to various anomalies. This has also led to tariff differentiation between berths at the same port. The Committee recommends that since sufficient competition already exists in this sector, port tariffs may be deregulated to reflect market driven principles.

Reduction in dwell time

5.8.3 Indian ports have a much longer dwell time as compared to the developed countries.

This is an indicator of inefficiency leading to higher costs. Hence, there is a need to modernise the technology and processes to bring dwell time at par with international standards. The Committee recommends that the Government should announce a time-bound action plan for reduction in dwell time.

Capital dredging

5.8.4 Several Indian ports suffer from low drafts which prevent entry of large modern vessels. The Committee recommends that the Ministry of Shipping should accelerate the pace of capital dredging and where the project size is large, private participation may also be explored along with the provision of VGF, where necessary.

Restructuring of Port Trusts

5.8.5 The Committee noted that the current structure of Port Trusts is archaic and requires an overhaul. The Committee recommends that all Major Ports may be corporatized like the Ennore Port in order to make them functionally efficient. The Committee further recommends that all the terminals currently being operated should be converted into PPP terminals.

Private participation in inland waterways

5.8.6 Given the huge growth potential of inland waterways as well as the paucity of budgetary resources for making the required investments, the Committee recommends private participation in the development and

operation of inland waterways. The Government should finalise and adopt the regulatory and contractual framework to enable PPP projects in financing, construction and operation of inland waterways.

5.9 AIRPORTS

Expedite award of Greenfield airports

5.9.1 The Committee recommends that the three greenfield airports at Navi Mumbai, Goa and Chandigarh, which have been identified for development through PPP, may be awarded within six months.

Management and Operation of metro airports

5.9.2 The Committee noted that non-aeronautical revenues constitute a major source of income for airports and such revenues have a direct impact on reducing passenger charges. Past experience suggests that AAI has not succeeded in maximising the non-aeronautical revenues and as a result, there has been a steep rise in the user charges levied at airports such as Chennai and Kolkata. On the one hand, competition among airlines has succeeded in driving down passenger fares and increasing air traffic while on the other hand, airport charges have increased steeply due to an inadequate increase in the non-aeronautical revenues. The efficiency levels of AAI are also lower as compared to private sector operators. The Committee, therefore, recommends expeditious award of Management and Operation concessions for Chennai, Kolkata and Ahmedabad airports within three months

as the bid process has already commenced and is half-way through.

Management and operation of non-metro airports

5.9.3 The AAI has not been able to realise the full potential of non-aeronautical revenues which has led to losses or higher user charges. Moreover, the levels of efficiency in the management and operation of newly constructed terminals need to be improved significantly. Many of these airports would also require further investments. The Committee recommends that the development and operation of both airside and city side facilities at the 10 non-metro airports in Jaipur, Lucknow, Amritsar, Bhubaneswar, Guwhati, Coimbatore, Varanasi, Gaya, Udaipur, and Tuticorin, may be undertaken through PPP.

Tariff Regulation

5.9.4 The Committee noted that all infrastructure sectors such as power, telecom, roads and ports have moved away from 'cost plus' tariff-setting. It is universally recognised that 'cost plus' arrangement incentivises gold plating of capital as well as operational costs while reducing efficiencies, thus raising user charges to uneconomic levels. The Committee recommends that the Airports Economic Regulatory Authority (AERA) may be advised by the Central Government to establish a regulatory framework that ensures economic and competitive costs, as distinct from 'cost plus' tariffs. For this purpose, AERA may adopt international best practices and also

draw from the experience in other infrastructure sectors in India.

5.10 STORAGE

Creation of modern storage

5.10.1 Shortage of modern storage capacity has caused a significant loss of food grains. Sole reliance on FCI as well as the absence of a viable model has hampered the creation of modern storage capacity. The Committee recommends that the programme for creating 2 MT of Silo storage through PPP may be implemented expeditiously through FCI as well as the State Governments within agreed timelines to be announced by the Government.

6. CONCLUSION

6.1 The Committee recommends that a time-bound action plan may be drawn up to address the aforesaid recommendations, especially with a view to improving the enabling environment for private investment.

6.2 The Committee wishes to note that it has not been possible for it to address several other concerns that have affected the pace of investment in infrastructure. Further research and deliberations would be necessary to make additional recommendations.

6.3 The Committee wishes to emphasise that while there is considerable investor interest in several sectors, the roll-out of PPP projects has been quite slow. The project authorities do not seem to prepare an adequate shelf of projects, nor are they able award projects in

time. Delays in land acquisition and environmental clearance are also a cause of concern. As a result, investments have fallen significantly short of targets. The Committee, therefore, recommends a monthly monitoring of the implementation of the above recommendations as well as the pace of award of projects by the proposed Infrastructure Development Council.

